U.S. Department
of Transportation

Research and
Special Programs
Administration

John A. Volpe
National Transportation
Systems Center

APPENDIX TO PROJECT MEMORANDUM

METROPOLITAN PLANNING REVIEWS

EXAMPLES OF MPO DOCUMENTATION

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May 16, 1995

Prepared for:

U.S. Department of Transportation
ITS Joint Program Office

Foreword

This project memorandum was prepared by the U.S. Department of Transportation's (U.S. DOT) John A. Volpe National Transportation Systems Center (Volpe Center) under PPA HW-552 with the U.S. DOT's ITS Joint Program Office. Ms. Anne McEwan of EG&G/Dynatrend was the principal author. Mr. Allan J. DeBlasio of the Volpe Center's Economic Analysis Division is the project leader and should be contacted concerning comments on this report at (617) 494-2032.

This document contains information subject to change. It is considered an informal technical document for working level communication and dissemination of preliminary information within the cited project. The Volpe Center project leader is responsible for distribution of this report.

HOUSTON

ELEMENT 3.2 DEVELOPMENT AND MAINTENANCE OF THE CONGESTION REDUCTION/MANAGEMENT PLAN

OBJECTIVES:

1. To identify short and long range Transportation Control Measures (TCMs) to improve traffic flow and congestion.
2. To evaluate the potential emissions reductions of TCMs.
3. To estimate VMT reductions resulting from TCM applications.
4. To calculate the cost-effectiveness of potential TCMs.
5. To develop a TCM Program which can be incorporated into the State Implementation Plan (SIP).

BACKGROUND:

ELEMENT 3.2.1 DEVELOPMENT OF THE REGIONAL CONGESTION REDUCTION MANAGEMENT PLAN

The Clean Air Act Amendments signed into law in 1990, incorporates strict deadlines for mobile source emissions reduction and requisite highway sanctions if deadlines and requirements are not met. The Act mandates that "severe" nonattainment areas for ozone must revise their State Implementation Plans to adopt TCMs, to offset growth in emissions from growth in VMT, as well as employer trip reduction programs. The purpose of implementing these requirements is to modify travel demand and limit emissions related to traffic congestion.

On November 26, 1991 Congress enacted the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). This legislation mandates that Transportation Management Areas (urbanized areas with populations over 200,000) include as part of the planning process a "congestion management system that provides for effective management of new and existing facilities... through the use of travel demand reduction and operational management strategies". Congestion Management (CM) has become the accepted term to describe a system of actions whose purpose is to alleviate traffic problems. The term incorporates aspects of Transportation Systems Management (TSM) and Travel Demand Management (TDM). The aim of CM is to reduce the need or demand for making trips while making the most efficient use of existing facilities.

The common goals of the CAAAs and ISTEA, to reduce traffic congestion and the resulting emissions, can be met by implementing a Congestion Management Plan and a TCM Program. Through the effective USC of TSM and TDM strategies, traffic flow and congestion can be improved and air quality can be improved.

The following conceptual Scope of Work identifies the major components and the intent of the Congestion Management Plan.

ELEMENT 3.2.2 DEMONSTRATION OF ADVANCED CONGESTION MANAGEMENT PLAN TECHNOLOGIES

This element provides the opportunity to demonstrate the abilities of strategies for

technologies are significant components of the development and implementation of Element 3.2.1. Specifically, these components are those strategies that seek in a real-time manner to better manage the transportation system, as well as the demand for travel on that system. This element focuses on the testing of two different, but interrelated concepts as presented in the Concept Design and Implementation Program for the Houston Smart Commuter Dcmonstration Project, developed by the Smart Commuter Project Management Team. These concepts are but two of many IVHS oriented projects currently under development in Houston, many of which could prove to be important elements to the development, implementation, and maintenance of a Congestion Management Plan.

STAFF ACTIVITIES:

ELEMENT 3.2.1 DEVELOPMENT OF THE REGIONAL CONGESTION REDUCTION/ MANAGEMENT PLAN

Task 1. Refine plan design.

Early in the study, a steering committee will be formed to review and refine the scope of work and plan design

Task 2. Data collection and assembly.

It is anticipated that several types of data will need to be collected, assessed and assembled to complete this study. Various data classifications that may be useful to the project will be investigated for their usefulness.

Task 3. Inventory of methods.

Assemble an inventory of methods that may be used to address congestion. These methods will include TCM strategies from both TSM and TDM. These strategies will include, but are not limited to the following:

- Curb cut and median restrictions
- Channelization and intersection improvements
- High occupancy vehicle lanes
- Signal coordination and timing
- Ramp metering
- One-way street conversion
- Reversible lanes
- Restricted deliveries during peak periods
- Auto restricted zones/Transit malls
- Bus shelters and amenities
- Parking controls
- Guaranteed ride home
- Congestion pricing
- Land use controls
- Telecommuting
- Intelligent vehicle highway systems
- Improvements to existing transit services
- On-site transit information and ticket sales
- Transit marketing
- Pedestrian improvements

Task 4. Define range of appropriate TCMs.

Identify and discuss the specific applications *of* the methods mentioned in Task 3.

Task 5. Analyze TCM impacts,

Based on the list of potential TCMs defined in Task 3, an analysis of impacts will be conducted including:

a. Trip and VMT reductions resulting from implementation of TCM strategies.

b. Emissions reductions resulting from implement&ion of TCM strategies.

c. Potential TCMs effectiveness in producing emissions reductions sufficient to offset growth in VMT and vehicle trips.

d. Implementation and maintenance costs.

c. Potential relocation of development and/or VMT resulting from area-specific TCM applications.

Task 6. Develop implementation strategy.

Identify institutional implementation responsibilities and the various processes and instruments that local government can use to implement the plan.

a. Examine alternative strategies for the implementing of the methods presented in the Congestion Management Plan.

b. Identify the roles of each institutional group toward the implementation of strategies presented.

- Private sector (major employers)
- City
- State
- Federal
- Harris County Metropolitan Transit Authority

c. Prioritize implementation strategies and identify opportunities and/or constraints.

Task 7. Final Report

a. Preparation of a Congestion Management Plan.

b. Preparation of a Transportation Control Measures Program.

ELEMENT3.2.2 DEMONSTRATION OFADVANCED CONGESTION MANAGEMENTPLAN TECHNOLOGIES

1. Demonstration of advanced traffic and transit information system

To improve the peak period efficiency of a traditional suburban to downtown travel corridor (I-45 N) through greater utilization of high occupancy commute modes, shifts in travel routes and changes in travel time through the application *of* innovative communication techniques using advanced technologies.

a. Smart Commuter Bus and Traffic Information System development (METRO, TTI, TxDOT)

b. Recruitment of test and sample groups (METRO, TTI, TxDOT)

c. Initiate and conduct demonstration (METRO, TTI, TxDOT)

d. Monitoring and evaluation of demonstration (TTI, METRO, TxDOT, H-GAC)

2. Demonstration of instant ridesharing matching service

To improve the peak period efficiency of an emerging suburban to suburban travel corridor (I-10 W) through the provision of instant ridesharing matching services.

a Instant rideshare system development (METRO, TTI, TxDOT)

b. Recruitment of participating employers and employees (METRO, TTI, TxDOT)

c. Initiate and conduct demonstration (METRO, TxDOT TTI)

d. Monitoring and evaluation of demonstration (TTI, METRO, TxDOT H-GAC)

PRODUCTS:

ELEMENT 3.2.1 DEVELOPMENT OF THE REGIONAL CONGESTION REDUCTION/MANAGEMENT PLAN

1. Inventory and definition of the methods that may be used to address congestion.
2. An identification of the roles and strategies to aid the implementation of the Congestion Management Plan and the Transportation Control Measure Program.
3. A Transportation Control Measures Program that can be incorporated into the State . Implementation Plan.

ELEMENT 3.2.2 DEMONSTRATION OF ADVANCED CONGESTION MANAGEMENT PLAN TECHNOLOGIES

A final report on the project detailing the results of a comprehensive evaluation program of the two technology demonstrations will be produced. This report will provide some vital feedback to development and implementation of the Congestion Management Plan (Element 3.2.1) in terms of the viability of using advanced (IVHS) technologies in impacting the level of congestion. As this project will be conducted in a complementary and compatible manner with other system oriented IVHS projects in the Houston area, the exchange of experiences and results also will provide an increased level of benefit to the successful implementation of a Congestion Management Plan

ELEMENT 3.2.1

DEVELOPMENT OF THE REGIONAL CONGESTION REDUCTION/MANAGEMENT PLAN

RECIPIENT AGENCY		FUNDING SOURCE						
		FTA	FHWA	STATE	LOCAL	FAA	UNFUNDED	TOTAL
H-GAC	Agency	60,000	70,000					130,000
	Consultant			200,000				200,000
	Contract							
H-GRTS	Agency			72,000				72,000
	Consultant							
	Contract							
TOTAL	Agency	60,000	70,000	72,000				202,000
	Consultant			200,000				200,000
	Contract							
	TOTAL	60,000	70,000	272,000				402,000

1993-94 UNIFIED PLANNING WORK PROGRAM BUDGET

($ THOUSANDS)

NO.	FY92	TASK DESCRIPTION	PROJECT TOTAL	FEDERAL	STATE	NCTCOG/ LOCAL	RPO
1		TRANSPORTATION PLAN PROGRAMMING AND IMPLEMENTATION					
1A		Regional Transportation Plan Monitoring	50	40	10	0	0
1B		TIP Preparation/Project Refinement	250	200	50	0	0
1C		Transportation Enhancement Programming	75	60	15	0	0
1D		Regional Thoroughfare Plan	30	24	6	0	0
1E	1e	Suburban Mobility Initiatives	45	45	0	0	0
1F		TxDOT/MPO Travel Forecast Coordination	30	24	6	0	0
1G		Regional Traffic Count Program	100	80	20	0	0
1H		Regional Transportation Information System	150	120	30	0	0
1I		DFW Regional Travel Model Updates	100	80	20	0	0
1J		Demographic Forecasts & Monitoring	350	280	70	0	0
1K		1994 Regional Travel Survey *	1200	960	240	0	0
1L		Transportation Corridors Before/After Studies	50	40	10	0	0
1M		Transportation Environmental Mitigation	35	28	7	0	0
1N		Regional Commuter Rail Feasibility Study	200	160	40	0	0
1O		Transportation Enhancement Planning	50	40	10	0	0
1P		Economic Impact of Transportation Investments	50	40	10	0	0
		CATEGORY TOTAL	2765	2221	544	0	0
* Additional State Funds for the Regional Travel Survey are being pursued by TxDOT Division 10							
2		REGIONAL CONGESTION MANAGEMENT AND PROGRAMMING					
2A		Regional Congestion Management Plan & Program	200	160	40	0	0
2B		Congestion Management System Data Development	100	80	20	0	0
2C		Regional Freeway Incident/Motorist Assistance	50	40	10	0	0
2D		Regional Parking Supply & Cost Inventory	20	16	4	0	0
2E	2e	IVHS Application for Arterial Streets	145	0	139	6	0
2F		Freeway Construction Management Program	50	40	10	0	0
2G		IVHS Technology Assessment: Phase 2	50	40	10		
		CATEGORY TOTAL	615	376	233	6	0
3		AIR QUALITY PLANNING					
3A		Monitoring the Implementation of TCMs	100	80	20	0	0
3B		TIP Conformity Analysis	50	40	10	0	0
3C		Air Quality/TDM Planning	100	80	20	0	0
3D	3d	Alt Fuels & Technology Implementation Plan	16	0	15	1	0
3E		Air Quality Public Information Program	50	40	10	0	0
		CATEGORY TOTAL	316	240	75	1	0

2D **Regional Parking Supply and** Cost Inventory

Availability of parking within the Dallas and Fort Worth Central Business Districts as well as in or near suburban employment centers is an important travel mode decision factor. An inventory of the supply and costs of parking will be the result of a regional parking survey. This project will also examine modifying parking costs and supply as a means of congestion management and identify potential pricing techniques. Consultant assistance may be requested on this project.

2E 2e **Intelligent Vehicle/Highway System Application for Arterial Streets**

This project will identify and evaluate low-cost, existing first generation IVHS technology as a potential congestion management strategy. Specifically, this project will identify five congested nonfreeway corridors (in the older, established areas of the Dallas-Fort Worth Metropolitan Area) **as** candidates for implementing "smart" technology. Project recommendations would complement current local government and TxDOT investments and would deal with both recurring and nonrecurring congestion. The focus will be on Roadways of Regional Significance. Identification of energy consumption, air quality, and travel benefits would be included, along with the comparison of various technological improvements. Funding from this project is being provided through the Texas Department of Transportation (TxDOT) Oil Overcharge Program.

2F **Freeway Construction Management Program**

Long-term major reconstruction in established freeway corridors can increase traffic in the freeway corridor in addition to forcing altered travel patterns. This study will identify methods of mitigating the negative impacts using travel demand management measures such as rideshare/carpool/vanpool incentives, high occupancy vehicle lanes, an extensive public information dissemination effort, encouragement of flexible/alternate work' schedules, or parallel public transit alternatives. Reviewing successful procedures and developing specific strategies will be part of this project. This effort will involve working closely with the Texas Department of Transportation, transportation authorities, and local governments to identify candidate freeway corridors and appropriate congestion mitigation strategies.

2G **IVHS Technology Assessment: Phase 2**

This project would provide for the investigation of IVHS technology on the **region's** transportation system. Various technologies including advanced traffic management systems (ATMS), advanced public transportation systems (APTS), advanced traveller information systems **(ATIS),** advanced vehicle control systems (AVCS), and commercial vehicle operations (CVO) will be investigated for their effectiveness in relieving traffic congestion and improving air quality. In addition, the interrelationship and communication between the various IVHS subsystems will be investigated and standards proposed based on existing communications standards. Consultant assistance may be requested on this project.

