

TRANSIT TSM ELEMENT
OF THE RTDP

FIRST ANNUAL STATUS REPORT

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

PLANNING DEPARTMENT

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I. Definition of Transportation Systems Management
Transit Element

Transportation Systems Management is a concept that considers a wide range of actions to improve efficiency and productivity of existing equipment and facilities. These actions include low-capital investment programs that can improve transportation in the near-term, as well as produce long-term solutions to area transportation problems.

A. Goals of Transit TSM

As developed by the Interagency Technical Committee of the Regional Transit Development Program, the goals of the TSM Transit Element are to:

- Improve efficiency of existing roadway facilities;
- Reduce transit travel times for system users;
- Improve energy efficiency through better utilization of transit vehicles and facilities;
- Improve coordination of SCRTD service with other carriers in region;
- Improve local circulation and feeder/distribution service in communities throughout Los Angeles County;
- Improve access and be complementary to other elements of Regional Transit Development Programs;

- Increase operating efficiency and productivity of existing transit system.

B. Responsibility for Full Range Documentation

Each year, UMTA requires local reviewing agencies, as a condition precedent to funding operator capital and operations grants, to provide UMTA with three basic documents. One is the Transportation Improvement Program (TIP), which lists the grant applications each operator expects to file over the next five years. The second document is a Short Range Transportation Plan (SRTP). Its purpose is to detail the capital and operating needs of an operator and the logic which led to those decisions. The third document is a Transportation Systems Management (TSM) Element. It is compiled by the reviewing agencies from material included in the SRTP.

Eventually, the Los Angeles County Transportation Commission (LACTC) and Southern California Association of Governments (SCAG) will integrate the submittals of all of the operators into county and regional counterparts which are submitted in

June each year to UMTA. SCAG is responsible for documenting planning for all modes' TSM actions; the Commission will document the programming of TSM projects for implementation.

SCAG included within the Regional Transportation Plan (RTP) for the first time in 1976, a Transportation System Management Element. This element was updated in the 1977 RTP. Section 4.1.2.2 and 4.8.9.1 of the 1977 RTP lays out policies for managing the region's transportation system.

Section 4.2 of the 1976 TSM Element defines those TSM strategies which are called for by the Regional Transportation Plan. The application submitted to UMTA in September 1976 for the Regional Transit Development Program (RTDP) defined the TSM Element of the RTDP as the transit component of the region's TSM strategies. Specifically, the application described the RTDP TSM Element as "maintaining the existing regional bus system and adding the necessary local buses and freeway flyers and fringe parking lots to provide regionwide bus improvements."

C. Scope of Transit TSM Planning and Implementation

The TSM Transit Element of the RTDP consists of three main components. They are basic transit, preferential treatment and issues of community transit. The major goals of Transit TSM are divided among the three components.

1. Basic Transit Component: The primary objectives of this component are to maintain and improve existing transit services and facilities. Efforts toward these ends will focus on immediately improving the management and coordination of transit in the County through:

- Modernizing the bus fleet through bus acquisitions;
- More frequent service and better loading standards in areas affected by service economies; reinstated night and weekend services in areas showing ridership potential;
- Completion of the sector improvement programs;
- Operating efficiency improvements;
- Promotion of transit usage;
- Modernizing maintenance facilities;
- Developing a fleet mix with appropriate size vehicles to conform to ridership patterns and street geometrics.

2. Preferential Treatment: The principal objectives of this component are to improve efficiency for transit of existing roadway facilities and to reduce transit travel times for system users. This component emphasizes preferential treatment on streets and freeways for incremental improvement for line-haul service and will specifically address:

- Expanded bus service on freeways;
- Joint agency projects for preferential treatment;
- Expanded arterial limited and express bus service;
- Expanded park/ride facilities.

3. Issues of Community Transit: This component emphasizes local circulation and feeder distribution requirements in communities. The basic transit component will provide a level of service to meet minimum service standards and access major line-haul transit services. Many communities may wish to build upon the minimum service standards by providing special services

such as dial-a-ride, minibus, additional conventional buses, etc. Specific issues of financing and developing community transit must, therefore, be given priority consideration for integration into the TSM efforts.

II. The TSM Process at RTD

A. Service Policy Development and Review

The District presently has Board adopted level of service guidelines. These guidelines consist of line spacing and frequency of service related to population density and loading standards. This policy is presently under review. Proposed improvements to the present policy include allocation of service by geographical units, (sectors, cities, etc.) on the basis of population and ridership. Such a service policy and procedure will also relate level of service by area to financial ability to provide that service for given budgets. This will avoid the arbitrariness of line spacing predicated on an assumed uniform grid design of routes which may not be desirable or practical in some areas. The existing guidelines are as follows:

1. Accessibility:

- Population Coverage. These objectives apply to local service only which, for this purpose, is defined as service with four or more stops per mile and with no restrictions on passenger boarding or alighting.
 - In areas where population density is greater than 8,000 per square mile, service with a weekday base headway of 30 minutes or less will be provided to within one-quarter mile of 90% of the population.
 - In areas where population density is 4,000 to 8,000 per square mile, service with a weekday base headway of 30 minutes or less will be provided to within one-half mile of 90% of the population.
 - In areas where population density is 4,000 or fewer persons per square mile service with a weekday base headway of 60 minutes or less will be provided to within one-half mile of 90% of the population. This statement will represent the minimum service standard throughout the service area.
- Line Spacing. The population coverage objectives imply spacing objectives (e.g. spacing of one-half mile or less in at least one direction for areas with population density greater than 8,000 per square mile). Appropriate spacing will vary according to terrain, the street system, and the relative demand for travel in different directions.
- Loading. In order to provide an accessible and dependable transit system, headways on local services should not exceed the policy

headways described under the population coverage objectives. All parts of the transit system should also have adequate capacity for safety and to attract and keep riders.

