

EVALUATION OF NEW SERVICE
IN
SAN GABRIEL VALLEY

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SOUTHERN CALIFORNIA RAPID
TRANSIT DISTRICT

Prepared by
Surface Planning Department

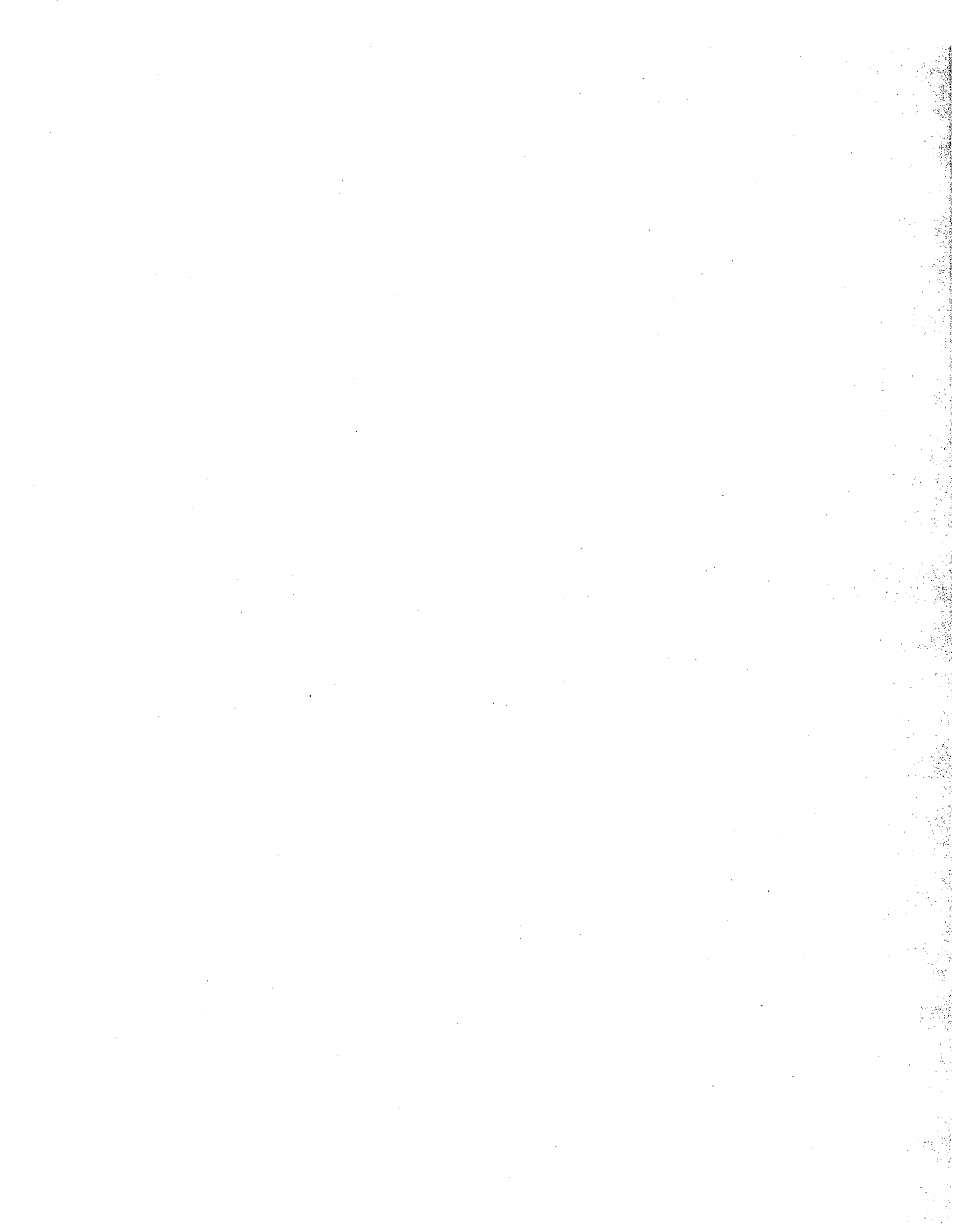
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B A C K G R O U N D

The San Gabriel Valley Transit Improvement Program was implemented on April 11, 1976 in the area roughly bounded by the San Gabriel Mountains, the Los Angeles-San Bernardino County Lines, the Puente Hills, and the Repetto and San Rafael Hills. The plan yielded a significant improvement over existing transit services by the addition of 50 buses, a 16% increase, and 29,011 daily miles traveled, a 62% increase.

The new lines of the San Gabriel Valley Transit Improvement Program provided commuter and local service for Valley residents. An increase in frequency, hours of operation, and weekend service has facilitated convenient use of this system for many transportation needs. The 31 new lines now create a network of surface transit within the 30 municipalities in the San Gabriel Valley Sector. (Figure 1)

The report of the initial evaluation of San Gabriel Valley lines riding checks taken after approximately 4 weeks of service showed significant gains in total ridership, however, productivity had declined under the influence of the great increase in vehicle hours operated. On July 1, 1976, the District implemented a fare increase which raised the base fare 40% from \$.25 to \$.35. Interim checks on ridership of low productivity lines were scheduled during early August of 1976. The effects of the fare change on ridership were just beginning to be measured when the bus operators and mechanics went on strike August 22, 1976 for 36 days until September 26, 1976. When service resumed, the District reduced the number of peak hour buses in service in anticipation of lower than normal ridership and gradually restored service as ridership increased slowly over several months. Table 1 displays the monthly average estimated system ridership derived from system revenues. After the strike, a full count of passengers riding San Gabriel Valley lines was scheduled for December 1976 and January, 1977. By this time staff perceived monetary shortfalls for Fiscal Year 1977 and Fiscal Year 1978 and began planning reductions of service for lines with low productivity. Passenger counts were made of affected lines before service reductions took place on November 7, 1976 in the Pomona Valley and on December 26, 1976 in the Central San Gabriel Valley.

Further service reductions were made on January 16, 1977, February 27, 1977, March 27, 1977 and June 19, 1977 and are planned for July 10, 1977, September 19, 1977 and December 1977.

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT San Gabriel Valley Transit Improvement Program