MINNEAPOLIS/ST. PAUL

TABLE C2
STATUS OF TWIN CITIES AREA TSM STRATEGIES

TWIN CITIES AREA TSM STRATEGIES	STATUS
Vehicle Inspection/Maintenance (Listed in Transportation Control Plan as TSM Strategy) • Establish VIM program	• Program became operational in July, 1991
Staggered Work Hours . Variable work hours-implemented by various agencies	• City, county and state employees have flex time programs available. • Some employers allow flextime and help support van and car pooling programs.
Traliic Flow Improvements • Minneapolis Computerized Traffic Management System • St. Paul Computerized Traffic Management System • New Construction - Mpls., 3rd Ave Distributor; I-35E, St. Paul • University and Snelling Aves.- St. Paul;, traffic flow improvements	• Mpls. system installed. New hardware and software installation to be completed in late 1992. • St. Paul system completed in 1991. • 3rd Ave. Distributor signals computerized. • Improvements completed in 1990
Alternative Fuels or Engines • Gasohol demonstration project	• MTC is implementing alternatives fuel testing program for buses in 1992; Mpls. is testing its fleet & vehicles.
Coid Start Emissions Reductions • Study the feasiblity of auto plug-in program for cold-start reductions	• Strategy found not to be feasible

Improved Public Transit	
• Reduced MTC Fares	• Super Savers and other marketing concepts were introduced by the MTC
• MTC Downtown Fare Zone	• Special reduced fares for Mpls. and St. Paul downtowns introduced
• Community Centered Transit	• "Opt Out" provisions now allow communities to develop local service
• Flexible Transit	• Alternative modes introduced to provide specialized transit services
• Total Commuter Service demonstration, Elderly, Handicapped Service	• Implementing accessible route service in addition to metro mobility service
• Responsiveness in Routing and Scheduling	• Transit agencies have active planning and communication program with communities
• CBD Parking Shuttle	• Parking shuttles found not feasible
• Simplified Fare Structure	• Difficult to implement due to economic conditions
• Bus Shelters	• Established ongoing program of installing and maintaining bus shelters
• Rider Information	• Region wide transit information is available through CBD Transit Sotres and a computerized phone system
• Transit Marketing	• Transit marketing remains an integral part of transit planning
• Cost Accounting, Transit Performance Funding	• Developed computer models to assess transit costs and establish performance measures
• Transit Maintenance Program	• Construction of new maintenance garages and bus overhaul facilities.
• "Real-time" monitoring	• Planning of IVHS "real time" programs implemented
• Park and Ride	• Joint program with Mn/DOT for the planning and construction of park-and-ride facilities

PORTLAND

Metropolitan Service District
Portland Urbanized Area
Transportation Improvement Program
Fiscal Years 1993 to Post 1996
Effective 01-October-92

SUNSET HIGHWAY RAMP METERING

Project Sponsor : ODOT
Federal-Aid Route: FAP 27
Functional Class : Connecting Link
Length in Miles : 6.20

	Cost Summary Annual Element	Total Program
Authorization:	371,725	770,000
Local Match :	0	27,176
State Match :	65,598	108,705
Total Cost :	437,323	905,882

Funding Plan by Fiscal Year

	Obligated	1992	1993	1994	1995 to Post 1996	Authorized
Federal-Aid Interstate Transfer						
Pre Eng	32,848	7,152	0	0	0	40,000
Constr	358,250	25	371,725	0	0	730,000
Reserve	0	0	0	0	0	0
Total	391,098	7,177	371,725	0	0	770,000

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Annual Element

Project Description and Location Map

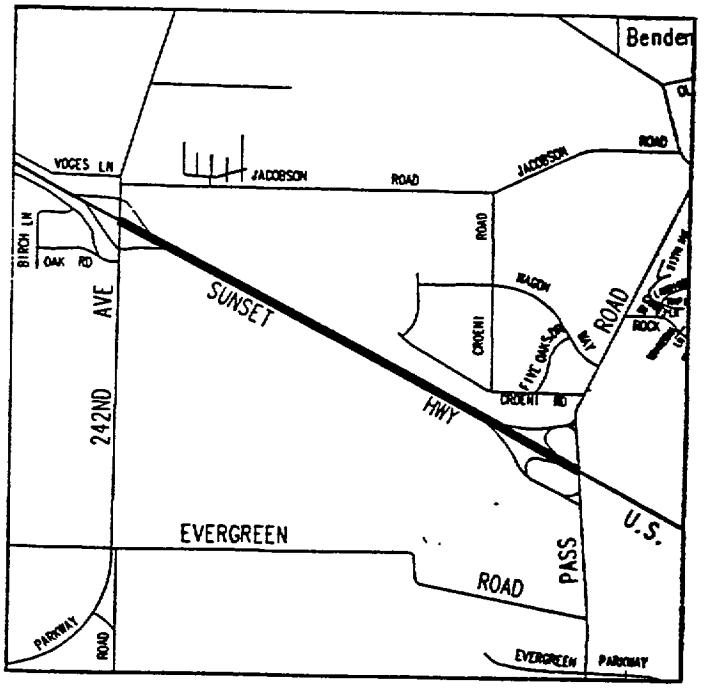
The basic purpose of ramp metering is to assure that free flow is maintained in freeway lanes, without breakdown into congested flow with its shock waves and stop-and-go operation. It has the following advantages:

It allows the full capacity of downstream sections to be effectively utilized by avoiding upstream bottle-necks;

it sometimes permits a desired level of service to be attained and maintained on the facility;

in addition, it has specific operational advantages at particular problem sites.

Ramp metering is planned to be installed at selected eastbound on-ramps on the Sunset Highway at Helvetia (Schute) Road and Cornelius Pass Road. The project also covers investigating, and if feasible, adding additional ramp meters in the Sunset/217 Interchange.



Metropolitan Service District
Transportation Improvement Program

Fiscal Years 1993 to Post 1996

In Federal Dollars

Portland Ur

Effective October 1, 1992

Interstate Transfer Program

Project Description

	Estimated Expenditures by Federal Fiscal Year							
	Obligated	1992	1993	1994	1995	1996	Post 1996	Authori
Category I Projects (Continued)								
15 NW YEON AVE - NW ST HELENS RD TO NW NICOLAI 733 *79-038***00364*FAP1***2W*****0								
Rt-of-Way	760,217	242,855	0	0	0	0	0	1,003,
Constr	9,844,232	-4,060	0	0	0	0	0	9,840,
Reserve	0	0	0	0	0	0	1,406,487	1,406,
Total	10,604,449	238,795	0	0	0	0	1,406,487	12,249,
16 NW ST HELENS RD - NW KITTRIDGE TO NW 31ST AVE 734 *79-038***00367*FAU9296*726*****4								
Rt-of-Way	150,552	0	0	0	0	0	0	150,
Constr	1,679,640	0	0	0	0	0	0	1,679,
Reserve	0	0	0	0	0	0	43,998	43,
Total	1,830,192	0	0	0	0	0	43,998	1,874,
17 FRONT - YEON CONNECTION 738 *79-038***00586*FAU9300*726*****0								
Rt-of-Way	1,003,071	0	0	0	0	0	0	1,003,
Constr	4,444,932	169,990	0	0	0	0	0	4,614,
Reserve	0	0	0	0	0	0	68,260	68,
Total	5,448,003	169,990	0	0	0	0	68,260	5,686,
18 REGIONAL RESERVE 755 *00-000***00000*VARvar**na*****0								
Reserve	0	0	0	0	0	0	11,802	11,
Total	0	0	0	0	0	0	11,802	11,
19 BANFIELD TRAFFIC MONITORING PROGRAM 771 *10183****01806*FAP68***2*****0								
Constr	108,963	74,496	0	0	0	0	0	183,
Total	108,963	74,496	0	0	0	0	0	183,
20 NW TRANSPORTATION SYSTEMS MANAGEMENT PROGRAM 802 *84-016***02358*VARvar**726*****0								
Pre Eng	81,537	60,498	0	0	0	0	0	142,
Total	81,537	60,498	0	0	0	0	0	142,
21 TRANSIT MALL EXTENSION NORTH - N BURNSIDE ST TO NW IRVING 822 *91-009***06356*FAU9341*726*****0								
Pre Eng	270,300	40,900	0	0	0	0	0	311,
Constr	0	2,876,300	0	0	0	0	0	2,876,
Total	270,300	2,917,200	0	0	0	0	0	3,187,
22 SUNSET HIGHWAY RAMP METERING 827 *10231****02235*FAP27***47*****67								
Pre Eng	32,848	7,152	0	0	0	0	0	40,
Constr	358,250	25	371,725	0	0	0	0	730,
Total	391,098	7,177	371,725	0	0	0	0	770,
23 TRI-MET RESERVE ACCOUNT 903 *00-000***00000*****var**na*****0								
Reserve	0	0	0	0	0	0	3,000,000	3,000,
Total	0	0	0	0	0	0	3,000,000	3,000,
24 I-205 BUSLANES WITHDRAWAL RESERVE(T) 907 *00-000***00000*TRA205**64*****18								
Reserve	0	0	0	0	0	0	15,941,283	15,941,2
Total	0	0	0	0	0	0	15,941,283	15,941,2
25 I-205/MILWAUKIE PRELIMINARY ALTERNATIVE ANALYSES(T) 939 *00-000***00000*OR*29-90na*****9								
Pre AA	997,050	14,462	0	0	0	0	0	1,011,5
Total	997,050	14,462	0	0	0	0	0	1,011,5
Total Category I	247,707,965	5,554,242	682,505	987,950	0	0	20,917,847	275,850,5

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Annual Element Year

Metropolitan Service District
Portland Urbanized Area
Transportation Improvement Program
Fiscal Years 1993 to Post 1996
Effective 01-October-92

OR217 BEAV/TIG HWY - SUNSET HWY TO I-5 - RAMP METERING

		Cost Summary	
		Annual Element	Total Program
Project Sponsor : ODOT	Authorization:	450,000	450,000
Federal-Aid Route: FAP 79	Local Match :	0	0
Functional Class : Connecting Link	State Match :	450,000	450,000
Length in Miles : 7.40	Total Cost :	450,000	450,000

Funding Plan by Fiscal Year

	Obligated	1992	1993	1994	1995 to Post 1996	Authorized
State Operations						
Constr	0	0	450,000	0	0	450,000
Total	0	0	450,000	0	0	450,000

091510

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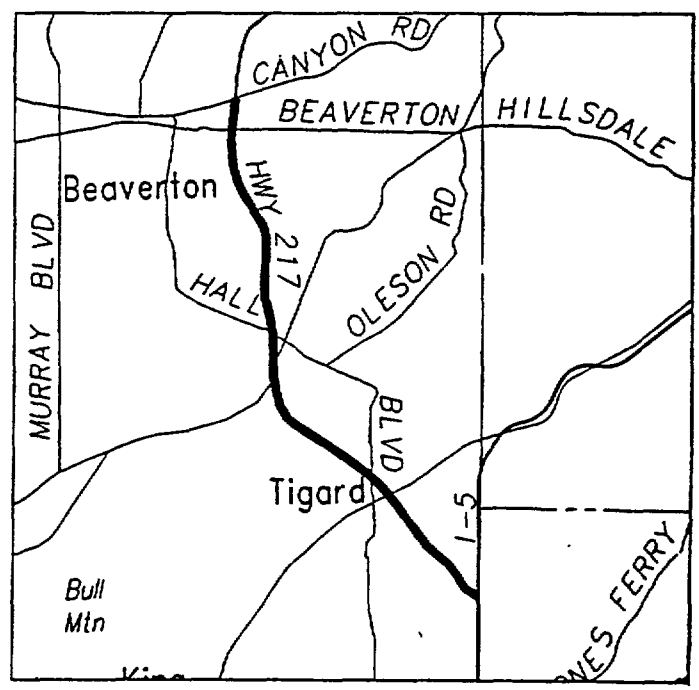
Annual Element

Project Description and Location Map

The basic purpose of ramp metering is to assure that free flow is maintained in freeway lanes, without breakdown into congested flow with its shock waves and stop-and-go operation. It has the following advantages:

- It allows the full capacity of downstream sections to be effectively utilized by avoiding upstream bottle-necks;
- it sometimes permits a desired level of service to be attained and maintained on the facility;
- in addition, it has specific operational advantages at particular problem sites.

Ramp metering is planned to be installed on all on-ramps of the Beaverton/Tigard Highway between the Sunset Highway and the I-5 freeway. The project will involve sixteen locations (excluding Walker Road) in an effort to maximize highway efficiency and uses a combination of state and Congestion Mitigation/Air Quality funds.



Metropolitan Service District
Transportation Improvement Program

Portland Urbanized Area

1993 to Post 1996

October 1, 1992

In Total Cost Dollars

State Highway Program

Description

	Obligated	Estimated Expenditures by Federal Fiscal Year 1992	1993	1994	1995	1996	Post 1996	Authorized
State Operations Projects								
34 US30BY - ST JOHNS BRIDGE PAINTING********								202 *91-010***05797*FAU9966*123********1**********
Constr	0	2,822,000	0	0	0	0	0	2,822,000
Total	0	2,822,000	0	0	0	0	0	2,822,000
35 BEAVERTON TUALATIN HWY @ SW WASHINGTON DRIVE********								211 *86-088***03611*fau9091*141********4**********
Pre Eng	0	43,820	0	0	0	0	0	43,820
Total	0	43,820	0	0	0	0	0	43,820
36 I-84 - BALSEY STREET UNDERCROSSING BRIDGE #13516********								221 *92-009***00000*FAI2****2********** 6**********
Constr	0	315,000	0	0	0	0	0	315,000
Total	0	315,000	0	0	0	0	0	315,000
37 OR-99W - SW HAMILTON TO BEAVERTON/HILLSDALE HWY JCT - GUARDRAIL********								224 ********** 06020*FAP9****1W********** 2**********
Constr	0	0	290,000	0	0	0	0	290,000
Total	0	0	290,000	0	0	0	0	290,000
38 OR-8 - TUALATIN VALLEY OVERLAY - 110TH TO 160TH********								234 *00-000***05859*FAP32***29********** 3**********
Constr	0	0	0	0	0	1,020,800	0	1,020,800
Total	0	0	0	0	0	1,020,800	0	1,020,800
39 OR-8 - TUALATIN VALLEY HWY AT MARKET CENTRE ENTRANCE********								257 ********** 06579*FAP32***29********** 8**********
Constr	0	0	500,000	0	0	0	0	500,000
Total	0	0	500,000	0	0	0	0	500,000
40 I-405 - FREMONT BRIDGE/RAMPS DECK RESTORATION AND JOINT REPAIR********								377 *86-118***05830*FAI405**61********** 4**********
Constr	0	0	1,390,000	0	0	0	0	1,390,000
Total	0	0	1,390,000	0	0	0	0	1,390,000
41 STATE FINANCED PROJECTS AT OR UNDER $100,000********								412 *79-049c**00000*VARvar**var********0**********
Pre Eng	0	25,000	0	0	0	0	0	25,000
Constr	0	290,000	0	0	0	0	0	290,000
Total	0	315,000	0	0	0	0	0	315,000
42 HAZARD ELIMINATION PROJECTS AT OR UNDER $100,000********								522 *88-043***04935*VARvar**var********0**********
Constr	0	195,700	0	0	0	0	0	195,700
Total	0	195,700	0	0	0	0	0	195,700
43 HALL BOULEVARD AT BURNHAM STREET - SIGNAL********								728 *85-033***03913*FAU9091*141********5**********
Constr	0	130,000	0	0	0	0	0	130,000
Total	0	130,000	0	0	0	0	0	130,000
44 ORE TV HWY - CANYON LANE TO WALKER ROAD - TRAFFIC SIGNALS********								912 *90-007***04401*FAP32***29********** 0**********
Constr	0	270,000	0	0	0	0	0	270,000
Total	0	270,000	0	0	0	0	0	270,000
45 OR99W PACIFIC HWY WEST AT 124TH AVENUE - SIGNAL/REALIGN********								914 *00-000***05301*FAP9****1W********13**********
Constr	0	0	0	0	0	870,000	0	870,000
Total	0	0	0	0	0	870,000	0	870,000
46 OR217 BEAV/TIG HWY - SUNSET HWY TO I-5 - RAMP METERING********								915 *90-056***01497*FAP79***144********7**********
Constr	0	0	450,000	0	0	0	0	450,000
Total	0	0	450,000	0	0	0	0	450,000
47 REGIONAL RAMP METERING, TRAFFIC LOOP REPAIR, AND MESSAGE SIGNING********								927 *90-038***04381*VARvar**var********0**********
Constr	0	800,000	0	0	0	0	0	800,000
Total	0	800,000	0	0	0	0	0	800,000
48 REGIONAL PAVEMENT, DECK RESTORATIONS, AND EXPANSION JOINT REPAIR********								928 *90-051***03624*VARvar**var********0**********
Constr	0	0	200,000	0	0	0	0	200,000
Total	0	0	200,000	0	0	0	0	200,000
49 REGIONAL GUARDRAIL IMPROVEMENTS********								929 *90-030***03323*VARVAR**var********0**********
Constr	0	0	0	920,000	0	0	0	920,000
Total	0	0	0	920,000	0	0	0	920,000
Total State Operations Projects	0	4,891,520	2,830,000	920,000	0	1,890,800	0	10,532,320