- Loading ratios for individual lines should not exceed 140% measured for the peak 20 minutes at the maximum load point.
- Loading ratios should not exceed 100% for base periods and evenings.
- Loading ratios for long distance free-way and busway services should not exceed 100% measured for the peak half-hours.

2. Service Effectiveness: New services should be designed to meet the objectives specified below. New or existing services not meeting these objectives will be evaluated for remedial action or deletion in accordance with the procedure for treatment of low performance lines outlined in the District's Service Evaluation Program.

a. For local services:

- At least 20 passengers per bus hour (all day).
- At least 2.5 passengers per bus mile in the peak period, and
- At least 1.5 passengers per bus mile (all day).

b. For express service:

- At least 250 passenger-miles per bus hour.

B. Monitoring Current Service and Patronage Through Line Profiles

The District is continually monitoring its current level of service. A goal of the Planning Department is to conduct at least one complete line check per line during a weekday each year and a full line check on Saturday and Sunday for lines that operate on weekends at least every two years. Line profiles are then developed that are used for further analyses and monitoring of existing service.

C. System Efficiency Monitoring and Improvement Through Service Economy Program

Anticipated funding for District operation is obtained primarily from passenger revenues, sales tax funds and federal subsidies. Small additional amounts of revenue are provided by Los Angeles County and other miscellaneous sources. In order to balance projected expense and revenues, a Service Economy Program is in effect that assures a balanced budget. Lines are scrutinized for service reductions that are a compromise between providing minimum

coverage in our service area and concentrating on providing bus service where it is most needed as evidenced by actual ridership.

D. Accounting for Costs and Benefits Through Area Accounts

Area accounts are groups of data on community demographics and service variables filed according to census tract. Through aggregation of the data in suitable groups of census tracts, information can be provided for larger areas. This information allows analysis and comparison of adequacy of service in a particular city or other area from the standpoint of a number of taxpayer equity and system user considerations.

Census tracts were chosen as the common denominator because they are smaller than any logical area that might be chosen for transit-related analyses. If the data were kept only for the larger areas the system would be inflexible. Requests for differently defined areas would require starting over. Just as important, much data is already compiled elsewhere by census tract, which we can easily obtain and put into our files.

Service and patronage data are obtained from detailed line files, where they are stored by direction, by bus trip, and by stop. By coding the stops according to which census tract they are in, each line's data can be disaggregated or broken down into the census tracts through which the line runs. When this is done for all lines, then added, the result is a set of totals for each census tract.

The data is kept in line files until it is wanted in census tract form. That way, any new line data replaces old data as it comes along -- providing a mechanism for continual updating. Each time data is produced for specified areas, it represents the latest information available in the line files.

By keeping lists that say what census tracts compose what other areas (like cities, planning sectors, supervisorial districts, etc.) the area data can readily be provided in many ways. Most of the work involved in keeping area accounts up to date is thus really keeping the line data current, work which would be done anyway to satisfy the long-standing need for line information.

E. Developing, Establishing Priorities, Phasing and Refining Major Service Improvement Proposals

The District currently attempts to accomplish major planning changes using the sector approach. Due to the size of the District area ten (10) individual geographic areas within Los Angeles County have been identified and designated as sectors, which are treated as sub-areas for planning purposes.

The sector approach to bus improvements consists of intensive review of the bus service within each of the existing bus services within each of the 10 sectors comprising the District's service area on a 3 to 5-year cycle. This includes a review of opportunities for modifying existing lines and introducing new concepts in response to changing demands. Modifications may include line extensions, rerouting and/or changing frequencies.

F. Interagency Liaison Process

The prime responsibility for providing public transportation in the Los Angeles area region lies with the Southern California Rapid Transit District.

The District must work cooperatively with many jurisdictions over whose streets and highways District buses operate. Three major agencies the District constantly works with to help resolve mutual problems are:

1. City of Los Angeles: District staff works closely with the Los Angeles Bureau of Engineering and Traffic Departments. A letter from the City Engineer dated June 16, 1978 is evidence of the outstanding on-going cooperation between the District and the City Bureau of Engineering. (Attachment #1).

Additionally, the District has a contract with the City to perform various tasks for the Regional Transit Development Program. The Traffic Department is performing the TSM Element tasks which include identifying and ranking critical sections within the City and developing TSM type solutions. Top management District staff also meet with the City Traffic Engineer and his Deputies on a regular basis in an attempt to solve mutual transportation problems.

2. Caltrans: Continuous liaison between Caltrans Transportation Planning, Traffic and Freeway Operation Branches takes place. Additionally, respective Executive Staffs hold monthly meetings in an attempt to resolve problems in an amicable and professional manner. Attachments 2 and 3 reflect on-going cooperative efforts.

3. The County of Los Angeles: The Los Angeles County Road Department has agreed to act on behalf of the District in dealing with bus operational problems in unincorporated County areas. They will also jointly work with the District and Traffic Engineering staffs of the many cities District buses must operate through regarding TSM solutions to problems encountered.

III. Status of Basic Transit Component

A. Joint Agency Pursuit of Solutions to Critical Operating Problems

The District is cooperatively working with the City of Los Angeles Traffic Department in the identification of problem operating areas throughout the City of Los Angeles. Critical street sections of the

bus route system in the City by time period (7:00-9:00 A.M., 11:00-1:00 P.M., 4:00-6:00 P.M.) were investigated.

