ATTACHMENT

WESTSIDE CORRIDOR PROJECT PREFERRED ALTERNATIVE
PROPOSED AMENDMENTS TO EXHIBIT B OF RESOLUTION NO. 91-1424

Amendment No. 1

. Provision should be made for routing traffic from Golf Creek Apartments northward to the intersection of Barnes Road at Leahy Road. If further consideration of this option results in a finding that it is infeasible, a variation of mitigation option 110 or 110A that is least disruptive to the existing ingress and egress situation should be explored.

Amendment No. 2

. Sylvan Station (Planning Management Group, cost to be determined)
Recommendation: Pursue preserving the option for a future station at Sylvan Interchange if costs are minimal. Staff is to identify costs as soon as possible.

Amend as follows:

. Sylvan Station [(Planning Management Group, cost to be determined)]
Recommendation: [Pursue preserving the option for a future station at Sylvan Interchange if costs are minimal. Staff is to identify costs as soon as possible.] Tri-Met is directed to undertake additional activities toward development of a Sylvan station after negotiation of the Full-Funding Agreement by the September 30, 1991 deadline. Between September 1991 and tunnel project bidding (1993), Tri-Met is to refine the station's cost estimate and assess overall Westside project costs and funding. In the 1993 timeframe, Tri-Met will bid the tunnel project with three options:

1. Long tunnel without a Sylvan Station
2. Long tunnel which preserves the option for the Sylvan Station
3. Long tunnel with a Sylvan Station included

At the time bids are received, and based on the financial status of the remainder of the project as well as the need to protect and preserve air quality, Tri-Met, in consultation with the region's participating governments and the appropriate state agencies, will assess whether or not to build a Sylvan station. ~~with matched funds or with local funds.~~

ACC:lmk
91-1424.AMD
4-11-91

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 91-1442 FOR THE PURPOSE OF AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM AND ITS ANNUAL ELEMENT BY REVISIONS TO TRI-MET'S SECTION 3 DISCRETIONARY AND TRADE PROGRAMS

Date: April 18, 1991 Presented by: Andrew C. Cotugno

PROPOSED ACTION

Adoption of this resolution would amend the Transportation Improvement Program to include a series of revisions to Tri-Met's Section 3 Discretionary and Trade programs. Major emphasis of the revised program for the annual element year 1991 includes:

1. Accelerating $7.5 million of Section 3 Discretionary funds from FY 1993 to the FY 91 annual element year for procurement of buses.

2. Shifting $9.9 million of Section 3 Trade funds from FY 1992 to the FY 91 annual element year for bus procurement, Transit Mall Extension North, special needs buses and passenger shelters. This action programs all remaining Trade funds ($18,408,880) for use in the current annual element year.

3. Augmenting this action is release of Section 3 Trade funds ($8.9 million) from deleted or modified projects:

Route Terminus Sites	$ 250,000	Dropped
Sunset Transit Center	$5,270,000	Funded under Westside Corridor Project
Parts and Equipment and Information/Communication Equipment	$2,290,000	Funded from Tri-Met General Fund Capital
SNT Vehicles	$1,126,000	Program Reduction

TPAC has reviewed this TIP amendment and recommends approval of Resolution No. 91-1442.

FACTUAL BACKGROUND AND ANALYSIS

Tri-Met proposes to amend the Section 3 Discretionary and Trade programs to now include procurement of 116 buses between October 1991 and December 1992. The Clean Air Act allows for continued purchase of diesel buses if delivered by December 1992. In accomplishment of this, and in combination with other changes, the two programs to be revised are as follows:

Current Program	1991 Annual Element	1992	1993
Section 3 Discretionary	$ 0	$ 0	$10,000,000
Section 3 Trade	$ 8,500,000	$ 9,908,880	$ 0

Proposed Program	1991 Annual Element	1992	1993
Section 3 Discretionary			
Bus Purchases	$ 7,500,000	$ 0	$ 2,500,000
Section 3 Trade			
Bus Purchases	$11,656,000	$ 0	$ 0
Transit Mall Ext.	5,088,880	0	0
Special Need Buses	1,264,000	0	0
Shelters	400,000	0	0
Total Trade	$18,408,880	$ 0	$ 0

FY 1991 Annual Element $25,908,880

Project Descriptions - Proposed Program

Section 3 Discretionary

Bus Purchase - The amount of $7.5 million will allow the procurement of approximately 40 40-foot lift-equipped buses (replacement) and 10 30-foot lift-equipped buses (new).