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Annual Element Year

Metropolitan Service District
Portland Urbanized Area
Transportation Improvement Program
Fiscal Years 1993 to Post 1996
Effective 01-October-92

OR217 BEAV/TIG HWY - SUNSET HWY TO I-5 - RAMP METERING

		Cost Summary	
		Annual Element	Total Program
Project Sponsor : ODOT	Authorization:	540,000	540,000
Federal-Aid Route: FAP 79	Local Match :	0	0
Functional Class : Connecting Link	State Match :	60,000	60,000
Length in Miles : 7.40	Total Cost :	600,000	600,000

Funding Plan by Fiscal Year

	Obligated	1992	1993	1994	1995 to Post 1996	Authorized
State Congestion Mitigation/Air Quality Program						
Constr	0	0	540,000	0	0	540,000
Total	0	0	540,000	0	0	540,000

091536

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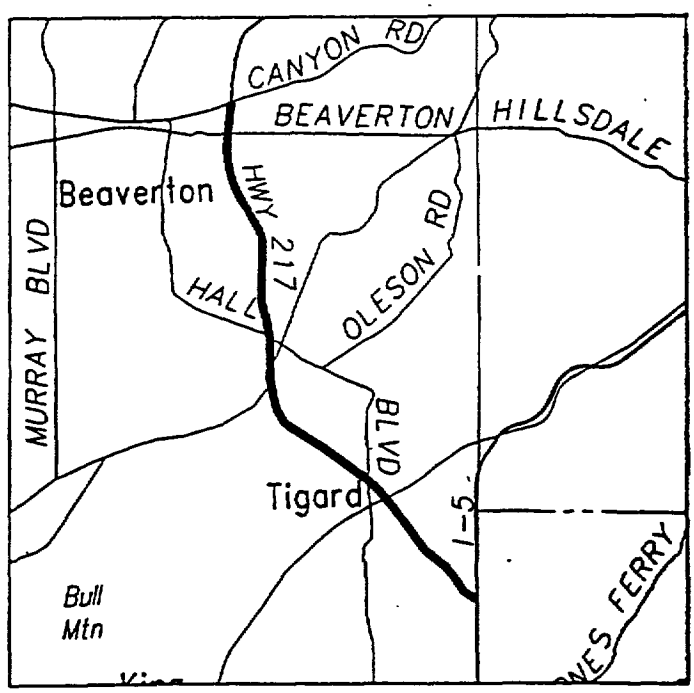
Annual Element

Project Description and Location Map

The basic purpose of ramp metering is to assure that free flow is maintained in freeway lanes, without breakdown into congested flow with its shock waves and stop-and-go operation. It has the following advantages:

- It allows the full capacity of downstream sections to be effectively utilized by avoiding upstream bottle-necks;
- it sometimes permits a desired level of service to be attained and maintained on the facility;
- in addition, it has specific operational advantages at particular problem sites.

Ramp metering is planned to be installed on all on-ramps of the Beaverton/Tigard Highway between the Sunset Highway and the I-5 freeway. The project will involve sixteen locations (excluding Walker Road) in an effort to maximize highway efficiency and uses a combination of state and Congestion Mitigation/Air Quality funds.



Metropolitan Service District
Transportation Improvement Program

All years 1993 to Post 1996

In Federal Dollars

Portland Urbanized Area

Effective October 1, 1992

State Highway Program

Project Description

	Estimated Expenditures by Federal Fiscal Year						
	Obligated	1992	1993	1994	1995	1996	Post 1996	Authorized

State Congestion Mitigation/Air Quality Program Projects

75 OR-43 - TAYLOR'S FERRY ROAD TO I-205 (MACS)********								226 *00-000***03853*FAU9565*3**********2**********
Constr	0	0	0	1,390,400	0	0	0	1,390,400
Total	0	0	0	1,390,400	0	0	0	1,390,400
76 US-30B - SANDY BLVD METROPOLITAN AREA CORRIDOR STUDY********								230 *00-000***06239*FAU9326*59**********0**********
Constr	0	0	0	0	3,880,800	0	0	3,880,800
Total	0	0	0	0	3,880,800	0	0	3,880,800
77 SUNSET HWY AT VISTA RIDGE TUNNEL MESSAGE SIGNING(III)********								386 *10143c***01892*FAP27***47**********72**********
Constr	0	0	0	1,320,000	0	0	0	1,320,000
Total	0	0	0	1,320,000	0	0	0	1,320,000
78 OR217 BEAV/TIG HWY - SUNSET HWY TO I-5 - RAMP METERING********								915 *90-056A***06231*FAP79***144**********7**********
Constr	0	0	540,000	0	0	0	0	540,000
Total	0	0	540,000	0	0	0	0	540,000
79 REGIONAL-RAMP METERING, TRAFFIC LOOP REPAIR, AND MESSAGE SIGNING********								927 *90-047***04383*VARvar**var**********0**********
Constr	0	0	0	460,000	0	0	0	460,000
Total	0	0	0	460,000	0	0	0	460,000
Total State Congestion Mitigation/Air Quality Program Projects								
	0	0	540,000	3,170,400	3,880,800	0	0	7,591,200

Metropolitan Service District
Portland Urbanized Area
Transportation Improvement Program
Fiscal Years 1993 to Post 1996
Effective 01-October-92

REGIONAL RAMP METERING, TRAFFIC LOOP REPAIR, AND MESSAGE SIGNING

		Cost Summary	
		Annual Element	Total Program
Project Sponsor : ODOT	Authorization:	990,000	990,000
Federal-Aid Route: VAR var	Local Match :	0	0
Functional Class : Various Locations	State Match :	110,000	110,000
Length in Miles : 0.00	Total Cost :	1,100,000	1,100,000

Funding Plan by Fiscal Year

	Obligated	1992	1993	1994	1995 to Post 1996	Authorized
State Surface Transportation Program						
Constr	0	0	990,000	0	0	990,000
Total	0	0	990,000	0	0	990,000

092731

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Annual Element

Project Description and Location Map

This project covers several types of effort that are regionwide. Specific locations, repairs and corrective actions will be implemented throughout the year.

The funding for 1993 above covers Phase 1 of a variable motorist advisory system along I-5 and I-205 to inform the motorist of traffic conditions. The project consists of changeable message signs with up to 6 signs located at major decision points to relay real time traffic information.

The message signs will alert motorists to delays resulting from accidents or incidents as well as road conditions within their travel corridor. Advanced, real time, road advisory conditions will allow motorists to seek alternate routes where possible which will reduce travel demand around the event causing the delay.

Metropolitan Service District
Transportation Improvement Program

Portland Urbanized Area

...years 1993 to Post 1996

...tive October 1, 1992

In Federal Dollars

State Highway Program

...roject Description

	Estimated Expenditures by Federal Fiscal Year						
	Obligated	1992	1993	1994	1995	1996	Post 1996	Authorized

State Surface Transportation Program Projects

55 I-84 - I-84 AT 82ND AVENUE PARK AND RIDE LOT********222 **********06243*FAI84***2**********5**********

Constr	0	0	216,000	0	0	0	0	216,000
Total	0	0	216,000	0	0	0	0	216,000

56 I-84 - ARGAY DOWNS SOUNDWALL (PORTLAND)********223 **********05746*FAI84***2**********7**********

Constr	0	0	117,000	0	0	0	0	117,000
Total	0	0	117,000	0	0	0	0	117,000

57 I-84 - GATEWAY PARK AND RIDE LOT********225 *00-000***06241*FAI84***2**********6**********

Constr	0	0	0	664,000	0	0	0	664,000
Total	0	0	0	664,000	0	0	0	664,000

58 OR-210 - SCHOLLS AT BEEF BEND ROAD - LEFT TURN REFUGE********232 *00-000***04440*FAU9234*143********5**********

Constr	0	0	0	0	580,800	0	0	580,800
Total	0	0	0	0	580,800	0	0	580,800

59 WESTSIDE LIGHT RAIL EXTENSION TO HILLSBORO********246 *00-000***00000*TRA*****na**********0**********

Non-Hwy Cp	0	0	0	0	0	22,000,000	0	22,000,000
Total	0	0	0	0	0	22,000,000	0	22,000,000

60 US26 - SUNSET HIGHWAY OVERLAY - STOREY CREEK TO CORNELL ROAD********267 *90-027d***03663*FAP27***47********60**********

Constr	0	0	0	2,411,200	0	0	0	2,411,200
Total	0	0	0	2,411,200	0	0	0	2,411,200

61 I-205 - WILLAMETTE RIVER BRIDGE ICE DETECTORS********332 *86-099***03280*FAI205**64**********9**********

Constr	0	0	0	0	0	156,774	0	156,774
Total	0	0	0	0	0	156,774	0	156,774

62 I-405 EAST FREMONT BRIDGE APPROACH********376 *00-000***05856*FAI405**61**********4**********

Constr	0	0	0	0	720,000	0	0	720,000
Total	0	0	0	0	720,000	0	0	720,000

63 US26 - SUNSET / NW 185TH AVE INTERCHANGE********426 *84-013***00847*FAP27***47********84**********

Constr	0	5,427,000	0	0	0	0	0	5,427,000
Total	0	5,427,000	0	0	0	0	0	5,427,000

64 REGIONAL RAMP METERING, TRAFFIC LOOP REPAIR, AND MESSAGE SIGNING********927 *90-022***03278*VARvar**var********0**********

Constr	0	0	990,000	0	0	0	0	990,000
Total	0	0	990,000	0	0	0	0	990,000

65 REGIONAL PAVEMENT, DECK RESTORATIONS, AND EXPANSION JOINT REPAIR********928 *90-040***04343*VARvar**var********0**********

Constr	0	0	522,000	0	0	0	0	522,000
Total	0	0	522,000	0	0	0	0	522,000

Total State Surface Transportation Program Projects

0	5,427,000	1,845,000	3,075,200	1,300,800	22,156,774	0	33,804,774

Metropolitan Service District
Transportation Improvement Program

1993 to Post 1996

In Federal Dollars

Portland Urbanized Area

October 1, 1992

State Highway Program

Description

	Estimated Expenditures by Federal Fiscal Year							
	Obligated	1992	1993	1994	1995	1996	Post 1996	Authorized
Federal-Aid Interstate 4R Projects								
3 I-205 - AIRPORT WY TO COLUMBIA BLVD - WIDEN SB ON-RAMP,ADD AUX L*******306 *86-062***03270*FAI205**64********24**********								
Constr	0	460,000	0	0	0	0	0	460,000
Total	0	460,000	0	0	0	0	0	460,000
4 I-5 - EAST MARQUAM INTERCHANGE GRAND AVE/ML KING AVE RAMPS (III)*******320 *76-011***00597*FAI5****1********301**********								
Constr	0	0	0	0	0	0	53,856,480	53,856,480
Total	0	0	0	0	0	0	53,856,480	53,856,480
5 I-5 - NB CONNECTION TO SB I-405(8958E) - DECK RESTORATION*******336 *10217****01489*FAI5****1********303**********								
Constr	0	0	0	0	0	0	1,420,188	1,420,188
Total	0	0	0	0	0	0	1,420,188	1,420,188
6 I-5 - TERWILLIGER BLVD INTERCHANGE OVERCROSSING/RAMPS*******360 *84-055***01945*FAU9383*1********297**********								
Constr	0	11,868,000	0	0	0	0	0	11,868,000
Total	0	11,868,000	0	0	0	0	0	11,868,000
7 I-5 - STAFFORD INTERCHANGE*******403 *86-061***03271*FAI5****1********286**********								
Pre Eng	654,463	129,000	0	0	0	0	0	783,463
Rt-of-Way	2,003,941	0	0	0	0	0	0	2,003,941
Constr	0	0	0	0	8,447,352	0	0	8,447,352
Total	2,658,404	129,000	0	0	8,447,352	0	0	11,234,756
8 I-5 - GEOLOGICAL INVESTIGATION OF PAVEMENT SUBSIDENCE MP287*******472 *85-008***02910*FAI5****1********287**********								
Constr	0	0	0	0	737,760	0	0	737,760
Total	0	0	0	0	737,760	0	0	737,760
9 I-205 - AT SANDY BLVD WEST BOUND CONNECTION*******682 *86-058***04059*FAI205**64********24**********								
Pre Eng	38,548	0	0	0	0	0	0	38,548
Constr	0	360,000	0	0	0	0	0	360,000
Total	38,548	360,000	0	0	0	0	0	398,548
10 I-5 - UPPER BOONES FERRY TO I-205 INTERCHANGE********876 *84-127***02499*FAI5****1********289**********								
Pre Eng	145,230	164,595	0	0	0	0	0	309,825
Constr	0	3,128,000	0	0	0	0	0	3,128,000
Total	145,230	3,292,595	0	0	0	0	0	3,437,825
11 I-5 - AT HIGHWAY 217/KRUSE WAY INTERCHANGE CONNECTION********893 *86-056***03277*FAI5****1********292**********								
Constr	0	0	0	0	38,824,620	0	0	38,824,620
Total	0	0	0	0	38,824,620	0	0	38,824,620
12 I-84 - UPRR (GRAHAM ROAD) BRIDGE #6967 REPLACEMENT********911 *00-000***03342*FAU9883*2********18**********								
Constr	0	2,631,200	0	0	0	0	0	2,631,200
Total	0	2,631,200	0	0	0	0	0	2,631,200
13 I-84 COLUMBIA RIVER HIGHWAY - 223RD AVENUE TO TROUTDALE********922 *84-023b***04738*FAI68***2*********15**********								
Constr	0	0	0	29,049,300	0	0	0	29,049,300
Total	0	0	0	29,049,300	0	0	0	29,049,300
14 REGIONAL RAMP METERING, TRAFFIC LOOP REPAIR, AND MESSAGE SIGNING********927 *90-006***05276*VARvar**var********0**********								
Constr	0	875,840	0	0	0	0	0	875,840
Total	0	875,840	0	0	0	0	0	875,840
Total Federal-Aid Interstate 4R Projects								
	2,842,182	19,616,635	0	29,049,300	48,009,732	0	55,276,668	154,794,517

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Annual Element Year

ADDITIONAL PROJECTS AND PROGRAMS

PROJECTS INCLUDED IN THE PREFERRED PLAN

Three additional improvements that would be necessary to achieve the plan go beyond the minimum levels listed above. (See Maps 2 and 3.)