A review identified those surface street bus route sections on which general traffic had average route speeds of less than 15 MPH or between 15 and 20 MPH for the weekday, 7:00-9:00 A.M., 11:00-1:00 P.M. and 4:00-6:00 P.M. time periods. Surface street bus route sections were considered deficient if general traffic had average route speeds of less than 15 MPH for any of the three time periods under study or if the average route speed was between 15 and 20 MPH for both the AM and PM peak periods. Approximately 600 street sections were classified as being deficient.

Information on bus line, bus volume, bus patronage and traffic volumes for each deficient street section was inventoried and tabulated. Passenger delays were tabulated and deficient sections ranked.

Investigation of possible TSM solution for highly ranked segments is now being investigated by the Los Angeles City Traffic Department.

B. Line-by-Line Operational Review

A systematic analysis is being made of all aspects of the operations of each line, including service levels, performance, schedules, routes, stops, traffic problems, fares, delays and geometrics. Recommendations will be made to correct deficiencies which may be internally remedied, as well as those requiring corrective measures dependent upon inter-agency cooperation.

C. Planning for Expanded Regional Bus Service on Freeways

A short-range planning program has been developed that will assess the current status of all District freeway operation. Existing surface feeder lines, as well as present freeway service will be analyzed. Freeway transit lines (routes) that could serve to replace or augment existing regional transit lines as part of an initial incrementally developed county-wide freeway transit system will be identified.

These transit lines will:

1. Attempt to provide maximum passenger access and coverage that can be developed within current financial constraints;
2. Develop proper interface with other surface system lines;
3. Expedite movement of freeway transit lines through the CBD.

D. Sector Improvement Schedule

The District has ten established geographic planning sectors. Since 1975 major sector improvements have been made in six of the sectors. They are: (1) South Central Los Angeles; (2) San Fernando Valley; (3) East Los Angeles; (4) Mid-Cities, (5) San Gabriel Valley and (6) South Bay Region. In accordance with the SCRTD Five-Year Plan, study and planning programs are underway on the remaining sectors of the District's service area: (7) West Los Angeles; (8) North Los Angeles; (9) Southern Cities and (10) The Los Angeles Central Business District. The major West Los Angeles sector is scheduled for tentative implementation in 1979.

The overall present sector study cycle is as follows:

	<u>Sector</u>	<u>First Studied</u>	<u>Service Imple-mented</u>	<u>Scheduled Re-Study</u>
#1	South Central	Summer 74	1/75	FY 80
#2	San Fernando Valley	Fall 74	3/75	FY 80
#3	East Los Angeles	Fall 75	1/76	FY 81
#4	Mid-Cities	CY 75	2/76	FY 81
#5	San Gabriel Valley	CY 75	4/76	FY 81
#6	South Bay	CY 76	6/76	Redone FY 78; then FY 82
#7	West Los Angeles*	FY 78 & 79	-	-
#8	North Los Angeles- Glendale	FY 78 & 79	-	-
#9	Southern Cities (combine with South Central)	FY 79	-	-
#10	Central Business District	FY 79	-	-

* Santa Monica Freeway Diamond Lane experimental service was implemented 3/76.

E. Progress Toward Improving Existing and Constructing New Transportation and Maintenance Divisions

Most of the District's maintenance facilities have not had any major improvements for over 30 years. The only recent major improvements have been at the Long Beach Division (Division 12), the El Monte Division (Division 9), the recently completed reconstruction of West Los Angeles Division (Division 7), replacement of the Maintenance building at Highland Park Division (Division 3) and various isolated improvements.

The District's Five-Year Capital Improvement Program provides for the reconstruction of older yards and revisions to newer yards in order to provide better facilities to meet the needs of bus maintenance and operation, as well as to allow for future expansion.

Future plans call for the construction of at least four new bus operating facilities. They are located at (1) West San Fernando Valley, (2) East San Fernando Valley, (3) South Los Angeles and (4) East San Gabriel Valley/Pomona areas.

Additionally, South Park Shops (Division 14) functions as the major overhaul center for all of the operating equipment in addition to providing facilities for activities such as painting, stores building, and other support activities. Many of the buildings were constructed in 1911 and are substandard from the standpoint of earthquake resistance, as well as electrical, heating and cooling equipment. The location of this Division at 5414 Avalon Boulevard makes it difficult for direct access from the freeway network, thereby requiring extra travel time for all units assigned for overhaul, brake refurbishing, or the other functions performed at this yard. A plan is now underway to determine the most cost-effective method of providing the necessary Central Maintenance Facility functions.

F. El Camino Train Service

As part of the recent implementation of the Los Angeles County (El Camino) Train, the District was called upon to provide a train to bus interface at Los Angeles Union Passenger Terminal (Union Station). This service was inaugurated in February 1978.

Extensive cooperation was required in this overall effort between the District, Los Angeles County, Amtrak, Caltrans and the Southern California Automobile Club.

A report on the District's overall efforts was presented to our Board in May 1978.

IV. Status of Preferential Treatment Component

The TSM Transit Element is pursuing immediate action on a number of measures to provide preferential treatment for buses on streets and freeways.

A. Broadway Mall

The District is working cooperatively with the City of Los Angeles in the development of the Broadway Mall Demonstration Project. A grant application under the auspices of SB 283 was forwarded by the City to Caltrans resulting in an approved funding level of \$250,000. Additional monies are being committed from local sources to cover costs for the initial demonstration period.

1. Project Description: This project would initiate a 90-day trial busway and pedestrian mall on Broadway between 2nd Street and 9th Street. The blocks between 5th and 7th Streets would be for the exclusive use of buses and pedestrians. The remainder of the project would provide preferential treatment for bus operations while providing automobile access to existing parking lots. Delivery vehicles would be allowed within the project limits during specific hours. Emergency vehicles would have access at all times.