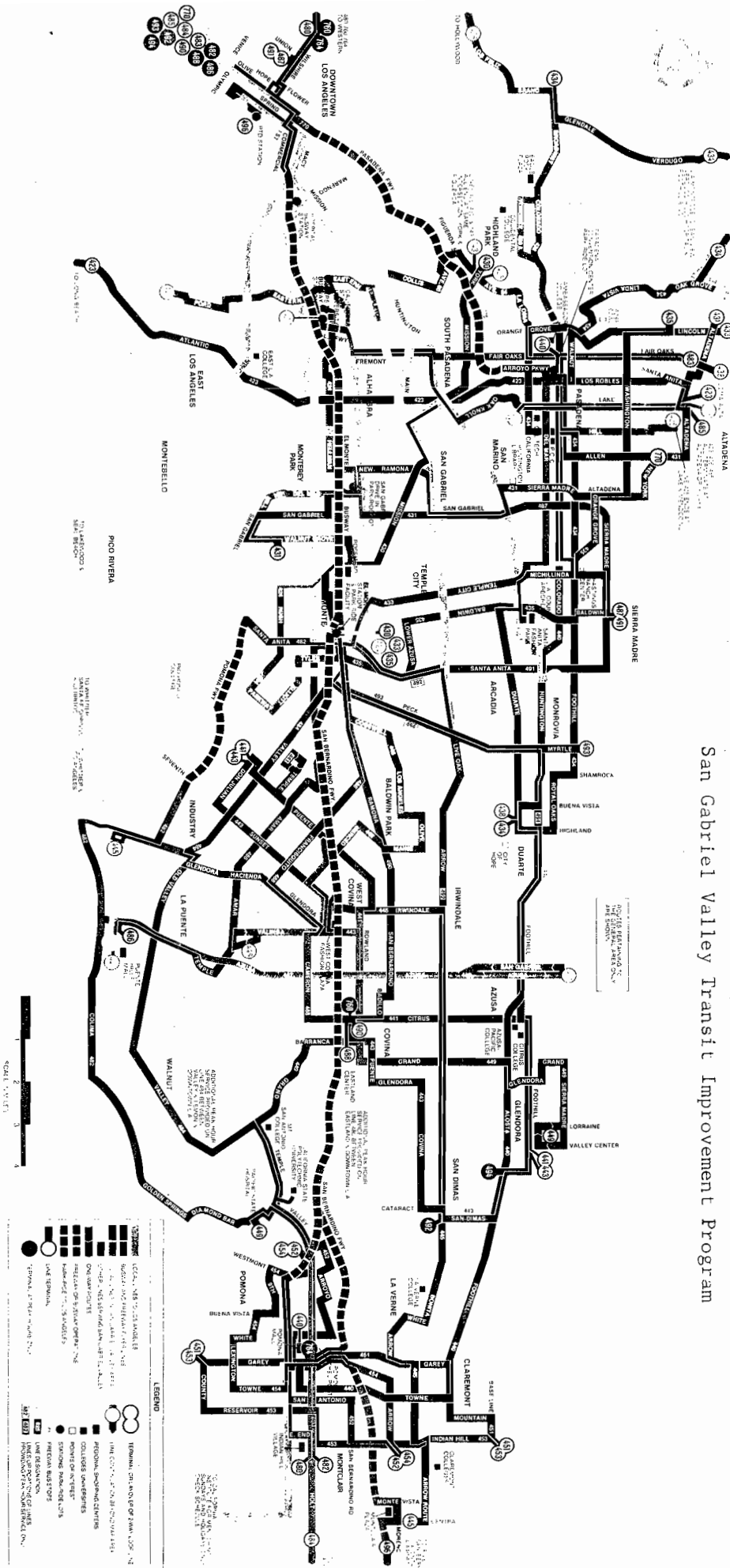


Table 1

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Average Weekday System-wide Boardings

<u>Month</u>	<u>Estimated Boardings*</u>	<u>% Change from June '76</u>
June 1976	1,080,000	base
July 1976	1,070,000	- 1%
August 1976	1,010,000	- 6%
October 1976	900,000	-17%
November 1976	1,010,000	- 6%
December 1976	990,000	- 8%
January 1977	1,030,000	- 5%
February 1977	1,050,000	- 3%
March 1977	1,050,000	- 3%
April 1977	1,070,000	- 1%
May 1977	1,060,000	- 2%

* System boarding estimates are derived from system revenues.

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PURPOSE OF REPORT

This report presents a detailed evaluation of the San Gabriel Valley Transit Improvement Program's weekday ridership after approximately 7-9 months of service compared to preliminary data taken after 3 to 6 weeks of service. The report also summarizes the changes in San Gabriel Valley ridership observed after approximately one year of operation compared to 3-6 weeks of service. Evaluations were made following the policies and criteria established by the District's Board of Directors.

Because of the long time required to obtain weekend ridership counts, no comparison data is currently available. While conclusions are drawn, no specific recommendations are made in this report. Recommendations for modifications to lines will continue to be made commensurate with additional data, and subject to the District's financial position.

CHARACTERISTICS OF THE AREA

To properly consider the development of the new system, topographic, socio-economic and demographic characteristics of the area must be placed in perspective. The San Gabriel Valley encompasses approximately 348 square miles and with a population of more than 1,260,000 people, the average density is 3,600 per square mile.

The characteristically flat topography is interrupted by the San Gabriel Mountains, Repetto and San Rafael Hills and the Puente Hills. As the San Gabriel Valley has continued to grow in the last 20 years, shopping, employment and other institutions have somewhat decentralized into Pasadena and other regional centers. SCAG's projections indicate that there will be a nearly balanced labor force and employment for an estimated 530,000 people by the year 2000. The major employment centers are Pasadena, Duarte, El Monte, City of Industry and Pomona.

The characteristically dispersed travel patterns were fostered and are maintained by the many shopping centers, employment generators, and civic centers in the area. The new San Gabriel Transit Improvement Program was designed to serve the street arterials, and still conveniently link the major trip generators with residential and commercial centers. The intensified use of the El Monte Busway,

including the Long Beach and Del Mar Ramps, has made expedited travel more convenient, providing better access to downtown Los Angeles for both the East and West San Gabriel Valley areas.

COMMUNITY INVOLVEMENT & SYSTEM REFINEMENTS

Community Involvement

In order to consider and respond to public transit needs, the District's Planning and Community Relations staff has operated a field office in the El Monte Division. Since implementation on April 11, 1976, this office has become the regional District contact for the San Gabriel Valley Municipal Governments and civic associations and numerous community meetings have been attended, resources of the District were coordinated through the field office to respond to the needs of the 30 cities served.

Since the strike, however, the field office has operated with reduced staffing and the contacts have been gradually shifted to the Planning and Community Relations departments in the headquarters building in Los Angeles. District's staff has continued to meet the needs of the public and local governments from the central offices through coordinated efforts.

System Refinements

The thrust of the system refinements made since the preliminary evaluation report in June 1976 has been to adjust routings, service frequencies and stop locations in response to public requests for improved service or complaints about bus service on residential streets. Where these requests for local modifications conflicted with regional service objectives, mutually satisfactory compromises were reached. Additionally, requirements to make significant service economies have resulted in a different type of modification with much greater public impact. Of the 49 lines in the San Gabriel Valley, 26 or 53% have had reductions to frequency, spread of service or area coverage through June 19, 1977 with additional reductions planned in July, September and December 1977.

Separate lists for public or governmentally requested modifications and for service economies are included at Tables 2 and 3, respectively. The lists include all changes to San Gabriel Valley lines implemented through June 19, 1977.

Table 2

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

SERVICE CHANGES TO SAN GABRIEL VALLEY SECTOR LINES REQUESTED BY THE PUBLIC OR GOVERNMENTAL UNITS

Line No./Name	Effective date of Chg	City	Service Changes	Reason	DAILY			SATURDAY		SUNDAY	
					Veh.	Hours	Miles	Veh.	Hours	Veh.	Hours
16 - Arizona Av. State University	10/3/76	Alhambra	Reroute from CSULA to Alhambra CBD via Fremont Commonwealth, Marengo & Main	Sr. Citizen request for direct service to Alhambra CBD	- 5.6	84	- 5.6	84	- 5.8	60	
17 - Fremont Av. Arizona Av	10/3/76	Los Angeles - Emery Park	Reroute via Warwick, Allan, Concord & Westmont	Resident request for closer service	- 0.7	6	- 0.7	6	- .7	6	
420 - Los Angeles Alhambra via Brooklyn & Garfield Ave.	4/11/76	Alhambra	Minor route modification Layover Problem	Resident complaints							
423 - Long Beach Pasadena Altadena	12/12/76	Altadena	Minor route north terminal to Altadena Dr. west of Lake St.	Operator comments - city complaints							
424 - Hellman Av. El Monte via South El Monte	4/22/76	San Gabriel	Reroute from Glendon Way to Valley between New & Del Mar. Reroute from Palm & Montezuma to Fremont	Resident Complaints		-19		-14		- 7	
426 - Los Angeles El Monte via Valley Blvd.	4/3/77	El Monte	Reroute around El Monte Mall via Ramona, Tyler and Valley. Includes change to school holidays	City requests C of C requests	- 1	-226		-150		-100	