1. **Deepening the Columbia and Coos Bay channels**

   These projects will be necessary to preserve the competitiveness of Oregon ports for international transportation. The Corps of Engineers is undertaking a feasibility study to deepen the Columbia channel to 43 feet and has completed a feasibility study to deepen the Coos Bay channel to 36 feet.

2. **Implementation of Intelligent Vehicle Highway Systems (IVHS)**

   IVHS systems allow vehicles to exchange information about the road system and have the potential to enhance the efficiency and safety of highways by giving drivers information necessary to select routes. They control vehicle operations in such a way as to maximize use of facilities while minimizing congestion. This capability will be particularly valuable on the interstate highways and in metropolitan areas. In metropolitan areas IVHS will also be critical to implementation of management and pricing strategies discussed below. IVHS is now in its infancy in terms of application but should be implemented during the next 20 years.

3. **Expanded urban transit in metropolitan areas**

   The level of service prescribed for metropolitan areas in the minimum levels of service was that required to meet the accessibility and balance goals in the OTP for individual travelers. However, this level will not be sufficient to reduce the per capita VMT necessary to meet the LCDC Transportation Goal Rule. To meet that rule, this plan also envisions significant additional investments in metropolitan transit service, including construction of the light rail routes in the Portland metropolitan area that are identified in the 1992 Tri-Met Strategic Plan.

SACRAMENTO

Land Use/Mobility Programs and Actions

Program #	Responsible Agency/Agencies	Program/Action	Time Frame
LAND USE			
1	SACOG	Conduct research on the relationship between land use and transportation and provide the results to member jurisdictions.	1991-92
2	SACOG, Local Jurisdictions	Participate in a regional forum that will allow for discussion of regional land use issues.	1992-93
3	SACOG, Local Jurisdictions	Implement recommendations that result from a regional land use forum.	Upon completion of forum
4	Local Jurisdictions	Include SACOG in lists of reviewing agencies for major development proposals.	Ongoing
5	SACOG, Caltrans, Transit Operators	Monitor major development proposals for their potential impacts to the transportation system and, where appropriate, recommend changes in project design that would make more efficient use of the transportation system.	Ongoing
6	SACOG	Develop a system of assigning priority programming status to transportation projects in jurisdictions that promote higher density development adjacent to transportation corridors with transit services adequate to handle increased ridership and that promote mixed-use development.	1990-91
7	SACOG	Evaluate the combined transportation impacts of local general plans and recommend plan changes that would be effective in limiting or reducing vehicle trips.	1992-93 and beyond
8	SACOG, Local Jurisdictions	Participate jointly, where appropriate, in general plan updates to ensure better coordination among local general plans.	1992-93 and beyond
9	Local Jurisdictions	Send applications for major development projects and general plan drafts to neighboring jurisdictions for their review and comment.	Ongoing
10	SACOG	Investigate the feasibility of applying the transit-oriented and pedestrian-oriented development concepts throughout the region and inform member jurisdictions of the results of the analysis.	1992-94
11	Local Jurisdictions, SACOG	Develop a list of desired high-density land uses within transportation corridors and encourage the use of fast-track processing incentives by permit agencies to promote such uses.	1992-93 and beyond
12	Local Jurisdictions	Review transportation/circulation elements of local general plans for consistency with the Regional Transportation Plan and local air quality attainment plans.	1992-93 and beyond
TRANSPORTATION SYSTEM MANAGEMENT			
13	SACOG, Local Jurisdictions, Caltrans, CHP	Build upon the callbox program to develop and implement incident management plans to help remove congestion caused by accidents and breakdowns.	1992-93 and beyond
14	SACOG	Develop a system of assigning priority programming status to multi-modal or system management techniques enacted by local jurisdictions and transit operators.	1990-91
15	Caltrans	Continue research into on-board technology that would provide information to drivers regarding road conditions and possible alternative routes.	Ongoing

Status: Ongoing.

21. ***SACOG will encourage cities and counties to develop (where lacking) and expand (where feasible) bicycle and pedestrian route systems to link with adjoining local and state systems.***

Status: Ongoing.

22. SACOG will coordinate a study with Caltrans and local jurisdictions to identify trouble spots where the relationship between trucks and automobiles needs improvements.

Status: The 1992 RTP carries this action forward, calling for SACOG and Caltrans to do this in 1992-93.

23. SACOG will identify in the 1992 RTP those urban areas where state highway bypasses would improve goods movement.

Status: Ongoing. Caltrans has completed various studies of bypass routes around local areas, such as Lincoln and live Oak, and recommendations from those studies are included in the 1992 RTP. Because of concern that the movement of people and goods on area highways will be severely impacted in the near future, Caltrans is continuing studies of the proposed Route 102 and the Routes 65/148 corridors to evaluate the need for new transportation corridors within the region. Any recommendations which evolve from those studies will be reviewed by SACOG for possible inclusion in the 1994 RTP.

Caltrans Actions

1. Caltrans will continue to operate the Sacramento Area Rideshare Office to develop and market ridesharing throughout the region.

Status: Ongoing.

2. Caltrans will develop and implement a regional traffic operations center for the Sacramento metropolitan area.

Status: Completed and ongoing. Caltrans and the California Highway Patrol jointly operate the Traffic Operations Center, which provides regular reports of traffic conditions to local television and radio stations in the metropolitan area. Project development is underway for changeable message signs and related operatfonal improvements.

Public Transit

Major accomplishments in transit planning within the region include the completion of the Sacramento Systems Planning Study by Regional Transit, implementation of expanded intercity transit services within Yolo County by the Yolo County Transit Authority (YCTA), and the implementation of a successful commuter service by the Hub Area Transit Authority (HATA) between Marysville-Yuba City and Sacramento. Regional Transit will soon begin an alternatives analysis for the South Sacramento light rail extension, and has commenced work on a long-range Transit Master Plan. When the plan is completed, SACOG will review its recommendations for inclusion in the 1994 RTP.

LOS ANGELES

SYSTEM MANAGEMENT PROGRAM

Under current conditions of funding and environmental constraints, it is imperative that a priority emphasis in addressing mobility needs be placed on system management. In accordance with regional policy, the utilization and capacity of the existing infrastructure must be managed with maximum efficiency in order to minimize costs and impacts. Accordingly, a strong emphasis on system management is included throughout the alternatives evaluation for the Plan. The development of both the needs assessment and the modal system components presupposed a far greater degree of management effort and effectiveness than currently excists. Programs to achieve the degree of efficiency anticipated in the Plan development process must therefore be implemented as a necessary precondition for other components of the Plan.

The expression "system management" addresses a very wide range of problems and facilities. Most broadly, system management (in contrast to demand management, which addresses the behavior of people) can be viewed as a set of programs to address freeways and arterials, on the one hand, and another set of programs to address both regular, recurrent congestion as well as nonrecurrent congestion on the other. In many cases, these programs overlap.

Taken together, all of these system management efforts must eliminate the equivalent of about 800,000 vehicle hours of delay daily. The effectiveness of all remaining Plan elements at reducing that delay resulting simply from excess vehicle demand depends directly on the success of these efforts.

The action program to achieve this reduction is outlined below:

Agency	**Action**	**Date**
Caltrans, County Commissions, SCAG ,	Program to implement 600 ramp meters and HOV by-pass lanes.	1989- 1993
RCTC, Caltrans	Implement ramp meters and auxiliary lanes on Route 9 1 from Orange County line to San Bernardino County line.	1989- 1993
Riverside County	implement countywide program of signal mitigation districts.	1989-1993
City of Los Angeles, City of Anaheim	Implement ATSAC signal control on 1,000 intersections.	1989-1993
Local jurisdictions	Implement ATSAC or similar interconnected signal control at 1,000 intersections regionwide.	1989- 1993

Agency	Action	Date
L.A. County Public Works	Finance and implement a 5-year signal synchronization program. Effect multi-jurisdictional coordination of traffic control centers.	1989-1993
SCAG	Survey local jurisdictions and identify candidate locations and targets for intersection channelization improvement [Overall Work Program).	1989-1990
Local jurisdictions	Implement projects to improve 125 intersection channelizations.	1989-1993
Caltrans 7, 8, 11, 12	Expand personnel and equipment for Incident Management Program; develop new program for Orange County; implement program to provide geographic dispersal of response team.	1989-1993
Caltrans	Program, purchase, and install changeable message signs and closed circuit cameras at appropriate locations.	1989-1993
SCAG	Evaluate costs, benefits, and feasibility of increased night time maintenance (OWP).	1989-1990
CHP	Implement stricter enforcement of regulations on spilled loads and cleanup costs.	1989-1993
CHP	Implement stricter enforcement of codes governing unsafe loads.	1989-1993
CHP	Implement refined law enforcement techniques which concentrate on congestion management and mitigation.	1989-1993
L.A. City, LACTC, Caltrans	Demonstrate and evaluate benefits of "smart" technology on a corridor basis.	1989-1993
OCTC	Implement Superstreet improvements on defined system.	1989-1993
Caltrans 7, 8, 12	Implement or upgrade Traffic Operations Centers.	1989-1993

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
1991-1997 FEDERAL TIP
LOCAL HIGHWAY PROGRAM
ORANGE COUNTY

** ANAHEIM **

AGENCY# PROJECT DESCRIPTION / PRJ CODE / TYPE OF WORK / RTIP COMMENTS / PPNO / EA / PROG	SOURCE / RCH / DIST / YR ADDED / CMP (N/S) / ELEMENT - PRI = RTIP(STIP) STIP TYPE FUND	BIENNIAL ELEMENT FED	STA	OTHER	so/s 1	91/92	92/93	93/94	94/95	95/96	96/97
05030 EVENT COMMUNICATION SYSTEM ANAHEIM RTIP 120 COMMERCIAL AND RECREATION AREA	TEC=$1043										
	P		23					23			
84076	R										
SCAB	C		93					93			
	MFED T		116					116			
	P				782			782			
	R										
	C										
	OCUTT T				782			782			
	P				145			145			
	R										
	C										
	TDA T				145			145			
05030 KATELLA AVE FROM LEWIS ST TO STATE RTIP 160 STATE COLLEGE BLVD RECONSTRUCTION	TEC=$340										
	P										
24005	90 STIP R										
SCAB AN	(S) C				340			340			
	OCUTT T				340			340			

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
1991-1997 FEDERAL TIP
LDCAL HIGHWAY PROGRAM
LOS ANGELES COUNTY

** CULVER CITY **

AGENCYM PRJ CODE / PPNO / EA / PROG	PROJECT DESCRIPTION / TYPE OF WORK / RTIP COMMENTS / AIR BASIN - AIR QUALITY (ENV) / ELEMENT - PRI=RTIP(STIP)	SOURCE RCH DIST / YR ADDED CMP (N/S) / STIP TYPE	BIENNIAL ELEMENT FED STA OTHER	90/91	91/92	92/93	93/94	94/95	95/96	96/97
04220 000	LOCAL SIGNALIZTIDN IN CONJUNCTION WITH SAMRT STREETS	RTIP	TEC=S72 1							
27 IO	SCAB AN	FAU	P R C 721 721 T 721 721				($1 ,000)			
04220 160	SEPULVEDA BLVD GREENLAWN AVE TO WASHINGTON RECONSTRUCTION	RTIP	TEC=S23 1							
2711	SCAB AN	FAU	P R C 199 32 231 T 199 32 231							
04220 120	WASHINGTON BLVD FROM RTE 405 TO FAIRFAX VENICE BLVD SMART STREET	RTIP	TEC=$945							
2520	SCAB	IFAU	P R C 945 945 T 945 945							
04220 160	WASHINGTON BLVD SAWTELLE TO WASATCH RECONSTRUCTION	RTIP	TEC=$231							
2712	SCAB AN	FAU	P R C 199 32 231 T 199 32 231							

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
1991-1997 FEDERAL TIP
STATE HIGHWAY PROGRAM
LOS ANGELES COUNTY

RTE / PMB / PMA / PPNO / EA / PROG	PROJECT DESCRIPTION / TYPE OF WORK / RT I P COMMENTS / AIR BASIN - AIR QUALITY (ENV) / ELEMENT - PRI=RTIP(STIP) STIP TYPE FUND	SOURCE / RCH / DIST / YR ADDED / CMP (N/S)	BIENNIAL ELEMENT	FED	STA	OTHER	90/91 4.8% ($1,000)	91/92 4.64;	92/93 4.8%	93/94 4.8%	94/95 4.8%	95/96 4.8%	96/97 4.8%
134	IN GLENDALE	90TI P	TEC=$493										
R 7.9	GLENDALE AVE/VERDUGO RD												
R 8.3	SOUNDWALLS: SOUTH (EB) SIDE	07	P	55	9		64						
0688M		88 STIP	R										
02058G	SCAB AN	(S)	C	369	60			429					
HB311	SND	F	T	424	69		64	429					
134	IN GLENDALE	90TIP	TEC=S4192										
R 9.0	RTE 2/0.1 MI W PATRICIAN (POR)												
R 11.6	SEISMIC RETROFIT	07	P	470	77		547						
0690S		90 STIP	R										
11649G	SCAB AN	(S)	C	3135	510		3645						
HA4S	HAS	F	1	3605	587		4192						
134	IN PASADENA AT SAN RAFAEL AV & NEAR	90TIP	TEC=S3420										
R 12.4	SAN DIMAS ON RTE 210:R25.0/R44.3												
.0	METER AND WIDEN RAMPS	07	P	408	38		446						
0747G		90 STIP	R										
11750G	SCAB	(S)	C	2721	253		2974						
	TSM	IR	T	3129	291		3420						
138	NEAR GORMAN	90TI P	TEC=$1430										
5.3	FIVE MILES EAST OF RTE 5												
6.2	CORRECT CURVES	07	P	147	24		171						
0692H		88 STIP	R						119				
11541G	SCAB	(S)	C						1140				
HE12	FCR	F	T	147	24		171		1259				
138	NEAR PEARBLOSSOM	90TI P	TEC=S5227										
51.6	AVE T/RTE 18 EXCL 57.2/60.2												
69.4	PASSING LANES, WIDEN BR, CHANNELIZE	07	P	314	51		365						
06958	LOCAL 50%	88 STIP	R										
10733G	SCAB	(S)	C	2091	340			2431					
HB4C	IRS	F	T	2405	391		365	2431					