2. Project Objectives: The objectives of the project are as follows:
 - a. Improved and more attractive bus service.
 - Decreased travel times.
 - Greater patronage attraction.
 - b. Improved pedestrian area.
 - c. Improvement and beautification of the existing Broadway streetscape.
 - d. To determine the effect on traffic throughout downtown.

- e. To determine the feasibility of a permanent transit way and pedestrian mall on Broadway.

Implementation of this project is contingent upon favorable reception from businessmen on Broadway within the project area plus the City's ability to provide appropriate funding levels during the 90-day trial phase.

B. Glendale Boulevard

This project would establish a preferential bus lane on Glendale Boulevard between the Glendale Freeway and First Street. The section of Glendale Boulevard between the Glendale Freeway and Sunset Boulevard would operate as a peak direction, peak period contra-flow lane and the remainder would operate as a combination of peak direction, median, and off-center lanes. Initially, existing bus lines in this corridor would benefit from this project; as short and medium range actions in Freeway Transit are developed, line-haul services could be routed through this corridor.

This project would demonstrate the feasibility and acceptability of establishing peak period bus lanes on streets such as Glendale Boulevard in the City of Los Angeles. It is consistent with the Southern California Association of Governments' Regional Transportation Plan which includes transportation improvements that provide preferential treatment for high-occupancy vehicles.

It is anticipated that the bus lane operation described above would test these hypotheses:

1. Bus lanes increase the people-carrying-capacity and decrease average travel times on the streets subject to the preferential treatment.
2. The bus lanes provide an actual or perceived time advantage to transit riders.
3. The real or perceived time advantage of transit causes a shift from private autos to transit.
4. The overall traffic safety record on the subject streets will not deteriorate.
5. The compliance with bus lane restrictions is feasible without excessive enforcement.

6. The operational costs of the bus lanes are not excessive.
7. The auto drivers, bus passengers, businesses, and residents in the corridor and the general public will view the project as a positive step toward the improvement of transportation in Los Angeles.

A grant application for funding of this project under SB 283 has been forwarded to Caltrans by the City of Los Angeles. The amount of money offered by Caltrans in response to this grant application was not sufficient to implement this project. However, the City of Los Angeles Traffic Department feels that this is still a viable demonstration project. When appropriate funding can be assured, this project will receive City staff agreement and support; at that time, the District will participate fully in the demonstration.

C. Signal Pre-Emption Possibilities

The District has forwarded two likely corridor candidates for signal pre-emption to the City of Los Angeles Traffic Department for their consideration.

1. Wilshire Boulevard Signal Pre-Emption: This project would establish the pre-emption of traffic signals on minor distributor streets intersecting Wilshire Boulevard between the CBD and Beverly Hills. Initially, the existing lines on Wilshire Boulevard which operate on a "limited" basis would utilize the pre-emption mode. Ultimately, short and medium-range free-way transit lines which will serve the regional core would operate in the same mode.

2. Ventura Boulevard Signal Pre-Emption: This project would establish the pre-emption of traffic signals on minor distributor streets intersecting Ventura Boulevard between Reseda Boulevard and Vineland Avenue. Initially, two heavily traveled local lines on Ventura Boulevard would utilize pre-emption. Ultimately, short and medium-range freeway transit lines which will operate through this corridor would operate in the same mode.

D. Other Preferential Treatment Possibilities on Streets

The District has presented to the Interagency Technical Committee a suggested TSM Service/Facility Improvement and Preferential Treatment Project list for consideration. Included on this list are:

1. Seventh Street Transit Facility: The conversion of Seventh Street into an exclusive transit facility between Figueroa Street and Los Angeles Street. This project would improve heavily traveled east/west local transit operations within the CBD.
2. Fifth/Sixth Street Contra-Flow Lanes: This project would establish a permanent contra-flow lane operation on Fifth and Sixth Streets in order to significantly improve CBD east/west transit operation between Beaudry Avenue and Central Avenue.

E. Short-Range Preferential Treatment Projects with Caltrans

District staff has a most productive working relationship with Caltrans in implementing a program of projects on or adjacent to freeways.

1. Bus Bypasses at Metered Freeway On-Ramps: District staff has worked closely with Caltrans in developing bypass lanes for buses at metered on-ramps. The latest project of this nature to be implemented was on the heavily-traveled southbound Hollywood Freeway. Bypass lanes for "Buses Only" were provided at Hollywood Boulevard, Sunset Boulevard, Santa Monica Boulevard, and Silverlake Boulevard and provide travel time benefits for inbound District buses during the 6:30 a.m. to 9:30 a.m. metering period.

2. Long Beach Freeway and Santa Monica Freeway
Stops: As District short-term plans for regional services are developed, staff intends to investigate the feasibility of establishing on-line freeway stops on the above-mentioned freeways. Locations will be determined as to operational feasibility of buses utilizing existing freeway ramps for passenger and local service interface with existing and future freeway transit lines.

3. Venice Transit Center: Currently being actively pursued by Caltrans, City of L. A. and three transit operators, this project would establish a Transit Center/Terminal in the Venice Boulevard median strip near Pacific Avenue in Venice. This facility would permit interfacing existing District operations with the Santa Monica and Culver City Municipal Bus Lines, as well as providing layover/turnaround facilities for all three carriers. The facility's type and location are in conformance with District short-range plans and with the medium and long-range plans of the Freeway Transit Element of the RTDP. It is also an important component, along with the West Los Angeles Transit Center (Santa Monica Freeway and Fairfax Avenue), in the development of a high-capacity bus-based line-haul system for the West Side area.
4. West Los Angeles Transit Center: Presently in early stages of negotiation between SCRTD and Caltrans, this project would establish a transit

interface point in the vicinity of Fairfax Avenue/Washington Boulevard or Venice Boulevard/La Cienega Boulevard adjacent to the Santa Monica Freeway. Short, medium and long-range Freeway Transit lines would be able to easily interface with District local service on the West Side, as well as with Santa Monica and Culver City Municipal Bus Lines. The facility's type and location are in conformance with District short-range plans and with the medium and long-range plans of the Freeway Transit Element of the RTDP. It is also an important component, along with the Venice Transit Center, in the development of a high-capacity bus-based line-haul system for the West Side area.