CHANGES

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Table 2

SERVICE CHANGES TO SAN GABRIEL VALLEY SECTOR LINES REQUESTED BY THE PUBLIC OR GOVERNMENTAL UNITS

Line No./Name	Effective date of Chg	City	Service Changes	Reason:	CHANGES						
					DAILY		SATURDAY		SUNDAY		
					Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	
431 - San Gabriel Blvd. - Altadena Dr.	8/15/76	Pasadena San Marino	Reroute from San Gabriel Blvd. to Sierra Madre Blvd.	Resident's complaints - City requests							
434 - Glendale - La Canada, Duarte - Pasadena - Monrovia	8/1/76	Pasadena San Marino Glendale	Reroute to Hill and Walnut Extend to Galleria and expand spread of service	Resident & City complaints Opportunity to build ridership	1.5	41	-0.6	18			10
436 Hollywoood Glendale, Pasadena	Mid Feb. 1977	Pasadena	Change layover zone on San Pasqual Ave.	City request							
440 Pasadena Glendora, Pomona via Foothill Blvd.	4/3/77	Azusa	Reroute to Foothill Bl. & Citrus Ave. between Foothill & Alosta and Citrus & Alosta	Resident's request							
	1/2/77	Pomona	Change layover zone	City request							

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SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

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Line No./Name	Effective date of Chg	City	Service Changes	Reason	CHANGES					
					DAILY		SATURDAY		SUNDAY	
					Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles
445 - Hacienda Bl. - Irwindale Ave., Arrow Hwy.	8/15/76	La Verne	Reroute via White Ave., Arrow Hwy. & Garey Ave. Reroute via Temple Ave. and Hacienda Ave.	Resident request to serve trailer courts. City request.						
446 - El Monte Baldwin Park, West Covina, Valinda	4/14/77	Baldwin Park	Reroute short line turn-around loop	City request.						
451 Foothill Bl. - Garey Av.	5/31/77	Pomona	Alternate route to Park/Ride at Fairgrounds.							

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Table 2

SERVICE CHANGES TO SAN GABRIEL VALLEY SECTOR LINES REQUESTED BY THE PUBLIC OR GOVERNMENTAL UNITS

Line No./Name	Effective date of Chg	City	Service Changes	Reason (s)	CHANGES						
					DAILY		SATURDAY		SUNDAY		
					Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	
480-Los Angeles-El Monte-West Covina-Pomona	02-06-77 08-01-76 05-29-77 Various	Pomona Pomona Covina Wholeline	Added off ramp stop. Changed layover. Rerouted in Eastland Shopping Center. Improved service.	Passenger req. Traffic hazards Reduce parking near May Co. Overloads	4.2	174		22			22
482-Los Angeles-El Monte-Hacienda Heights-Pomona	08-01-76 05-01-77	Pomona Diamond Bar/Walnut	Changed layover. Daily-Added express serv. Diamond Bar-Los Angeles	Traffic hazards Fill demand for expedited serv. fr. Diam.Bar	3	259	-0.5	32			
483-LA-Pasadena-Altadena	12-12-76	Altadena	Changed layover zone fr. El Molino Ave. to Fontanet Way.	Traffic hazards	1	35					
485-LA-Altadena-via Lake Ave.	09-12-76	Wholeline	Improved AM pk hr serv.	Overloads							
484-Los Angeles-El Monte-La Puente Pomona-Ontario Airport	12-05-76 08-01-76	La Puente Pomona	Rerouted in La Puente to Stafford, Main, Central and Stimson. Changed layover.	City request Traffic hazard.	6.3	245					
487-LA-San Gabriel and Sierra Madre	06-01-77	San Gabriel	Cancel use of San Gabriel Theatre for Park/Ride		1						
491-LA-Sierra Madre via Sta. Anita Ave.	08-15-76 09-12-76	Pasadena San Marino Both Lines	Reroute over San Gabriel Blvd. Improve service	Overloads							

Table 2

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

SERVICE CHANGES TO SAN GABRIEL VALLEY SECTOR LINES REQUESTED BY THE PUBLIC OR GOVERNMENTAL UNITS

Line No./Name	Effective date of Chg	City	Service Changes	Reason	CHANGES					
					DAILY		SATURDAY		SUNDAY	
					Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles
496 LA-Pomona-River-side-San Bernardino	4-3-77	Pomona	Reroute to by-pass Pomona CBD. Makes freeway stop at Garey Av.	Speed up trip.	-1.7	-42	-1.8	-44	-1.5	-44
764 Pomona Park/Ride	2-28-77	Pomona	Relocate to Fairgrounds			-8				
770 Pasadena Park/Ride	May 1976	Pasadena	Change layover. Added stops along Arroyo Parkway.	Traffic hazards Passenger req.	4	549	-9.2	-46	-8	-53

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Table 3 SERVICE ECONOMIES ON SAN GABRIEL VALLEY SECTOR LINES EFFECTIVE THROUGH JUNE 19, 1977

Line No./Name	Effective date of Chg	City	Service Changes	Reason	DAILY		SATURDAY		SUNDAY		
					Veh.	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh	Veh. Hours
16 Arizona Av - Fremont Av - Alhambra	6-19-77		DA - Cancel Night Svc. SA-SU - Reduce Base 30" 40" and cancel night service.	Low Productivity	-9.3	-104	-22.8	-234	-2	-19.7	-202
17 Fremont Av - Arizona Av	6-19-77		SA-SU - Reduce service 30" to 40".	Low Productivity	-13.6	-172	-22.5	-322	-2	-36.5	-455
143 Eastern Av	2-27-77	LA	DA - Reduce service 20" to 20/25". SA - Reduce 20" to 25" and cancel nights. SU - Reduce 20" to 30" and cancel nights.	Load Factor	-1	-1	-1	-1	-2	-2	-2
420 LA-Alhambra via Brooklyn & Garfield	6-19-77	LA-Alhambra	SU - Reduce base 20" to 30". Minor adj. night service.	Low Productivity	2.5	130	-11.8	-199	-2	-25.4	-363
422 LA-El Monte via Garvey	6-19-77	LA-Alhambra-Montrey Pk.-Rosemead-El Monte	SA-SU - Reduce nights 30" to 60".	Low Productivity	-5	-72	-6	-85	-2	-3.5	-477
423 Long Beach-Pasadena-Altadena	6-19-77	Whole Line	DA-SA - Reduce nights 30"/60 to 60". SU - Reduce base 20" to 30" and nights 30/60".	Low Productivity							

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 SERVICE ECONOMIES ON SAN GABRIEL VALLEY SECTOR LINES
 EFFECTIVE THROUGH JUNE 19, 1977

Table 3

Line No./Name	Effective date of Chg	City	Service Changes	Reason	DAILY		SATURDAY		SUNDAY	
					Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles	Veh. Hours	Veh. Miles
424 Hellman Av. El Monte via So. El Monte	6-19-77	Whole Line	DA-SA-SU - Cancel night service.	Low Productivity	-16.1	-189	-13.2	-165	-10	-138
425 Ave. 64 - No. Hill St.	2-27-77	Whole Line	DA-SA - Reduce base 20" to 20/25". SU - Reduce base 30" to 45".	Load Factors	-815	7	-13.5	-147	-1	-15.6 -181
430 Highland Pk. - Alhambra - El Monte	11-7-76	Whole Line	DA - Reduce base 20" to 30".	Resident complaints and low productivity.	-15.5	-321	-0.5	11.		
431 San Gabriel Bl. - Altadena Drive	6-19-77	Whole Line	DA -SA-SU - Cancel night service. SA - Reduce base 20" to 30". SU - Reduce base 30" to 60"	Low Productivity	-18.5	-63	-44.	-552	-2	-53.4 -604
432 LA-Arcadia via Huntington Dr.	6-19-77	LA-Alhambra	DA - Shuttle nights in SGV. SA-SU - Reduce nights 30" to 60" and shuttle in SGV.	Low Productivity	-18.6	-206	-26.4	-332		-18 -235
433 Temple City Bl. - Del Mar Bl. - Lincoln Ave.	6-19-77	Whole Line	DA-SA-SU - Cancel night service	Low Productivity	-19.4	-169	-31.5	-202	-1	-28.9 -194