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
1991-1997 FEDERAL TI P
STATE HIGHWAY PROGRAM
LOS ANGELES COUNTY

RTE / PMB / PMA / PPNO / EA / PROG	PROJECT DESCRIPTION / TYPE OF WORK / RT I P COMMENTS / AIR BASIN - AIR QUALITY (ENV) / ELEMENT - PRI=RTIP(STIP) STIP TYPE FUND	SOURCE / RCH / DIST / YR ADDED / CMP (N/S)	BIENNIAL ELEMENT FED	STA	OTHER	90/91 4.8%	91/92 4.6%	92/93 4.8%	93/94 4.8%	94/95 4.8%	95/96 4.8%	96/97 4.8%
									($1,000)			
	47 IN IA & LONG BCH, 1.1 S HENRY FORD	90TI P	TEC=$1362									
	2.3 DR/RTE 103 & RTE 103-FR RT 47/RT 1											
	4.7 REHAB RAMPS	07	P									
0441M		88 STIP	R									
10231G	SCAB AN	(S)	C	1171	191		1362					
HA22	RAS	FAU8	T	1171	191		1362					
	47 IN LONG BEACH	90TIP	TEC=$1027									
	6.2 RTE I/WILLOW ST											
	7.2 REPAIR FOR RELINQUISHMENT	07	P									
0434R		90 STIP	R									
11622G	SCAB AN	(S)	C					1027				
HA22	RAS	FAUB	T					1027				
	48 NEAR GORMAN. 0.4 MI E OF 280TH ST	90TIP	TEC=$1456									
	6.8 TO 1.1 MI W OF THREE POINTS RD											
	7.5 CORRECT CURVES	07	P	163	27		190					
0448S		8 8 STIP	R									
11519G	SEDAB	(S)	C					1266				
HE12	FCR	F	T	163	27		190	1266				
	5 7 ORA C O L/RTE 6 0	90TIP	TEC=S416									
R	.O											
R 4.5	RAMP METER & BYPASS LN	07	P	46	8		54					
C451A		8 8 STIP	R									
069210	SCAB	(S)	C	311	51		362					
HB4N	TSM	F	T	357	59		416					
	57 NEAR DIAMOND BAR	RTIP	TEC=S2103									
R 3.2	AT PATHFINDER RD INTERCHANGE	MOD										
	.O WIDEN OC & MODIFY SOUTHERLY RAMPS	07	P	236		38	274					
0457A		8 8 STIP	R									
019010	SCAB	(S)	C	1573		256	1829					
HE1 1	FCRL	FAU	T	1809		294	2103					

TRAFFIC SYSTEMS MANAGEMENT PLAN
1991-92

TABLE A-1
NEW PROJECTS PRIORITY LIST
IN PRIORITY ORDER
(All amounts in thousands)

Estimate of TSM capital outlay funds available:	$64,000
Less funds for TSM projects from the 1988 STIP:	$4,800
Estimate of funds available for new TSM projects:	$59,200

Rank	Lead Agency	Co.	Project Description	Total Alloc Request	Support	Cap Outlay	Cum Cap Outlay
1	Caltrans 11	SD	Rte 15 SB, Bernardo Center Dr-Centre City Pkwy, metering	$1,305		$1,305	$1,305
2	Pasadena	LA	Rte 210 Fwy Corridor, information/control system	$2,090	$573	$1,517	$2,822
3	Caltrans 11	SD	Rte 805 Fwy NB, Governor Dr-Miramar Rd, ramp metering	$1,048		$1,048	$3,870
4	Caltrans 7	LA	Changeable message signs, upgrade	$1,600		$1,600	$5,470
5	Caltrans 7	LA	East LA Interchange, expand CCTV surveillance	$160		$160	$5,630
6	Caltrans 7	LA	Rte 5 SB/Rte 110 SB Fwy Connector, ramp metering	$210		$210	$5,840
7	Caltrans 7	LA	V Thomas Bridge, satellite communication demonstration	$298		$298	$6,138
8	Caltrans 12	Ora	Phase 1 Traffic Operations System, computer system	$495		$495	$6,633
9	Caltrans 12	Ora	Rte 57 Fwy, Rte 5 To LA Co Line, ramp metering	$1,320		$1,320	$7,953
10	Caltrans 8	SBd	Rte 10 Fwy, LA Co Line-Milliken Av, ramp metering	$3,144		$3,144	$11,097
11	Anaheim	Ora	Rte 57/Rte 5 Fwy corridors, event communication system	$1,285		$1,285	$12,382
12	Caltrans 11	SD	Traffic Operations Center, upgrade control system	$417		$417	$12,799
13	Caltrans 11	SD	Rte 805 Fwy NB, Murray Ridge-Clairemont Mesa, metering	$1,130		$1,130	$13,929
14	Anaheim	Ora	Rte 57/Rte 5 Fwy corridors, event info/guidance system	$1,165		$1,165	$15,094
15	Anaheim	Ora	Tustin Av & La Palma Av, turn lanes at intersection	$347		$347	$15,441
16	Anaheim	Ora	Lakeview Av & La Palma Av, turn lanes at intersection	$529		$529	$15,970
17	Los Angeles Co	LA	Glenoaks Bl, Buena Vista St-Chevy Chase Dr, signal coord	$1,128	$275	$853	$16,823
18	Alameda Co	Ala	Rte 880 Fwy at Mowry Av, ramp metering, auxiliary lanes	$1,723	$144	$1,579	$18,402
19	Commerce	LA	Telegraph Av/Atlantic Bl (Mixmaster), intersec improvs	$115	$10	$105	$18,507
20	Caltrans 8	Riv	Rte 60/91/215 interchange, install CMS & CCTV	$960		$960	$19,467
21	Caltrans 7	LA	TOS, Phase 1-1, communication system & CCTV	$8,700		$8,700	$28,167
22	Caltrans 7	LA	Rte 5 Fwy, Pasadena Av-Burbank Bl, ramp metering	$200		$200	$28,367
23	City Riverside	Riv	Van Buren Bl at Rte 91/Indiana Av, signal improvements	$163	$11	$152	$28,519
24	Caltrans 7	LA	Rte 1/Los Alamitos Traffic Circle, restripe & sign	$288		$288	$28,807
25	Caltrans 7	LA	Rte 101 (Hollywood Fwy), Melrose Av SB on ramp, metering	$125		$125	$28,932
26	Caltrans 7	LA	Rte 10 (Santa Monica Fwy), infra-red camera demonstration	$197		$197	$29,129
27	Corona	Riv	6th St, Rte 91-Magnolia Av, signal coordination	$355	$30	$325	$29,454
28	Caltrans 7	LA	TOS, Phase 1-2, communication system & CCTV	$5,210		$5,210	$34,664
29	City San Diego	SD	EB Del Mar Heights Rd on-ramp to SB Rte 5 Fwy, HOV bypass	$27	$7	$20	$34,684
30	Caltrans 7	LA	Rte 10 Fwy Smart Street Corridor, central computer system	$175		$175	$34,859
31	Riverside Co	Riv	Magnolia Av, E 6th St-Pierce St, signal coordination	$316	$2	$314	$35,173
32	Caltrans 7	LA	Rte 10 Fwy Smart Corridor, accident investigation sites	$460		$460	$35,633
33	Caltrans 4	Ala	Rte 880 Fwy, Whipple Rd-Rte 238, ramp metering, CMS, CCTV	$3,516		$3,516	$39,149
34	Caltrans 4	SCl	Rte 85 Fwy, Rte 101 (San Jose)-Rte 280, ramp metering	$4,900		$4,900	$44,049
35	Caltrans 4	SCl	Rte 87 Fwy, Rte 85-Rte 280, ramp metering	$1,100		$1,100	$45,149
36	Caltrans 12	Ora	Rte 91 (Riverside Fwy), changeable message signs	$420		$420	$45,569
37	Caltrans 12	Ora	Rte 405 (San Diego Fwy), changeable message signs	$420		$420	$45,989
38	Caltrans 3	Sac	Rte 50 Fwy, Rte 5 to Stockton Bl, ramp metering & TOS imps	$1,300		$1,300	$47,289
39	Caltrans 6	Fre	Rte 41 Fwy SB, Herndon Av-Ashlan Av, ramp metering	$950		$950	$48,239
40	Anaheim	Ora	Santa Ana Cyn Rd at Imperial Hwy, left turn lanes	$202		$202	$48,441
41	City San Diego	SD	Mira Mesa/Miramar area, traffic signal system	$1,272	$294	$978	$49,419
42	Caltrans 7	LA	Lincoln Bl (Rt 1), Venice Bl-Rte 10, signal coordination	$1,103		$1,103	$50,522
43	Caltrans 7	LA	Rte 110 (Harbor Fwy), expand CCTV surveillance	$200		$200	$50,722
44	Caltrans 8	SBd	Rte 60 Fwy, LA Co Line-Rte 15, ramp metering	$2,530		$2,530	$53,252
45	San Pablo	CC	San Pablo Av, R H Miller Dr-Rheem Av, signal coordination	$475	$75	$400	$53,652
46	San Francisco	SF	Bus/LRV signal pre-emption, 14 locations on arterials	$437		$437	$54,089
47	Richmond	CC	San Pablo Av, Natalie Ct-Roosevelt Av, channel, sig coord	$1,371	$179	$1,192	$55,281
48	Richmond	CC	San Pablo Av, Clinton Av-McBryde Av, signal coordination	$285	$35	$250	$55,531
49	Caltrans 11	SD	Rte 15 Fwy NB, Poway Rd-Camino Del Norte, ramp metering	$1,260		$1,260	$56,791
50	Caltrans 8	SBd	Rte 10/215 interchange, changeable message signs, CCTV	$960		$960	$57,751
51	Caltrans 11	SD	Rte 15 Fwy SB, Citracado Pkwy-El Norte Pkwy, ramp metering	$969		$969	$58,720
52	Caltrans 11	SD	Rte 163 Fwy NB, Balboa Av-Kearny Villa Rd, ramp metering	$875		$875	$59,595
53	Caltrans 11	SD	Rte 5 Fwy, First Av-Old Town Av, ramp metering	$1,780		$1,780	$61,375
54	Santa Clara Co	SCl	Capital & Almaden Expwys, signal coordination	$1,200	$147	$1,053	$62,428
55	Caltrans 7	LA	TOS, Phase 1-3, communication system & CCTV	$7,550		$7,550	$69,978
56	Contra Costa Co	CC	Willow Av, Hawthorne Dr-7th St, intersection improvements	$988	$200	$788	$70,766
57	Caltrans 6	Fre	Rte 99 Fwy NB, Jensen Av-Ventura St, auxiliary lane	$1,400		$1,400	$72,166
58	Solano Co	Sol	Cordelia-Vacaville, near Rte 80, modify 6 intersections	$2,412		$2,412	$74,578
59	City San Diego	SD	Downtown trolley signal pre-emption system	$68	$6	$62	$74,640
60	Fremont	Ala	Warm Springs Bl, Mission Bl-Scott Creek Rd, sig coord	$196	$24	$172	$74,812
61	Contra Costa Co	CC	Willow Pass Rd/Bailey Rd, signal coordination, new signal	$199	$15	$184	$74,996
62	Los Angeles Co	LA	San Gabriel Bl, California Bl-Rosemead Bl, signal coord	$179	$28	$151	$75,147