5. North Long Beach Transit Center: Presently being considered by Caltrans, this project would permit interface between the District, Long Beach Public Transportation Company, and possibly the Gardena Municipal Bus Lines in the vicinity of the Long Beach Freeway and Artesia Boulevard (Artesia

Boulevard and Butler Avenue). This facility may also serve as a Park/Ride lot for enhanced passenger convenience in using Long Beach Freeway transit services. Many District local lines which presently terminate in the general area would interface with the facility as well.

6. Universal City Transfer Facility: This project would establish a bus transfer facility north of the vicinity of Ventura Boulevard and Fruitland Drive. The facility location is in conformance with short, medium and long-range Freeway Transit plans and would afford passengers most convenient access to service options destined for Hollywood-Wilshire, the L.A. CBD or the East or West Valley areas.

The District has had preliminary discussions with Caltrans regarding the use of the site. The possibility of providing an exclusive bus ramp from the existing Park and Ride lot to the south-bound Hollywood Freeway will be investigated.

V. Status of Integration of Issues of Community-Level Transit

A. Tasks that Need to be Accomplished Before a New Source of Funds is Found for Community Transit

In October 1977, the Interagency Technical Committee drafted a work program for integrating issues related to "community transit" into the TSM Transit element. This component emphasizes circulation and feeder requirements in localized areas. It recognizes that many communities may wish to build upon service standards met by RTD and others by providing special services. The work program further recognizes that such services are heavily dependent upon increased financial resources for public transportation. To better understand the effort required for community transit, ITC divided its consideration into those tasks that need to be done before a new source of funds is found and those that must await the new resources.

1. Define Service Options and Operating Constraints

for Each Option: A list will be prepared of various types of service and technologies that are or will be operational within the next

3-4 years. These will include conventional systems such as improved buses of varying capacities and performance, people mover concepts, supported and suspended fixed guideway systems, jitneys and shuttle systems. Performance characteristics, capacity, and estimated costs will be provided for each.

2. Consider General Routing Options: Work with the citizens groups to advise them on the application of the technologies to specific applications.
3. Assist in Defining Community Boundaries: As a starting point, the initial outline of communities must be identified to the extent necessary to provide a focus for community planning, citizen involvement and any financial allocation plan.
4. Develop Funding Allocation Criteria and Methodology: Prior analysis on the Starter Line, Freeway Transit, Downtown People Mover and Basic Transit and Preferential Treatment provide reasonable cost estimates for implementing and operating these parts of the RTDP over the next

20 years. However, community transit has not been costed and perhaps should be approached on the basis of a designated portion of a new funding source to be returned directly to communities. Thus an allocation methodology must be developed, perhaps based on a population--population density basis.

B. The "Paratransit Advisory Committee" Report on Operating Options and Constraints

In March of 1977, the SCRTD Board of Directors established the Paratransit Advisory Committee. This group, composed of representatives of SCRTD, municipal operators, social service agencies, SCAG and regulatory agencies, was set up to investigate the status of paratransit in Los Angeles County and to suggest opportunities for coordination of funding, transfers and reduced fare programs.

In December 1977, this group presented a report of the results of this investigation to the SCRTD Board of Directors. This report presented analysis of the needs and options for additional services,

recommendations for coordination of fixed route and paratransit services and ways of maximizing funding available to all operators.

The interagency dialogue fostered by this committee, as well as the recommended actions of the report, will do much to further coordination of transfers, facilities, schedules, dispatching and routes. The report itself represents a general view of the non-fixed route, paratransit options for community transit and the operating and administrative constraints associated with them. A final report is tentatively due to be presented to the District Board in June 1978.

C. General Service Placement and Routing Options

After months of investigation, in December 1977, RTD staff presented to the District Board of Directors an inventory of areas which are candidates for minibus operations should additional funding and equipment be obtained.

This inventory is grouped into three categories:

1. Placement of minibus equipment on certain present regular route services.
2. The establishment of supplemental routes in areas where present services are operated -- contingent on supplemental funding being provided.
3. The establishment of new services in areas where standard transit buses cannot operate or where special equipment would be required -- primarily in hillside or canyon locations where streets are narrow or have short turning radii and where neither standard transit buses nor presently available minibuses would be suitable.

Furthermore, the staff report discussed criteria for establishment of these services. Far more than simply an inventory of possible minibus operations, this report fundamentally deals with the establishment of new community-level transit services which exceed

SCRTD's present budget and service policies. This detailed and comprehensive study is a good start on developing one of the key options for community transit services, fixed route shuttle service.

D. Initial Definition of Community Planning Areas

Since time and manpower were not available to conduct original research or an extensive study of communities in Los Angeles County, it was decided a committee of experienced people would be able to provide a reasonable determination of compatible community areas which could serve as a base for intra-community transportation planning. The total membership of the committee included personnel from the following agencies:

County of Los Angeles, Regional Planning
Department

City of Los Angeles, Planning Department

City of Los Angeles, Public Utilities &
Transportation Department

Southern California Association of
Governments

Southern California Rapid Transit District

The basis for arriving at community boundaries for transit planning purposes included:

- City boundaries
- Census Tract boundaries
- Community planning areas of the City of Los Angeles
- Major physical features
- Existing transit systems
- Potential for acting as a feeder to the RTDP
- History of cooperation/identity
- Presence or planned development of a major generator
- Transit dependence

In addition, a target of 100,000 to 150,000 population in an area of 15 to 25 square miles was regarded as optimum.