Section 3 Trade

Bus Purchase - The $11.7 million will allow procurement of approximately 58 40-foot lift-equipped buses (replacement) and 8 alternative fuel 40-foot lift-equipped buses (replacement).

Transit Mall Extension North - This project uses a combination of "Trade" and Interstate Transfer funds; it calls for reconstructing 16 blocks on NW Fifth and Sixth Avenues between and including West Burnside and NW Irving Streets.

Special Needs Bus Purchase - The $1.3 million will allow procurement of approximately 25 minibuses, 20-25 foot, with lifts and radios. These are replacement buses.

Passenger Shelters - The $0.4 million will procure approximately 120 shelters with an expected service life of 16 years. These are for replacement.

Vehicles will meet all applicable federal and state emission, noise, and Americans with Disabilities Act (ADA) regulations. Private enterprise participation documentation appears in Exhibit A to the resolution.

At the April 26, 1991 TPAC meeting, concern was expressed about further consideration of acquisition of buses that emit lower noise and air pollution levels. This could be accomplished through the use of electric trolley buses, dual-mode buses (diesel and electric) or with buses that meet a higher standard for both noise level and air pollution emissions. The Committee recommended that these options be considered further prior to acquisition of replacements to the 86 articulated buses in 3-4 years. The Committee also acknowledged that Metro, JPACT and the other jurisdictions interested in transit improvement should pursue funding options to facilitate these extra costs.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 91-1442.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM AND ITS ANNUAL ELEMENT BY REVISIONS TO TRI-MET'S SECTION 3 DISCRETIONARY AND TRADE PROGRAMS	))))))	RESOLUTION NO. 91-1442 Introduced by David Knowles, Chair, Joint Policy Advisory Committee on Transportation

WHEREAS, Tri-Met will be submitting a grant application to the Urban Mass Transportation Administration in June 1991; and

WHEREAS, The Transportation Improvement Program Section 3 Discretionary and Trade programs are to be revised to reflect Tri-Met's current program requirements; and

WHEREAS, The focus of the pending grant application will cover bus procurement, passenger shelter purchase, and funding for the Transit Mall Extension North; and

WHEREAS, Private sector involvement is evidenced in the form of private enterprise participation documentation appearing in Exhibit A; now, therefore,

BE IT RESOLVED,

1. That the Council of the Metropolitan Service District endorses Tri-Met's revised program as follows:

Section 3 Discretionary	Annual Element (FY 91)
Bus Purchases	$7,500,00
40 40-foot with lifts	
10 30-foot with lifts	

Section 3 Trade	Annual Element (FY 91)
Transit Mall Extension	$ 5,088,880
Bus Purchases	11,656,000
58 40-foot with lifts	
8 alternative fuel with lifts	
Special Need Buses	1,264,000
25 accessible minibuses	
Passenger Shelters (120)	400,000
Total FY 91 Annual Element	$25,908,880

2. That all remaining funds in the Section 3 Trade program ($18,408,880) are to be programmed in the FY 1991 annual element for the four projects noted above.

3. That the Transportation Improvement Program be amended to incorporate these allocations and project changes.

4. That these actions are consistent with the Regional Transportation Plan and affirmative Intergovernmental Project Review is hereby given.

ADOPTED by the Council of the Metropolitan Service District this ____ day of _____, 1991.