Table 3

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 SERVICE ECONOMIES ON SAN GABRIEL VALLEY SECTOR LINES
 EFFECTIVE THROUGH JUNE 19, 1977

Line No./Name	Effective date of Chg	City	Service Changes	Reason	DAILY			SATURDAY			SUNDAY	
					Veh.	Veh. Hours	Veh. Miles	Veh.	Veh. Hours	Veh. Miles	Veh	Veh Hours
434 Glendale-La-Canada-Duarte-Pasadena-Monrovia	2-27-77	Whole Line	DA-SA - Reduce base 30" to 40" and shortline night service at Foothill & Shamrock.	Low Productivity	-18	-186	-2	-31.8	-440	-4	-17	
440 Pasadena-Glendoria-Pomona via Foothill Bl.		Whole Line	DA-SA-SU- Cancel night service	Low productivity	-16.5	-260		-16.5	-260	-17.4	-24	
441/443-Puente Ave Citrus Ave & Sunset Av	12-26-76	Whole Line	DA-SA-Reduce service 30" to 60"	Low productivity	-4	-1150	-4	-57.8	-1452			
445 Hacienda Bl Irwindale Av.-Arrow Hwy.	12-26-76	Whole Line	DA-SA- Reduce serv. 30" to 60" except retain 30" between Hacienda Hghts. & W.Covina Plaza.		-2	-538	-2	-28.7	-538	-1.6	-15	
446 El Monte-Baldwin Pk. W. Covina-Valinda	12-26-76	Whole Line	DA-SA- Reduce serv. 30" to 60" except retain 30" between El Monte & Baldwin Park.	Low productivity	-1	-185	-1	-13.4	-185			

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

Table 3 SERVICE ECONOMIES ON SAN GABRIEL VALLEY SECTOR LINES

EFFECTIVE THROUGH JUNE 19, 1977

Line No./Name	Effective date of Chg	City	Service Changes	Reasou.	DAILY			SATURDAY			SUNDAY	
					Veh.	Veh.	Veh.	Veh.	Veh.	Veh.	Veh.	Veh.
					Hours	Miles	Hours	Miles	Hours	Miles	Hours	Mile
827 El Monte Cerritos	3-27-77	Whole Line	DA-SA-Reduce base 30" to 40". Cancel night service. SU - Cancel service.	Low Productivity	-2	-805	-2	-597	-4	-72.5	-10	
829 Lakewood Bl.-Rosemead Bl.	3-27-77	Whole Line	SA - Reduce base 30 to 40"	Low Productivity	-1	10	-1	-106				
820 LA-Whittier-La Habra Puento Hills - via Mail - via Whittier Bl.	6-19-77	Whole Line	Re ie line without affecting service	Service economies	-1		-10.7	4				
					-22	-6364	-19	-6306	-16	-359.5	-48	
					-457.9		-455.5					

EVALUATION

This evaluation supplements the preliminary evaluation of the San Gabriel Valley published in June 1976. The same care was taken to separate the San Gabriel Valley portions of the lines from the portions operated in adjacent sectors of East Los Angeles, Mid-Cities and North Los Angeles.

Objectives & Criteria

The objectives of the evaluation process and the criteria for measuring their accomplishment are still valid and have not been surpassed since the preliminary evaluation report. Although passenger miles per bus hour are now available and are considered in decisions involving express lines, the most important measure remains the productivity in passengers per bus hour (PPBH).

Table 4
Evaluation of New Services in
East Los Angeles
Objectives & Criteria

OBJECTIVES	CRITERIA
To determine if the new service has attracted more riders than the previous service.	Passenger totals, day and night, by line, by sector, pre-and-post.
To determine if new service is as productive as previous service.	Passengers in the Sector, divided by vehicle hours assigned to lines or portions of lines in the project Sector, day and night, pre-and-post implementation.
To determine if productivity is adequate to continue service.	Productivity of the line at <u>maturity</u> should exceed 20 passengers per bus hour, or 250 passenger miles per bus hour, day & night, by sector and by line. Transit dependency and system integrity are considered on a subjective basis.

Methodology

In designing the service evaluation program for projects implemented early in 1976, it was felt that all improvement projects should be evaluated the same way so that any one could be compared with another. Project evaluations for recently implemented service in East Los Angeles, Mid-Cities and the San Gabriel Valley should be comparable to the San Fernando Valley and South Central Grid evaluations performed in 1975.

Sector Boundaries

To satisfy this requirement, the improvement project sectors were clearly defined so that projects were mutually exclusive. Passengers would be counted only within one sector regardless of whether the line operated within the sector or partly outside it. The San Gabriel Valley Sector for the purpose of evaluation is bounded by:

- o Along Eastern Avenue, Huntington Drive and Monterey Road from Valley Blvd. to Highland Park.
- o Along the eastern city boundaries of Los Angeles and Glendale from Highland Park northward along Chevy Chase Drive and Commonwealth Avenue in Flintridge and La Canada to the foothills of the San Gabriel Mountains.
- o Along the foothills of the San Gabriel Mountains from Commonwealth Avenue to the San Bernardino County Line.
- o The San Bernardino County Line from the foothills of the San Gabriel Mountains to the Orange County line.
- o The northern boundary of Orange County and the northern city limits of Whittier, Pico Rivera and Montebello.
- o North and west along the southern city limits of Monterey Park to Monterey Pass Road.
- o Monterey Pass Road from Floral Drive to Garvey Avenue.
- o Garvey Avenue from Monterey Pass Road to the Long Beach Freeway.
- o The Long Beach Freeway from Garvey Avenue to Valley Boulevard.
- o Valley Boulevard from the Long Beach Freeway to Eastern Avenue.

The portions of lines included in the San Gabriel Valley sector are shown in Table 5. This information is almost unchanged from the preliminary evaluation report.

Table 5 EVALUATION OF NEW SERVICE, SAN GABRIEL VALLEY TRANSIT
 IMPROVEMENT PROGRAM
 POST IMPLEMENTATION LINE DESCRIPTION

Line No.	Line Name	One-Way Route Miles		Sector Boundaries Segment of Line in San Gabriel Sector	
		From	To	From	To
16	Arizona Ave.-Fremont Ave-Alhambra	8.6	Monterey Pass & Garvey	North Terminal	North Terminal
17	Fremont Ave-Arizona Avenue	9.8	Monterey Pass & Garvey	North Terminal	North Terminal
143	Eastern Avenue	11.8	Monterey & Huntington	North Terminal	North Terminal
420	Los Angeles-Alhambra via Brooklyn and Garfield Avenues	14.2	Brooklyn & Atlantic	East Terminal	East Terminal
422	Los Angeles-El Monte via Garfield Avenue	16.6	Eastern & Ramona	East Terminal	East Terminal
423	Long Beach-Pasadena-Altadena via Atlantic Blvd.	30.9	Terminal	Terminal	Terminal
424	Hellman Ave.-El Monte via South El Monte	20.1	Terminal	Terminal	Terminal
425	Avenue 64-North Hill Ave.	8.7	Terminal	Terminal	Terminal
426	Los Angeles-El Monte via Valley Boulevard	16.4	Terminal	Terminal	Terminal
428	Los Angeles-Alhambra-South Arcadia via Las Tunas Drive	18.4	Terminal	Terminal	Terminal
430	Highland Park-Alhambra-El Monte	11.9	Terminal	Terminal	Terminal