The factor of city boundaries was adhered to generally with communities made up of one or a combination of cities. The major exception was the City of Los Angeles which was divided into the City Planning Department's planning areas. Minor exceptions occurred

where a census boundary was followed to insure statistical inclusion. The committee finally selected and identified 52 community areas for further study throughout Los Angeles County.

E. Impacts of Funding Allocation Options

The Finance Sub-committee of ITC has been considering a number of alternatives for financing the RTDP. Among these are some of which allocate various proportions of new funding sources to Community Transit services. Beyond assessing the impacts of these various allocations, the sub-committee is investigating criteria and methodology for allocating funds among communities or areas. The difficulty of identifying new funding sources together with the rapidly changing climate relative to financing of public services indicates that completion of this task may be some distance into the future.

F. Tasks that can only be Accomplished Subsequent to Establishing a New Funding Source

These items of work on community transit must await identification and commitment of new financial

resources for the purpose of providing community transit services. They are described here to complete presentation of the ITC work program.

1. Definition of Specific Community Boundaries

and Needs: As a starting point, the initial outline of the community must be defined. This initial configuration will consider area size, population characteristics, and political boundaries. Detailed maps of the communities (primarily U.S.G.S. maps) will be inspected for open areas, street discontinuities, and topographic features that might further define the community boundaries. The communities will be field-checked for land use and general character.

To enable investigation of possible transit needs in the community, a profile and distribution of population characteristics must be assembled.

At least the following data, from Census reports and various County of Los Angeles sources, should be studied (by Census Tract and for the community in aggregate):

- Population and population density
- Housing unit density
- Median family income
- Population with income below poverty level
- Households with no auto available
- Population 65 and older
- Population under age 16
- Population receiving County aid to totally disabled
- Persons unemployed
- Minority group populations

The community configuration will also be affected somewhat by probable line-haul station spacing as proposed in the other element of RTDP, or by the location of freeway system interchanges. Other factors that might prove useful in community definition and needs study include the districts for primary and secondary schools, the primary trade area of commercial centers, and the location of community organizations. Community boundaries need not be over-emphasized as a

factor because they are flexible as far as system layout is concerned. They become much more important in the detail planning.

2. Definition of Level-of-Service Assumptions: An initial assumption in delineating services in the communities will be relatively high level of service if the system is to provide local community circulation. As seems appropriate, based on review of community needs information, assumptions as to the level of service in a community will be developed.

Important in level of service is the fact that the system being designated for the community must serve three types of transit travel:

- Intra-community local circulation
- Feeder/distribution service to future line-haul transit systems
- Inter-community travel not occurring on the line-haul system

This latter classification is important for several reasons. First, the basic configuration of various line-haul transit systems prevents

service of every inter-community travel need. Second, because of transfers and the out-of-direction travel involved, there is a place in the regional transit system for surface transit lines which parallel freeway or rail rapid transit routes. Third, and perhaps most important, the community being served may not provide all social and economic services necessary for its residents.

3. Layout of Candidate Services: A first step in planning systems with each community is to map existing surface transit routes. In many relatively dense areas, existing RTD service often approximates a grid system. In all areas, the location of these surface transit routes may indicate the location for inter-community non-line-haul surface transit connections.

Three distinct types of service systems might be investigated for a given community:

- Conventional Bus
- Demand Responsive Service
- Automated Guideway Transit

4. Integration with Other RTDP Elements: Each of the systems thus laid out will be checked against possible locations for rail rapid transit stations or freeway express bus stations or access points. In some cases (particularly for the bus-on-freeway express system), some sort of shuttle connections might be necessary. Also, in outlying communities, it is possible that express buses using the freeways could move directly from the freeway into arterials and into community central areas.

A final step in laying out the systems will be to recheck the system layout with community boundaries. Both will be modified where necessary to match the available data base, which is mainly oriented around LARTS analysis zones.

5. System Performance Estimates: The first step in developing performance estimates for each system will be to map them out on U.S.G.S. scale maps (1 inch = 2,000 ft.). The systems will then be measured and converted to one-way route miles.

With the length of the system set and performance standards such as headway and average speed assumed, the systems' daily vehicle-hours and vehicle-miles could be calculated. The demand-responsive service calculations will have to follow a different procedure from those for the other services.

The key point in this step is the basic assumed or measured values that are input to the performance variable equations. Speed is an assumption that can be varied, though probably not too greatly within each generic system type. Headways, on the other hand, along with the extent of the system (miles of routes) are the key variable under the control of the system planner. These quantities will be selected or developed to match the goals and objectives of the specific community.

6. Service, Patronage and Benefits Estimation: The patronage estimating procedure will divide patronage into two categories: (1) local travel (including

intra-community and inter-community, non-line-haul), and (2) feeder/distribution travel to and from the rapid transit or freeway transit stations. The procedures to be used here are necessarily of a lower level of precision and sophistication than those used in forecasting regional travel and mode choice. Because of the virtual absence of proven techniques for modeling local travel, application will be made here of typical experience observed throughout the country.

Economic benefits to the service users will be estimated to include:

- Savings in time and automobile costs for trips made by others to chauffeur transit dependents;
- Savings in cost for trips now made by taxi. Part of these costs might be paid by public agencies in the absence of community responsive systems.

Other social benefits of the service may be identified.