63	Los Angeles Co	LA	Santa Monica Smart Corridor (Systems Manager)	$500		$500	$75,647
64	Alameda Co	Ala	Castro Valley Bl, Lake Chabot Rd-Marshall St, signal coord	$158	$38	$120	$75,767
65	City Riverside	Riv	Van Buren Bl, Magnolia Av-Jurupa Bl, signal coordination	$410	$55	$355	$76,122
66	Upland	SBd	16th St, Benson Av-Tanglewood Av, signal coordination	$547	$49	$498	$76,620
67	Los Angeles Co	LA	Rosecrans Av, Highland Av-Santa Gertrudes Av, sig coord	$2,197	$458	$1,739	$78,359
68	Hemet	Riv	Florida Av (Rt 74), Golden Village-Yale St, signal coord	$70	$2	$68	$78,427
69	Riverside Co	Riv	Florida Av (Rt 74), Yale St-Fairview Av, signal coord	$45	$2	$43	$78,470
70	City Ventura	Ven	Main St/Thompson Bl corridor, signal coordination	$802	$10	$792	$79,262
71	Los Angeles Co	LA	Aviation Bl, 104th St-Pacific Coast Hwy (Rt 1), sig coord	$570	$170	$400	$79,662
72	Fairfax	Mrn	Sir Francis Drake Bl, Oak Manor-Lagunitas, signals & coord	$1,513	$126	$1,387	$81,049
73	City of LA	LA	Area control system (East Wilshire ATSAC)	$4,425		$4,425	$85,474
74	San Diego Co	SD	Sweetwater Rd, Troy St-Paradise Valley Rd, signal coord	$228	$10	$218	$85,692
75	Carlsbad	SD	Palomar Airport Rd & El Camino Real, left turn lanes	$444	$59	$385	$86,077
76	Caltrans 11	SD	Waring Rd approach to WB Rte 8 Fwy, loop detectors, CMS	$160		$160	$86,237
77	City Riverside	Riv	Arlington Av, Magnolia Av-Tyler St, signal coordination	$738	$96	$642	$86,879
78	Caltrans 11	SD	NB Rte 15 Fwy at Fairmount Av on ramp, metering	$1,550		$1,550	$88,429
79	Caltrans 11	SD	Rte 8 Fwy, Nimitz Blvd-Midway Dr, ramp metering	$620		$620	$89,049
80	Carlsbad	SD	Rte 5 Fwy at Palomar Airport Rd, ramp metering, aux lanes	$2,980	$225	$2,755	$91,804
81	City Fresno	Fre	McKinley Av and Herndon Av at Rte 41 Fwy, turn lanes	$58		$58	$91,862
82	Caltrans 12	Ora	Rte 405 Fwy, Harbor Bl-Fairview Rd, ramp metering	$1,286		$1,286	$93,148
83	Cupertino	SCl	Saratoga-Sunnyvale Rd, Bollinger Rd-Prospect Rd, sig coord	$179	$12	$167	$93,315
84	Fremont	Ala	Blacow Rd, Central Av-Stevenson Bl, signal coordination	$102	$17	$85	$93,400
85	Yucaipa	SBd	Yucaipa Bl, 14th St/Sand Canyon Rd-Bryant St, signal coord	$265	$75	$190	$93,590
86	Caltrans 7	LA	Rte 57/210 Fwys, Sunset Crossing Rd-Allen Av, ramp meter	$3,500		$3,500	$97,090
87	Caltrans 7	LA	Rte 2 (Glendale) Fwy, Rte 5-Verdugo Bl, ramp metering	$930		$930	$98,020
88	Caltrans 7	LA	Rte 170 (Hollywood) Fwy, Rte 5-Rte 101, ramp metering	$820		$820	$98,840
89	Commerce	LA	Washington Bl, Rte 710-Rte 5, truck/bus turnouts	$430	$30	$400	$99,240
90	City San Diego	SD	Hillcrest area, signal coordination	$329	$40	$289	$99,529
91	City San Diego	SD	Clairemont Mesa Bl, Luna Av-Shawline St, signal coord	$470		$470	$99,999
92	Santa Ana	Ora	Phase 1, Traffic Management Center & CCTV	$1,000	$419	$581	$100,580
93	Arcadia	LA	Citywide signal control system, upgrade	$100	$20	$80	$100,660
94	Caltrans 7	LA	Western Av (Rt 213), 25th St-Summerland Av, signal coord	$623		$623	$101,283
95	Caltrans 7	LA	Western Av (Rt 213), Summerland Av-Rte 405, signal coord	$1,851		$1,851	$103,134
96	Kern Co	Ker	Airport Dr, Roberts Ln-Norris Rd, channelization & signals	$715	$125	$590	$103,724
97	Fullerton	Ora	Bastanchury Rd at Associated Rd, right turn lane	$170	$14	$156	$103,880
98	Caltrans 12	Ora	Pacific Coast Hwy (Rt 1) at Warner Av, intersec improvs	$156		$156	$104,036
99	Cupertino	SCl	Stevens Creek Bl, De Anza Bl, & Wolfe Rd, 15 bus turnouts	$1,057	$7	$1,050	$105,086
100	Palm Desert	Riv	Monterey Av (Rt 74) at Rte 111, intersection improvements	$225		$225	$105,311
101	City of LA	LA	Area control system (West Wilshire ATSAC)	$5,242		$5,242	$110,553
102	City of LA	LA	Area control system (Mid-Wilshire ATSAC)	$5,205		$5,205	$115,758
103	City San Diego	SD	Navajo Rd, Park Ridge Bl-Lake Murray Bl, signal coord	$751	$172	$579	$116,337
104	San Jose	SCl	Citywide traffic signal control system	$4,713	$517	$4,196	$120,533
105	Sacramento	Sac	Freeport Bl, Blair Av-Vallejo Way, signal coordination	$986	$170	$816	$121,349
106	Palmdale	LA	Palmdale Rd (Rt 138) at Rte 14 Fwy, traffic signal	$90	$10	$80	$121,429
107	Palmdale	LA	Palmdale Rd (Rt 138) at 5th St East, traffic signal	$50	$5	$45	$121,474
108	City of Fresno	Fre	Ashlan Av at First St & Cedar Av, 2 bus turnouts	$70	$13	$57	$121,531
109	Irvine	Ora	Citywide traffic signal control system	$3,066	$511	$2,555	$124,086
110	Mission Viejo	Ora	Citywide traffic signal control system	$250		$250	$124,336
111	Kern Co	Ker	Mt Vernon Av, Calif Av-College Av, signal coordination	$225	$30	$195	$124,531
112	El Cajon	SD	Citywide traffic signal control system	$200		$200	$124,731
113	City San Diego	SD	Rosecrans St, Kurtz St-Camino Del Rio, channelization	$105	$26	$79	$124,810
114	Caltrans 12	Ora	Beach Bl (Rt 39), Orangethorpe Av-Rosecrans Av, turn lns	$1,665		$1,665	$126,475
115	City Riverside	Riv	Jurupa Rd & Van Buren Bl, intersection improvement	$149	$20	$129	$126,604
116	Ontario	SBd	Holt Blvd & Grove Av, intersection improvement	$251	$16	$235	$126,839
117	Concord	CC	Monument Bl/Clayton Rd, signal coordination	$663	$122	$541	$127,380
118	Kern Co	Ker	Fairfax Rd, Eucalyptus Dr-Center St, channel & signals	$1,437	$237	$1,200	$128,580
119	Costa Mesa	Ora	Harbor Bl & Sunflower Av, turn lanes	$723	$94	$629	$129,209
120	Santa Ana	Ora	Citywide traffic signal control system	$2,833		$2,833	$132,042
121	Kern Co	Ker	N Chester Av, Kern Riv Br-Universe Av, channel & signals	$980	$155	$825	$132,867
122	City San Diego	SD	Downtown surveillance camera system	$350		$350	$133,217
123	Long Beach	LA	Clark Av & Carson St, intersection improvement	$876	$150	$726	$133,943
124	Riverside Co	Riv	Washington St, Rte 111-Country Club Dr, signal coord	$202	$9	$193	$134,136
125	City of LA	LA	Area control system (Ventura/Victory ATSAC)	$12,162		$12,162	$146,298
126	Costa Mesa	Ora	Harbor Bl & South Coast Dr, turn lanes	$1,930	$130	$1,800	$148,098
127	Los Angeles Co	LA	Colima Rd & Fullerton Rd, intersection improvement	$3,000	$100	$2,900	$150,998
128	Los Angeles Co	LA	Colima Rd & Azusa Av, intersection improvement	$3,000	$100	$2,900	$153,898
129	Pico Rivera	LA	Washington Blvd, reversible lane	$301	$86	$215	$154,113
130	Pico Rivera	LA	Beverly Blvd, reversible Lane	$273	$78	$195	$154,308
131	Gardena	LA	Vermont Av, 135th St-168th St, signal coordination	$670	$70	$600	$154,908
132	City of Fresno	Fre	Metropolitan area traffic signal control system	$10,600	$1,270	$9,330	$164,238

TRAFFIC SYSTEMS MANAGEMENT PLAN
1991-92

TABLE A-2
NEW PROJECTS PRIORITY LIST
SORTED BY COUNTY AND LEAD AGENCY
(All amounts in thousands)

Rank	Lead Agency	Co.	Project Description	Total Alloc Request	Support	Cap Outlay
18	Alameda Co	Ala	Rte 880 Fwy at Mowry Av, ramp metering, auxiliary lanes	$1,723	$144	$1,579
64	Alameda Co	Ala	Castro Valley Bl, Lake Chabot Rd-Marshall St, signal coord	$158	$38	$120
33	Caltrans 4	Ala	Rte 880 Fwy, Whipple Rd-Rte 238, ramp metering, CMS, CCTV	$3,516		$3,516
60	Fremont	Ala	Warm Springs Bl, Mission Bl-Scott Creek Rd, sig coord	$196	$24	$172
84	Fremont	Ala	Blacow Rd, Central Av-Stevenson Bl, signal coordination	$102	$17	$85
117	Concord	CC	Monument Bl/Clayton Rd, signal coordination	$663	$122	$541
56	Contra Costa Co	CC	Willow Av, Hawthorne Dr-7th St, intersection improvements	$988	$200	$788
61	Contra Costa Co	CC	Willow Pass Rd/Bailey Rd, signal coordination, new signal	$199	$15	$184
47	Richmond	CC	San Pablo Av, Natalie Ct-Roosevelt Av, channel, sig coord	$1,371	$179	$1,192
48	Richmond	CC	San Pablo Av, Clinton Av-McBryde Av, signal coordination	$285	$35	$250
45	San Pablo	CC	San Pablo Av, R H Miller Dr-Rheem Av, signal coordination	$475	$75	$400
39	Caltrans 6	Fre	Rte 41 Fwy SB, Herndon Av-Ashlan Av, ramp metering	$950		$950
57	Caltrans 6	Fre	Rte 99 Fwy NB, Jensen Av-Ventura St, auxiliary lane	$1,400		$1,400
81	City Fresno	Fre	McKinley Av and Herndon Av at Rte 41 Fwy, turn lanes	$58		$58
108	City of Fresno	Fre	Ashlan Av at First St & Cedar Av, 2 bus turnouts	$70	$13	$57
132	City of Fresno	Fre	Metropolitan area traffic signal control system	$10,600	$1,270	$9,330
96	Kern Co	Ker	Airport Dr, Roberts Ln-Norris Rd, channelization & signals	$715	$125	$590
111	Kern Co	Ker	Mt Vernon Av, Calif Av-College Av, signal coordination	$225	$30	$195
118	Kern Co	Ker	Fairfax Rd, Eucalyptus Dr-Center St, channel & signals	$1,437	$237	$1,200
121	Kern Co	Ker	N Chester Av, Kern Riv Br-Universe Av, channel & signals	$980	$155	$825
93	Arcadia	LA	Citywide signal control system, upgrade	$100	$20	$80
4	Caltrans 7	LA	Changeable message signs, upgrade	$1,600		$1,600
5	Caltrans 7	LA	East LA Interchange, expand CCTV surveillance	$160		$160
6	Caltrans 7	LA	Rte 5 SB/Rte 110 SB Fwy Connector, ramp metering	$210		$210
7	Caltrans 7	LA	V Thomas Bridge, satellite communication demonstration	$298		$298
21	Caltrans 7	LA	TOS, Phase 1-1, communication system & CCTV	$8,700		$8,700
22	Caltrans 7	LA	Rte 5 Fwy, Pasadena Av-Burbank Bl, ramp metering	$200		$200
24	Caltrans 7	LA	Rte 1/Los Alamitos Traffic Circle, restripe & sign	$288		$288
25	Caltrans 7	LA	Rte 101 (Hollywood Fwy), Melrose Av SB on ramp, metering	$125		$125
26	Caltrans 7	LA	Rte 10 (Santa Monica Fwy), infra-red camera demonstration	$197		$197
28	Caltrans 7	LA	TOS, Phase 1-2, communication system & CCTV	$5,210		$5,210
30	Caltrans 7	LA	Rte 10 Fwy Smart Street Corridor, central computer system	$175		$175
32	Caltrans 7	LA	Rte 10 Fwy Smart Corridor, accident investigation sites	$460		$460
42	Caltrans 7	LA	Lincoln Bl (Rt 1), Venice Bl-Rte 10, signal coordination	$1,103		$1,103
43	Caltrans 7	LA	Rte 110 (Harbor Fwy), expand CCTV surveillance	$200		$200
55	Caltrans 7	LA	TOS, Phase 1-3, communication system & CCTV	$7,550		$7,550
86	Caltrans 7	LA	Rte 57/210 Fwys, Sunset Crossing Rd-Allen Av, ramp meter	$3,500		$3,500
87	Caltrans 7	LA	Rte 2 (Glendale) Fwy, Rte 5-Verdugo Bl, ramp metering	$930		$930
88	Caltrans 7	LA	Rte 170 (Hollywood) Fwy, Rte 5-Rte 101, ramp metering	$820		$820
94	Caltrans 7	LA	Western Av (Rt 213), 25th St-Summerland Av, signal coord	$623		$623
95	Caltrans 7	LA	Western Av (Rt 213), Summerland Av-Rte 405, signal coord	$1,851		$1,851
73	City of LA	LA	Area control system (East Wilshire ATSAC)	$4,425		$4,425
101	City of LA	LA	Area control system (West Wilshire ATSAC)	$5,242		$5,242
102	City of LA	LA	Area control system (Mid-Wilshire ATSAC)	$5,205		$5,205
125	City of LA	LA	Area control system (Ventura/Victory ATSAC)	$12,162		$12,162
19	Commerce	LA	Telegraph Av/Atlantic Bl (Mixmaster), intersec improvs	$115	$10	$105
89	Commerce	LA	Washington Bl, Rte 710-Rte 5, truck/bus turnouts	$430	$30	$400
131	Gardena	LA	Vermont Av, 135th St-168th St, signal coordination	$670	$70	$600
123	Long Beach	LA	Clark Av & Carson St, intersection improvement	$876	$150	$726
17	Los Angeles Co	LA	Glenoaks Bl, Buena Vista St-Chevy Chase Dr, signal coord	$1,128	$275	$853
62	Los Angeles Co	LA	San Gabriel Bl, California Bl-Rosemead Bl, signal coord	$179	$28	$151
63	Los Angeles Co	LA	Santa Monica Smart Corridor (Systems Manager)	$500		$500
67	Los Angeles Co	LA	Rosecrans Av, Highland Av-Santa Gertrudes Av, sig coord	$2,197	$458	$1,739
71	Los Angeles Co	LA	Aviation Bl, 104th St-Pacific Coast Hwy (Rt 1), sig coord	$570	$170	$400
127	Los Angeles Co	LA	Colima Rd & Fullerton Rd, intersection improvement	$3,000	$100	$2,900
128	Los Angeles Co	LA	Colima Rd & Azusa Av, intersection improvement	$3,000	$100	$2,900
106	Palmdale	LA	Palmdale Rd (Rt 138) at Rte 14 Fwy, traffic signal	$90	$10	$80
107	Palmdale	LA	Palmdale Rd (Rt 138) at 5th St East, traffic signal	$50	$5	$45
2	Pasadena	LA	Rte 210 Fwy Corridor, information/control system	$2,090	$573	$1,517
129	Pico Rivera	LA	Washington Blvd, reversible lane	$301	$86	$215
130	Pico Rivera	LA	Beverly Blvd, reversible lane	$273	$78	$195
72	Fairfax	Mrn	Sir Francis Drake Bl, Oak Manor-Lagunitas, signals & coord	$1,513	$126	$1,387
11	Anaheim	Ora	Rte 57/Rte 5 Fwy corridors, event communication system	$1,285		$1,285
14	Anaheim	Ora	Rte 57/Rte 5 Fwy corridors, event info/guidance system	$1,165		$1,165
15	Anaheim	Ora	Tustin Av & La Palma Av, turn lanes at intersection	$347		$347
16	Anaheim	Ora	Lakeview Av & La Palma Av, turn lanes at intersection	$529		$529
40	Anaheim	Ora	Santa Ana Cyn Rd at Imperial Hwy, left turn lanes	$202		$202