Table 5 EVALUATION OF NEW SERVICE, SAN GABRIEL VALLEY TRANSIT
IMPROVEMENT PROGRAM
POST IMPLEMENTATION LINE DESCRIPTION

Line No.	Line Name	One-Way Route Miles		Segment of Line in San Gabriel Sector		Terminal
		From	To	From	To	
431	San Gabriel Blvd.-Altadena Dr.	18.3	Terminal			Terminal
432	Los Angeles-Arcadia via Huntington Drive	17.6	Terminal			Terminal
433	Temple City Bl-Del Mar Bl-Lincoln Avenue	15.2	Terminal			Terminal
434	Glendale-La Canada-Pasadena-Monrovia-Duarte	30.5	Foothill & Commonwealth			East Terminal
435	Baldwin Ave.-Washington Blvd.	19.1	Terminal			Terminal
436	Hollywood-Glendale-Pasadena	18.2	Colorado & Eagle Rock			East Terminal
438	No. Fair Oaks Av-Colorado Bl-Duarte	17.8	Terminal			Terminal
440	Pasadena-Glendor-Pomona via Foothill Blvd.	30.2	Terminal			Terminal
441	Puente Ave.-Citrus Ave.	16.4	Terminal			Terminal
443	Sunset Ave-Covina Bl-San Dimas Ave	21.8	Terminal			Terminal
445	Hacienda Bl-Irwindale Ave-Arrow Hwy	26.4	Terminal			Terminal
446	El Monte-Baldwin Park-West Covina-Valinda	14.0	Terminal			Terminal
447	Azusa Avenue	11.1	Terminal			Terminal
449	Glendor-Pacific State Hospital Grand Avenue	16.3	Terminal			Terminal

Table 5 EVALUATION OF NEW SERVICE, SAN GABRIEL VALLEY TRANSIT
IMPROVEMENT PROGRAM
POST IMPLEMENTATION LINE DESCRIPTION

Line No.	Line Name	One-Way		Sector Boundaries	
		Route Miles	Segment of Line in San Gabriel Sector From	To	Sector
451	Garey Ave. - Foothill Blvd.	8.2	Terminal		Terminal
452	Arroyo Ave.-North White-San Bernardino Ave.	8.9	Terminal		Terminal
453	Indian Hill Blvd.-Reservoir St.	8.5	Terminal		Terminal
454	West Ninth St.-South Towne-Arrow Highway	10.6	Terminal		Terminal
480	Los Angeles-El Monte-West Covina-Pomona	40.1	Terminal		Terminal
482	Los Angeles-El Monte-Hacienda Heights-Pomona	46.7	Terminal		Terminal
483	Los Angeles-Altadena via Fair Oaks Ave.	17.5	Terminal		Terminal
484	Los Angeles-El Monte-La Puente-Pomona-Ontario Airport	45.5	Terminal		Terminal
485	Los Angeles-Altadena via Lake Ave.	18.7	Terminal		Terminal
486	Los Angeles-El Monte-Puente Hills Mall	29.3	Terminal		Terminal
487	Los Angeles-San Gabriel-Sierra Madre	22.5	Terminal		Terminal

Table 5 EVALUATION OF NEW SERVICE, SAN GABRIEL VALLEY TRANSIT
IMPROVEMENT PROGRAM
POST IMPLEMENTATION LINE DESCRIPTION

Line No.	Line Name	One-Way Route Miles	Segment of Line in San Gabriel Sector		Terminal
			From	To	
488	Los Angeles-El Monte-West Covina-Eastland	27.4	Terminal		Terminal
490	Los Angeles-El Monte-Covina Eastland	25.9	Terminal		Terminal
491	Los Angeles-Sierra Madre via Santa Anita Ave.	22.0	Terminal		Terminal
492	Los Angeles-El Monte-So. Arcadia-San Dimas	31.9	Terminal		Terminal
493	Los Angeles-El Monte-Monrovia	22.4	Terminal		Terminal
494	Los Angeles-El Monte-Monrovia-Glendora	31.4	Terminal		Terminal
496	Los Angeles-Pomona-Riverside-San Bernardino	74.7	Terminal		Terminal
760	Pomona-West Covina Park/Ride	26.1	Terminal		Terminal
764	Pomona Park/Ride	34.4	Terminal		Terminal
770	Pasadena Park/Ride	16.1	Terminal		Terminal
820	Los Angeles-Whittier-La Habra-Puente Hills Mall via Whittier Blvd.	28.4	Colima & Hacienda		North Terminal
827	El Monte-Cerritos	22.2	Workman Mill & Peck Rd.		North Terminal
829	Lakewood Blvd.-Rosemead Blvd.	32.8	Rosemead & Durfee		North Terminal

The evaluation considers a number of San Gabriel Valley lines that operate partly outside the sector. Some of these lines are considered as primarily serving the San Gabriel Valley although they may travel through and receive/discharge passengers in other sectors. In this case, the total line ridership is included in the sector for the purposes of evaluation. These lines are: 425, 426, 428, 430, 432, 436, 445, 480, 482, 483, 484, 485, 486, 487, 488, 490, 491, 492, 493, 494, 496, 760, 764 and 770.

Other lines operating partly outside the San Gabriel Valley sector serve adjacent sectors and the San Gabriel Valley. Their passengers are divided between the adjacent sectors and only those passengers boarding within the San Gabriel Valley sector boundaries are counted in the San Gabriel Valley sector totals. These inter-sector lines include Lines 16, 17, 143, 420, 422, 423, 434, 820, 827 and 829.

An additional analysis was made of the preliminary evaluation sector passenger totals for each of the lines that is considered to serve an adjacent sector and the San Gabriel Valley. This provides consistency in comparing this evaluation with the June 1976 preliminary evaluation as well as with evaluations of the East Los Angeles, Mid-Cities and South Bay Transit Improvement Programs. Passenger counts and productivity data will be given separately for the San Gabriel Valley sector and for the total line.

Ridership

Another essential element in meeting the evaluation objectives of the comparability for mature lines was to decide on a consistent definition of ridership. A rider is a boarding passenger regardless of the type of fare paid.

Ridership Growth With Time

The results of the San Gabriel Valley Transit Improvement Program are largely obscured by intervening events such as the fare increase, summer school vacations and the strike, the effects of which are almost impossible to unravel, however, the detailed picture of the San Gabriel Valley sector at 7-9 months and the total lines after approximately one year of service is clear. Ridership continues to grow and has not yet leveled off.

Results

Passenger counts were initially scheduled so as to allow the evaluation of approximately six months of operation after school resumed in the fall of 1976. This schedule was interrupted by the strike and the Christmas vacation period. By the time all the San Gabriel Valley lines had been checked, modifications for service economies had been implemented and operating data was accumulating. Because of the need to obtain fast estimates of ridership on the lines impacted by service cutbacks, a new type passenger count was introduced to supplement the 100% riding check previously used for line evaluations.

100% Ridership Checks

Passengers are counted by District checkers who ride each trip on a line from end to end. In what is known as a 100% check, the checker counts the passengers boarding and alighting at each stop and records the type of fare paid and the running time between timepoints. The 100% check is widely accepted as representative of annual ridership on a line but has limitations because of daily ridership fluctuations of 5% or more. Inclement weather can cause variations of 10% or more. The 100% check is, in reality, a sample and is subject to normal sampling errors when it is used to draw conclusions about the total annual ridership of a line. It took from November 3, 1976 to February 9, 1977 to complete riding checks for the 49 lines involved in the study. Total sector ridership, therefore, contains some inconsistencies introduced by possible variations between lines checked on different days. The same procedure was followed for the initial checks reported in June 1976, except checks were taken in 18 working days from May 3 to June 8, 1976.

Farebox Vault Checks

A procedure has been developed whereby the passengers boarding a line can be estimated from the current line revenue. The cash received on a line is divided by the average cash fare obtained from a previous 100% riding check to yield the estimated daily boarding passengers.

The procedure is largely clerical and is much less expensive than a full riding check. It has the disadvantage of providing only gross total passengers, so no estimates can be made about passengers by time of day or segment of a line. In addition to the sampling errors over time mentioned above, its point accuracy depends on the assumption that the composition of ridership used in arriving at the average cash fare

has not changed between the time the riding check was taken and the time the farebox cash was counted.