7. Service Cost Estimates: The actual cost, for any point in time, to provide circulation and distribution transit service in local communities in the Los Angeles Basin is a highly variable quantity. Much depends upon the specific equipment selected and upon the fiscal policies and constraints imposed by both the federal government and the local area. Fixed-guideway system costs, for example, are heavily dependent upon systems which are not in widespread use and have not yet achieved economies through standardization and mass production. Many of the newer systems have had limited or no service applications, making operating statistics speculative at best. However, for comparative purposes, it is reasonable to use the most current information available to estimate the order-of-magnitude capital and operating costs required for different types and levels of service to a given area. The methodology to be followed will allow individual

communities to evaluate the comparative monetary implications of alternative transportation policies and to simplify the preplanning selection of alternative systems.

The cost statistics to be used will be gathered from a variety of sources and represent the composite estimates of the most current cost data. Specific equipment systems will be grouped into generic categories, analyzed, and a representative capital cost average determined. In a like manner, operating costs will be developed from a range of values experienced by transit system operators. In the case of conventional buses, current area bus lines providing local service will be used as a base. Capital and operating costs will be developed separately. In order to obtain a common base of comparing costs of alternative systems, all costs could be converted to a uniform equivalent annual cost.

8. Concept Plan Assembly: The procedures described here can be applied for the estimation of system performance, patronage, and costs of community transit services in selected pilot areas. The data can be presented through the community involvement process described in Task 1. Assumptions made and values assumed should be continuously replaced with better data when improved information becomes available. It must be stressed that the patronage and cost estimates are intended to give general order-of-magnitude information and must be carefully reviewed prior to decisions on further planning within any community.

As reviewed and revised or accepted by various community committees, the data resulting from these processes should form an adequate starting point for detailed planning of systems within communities. The data developed can then form the basis for policy decisions about the type and extent of such community transit systems.

Furthermore, combinations of systems are not likely to be specifically analyzed in this study, with the exception of the supplemental bus in the people-mover systems. For instance, although demand-responsive transit would appear to have its most reasonable application in low-density areas, it is conceivable that demand-responsive transit can be used to supplement conventional fixed-route/fixed-schedule transit for certain types of travel and certain periods of the day in locations where vehicle inventories and driver training will allow such dual services.

Also, other "paratransit" concepts would fit in between private auto travel and conventional bus travel, and would include taxi, jitney, carpool, vanpool, and subscription bus, as well as the demand-responsive bus analyzed in this work program.

VI. Relationship of Transit TSM to the Other RTDP Elements

TSM is a process involving both planning and implementation of a transportation system. The concept ties together the network of existing facilities and resources into a single system. TSM transit improvements comprise the program for short-range maintenance and development of the transit system.

TSM must be the initial step in implementing all longer-range projects. The Regional Transit Development Program consists of these elements:

- I. TSM Element
- II. Regional Freeway Transit
- III. Los Angeles Downtown People Mover
- IV. Regional Core Rapid Transit

TSM actions must proceed and be integrated with long-term plans for Elements II, III and IV. Only if the transit system is strengthened or expanded to meet short-range needs can the longer-range projects expect to succeed.

The specific goals of the transit system TSM are:

- Improve coordination of SCRTD service with other carriers in region;
- Improve local circulation and feeder/distribution service in communities throughout Los Angeles County;
- Improve access and be complementary to other elements of Regional Transit Development Program.

This last goal depends very heavily upon provision of preferential treatment for ingress and egress of buses to stations developed for Elements II, III and IV of the RTDP.

In turn, the other RTDP elements do, indeed, depend upon these transit TSM components for immediate, near-term action that are being integrated into the overall program:

- Updated transit fleet through new bus acquisition;
- Introduction of higher capacity and medium-sized transit vehicles;
- Completion of Sector Improvement Programs;
- Joint Agency projects for preferential treatment;
- Expanded bus service on freeways;
- Additional Park/Ride facilities;
- Reinstated night and weekend services in most promising areas;

- Development of low-capital spot improvements that will result in improved bus operation on congested surface streets;
- Develop courses of action for Community-Level transit services;
- Contingency planning for response to energy crisis;
- Development of level of service and productivity guidelines;
- Internal operating efficiency improvements of the transit system;
- Joint Agency efforts for improvements in flow of transit vehicles by modification of traffic control strategy;
- Improve existing and construct new Transportation and Maintenance facilities.

CITY OF LOS ANGELES

CALIFORNIA



TOM BRADLEY
MAYOR

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CITY ENGINEER
ROOM 800, CITY HALL
LOS ANGELES 90012

DATE JUN 16 1978 JUN 19 1978

Mr. Paul C. Taylor
Director of Bus Planning
Southern California Rapid
Transit District
425 South Main Street
Los Angeles, California 90013

P.C.T.

RECEIVED

JUN 19 1978

SURFACE PLUG.

Dear Mr. Taylor:

Your letter of March 14, 1978, to the Interagency Technical Committee suggested various Transportation Systems Management (TSM) actions for transit service/facility improvements and preferential treatment projects on streets and freeways. My office is already working on several projects that fit into your TSM actions. You are, of course, aware of some of these. However, to be comprehensive, I will review all of our projects which apply to your plan.

The Broadway Bus Mall is being designed by my staff. The Venice Transit Center is under conceptual study and a draft EIR is being prepared. In addition, my staff is preparing plans for widening Glendale Boulevard to four lanes in the peak direction from Sunset Boulevard to the Glendale Freeway. Another project, which is to begin the environmental process next fiscal year, will provide three lanes plus a left turn pocket in the peak direction on Glendale Boulevard between Cortez Street and Sunset Boulevard. These projects should provide much needed relief for all traffic along this stretch of Glendale Boulevard.