8	Caltrans 12	Ora	Phase 1 Traffic Operations System, computer system	$495		$495
9	Caltrans 12	Ora	Rte 57 Fwy, Rte 5 To LA Co Line, ramp metering	$1,320		$1,320
36	Caltrans 12	Ora	Rte 91 (Riverside Fwy), changeable message signs	$420		$420
37	Caltrans 12	Ora	Rte 405 (San Diego Fwy), changeable message signs	$420		$420
82	Caltrans 12	Ora	Rte 405 Fwy, Harbor Bl-Fairview Rd, ramp metering	$1,286		$1,286
98	Caltrans 12	Ora	Pacific Coast Hwy (Rt 1) at Warner Av, intersec improvs	$156		$156
114	Caltrans 12	Ora	Beach Bl (Rt 39), Orangethorpe Av-Rosecrans Av, turn lns	$1,665		$1,665
119	Costa Mesa	Ora	Harbor Bl & Sunflower Av, turn lanes	$723	$94	$629
126	Costa Mesa	Ora	Harbor Bl & South Coast Dr, turn lanes	$1,930	$130	$1,800
97	Fullerton	Ora	Bastanchury Rd at Associated Rd, right turn lane	$170	$14	$156
109	Irvine	Ora	Citywide traffic signal control system	$3,066	$511	$2,555
110	Mission Viejo	Ora	Citywide traffic signal control system	$250		$250
92	Santa Ana	Ora	Phase 1, Traffic Management Center & CCTV	$1,000	$419	$581
120	Santa Ana	Ora	Citywide traffic signal control system	$2,833		$2,833
20	Caltrans 8	Riv	Rte 60/91/215 interchange, install CMS & CCTV	$960		$960
23	City Riverside	Riv	Van Buren Bl at Rte 91/Indiana Av, signal improvements	$163	$11	$152
65	City Riverside	Riv	Van Buren Bl, Magnolia Av-Jurupa Bl, signal coordination	$410	$55	$355
77	City Riverside	Riv	Arlington Av, Magnolia Av-Tyler St, signal coordination	$738	$96	$642
115	City Riverside	Riv	Jurupa Rd & Van Buren Bl, intersection improvement	$149	$20	$129
27	Corona	Riv	6th St, Rte 91-Magnolia Av, signal coordination	$355	$30	$325
68	Hemet	Riv	Florida Av (Rt 74), Golden Village-Yale St, signal coord	$70	$2	$68
100	Palm Desert	Riv	Monterey Av (Rt 74) at Rte 111, intersection improvements	$225		$225
31	Riverside Co	Riv	Magnolia Av, E 6th St-Pierce St, signal coordination	$316	$2	$314
69	Riverside Co	Riv	Florida Av (Rt 74), Yale St-Fairview Av, signal coord	$45	$2	$43
124	Riverside Co	Riv	Washington St, Rte 111-Country Club Dr, signal coord	$202	$9	$193
38	Caltrans 3	Sac	Rte 50 Fwy, Rte 5 to Stockton Bl, ramp metering & TOS imps	$1,300		$1,300
105	Sacramento	Sac	Freeport Bl, Blair Av-Vallejo Way, signal coordination	$986	$170	$816
10	Caltrans 8	SBd	Rte 10 Fwy, LA Co Line-Milliken Av, ramp metering	$3,144		$3,144
44	Caltrans 8	SBd	Rte 60 Fwy, LA Co Line-Rte 15, ramp metering	$2,530		$2,530
50	Caltrans 8	SBd	Rte 10/215 interchange, changeable message signs, CCTV	$960		$960
116	Ontario	SBd	Holt Blvd & Grove Av, intersection improvement	$251	$16	$235
66	Upland	SBd	16th St, Benson Av-Tanglewood Av, signal coordination	$547	$49	$498
85	Yucaipa	SBd	Yucaipa Bl, 14th St/Sand Canyon Rd-Bryant St, signal coord	$265	$75	$190
34	Caltrans 4	SCl	Rte 85 Fwy, Rte 101 (San Jose)-Rte 280; ramp metering	$4,900		$4,900
35	Caltrans 4	SCl	Rte 87 Fwy, Rte 85-Rte 280, ramp metering	$1,100		$1,100
83	Cupertino	SCl	Saratoga-Sunnyvale Rd, Bollinger Rd-Prospect Rd, sig coord	$179	$12	$167
99	Cupertino	SCl	Stevens Creek Bl, De Anza Bl, & Wolfe Rd, 15 bus turnouts	$1,057	$7	$1,050
104	San Jose	SCl	Citywide traffic signal control system	$4,713	$517	$4,196
54	Santa Clara Co	SCl	Capital & Almaden Expwys, signal coordination	$1,200	$147	$1,053
1	Caltrans 11	SD	Rte 15 SB, Bernardo Center Dr-Centre City Pkwy, metering	$1,305		$1,305
3	Caltrans 11	SD	Rte 805 Fwy NB, Governor Dr-Miramar Rd, ramp metering	$1,048		$1,048
12	Caltrans 11	SD	Traffic Operations Center, upgrade control system	$417		$417
13	Caltrans 11	SD	Rte 805 Fwy NB, Murray Ridge-Clairemont Mesa, metering	$1,130		$1,130
49	Caltrans 11	SD	Rte 15 Fwy NB, Poway Rd-Camino Del Norte, ramp metering	$1,260		$1,260
51	Caltrans 11	SD	Rte 15 Fwy SB, Citracado Pkwy-El Norte Pkwy, ramp metering	$969		$969
52	Caltrans 11	SD	Rte 163 Fwy NB, Balboa Av-Kearny Villa Rd, ramp metering	$875		$875
53	Caltrans 11	SD	Rte 5 Fwy, First Av-Old Town Av, ramp metering	$1,780		$1,780
76	Caltrans 11	SD	Waring Rd approach to WB Rte 8 Fwy, loop detectors, CMS	$160		$160
78	Caltrans 11	SD	NB Rte 15 Fwy at Fairmount Av on ramp, metering	$1,550		$1,550
79	Caltrans 11	SD	Rte 8 Fwy, Nimitz Blvd-Midway Dr, ramp metering	$620		$620
75	Carlsbad	SD	Palomar Airport Rd & El Camino Real, left turn lanes	$444	$59	$385
80	Carlsbad	SD	Rte 5 Fwy at Palomar Airport Rd, ramp metering, aux lanes	$2,980	$225	$2,755
29	City San Diego	SD	EB Del Mar Heights Rd on-ramp to SB Rte 5 Fwy, HOV bypass	$27	$7	$20
41	City San Diego	SD	Mira Mesa/Miramar area, traffic signal system	$1,272	$294	$978
59	City San Diego	SD	Downtown trolley signal pre-emption system	$68	$6	$62
90	City San Diego	SD	Hillcrest area, signal coordination	$329	$40	$289
91	City San Diego	SD	Clairemont Mesa Bl, Luna Av-Shawline St, signal coord	$470		$470
103	City San Diego	SD	Navajo Rd, Park Ridge Bl-Lake Murray Bl, signal coord	$751	$172	$579
113	City San Diego	SD	Rosecrans St, Kurtz St-Camino Del Rio, channelization	$105	$26	$79
122	City San Diego	SD	Downtown surveillance camera system	$350		$350
112	El Cajon	SD	Citywide traffic signal control system	$200		$200
74	San Diego Co	SD	Sweetwater Rd, Troy St-Paradise Valley Rd, signal coord	$228	$10	$218
46	San Francisco	SF	Bus/LRV signal pre-emption, 14 locations on arterials	$437		$437
58	Solano Co	Sol	Cordelia-Vacaville, near Rte 80, modify 6 intersections	$2,412		$2,412
70	City Ventura	Ven	Main St/Thompson Bl corridor, signal coordination	$802	$10	$792

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992

(All amount in thousands)

28-Aug-1991

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
Ramp Metering							
6	Caltrans 7	LA	R-5/R-110	On the connector from the southbound Rte 5 Fwy to the southbound Rte 110 Fwy, less than half mile. Ramp metering plus restriping to provid additional storage capacity in Los Angeles.	210		210
22	Caltrans 7	LA	R-5	On the Rte 5 Fwy between Pasadena Ave. in Pasadena and Burbank Blvd. in Burbank, almost ten miles. Installation of loop detectors and other equipment for existing traffic controllers in both directions to enable tie of existing ramp metering.	200		200
25	Caltrans 7	LA	R-101	In Hollywood, at the Rte 101 Fwy interchange with Melrose Ave. Provision of HOV bypass for southbound on-ramp.	125		125
86	Caltrans 7	LA	R-57/R-210	On the Rte 57 and Rte 210 Fwy between Sunset Crossing Road in diamond Bar and Allen Ave. in Gelndora, six and one-half miles. Ramp metering in both directions for fourteen ramps at eight interchanges, with HOV bypasses for twelve ramps.	3500		3500
87	Caltrans 7	LA	R-2	In Glendale, on the Rte 2 Fwy between Rte 5 and one mile north of Rte 210, almost eight miles. Ramp metering westbound for seven ramps, with HOV bypasses at six.	930		930
88	Caltrans 7	LA	R-170	On the San Fernando Valley, on the Rte 170 Fwy between the Rte 101 Fwy and Rte 5 Fwy six miles. Ramp metering northbound for nine ramps at nine interchanges, all with HOV bypasses.	820		820
9	Caltrans 12	OR	R-57	On the Rte 57 fwy between Rte 5 in Santa Ana and the Los Angeles county line in Brea, almost twelve miles. Ramp metering northbound for seventeen ramps at ten interchanges and southbound for one ramp with HOV bypasses at all locations.	1320		1320

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992
(All amount in thousands)

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
82	Caltrans 12	OR	R-405	In Costa Mesa, on the southbound Rte 405 Fwy on ramps from northbound Harbor Blvd. and from southbound Fairview Rd. Construct additional lane at each ramp, with ramp metering at Harbor Blvd. and a changeable message sign at fairview Rd.	1286		1286
10	Caltran 8	Sbd	R-10	In Ontario, on the Rte 10 Fwy between the Los Angeles County line and Milliken Ave., over nine miles. Ramp metering in both directions for twenty ramps at nine interchanges with HOV bypasses as feasible, plus incident detection stations at quarter mile intervals.	3144		3144
44	Caltran 8	Sbd	R-60	In Chino and Ontario, on the Rte 60 Fwy between the Los Angeles County line and Rte 15, nine miles. Ramp metering in both directions for sixteen ramps with HOV bypasses as feasible, plus installation of incident detection stations at quarter-mile intervals.	2530		2530
Traffic Signal Coordination							
93	Arcadia	LA		On eight arterials, upgrading of capacity of Master System Traffic Signal Computer from thirty-two to sixty-four intersections.	100	20	80
42	Caltrans 7	LA	Lincoln Blvd.	On Lincoln Blvd. between Venice Blvd. in Venice and the Rte 10 Fwy in Santa Monica, over two miles. Traffic signal interconnection, plus equipment upgrade at twelve intersections.	1103		1103
94	Caltrans 7	LA	Western Ave.	On Western Ave. between 25th St. in San Pedro and Summerland Ave. in Palos Verdes, two miles. Traffic signal interconnection at six intersections, plus equipment upgrade.	623		623
95	Caltrans 7	LA	Western Ave.	On Western Ave. between Summerland in Palos Verdes and the Rte 405 Fwy in Torrance, eight miles. Traffic signal interconnection at twenty-two	1851		1851

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992
(All amount in thousands)

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
116	Ontario	Sbd	Holt Blvd/ Grove Ave.	At the intersection of Holt Blvd. and Grove Ave.. Construction of two dual left-turn lanes and two right-turn lanes, plus other modifications.	251	16	235
Freeway Management Technology							
4	Caltran 7	LA		On freeways in Los Angeles County. Upgrading of changeable message sign system by replacing twenty-three traffic controllers, installing forty-three scan cameras at seven existing changeable message sign locations, and improving sign panels of nine existing changeable message signs. Part of District 7 traffic operations system and of changeable message sign master plan.	1600		1600
5	Caltran 7	LA		In Los Angeles, on approaches to the East Los Angeles Interchange almost five miles. Expansion of existing closed circuit TV system from one to five cameras. Part of District 7 traffic operations system and of closed circuit TV master plan.	160		160
7	Caltran 7	LA	R-47	In San Pedro, on Rte 47 at the Vincent Thomas Bridge. Installation of satellite antenna as demonstration of transmission of existing closed circuit TV to the District 7 traffic operations center. Also demonstration of remote control of closed circuit TV camera.	298		298
21	Caltran 7	LA	R-5	On the Rte 5 Fwy between the East Los Angeles Interchange in Los Angeles and McBean Parkway Drive in Santa Clarita, and on short stretches of adjacent Rte 10 and 101, about thirty-nine miles overall. Acquisition and installation of communication lines, replacing leased lines, to tie existing and future multi-district traffic operations system equipment (ramp metering, closed circuit TV, changeable message signs, etc.) into the District 7 traffic operations center. Also, installation of thirty-three closed circuit TV cameras at nine locations on Rte 5.	8700		8700

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992
(All amount in thousands)

28-Aug-1991

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
26	Caltran 7	LA	R-10	On the Rte 10 Fwy between Los Angeles and Santa Monica. Installation of infra-red camera at existing closed circuit TV location as demonstration of effectiveness at night. To tie into District 7 traffic operations center.	197		197
28	Caltran 7	LA	R-5 R-101	On the Rte 5 Fwy between the Orange County line in Santa Fe Springs and the East Los Angeles Interchange in Los Angeles, and in Los Angeles on the Rte 101 Fwy between Vermont Ave. and Rte 10, about twenty miles overall. Acquisition and installation of communication lines, replacing leased lines, to tie existing and future multi-district traffic operations system equipment (ramp metering, closed circuit TV, changeable message signs, etc.) into the District 7 traffic operations center. Also installation of fifteen closed circuit TV's at four locations.	5210		5210
30	Caltran 7	LA	R-10	In the Rte 10 Fwy corridor between Santa Monica and Downtown Los Angeles. for the Santa Monica Smart Corridor Demonstratioin project: Development of Specifications for computer hardware and software system, and installlation of system in the District 7 traffic operations center.	175		175
32	Caltran 7	LA	R-10	On the Rte 10 Fwy between Rte 405 in West Los Angeles and Santa Fe Ave. in Los Angeles, about twelve miles. Installation of approximately sixteen off-freeway accident investigation sites. Part of the Smart Corridor Demonstration.	460		460
43	Caltran 7	LA	R-110	In Los Angeles, on the Rte 110 Fwy. Installation of four closed circuit TV cameras, an expansion of the Rte 110 Transitway closed circuit TV Project. To tie into the District 7 traffic operations center.	200		200
55	Caltran 7	LA	R-101	In Los Angeles, on the Rte 101 Fwy between	7550		7550

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992
(All amount in thousands)