Passenger Totals

The passenger counts for the San Gabriel Valley sector after 7-9 months operation are shown at Table 6. During the day (beginning to 7:00pm) there were 85,729 passengers while 3,856 rode at night (7:01 pm to close) for a total of 89,585. The passenger figures for the inter-sector lines end to end are shown at Table 7. When substituted for the sector boarding counts in Table 6 so as to afford comparisons with the June 1976 preliminary evaluation report they yield day boardings of 94,382 and night of 4,463 for a total of 98,845.

3-6 Weeks Compared to 7-9 Months. Table 8 shows the line by line comparison of the 3-6 week sector passenger figures with the 7-9 months sector passenger totals. Sector ridership was down 2,244 passengers or 2.4%. Although not shown on Table 8 day sector ridership was down 1,365 or 1.6% while night sector ridership dropped 879 or 18.6%.

3-6 Weeks Compared to 12 Months. Table 9 shows the line by line comparison of the 3-6 week total line passenger figures with the 12-month total line passenger estimates. Since the data available at 12 months is for entire lines all day, no sector or night figures can be given. The total line ridership is up 1071 or 1%.

Factors Contributing to the Decrease - Seven to Nine Months.

The overwhelming factor which influenced the San Gabriel Valley ridership at seven to nine months is the strike. The San Gabriel Valley suffered losses of ridership along with the entire system and had not fully recovered when the checks were taken, predominately in December and January. Further depressing ridership totals was the July 1, 1976 fare increase of 40%. These factors are so interwoven with line adjustments, changing travel pattern and promotional efforts that their individual contributions can not be specified. Historically, the winter months are periods when ridership levels off or drops followed by recovery or continued growth in the spring. Overall, the mild decrease of 2.4% recorded over December 1976 and January 1977 when the system average in January had recovered only to 5% below June's base figure (Table 1), is a good sign of the underlying growth experienced in the sector.

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM
 SECTOR ONLY

7 - 9 MONTH CHECKS

Line	Passengers Boarding			Vehicle Hours			Productivity		
	Day	Night	Total	Day	Night	Total	Day	Night	Total
*16	202	6	208	22.32	4.25	26.57	9.1	1.4	7.8
*17	360	0	360	25.19	.34	25.53	14.3	0	14.1
*143	501	31	532	21.93	3.0	24.93	22.8	10.3	21.3
*420	1431	28	1459	45.34	6.27	51.61	31.6	4.5	28.3
*422	2239	126	2365	66.69	11.70	78.39	33.6	10.8	30.2
*423	2271	54	2325	75.49	9.75	85.24	30.1	5.5	27.3
424	1577	46	1623	109.99	14.6	124.59	14.3	3.2	13.0
425	1942	74	2016	68.97	9.07	78.04	28.2	8.2	25.8
426	4253	22	4477	131.95	34.48	166.43	32.2	6.5	26.9
428	3811	203	4014	124.1	22.57	146.67	30.7	9.0	27.4
430	808	26	834	55.08	10.41	65.49	14.7	2.5	12.7
431	1051	28	1079	97.5	14.4	111.9	10.8	1.9	9.6
432	2237	92	2329	113.13	27.2	140.33	19.8	3.4	16.6
433	2065	87	2152	97.26	14.25	111.51	21.2	6.1	19.3
*434	883	13	896	60.23	9.61	69.84	14.7	1.4	12.8
435	2322	86	2408	115.05	15.13	130.18	20.2	5.7	18.5
436	10569	628	11197	208.73	29.48	238.21	50.6	21.3	47.0
438	2905	140	3045	88.24	9.08	97.32	32.9	15.4	31.3
440	2491	123	2614	103.7	14.46	118.16	24.0	8.5	22.1
441/	443	7	450	143.66	19.35	163.01	6.4	0.9	5.7
443	474	10	484						
445	837	18	855	84.06	9.27	93.33	10.0	1.9	9.2
446	498	24	522	52.06	6.32	58.38	9.6	3.8	8.9
447	793	41	834	42.38	7.04	49.42	18.7	5.8	16.9
449	600	32	632	59.62	7.6	67.22	10.1	4.2	9.4
451/	1025	22	1047	119.24	7.22	126.46	11.8	4.8	11.4
453	383	13	396						
452/	543	20	563						
454	821	28	849	137.88	14.55	152.43	9.9	3.3	9.3

* SGV Sector Boarding Passengers only

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 Table 6 EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM
 SECTOR ONLY

7 - 9 MONTH CHECKS

Line	Passengers Boarding			Vehicle Hours			Productivity		
	Day	Night	Total	Day	Night	Total	Day	Night	Total
480	4527	238	4765	206.39	27.0	233.39	21.9	8.8	20.4
482	2349	135	2484	122.06	17.24	139.30	19.2	7.8	17.8
483	4214	238	4452	248.5	36.06	284.56	29.5	9.8	27.0
485	3124	116	3240						
484	4614	305	4919	196.17	40.2	236.37	23.5	7.6	20.8
496	2074	102	2176	104.42	13.15	117.57	19.9	7.8	18.5
487/	2064	47	2111	222.87	23.4	246.27	17.9	3.2	16.5
491	1935	27	1962						
488	1532	46	1569	91.61	10.4	102.01	16.6	4.4	15.4
490	2425	104	2529	116.71	13.39	130.1	20.8	7.8	19.4
492	249	NNS	249	20.18	NNS	20.18	12.3	NNS	12.3
493	676	33	709	33.21	6.15	39.36	20.4	5.4	18.0
494	256	NNS	256	18.42	NNS	18.42	13.9	NNS	13.9
496	1418	98	1516	88.99	12.31	101.3	15.9	8.0	15.0
760	676	NNS	676	29.41	NNS	29.41	23.0	NNS	23.0
764	354	NNS	354	18.30	NNS	18.30	19.3	NNS	19.3
770	1567	56	1623	110.28	15.76	126.04	14.2	3.6	12.9
*820	174	22	196	21.69	2.18	23.87	8.0	10.1	8.2
*827	447	24	471	19.39	5.68	25.07	23.1	4.2	18.8
*829	728	35	763	54.06	6.3	60.36	13.5	5.6	12.6
	85729	3856	89585	3992.45	560.62	4553.07	21.5	6.9	19.7
*SGV Sector Boarding Passengers only									

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
 EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM
 INTER-SECTOR LINES, END-TO-END

7 - 9 MONTH CHECKS

Line	Passengers Boarding			Vehicle Hours			Productivity		
	Day	Night	Total	Day	Night	Total	Day	Night	Total
16	743	21	764	48.17	9.81	58.04	15.42	2.13	13.16
17	917	6	923	42.03	1.33	43.36	21.82	4.51	21.29
143	1627	79	1706	68.17	10.35	78.52	23.87	7.63	21.73
420	4028	114	4142	100.67	16.74	117.41	40.01	6.81	35.28
422	3623	462	4085	128.82	28.67	157.49	28.12	16.11	25.94
423	4061	152	4213	105.88	34.54	140.42	38.35	4.40	12.53
434	1541	31	1572	108.34	17.16	125.50	12.28	1.81	12.53
	16,540	865	17,405	602.08	118.66	720.74		NA	