Three ongoing programs of value to bus operation, but not indicated in your letter, are also being done by my staff. The Bus Safety Program is a study to determine the street-facility-related causes of bus accidents and to recommend corrections. Recommendations include bus loading bays, larger radius curb returns, and concrete bus pads. Construction of needed facilities appears in the City's 5-year Capital Improvement Program. The highest priority portions are scheduled for 1978-79.

ATTACHMENT 1

ADDRESS ALL COMMUNICATIONS TO THE CITY ENGINEER

AN EQUAL EMPLOYMENT OPPORTUNITY—AFFIRMATIVE ACTION EMPLOYER

Secondly, my staff is developing a Bus Stop Facilities Program which is pointed toward improvements such as concrete sidewalks, shelters, telephones, etc. A study is underway to determine locations in need of improvements. Actual design is slated to begin next fiscal year. In addition, design or construction is proceeding on several bus passenger shelters within the central City area. A City-wide shelter program is under consideration by the City Council.

Thirdly, the street improvement program annually includes widening of streets and elimination of jogs and bottlenecks to provide better traffic circulation. This is ongoing under the 5-Year Capital Improvement Program.

I understand that RTD, together with the Traffic Department, has identified locations throughout the City where bus service suffers from traffic congestion. I would like to have the opportunity to review those locations with you so that projects can be developed, if necessary, to alleviate the problems. My staff is putting together our 1979-80 work program. It is certainly possible and advisable to get started now in development of projects to meet your TSM goals.


Several actions outlined in your letter would best be developed as joint projects involving both RTD and the City. I am prepared to work with you in development of funding for and implementation of:

- Establishment of a Bus Turnaround in the vicinity of Sunset Boulevard and Pacific Coast Highway.
- Seventh Street Transit Facility.
- West Los Angeles Transit Center.
- Universal City Transit Center.

Also, I am prepared to assist your efforts in:

- Line-by-Line Operational Review
- Establishment of Layover and Bus Staging Areas in the vicinity of the CBD.
- Santa Monica Freeway stops.

Sincerely,


DONALD C. TILLMAN
City Engineer

DEPARTMENT OF TRANSPORTATION

DISTRICT 7, P.O. BOX 2304, LOS ANGELES 90051



RECEIVED

MAR 13 1978

GENERAL MANAGER
S.C.R.T.D.

March 9, 1978

07-LA-101
Hollywood Freeway from Route 11
to Ventura Freeway
07393 - 936072 - 30082/85Mr. Jack Gilstrap
General Manager
Southern California Rapid Transit District
425 South Main Street
Los Angeles, CA 90013

Dear Mr. Gilstrap:

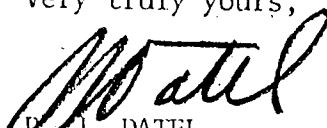
There are at present on the Hollywood Freeway three ramp meter bypass lanes for the exclusive use of buses. Three additional bus bypass lanes are being added under the soon to be completed project to provide ramp control on the Hollywood Freeway between the 4-level Interchange and Hollywood Boulevard, as indicated in my February 27, 1978 letter.

As requested in your letter dated December 16, 1977 my staff has taken the necessary steps to locate these three new bypass lanes to the left of the metered lane and to relocate the existing bypass lane at the southbound Silver Lake Boulevard on-ramp from the right to the left side.

The reservation of these ramp meter bypass lanes for the exclusive use of buses is an interim measure. Most or all of these bypass lanes will be made available to all types of High Occupancy Vehicles (HOV), such as car pools and van pools in addition to buses, once a workable solution is found to the problem of violators at these HOV bypasses.

Thank you for your cooperation.

Very truly yours,



R. J. DATEL
District Director

cc: Ben Urban

ATTACHMENT 2

DEPARTMENT OF TRANSPORTATION

DISTRICT 7, P.O. BOX 2304, LOS ANGELES 90051

Telephone No: (213) 620-2408



April 13, 1978

RECEIVED
APR 17 1978

R. II.

Mr. Benedict E. Urban
Principal Planner
Southern California Rapid
Transit District
425 South Main Street
Los Angeles, CA 90013

Dear Ben,

This will confirm our agreement today regarding the proposed eastbound Mission Road off-ramp lane configuration.

Caltrans will restripe the off-ramp to three lanes with an eleven foot lane on the left as shown on the attached plan. Buses coming off the eastbound pylon-divided lane will only be required to merge one lane to the left, just as they are now doing with the present two lane operation.

Mission Road will also be restriped as shown on the other attached plan. The limit line for southbound Mission Road will be placed to clear a truck-trailer combination turning from the left off-ramp lane.

Our resident engineer has informed us that this off-ramp and Mission Road will be restriped next week. This striping will give us the opportunity to monitor and evaluate operations before the off-ramp traffic increases when the pylons are installed.

We would like to again reassure you that if monitoring shows that bus operations are materially affected, other revisions will be made as quickly as possible.

I want to thank you again for this meeting and look forward to our continued working together in resolving mutual problems.

Sincerely,

R. W. NOAD
Senior Transportation Engineer
Freeway Operation Branch

Attachments (2)

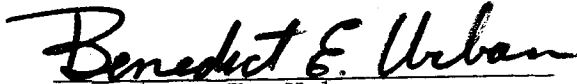
ATTACHMENT 3

cc: Bill Russell - CHP; Phil Richardson - City L.A. Engineering;
Don Bass - City L.A. Traffic; Bert Clark - Traffic;
Sam Black - SCRTO Operations

ACKNOWLEDGEMENTS

Report Prepared by:

SCRTD Planning Department


Benedict E. Urban
District TSM Group Manager