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
			R-10	Fwy between Rte 101 and 105, and on the Rte 10 Fwy between Rte 5 and 710, about thirty-four miles overall. Acquisition and installation of communication lines, replacing unreliable leased lines, to tie existing and future multi-district traffic operations system equipment (ramp metering, closed circuit TV, changeable message signs, etc.) into the Distric 7 traffic operations center. Also installation of forty-five closed circuit TV cameras at five locations.			
63	LA County	LA	R-10	In the Rte 10 Fwy corridor, between Santa Monica and downtown Los Angeles. Installation of central control center and highway advisory radio.	500		500
2	Pasadena	LA	R-210 R-110 R-134	Installation of changeable message signs, highway advisory radio, and closed circuit TV in areas which will provide direct benefit to traffic in the Interstate 210 corridor, the Rte 110 Fwy/Arroyo Parkway corridor and Rte 134 Fwy corridor.	2090	573	1517
129	Pico Rivera	LA	Washington Blvd.	On Washington Blvd., between Paramount Blvd. and the east city limit, over one mile. Installation of reversible lane.	301	86	215
130	Pico Rivera	LA	Beverly Blvd.	On Beverly Blvd., between San Gabriel River Parkway and Rosemead Blvd., about half mile. Installation of reversible lane.	273	78	195
11	Anaheim	Ora	R-57 R-5	In the Rte 57 and Rte 5 Fwy corridors in the vicinity of Anaheim Stadium. Establishment of Event Communication System by providing real time traffic signal operation for one hundred annual special events. Installation of seven closed circuit TV's and detectors at fourteen intersections to tie into the Districtd 12 traffic operations center.	1285		1285
14	Anaheim	Ora	R-57 R-5	In the Rte 57 and Rte 5 Fwy corridors in the vicinity of Anaheim Stadium. Establishment of Motorist Information and Route Guidance System to provide real time information to motorists for	1165		1165

TRAFFIC SYSTEM MANAGEMENT (TSM) 1991-1992
(All amount in thousands)

RANK/ SEQ #	LEAD AGENCY	CNTY	FWY/RTE	SEGMENT/PROJECT DESCRIPTION	TOTAL $ ALLOC REQUEST	$ SUPPORT	CAP $ OUTLAY
				one hundred annual special events. Installation of changeable message signs, highway advisory radio, and Anaheim traffic management center. To tie to the District 12 traffic operations center and highway advisory radio.			
8	Caltran 12	Ora	R-47	In San Pedro, at the District 12 Office. Conversion of freeway system control from District 7 in Los Angeles County to District 12. Purchase and installation of basic hardware and software.	495		495
36	Caltran 12	Ora	R-91	At three locations on the Rte 91 Fwy. Installation of three changeable message signs: in Fullerton, for eastbound traffic west of the Rte 5 Fwy; and in Anaheim, eastbound west of State College Blvd. and westbound east of Lakeview Ave..	420		420
37	Caltran 12	Ora	R-405	At three locations on the Rte 405 Fwy. Installation of three changeable message signs: in Irvine, for northbound traffic south of MacArthur Blvd.; in Costa Mesa, southbound north of Harbor Blvd.; and in Seal Beach, southbound north of Seal Beach Blvd..	420		420
92	Santa Ana	Ora	R-405	On the Rte 405 Fwy, almost three miles, and on MacArthur Blvd., over three miles. Phase I: Establishment of a Traffic Management Center and installation of closed circuit TV. A Smart Corridor project, to tie into the District 12 traffic operations center.	1000	419	581
20	Caltran 8	Riv	R-60/91 /215	In Riverside, on the approaches to the Rte 60/91/215 interchange, over nine miles. Installation of closed circuit TV and Changeable message signs.	960		960
50	Caltran 8	Sbd	R-10/ 215	In San Bernardino, on the approaches to the Route 10/215 Interchange, ten miles. Installation of closed circuit TV and changeable message signs.	960		960

WASHINGTON, DC

DISTRICT OF COLUMBIA TRANSPORTATION IMPROVEMENTS: CAPITAL COSTS (In $1,000s) FY 1995-2000

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		FY 1995 - 2000							FY 95 FUNDS						REMARKS:
	PROJECT	Funds In FY 94 TIP	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	Program Total FY95-00	Federal Total	Amt. of Match	Funding Sources	Environ. Review	Est. End Date	
17	Roadside Improvements Citywide	1,100 ac	1,650 ac						1,650	400	100 1,150	STP LOCAL	CE	On-going	See Transportation Enhancements (#12)
18	Southern Avenue Naylor Rd. to Erie St.					500 a			500			ITH	EA (1)	2001	LRE
19	Local Street Improvements Citywide	3,000 ac	1,800 ac						1,800		1,800	LOCAL	CE	On-going	
20	Intelligent Vehicle Highway System (IVHS)		500 c						500	400	100	IVHS 1/	CE	On-going	1/Special Legislation
21	Minnesota Avenue Extension		200 a		3,300 ab	1,500 c			5,000	160	40	STP	EA	1999	Extend Minn.Ave. between Sheiff Rd. & Meade St. to increase accessibility and help to promote the economic growth of nearby commercial areas.
22	Liberty Plaza Improvements		488 a			2,763 c			3,251		488	LOCAL	DEIS	2001	Restore G St., N.W. in front of MLK Library from pedestrian to vehicular traffic.
23	Metrobus Replacement Program		5,350						5,350	1,800	3,100 450	STP LOCAL WMATA	CE	1995	FTA Transit Project
24	New York Ave. and Bladensburg Rd. Grade Separation						300 a		300			NHS	DEIS	1998	Meet TCM objectives. LRE.
25	East Capitol Street and Benning Road Grade Separation							300 a	300			NHS	DEIS	1998	Meet TCM objectives.
26	New York Ave. and Florida Avenue Grade Separation							300 a	300			NHS	DEIS	1998	Meet TCM objectives.

MONTGOMERY COUNTY
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITOL COSTS (In $1,000)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
					FY 1995 - 2000								
	MCDOT OTHER PROJECTS	Funds In FY 94 TIP	Annual Element FY95	FY96	FY97	FY98	FY99	FY00	Program Total FY95-00	Funding Shares Fd/st/lo	Funding Source	Juris diction	Environ. Review
1	Bridge Replacement Projects	346 a 126 b 2825 c	2439 a 2424 c	1052 c	322 c				6237	80/0/20	BR	MGC	
2	Advanced Transportation Management System		1800						1800	56/00/44	IVHS	MGC	
3	Annual Bikeway Program		358 a 992 c						1350	0/0/100	N/A	MGC	
4	Annual Sidewalk Program		1260 a 60 b 7180 c						8500	0/0/100	N/A	MGC	
5	ADA Compliance Transportation Access		800 a 8610 c						9410	0/0/100	N/A	MCG	
6	Briggs Chaney Road Old Columbia Pk. to 1400' west		74 a 797 c						871	0/0/100	N/A	MCG	
7	Briggs Chaney Road Automobile Dr. to Gateshead Manor Way				1300 a	800 b	6700 c		8800	0/0/100	N/A	MCG	

NORTHERN VIRGINIA
TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (In $1,000)

FY 1995-2000

1	2	3	4	5	6	7	8	9	10	11	12	13	14
				FY	1995-2000								
	VIRIGINIA DEPARTMENT OF TRANSPORTATION	FUNDS IN FY94 TIP	AE FY95	FY96	FY97	FY98	FY99	FY2000	PROGRAM TOTAL FY95-2000	FUNDING SHARES FEDERAL ST/LOC	FUNDING SOURCE	JURIS-DICTION	ENV. REVIEW
49.	ROUTE 234 5.4 MI. WEST ROUTE 95 (ECLIPSE DRIVE) - 6.3 MI. EAST SCL MANASSAS PARALLEL LANE	--		9905 b			6460 c		16365	--	S	PWC	
50.	ROUTE 234 6.3 MI. EAST SCL MANASSAS - 3.5 MI. EAST SCL MANASSAS PARALLEL LANE	--			3810 b			5240 c	9050	--	S	PWC	
51.	ROUTE 234 3.5 MI. EAST SCL MANASSAS - 1.8 MI. EAST SCL MANASSAS PARALLEL LANE	--			2450 b			7515 c	9965	--	S	PWC	
52.	ROUTE 234 (MANASSAS BYPASS) BALLS FORD ROAD - W. OF RELOC. WELLINGTON RD. 4 LANES ON 6 LANE R/W	--	12113 b 9894 c						22007	-	BONDS	PWC	
53.	ROUTE 234 (MANASSAS BYPASS) W.OF RELOC WELLINGTON RD. - RTE 28 4 LANES ON 6 LANE R/W	--	12318 b 18091 c						30409	--	BONDS	PWC	
54.	ROUTE 234 (MANASSAS BYPASS) ROUTE 66 - BALLS FORD ROAD (INCLUDING INTERCHANGE AREA) 4 LANES ON 6 LANES RW	3000 b	15700 b 16000 c						15700 16000	80/20 80/20	NH STP	PWC	DEIS (4) FEIS (1)
55.	ROUTE 234 (MANASSAS BYPASS) I-66 (N. OF MANASSAS) - ROUTE 234/649 (LIMSTRONG) S. OF MANASSAS 4 LANES ON NEW LOCATION (PE ONLY)	4020 a	1024 a						1024	80/20	STP	PWC	
56.	ROUTE 244 S. VEITCH STREET - S. SCOTT ST.		45 b	135 c					180	90/10	STP(HES)	ARC	
57.	ROUTE 267 (DULLES TOLL RD) ROUTE 28 - ROUTE 123 WIDEN TO 8 LANES	--	3000 a	10000 b	26000 c				39000	--	BONDS	FXC LDC	
58.	ROUTE 267 (DULLES TOLL ROAD) ROUTE 28 - ROUTE 123 AVI/ETC SYSTEM	--	2000 a		13600 c				15600	--	TOLL	FXC LDC	

This Transportation Control Measure will increase the number of bicycle racks and lockers at transit stations where more than 80 percent of the existing facilities are regularly in use, and provide bicycle facilities at stations that currently have none. Racks and lockers will also be provided at selected commuter rail and selected park & ride facilities in the region. Recommended locations are available for METRO rail stations. State and local agencies will recommend locations for commuter rail and P & R facilities. Installation of racks and locks will cost a total of $300,000 (15% in D.C, 55% in MD and 30% in Vii). It was assumed that a total of 25 canopies will be constructed by 1999 at the rate of 5 a year (1 in D.C., 2 in MD and 2 in VA). The annual cost for installation of canopies is estimated to be $5000.

Complete 164 miles (30%) of the Bicycle Element of Long Range Plan (old M-37).

This Transportation Control Measure will construct 164 miles of the bicycle facilities identified in the Bicycle Element of the Long Range Transportation Plan by 1999. The total mileage of the bicycle element of the currently adopted LRP is 536 miles and will cost approximately $73 million. This TCM will implement approximately 30% by mileage of the adopted plan by 1999 at an annual cost of approximately $6 million.

Provide adequate bicycle **facilities at all government** and **public buildings in the region** and **develop guidelines for private building owners to provide bicycle facilities.(M-70)**

The measure assumes a total of 1000 new bicycle racks will be installed at government facilities by 1999 at the rate of 200 / year (20% in D.C., 40% in MD and 40% in VA).

Group 3 - Employer Support Programs

MEASURE M-47: Integrated Ridesharing Measures

This Transportation Control Measure would integrate three measures aimed at enhancing ridesharing capabilities in the region:

(1) upgrade the computer services of the MWCOG Ride Finders program to include integrated transit information and to provide real time transit information (ATIS) through kiosks and other outlets where feasible;

(2) implement satellite ridesharing or Transportation Management Associations (TMAs) at all major employment centers with interconnection

through the MWCOG program; and

(3) A "Guaranteed Ride Home" program to be implemented by the COG Ride Finders or other regional agency.

The measure as analyzed assumes 15 kiosks (6 in MD, 6 in VA and 3 in DC) and 15 new TMAs (6 in MD, 6 in VA and 3 in DC) will be in place by 1999. It is also assumed that there is additional transit capacity available to accommodate the 3400 new transit riders.

MEASURE **M-92** Metro Washington Regional Telework Measure

This measure builds on the previous telecommuting measures (M-46, M-58, M-80, M-81, M-82) and creates a new measure requiring both public and the private sector participation.

A US DOT report "Transportation Implications of Telecommuting April 1993, and a forthcoming USDOE study both predict that the number of workers telecommuting several days a week from home wiil increase by 10 to 20% per year up to the year 2000. Use of telework centers is also predicted to grow. The recommended regional strategy therefore is to provide maximum encouragement for t&commuting from home in the short term, and to start developing regional centers on a small scale and expand as demand increases.

The new telecommuting measure as proposed will have the following components.

I) Create a Washington Region Telework Resource Center. The center will perform the following functions:

1) Develop a program to educate employers and employees on the benefits of telecommuting and telework

2) Actively encourage employers (government / private sector) to establish telecommuting programs for their employees, and provide planning assistance and other technical expertise towards successful implementation of telecommuting program and teleworkcenters around the region.

3) Coordinate local, state and federal telecommuting and telework initiatives.

4) Disseminate information on the experience of Telework centers and Telecommuting around the nation and the world.

TABLE 2

NOx emission benefit of the recommended Nox Mitigation Measures

Measure	NOx emission Reduction (T/D)			
	1999	2000	2010	2020
M-47: Integrated Ridesharing (modified)	0.16	0.15	0.13	0.12
M-92: Telecommuting Support	0.66	0.63	0.53	0.52
M-24: Speed Limit Adherence (Regional)	-	-	1.71	1.70
Totals by year	0.82	0.78	2.37	2.34
Target	-0.013	0.233	1.387	1.895

privately funded, publicly supported roads to be built in the U.S. in over 100 years. An Automatic Vehicle Identification system will be employed to electronically collect tolls from passing cars. Also, the right-of-way for the project allows for future expansion of the roadway and mass transit development in the median This project illustrates a potential approach to developing transportation infrastructure at a time when public funds are increasingly scarce.

Potomac Yards Development

Potomac Yards is a large tract of undeveloped land, formerly a railyard, along the George Washington Memorial Parkway and the Potomac River in Alexandria. The city has adopted a plan to guide the redevelopment of the area. The goals of the plan are to encourage the redevelopment of the land as a pedestrian-oriented urban environment with a mix of uses. The plan calls for the area to be predominantly residential with a mix of land uses with community facilities, office, supporting retail, restaurants and higher density housing concentrated near a planned Metro station The plan allows for a possible shopping center to serve the district and nearby residential neighborhoods with a variety of retail and service uses scattered throughout the district at appropriate locations. A variety of parks and open spaces all connected by bike and pedestrian trails also are included.

Inner Beltway Revitalization Strategy

In 1993, Prince George's County formulated an Inner Beltway Revitalization policy that encourages more development in the portion of the County inside the Beltway. This portion of the county comprises less than one-third of the county's area but houses nearly two-thirds of its population and is well-served by existing roads, transit facilities, schools and other infrastructure. This strategy promotes more efficient use of existing infrastructure by taking advantage of the transit services in the area and by promoting mixed-use development around the Metro stations and reuse of existing commercial space.

Transit District ***Overlay Zones***

In 1985, Prince George's County implemented a special zone called a transit district overlay zone (TDOZ). This zone imposes special development requirements on the one-half mile area around a transit station. Through the use of this tool the county promotes