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM

DIFFERENCE BETWEEN 3/6 WEEK AND 7/9 MONTH CHECKS

Table 8

SECTOR PASSENGERS

Line No.	PASSENGERS				P R O D U C T I V I T Y								ACTION TAKEN as of che See Table 2&3 for detail	
	3 Weeks	8 Months	Diff	% Diff	3 Weeks Day	3 Weeks Night	Total	8 Months Day	8 Months Night	Total	Day	Night		Difference (No./%) Total
* 16	75	208	133	177	2.7	1.4	2.5	9.1	1.4	7.8	6.4/237	-	5.3/212	Reroute
* 17	369	360	-9	-2	13.7	28.6	13.9	14.3	0	14.1	0.6/4	-28.6/ -100	0.2/1	Reroute
* 143	452	532	80	18	31.7	10.2	29.1	22.8	10.3	21.3	-8.9/-28	1/1	-7.8/-27	Reroute
* 420	1690	1459	-231	-14	37.2	11.0	34.1	31.6	4.5	28.3	-5.6/-15	-6.5/-59	-5.8/-17	Reroute
* 422	2841	2365	-476	-17	40.8	15.1	36.8	33.6	10.8	30.2	-7.2/-18	-4.3/-28	-6.6/-18	Reroute
* 423	2773	2325	-448	-16	25.0	9.7	23.0	30.1	5.5	27.3	5.1/20	-4.2/-43	4.3/19	Reroute
424	1212	1623	411	34	9.9	7.8	9.7	14.3	3.2	13.0	4.4/44	-4.6/-59	3.3/34	
425	2016	2016	-173	-8	30.2	12.8	28.2	32.2	8.2	25.8	-2.0/-7	-4.6/-36	-2.4/-9	
426	1770	4477	-293	-6	33.7	9.8	28.7	30.7	6.5	26.9	-1.5/-4	1.3/17	-0.6/-2	
428	4014	4014	-98	-2	32.1	7.7	28.0	14.7	2.5	12.7	2.1/17	-0.4/-14	1.6/14	Frequency cut
430	899	834	-65	-7	12.6	2.9	11.1	14.7	1.9	9.6	1.5/16	-1.2/-39	1.1/13	Reroute
431	952	1079	127	13	9.3	3.1	8.5	10.8	3.4	16.6	3.6/22	-0.6/-9	2.6/19	
432	1962	2329	367	19	16.2	4.6	14.0	19.8	6.1	19.3	2.8/24	-0.2/-13	3.4/-15	
433	2531	2152	-379	-15	25.0	6.7	22.7	21.2	6.1	12.8	0.9/5	-2.4/-30	1.9/17	Reroute
* 434	896	896	0	0	11.9	1.6	10.9	14.7	1.4	12.8	2.8/24	-0.2/-13	0.5/3	
435	2345	2408	63	3	19.3	8.1	18.0	20.2	5.7	18.5	0.9/5	-1.6/-7	1.9/4	
436	10751	11197	446	4	48.2	22.9	45.1	50.6	21.3	47.0	2.4/5	-0.1/-1	-4.4/-12	
438	3476	3045	-431	-12	37.8	15.5	35.7	32.9	15.4	31.3	-4.9/-13	-0.9/-1	-4.0/-15	
440	4073	2614	-1459	-36	28.8	9.4	26.1	24.0	8.5	22.1	-4.8/-17	-0.9/-10	-4.0/-15	
441/	504	450	-54	-11	6.2	6.3	6.2	6.4	0.9	5.7	0.2/3	-5.4/-86	-0.5/-8	
443	510	484	-26	-5	9.3	3.4	8.8	10.0	1.9	9.2	0.7/8	-1.5/-44	0.4/5	Reroute
445	819	855	36	4	9.6	4.6	9.0	9.6	3.8	8.9	No chg.	-0.8/-17	-0.1/-1	
446	528	522	-6	1	9.6	4.6	9.0	18.7	5.8	16.9	-1.0/-5	-10.7/-65	-2.4/-12	
447	952	834	-118	-12	19.7	16.5	19.3	10.1	4.2	9.4	3.3/49	2.2/110	3.3/54	
449	473	632	159	34	6.8	2.0	6.1	10.1	4.2	9.4	3.3/49	2.2/110	3.3/54	

* SGV Sector Boarding Passengers Only

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM
DIFFERENCE BETWEEN 3/6 WEEK AND 7/9 MONTH CHECKS
SECTOR PASSENGERS

Table 8

Line No.	PASSENGERS			P R O D U C T I V I T Y												ACTION TAKEN as of che See Table 2&3 for detail
	3 Weeks	8 Months	Diff	% Diff	3 Weeks		Total	8 Months		Total	Difference (No./%)		Total			
					Day	Night		Day	Night		Day	Night				
451/	1130	1047	- 83	-	7	12.3	9.3	12.2	11.8	4.8	11.4	-0.5/-4	-4.5/-48	-0.8/-7		
453	409	396	- 13	-	3											
452/	610	563	- 47	-	8	9.5	4.3	9.1	9.9	3.3	9.3	0.4/4	-1.0/-23	0.2/2		
454	780	849	69		9											
480	4073	4765	692	17	17	18.5	12.1	17.1	21.9	8.8	20.4	3.4/18	-3.3/-27	3.3/19	Reroute	
482	2413	2484	71	3	3	19.1	4.6	17.3	19.2	7.8	17.8	0.1/1	3.2/70	0.5/3	Reroute	
483/	7354	4452	338	5	5	27.9	13.1	26.0	29.5	9.8	27.0	1.6/6	-3.3/-25	1.0/4	Reroute - Improve servic	
485	3240	3240														
484	4914	4919	5			24.4	6.8	20.7	23.5	7.6	20.8	-0.9/-4	0.8/12	0.1/-	Reroute	
486	2348	2176	- 172	-	7	21.2	7.5	19.7	19.9	7.8	18.5	-1.3/-6	0.3/4	-1.2/-6		
487/	1726	2111	385	22	22	16.7	3.3	15.2	17.9	3.2	16.5	1.2/7	0.1/-3	1.3/9		
491	1923	1962	39	2	2											
488	1727	1569	- 158	-	9	17.9	5.8	16.7	16.6	4.4	15.4	-1.3/-7	1.4/-24	-1.3/-8		
490	3324	2529	- 795	-	24	27.0	7.1	25.0	20.8	7.8	19.4	-6.2/-23	0.7/10	-5.6/-22		
492	318	249	- 69	-	22	16.5	NNS	16.5	12.3	NNS	12.3	-4.2/-25	NNS	-4.2/-25		
493	555	709	154	28	28	15.6	6.0	14.1	20.4	5.4	18.0	4.8/31	-0.6/-10	3.9/28		
494	260	256	- 4	-	2	15.2	NNS	15.2	13.9	NNS	13.9	-1.3/-9	NNS	-1.3/-9		
496	1382	1516	134	10	10	14.6	7.4	13.7	15.9	8.0	15.0	1.3/9	0.6/8	1.3/9		
760	680	676	- 4	-	1	23.1	NNS	23.1	23.0	NNS	23.0	-0.1/-	NNS	-0.1/-		
764	350	354	4			19.1	NNS	19.1	19.3	NNS	19.3	0.2/1	NNS	0.2/1		
770	2041	1623	- 418	-	20	17.7	5.9	16.2	14.2	3.6	12.9	-3.5/-20	-2.3/-39	-3.3/-20		
*820	238	196	- 42	-	18	12.0	12.4	12.0	8.0	10.1	8.2	-4.0/-33	-2.3/-19	-3.8/-32		
*827	438	471	33	8	8	18.0	9.2	17.1	23.1	4.2	18.8	5.1/28	-5.0/-54	1.7/10		
*829	682	763	81	12	12	9.4	4.7	9.5	13.5	5.6	12.6	4.1/44	0.9/19	3.1/33		
TOTAL	91829	89585	-2244	-2.4	-2.4	21.5	8.5	19.9	21.5	6.9	19.7	0.2/1	-1.5/-18	-0.2/-1.0		

* SGV Sector Only

Table 9 SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM

Line No.	P A S S E N G E R S				P R O D U C T I V I T Y				ACTION TAKEN Up To 6-19-77 See Table 2 & 3 for details
	3/6 Weeks	12 Months	Diff.	% Diff.	3-6 Wks Passengers Per Total	12 Mos. Passengers Per Total	Difference (No./%) Total		
16	685	829	144	21	11.8	15.8	4.0 / 34	Yes. Reroute	
17	1309	1257	- 52	- 4	30.1	29.0	-1.1 / - 4	Yes. Reroute	
143	1744	1661	- 83	- 5	22.2	25.4	3.2 / 14	Yes, Reroute	
420	4565	4707 V	142	3	38.9	40.1	1.2 / 3	Yes, Reroute	
422	4147	4467	320	8	26.7	28.4	1.7 / 6	Yes. Reroute	
423	4793	5770 V	977	20	34.1	41.0	6.9 / 20	Yes. Reroute	
424	1212	1817 V	605	50	9.7	14.6	4.9 / 51	Yes. Reroute	
425	2189	1925	-264	-12	28.2	24.7	-3.5 / -12	Yes. Reroute	
426	4770	4855 V	85	2	28.7	29.5	0.8 / 3	Yes. Reroute	
428	4112	3451	-661	-16	28.0	23.6	-4.4 / -16	Yes. Frequency cut	
430	899	906 V	7	1	11.1	13.8	2.7 / 24	Yes. Reroute	
431	952	1214 V	262	28	8.5	11.4	2.9 / 34	Yes. Reroute	
432	1962	2185 V	223	11	14.0	15.6	1.6 / 11	Yes. Reroute	
433	2531	2680	149	6	22.7	24.3	1.6 / 7	Yes. Reroute	
434	1691	1734	43	3	13.6	16.1	2.5 / 18	Yes. Reroute	

V - Vault Check

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM

Table 9

DIFFERENCE BETWEEN 3/6 WEEK AND 12 MONTH CHECKS
TOTAL LINE PASSENGERS

Line No.	P A S S E N G E R S		Diff.	% Diff.	P R O D U C T I V I T Y Passengers Per Bus Hour		ACTION TAKEN	
	3/6 Weeks	12 Months			3-6 Wks Total	12 Mos. Total		Difference (No./%) Total
435	2345	2408	63	3	18.0	18.5	0.5 / 3	Up To 6-19-77 See Table 2 & 3 for details
436	10751	10480	-271	-3	45.1	44.0	-1.1 / -2	Yes, Reroute
438	3476	3229	-247	-7	35.7	33.2	-2.5 / -7	Yes, Reroute and service cut.
440	4073	3105	-968	-24	34.6	30.5	-4.1 / -12	Yes, Frequency cut
441/ 443	504) 510)	746	-268	-26	6.2	7.1	0.9 / 15	Yes, Frequency cut
445	819	892 V	73	9	8.8	13.7	4.9 / 56	Yes, Frequency cut
446	528	759 V	231	44	9.0	16.7	7.7 / 86	Yes, Frequency cut
447	952	837	-115	-12	19.3	16.9	-2.4 / -12	Yes, Frequency cut
449	473	505	32	7	6.1	14.3	8.2 / 134	Yes, Frequency cut
451/ 453	1130) 409)	1305 V	-234	-15	12.2	14.0	1.8 / 15	Yes, Frequency cut
452/ 454	610) 780)	1040	-350	-25	9.1	12.8	3.7 / 41	Yes, reroute and improve service.
480	4073	4469	396	10	17.1	19.1	2.0 / 12	Yes, Reroute and improve service
482	2413	2727	314	13	17.3	18.3	1.0 / 6	

V - Vault check

Table 9 SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM

DIFFERENCE BETWEEN 3/6 WEEK AND 12 MONTH CHECKS
TOTAL LINE PASSENGERS

Line No.	P A S S E N G E R S				P R O D U C T I V I T Y				ACTION TAKEN Up To 6-19-77 See Table 2 & 3 for details
	3/6 Weeks	12 Months	Diff.	% Diff.	3-6 Wks Total	12 Mos. Total	Difference (No./%) Total		
483/ 485	7354	7854 V	500	7	26.0	27.6	1.6 / 6	Yes, reroute and improve service.	
484	4914	4466	-448	-9	20.7	18.9	-1.8 / -9	Yes, reroute	
486	2348	2230	-118	-5	19.7	19.0	-0.7 / -4		
487/ 491	1726) 1923)	4073	424	12	15.2	16.5	1.3 / 9	Yes, reroute and improve service	
488	1727	2224	497	29	16.7	21.8	5.1 / 31		
490	3324	2353	-971	-29	25.0	18.1	6.9 / 28		
492	318	435 V	117	37	16.5	21.6	5.1 / 31		
493	555	697	142	26	14.1	17.7	3.6 / 26		
494	260	235 V	-25	-10	15.2	12.8	-2.4 / -16		
496	1382	1380 V	-2	-	13.7				
760	680	700	20	3	23.1	23.8	0.7 / 3		
764	350	349	-1	-	19.1	19.1	No change		
770	2041	2352 V	311	15	16.2	18.7	2.5 / 15		

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V - Vault check

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT
EVALUATION OF SAN GABRIEL VALLEY TRANSIT IMPROVEMENT PROGRAM

Table 9

DIFFERENCE BETWEEN 3/6 WEEK AND 12 MONTH CHECKS
TOTAL LINE PASSENGERS

Line No.	P A S S E N G E R S		D I F F E R E N C E		P R O D U C T I V I T Y			A C T I O N T A K E N Up To 6-19-77 See Table 2 & 3 for details
	3/6 Weeks	12 Months	Diff.	% Diff.	3-6 Wks Total	12 Mos. Total	Difference (No./%) Total	
*820	238	196	- 42	- 18	12.0	8.2	-3.8 / - 32	Dec. 7, 1976 check
*827	438	471	33	8	17.1	18.8	1.7 / 10	Nov. 29, 1976 check
*829	682	763	81	12	9.5	12.6	3.1 / 33	Nov. 23, 1976 check
TOTALS	101,667	102,738	1071	1%	20.6	22.2	1.6 / 8	

* - San Gabriel Sector Passengers Only

V - Vault check

Factors contributing to the Recovery - Twelve Months.

In addition to the normal seasonal variations experienced in the spring rise, there were some service adjustments which facilitated connections and some improved service levels which both accommodated and attracted increased ridership. Of a more nebulous but still attributable nature is the heightened public awareness of the benefits of transit vis-a-vis the costs of automobile operation which have been fostered by the recent national concerns over the energy issue.

Productivity

To determine whether the productivity of service after 7-9 months and 12 months was as high as productivity after 3-6 weeks, the passengers per line (in the sector at 7-9 months) were divided by the bus hours per line (in the sector at 7-9 months) to get passengers per bus hour (PPBH).

The overall productivity of lines in the San Gabriel Valley sector at three to six weeks was 19.8 PPBH with individual lines ranging from a high of 45.1 PPBH to a low of 2.5 PPBH. Table 8 compares the sector productivity at three to six weeks with figures at 7-9 months when the overall productivity had slipped to 19.7. Single lines ranged from a high of 47.0 PPBH to a low of 5.7 PPBH. There were 29 lines with productivity in the sector below 20 PPBH, including nine lines below 10 PPBH at 3-6 weeks compared to 30 below 20 PPBH and 8 below 10 PPBH at 7-9 months. Average sector night productivity over the same period dropped from 8.4 PPBH to 6.9 PPBH, down 18%.

At twelve months, sector average productivity reflected in Table 9 had risen to 22.2 PPBH, compared to the total line productivity at 3-6 weeks. There were 27 lines with end-to-end productivity less than 20 PPBH including 2 lines below 10 PPBH compared to 28 below 20 PPBH with 8 lines below 10 PPBH after 3-6 weeks operation.

C O N C L U S I O N S

The San Gabriel Valley Transit Improvement Program has continued to attract and hold riders and has recorded a modest gain in both total riders and productivity in the face of a 40% fare increase and a 36-day strike which depressed system ridership substantially. Staff will continue to propose modifications which are warranted in the light of line performance and District evaluation policies. It can be expected that the service economies already implemented or scheduled as well as the July 1, 1977 fare increase will have a considerable impact on the future transit ridership of the San Gabriel Valley.

A C K N O W L E D G E M E N T S

The following people contributed a great deal of effort to make this report possible:

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