Tanya Collier, Presiding Officer

WHP:mk
91-1442.RES
04-18-91

EXHIBIT A

PRIVATE ENTERPRISE PARTICIPATION DOCUMENTATION

As required by UMTA C 7005.1, at the time of submission of TIP/AE information for projects, documentation must be provided regarding private enterprise participation. Following is the required documentation for projects in the Section 3 Trade and Section 3 discretionary grant applications (North Mall Extension, Purchase of Buses, SNT Mini-buses and Passenger Shelters):

a) Description of private sector involvement:

These projects have been identified for funding in Tri-Met's FY'92 Capital Budget. The Tri-Met budget undergoes extensive review by a seven member Citizens Advisory Committee and a public hearing on the proposed budget is convened by the Tri-Met Board of Directors.

The grant application process for all capital projects includes direct mailing to private transportation providers of notices of opportunity for public hearing on the proposed projects. Further opportunity for comment on the projects by private sector representatives is afforded when the Transportation Policy Alternatives Committee and the Joint Policy Advisory Committee on Transportation review the projects prior to the approval of the TIP.

Finally, the competitive procurement process for purchase of equipment or vehicles, and provision of services or materials for the TIP annual element projects includes distribution of notices of bid advertisements or requests for proposals to prospective private sector bidders/proposers.

Private sector involvement in the North Mall Extension project has been extensive. A Citizens' Task Force was established to help guide development of the project. Five of the six members represent property owners and/or operate businesses in the project area. That group has endorsed the proposed project. During the development of the preliminary engineering and environmental assessment work, all property owners along the proposed alignment were contacted and advised of the project proposals and the federal and local approval processes. Project meetings and hearings were advertised locally as an opportunity to comment on the project. The Historic Old Town Committee, a business group, provided comment during the EA review period. Business representatives have also contacted UMTA directly regarding their support for the project. During the PE phase of the project, proposals for private sector financing of capital and/or maintenance costs were advanced. None of those proposals have been agreed to due to the impacts of the recently approved property tax limitation on Local Improvement Districts. As final engineering is completed, private sector funding discussions may be resumed.

Public comment regarding the purchase of SNT vehicles can be provided at Committee on Accessible Transportation (CAT) meetings when budgets are reviewed, or at Tri-Met Board meetings when action is taken on specific grant requests.

The SNT vehicles will be operated by private for-profit operators under contract with Tri-Met.

b) Private sector proposals:

Tri-Met has received no unsolicited proposals from the private sector during the last year. Two proposals received the previous year under the UMTA Entrepreneurial Services Program are not being carried forward due to 13(c) conflicts.

Tri-Met offered 4 RFP's for the provision of transportation service during the last year. These new contracts are now in place and are worth approximately 3½ million dollars per year.

c) Impediments to competition:

The major impediment to contracted transportation is the labor contract which requires all vehicles on lines of the District to be run by Tri-Met operators. The situation has changed somewhat because several contractors for elderly and disabled services have become organized. This has opened a door for further discussions toward resolving impediments to competition.

d) Status of private sector complaints:

Tri-Met has received no private sector complaints regarding privatization in the past year.

Justification for Proposed Bus Purchases -Summary

Tri-Met currently has an active fleet of 524 buses ranging in age from 1 - 19 years (average age 7.6 years). The TIP amendments would provide funding for purchase of 108 diesel buses and a maximum of 8 alternative fuel buses next fiscal year. The diesel buses would replace 18 and 19 year old buses which currently present maintenance and reliability problems. The "sunset" of the Section 3 Trade funds, combined with a period when buses may not be generally availabe due to changing technology creates a need to act now on a major bus purchase.

Buses in the fleet to be replaced generate particulate emissions of between .60 and 1.0 grams per hour. Under the Clean Air Act the new buses are required to meet a particulate emissions standard of .25 grams per hour. In addition, by October 1993 all diesel fuel must be "clean" fuel (i.e. .05% sulfur content vs. current .50%). The rationale for this recommendation can be summarized as follows:

- Action now allows Tri-Met to replace old buses with new
- Waiting to purchase buses under the terms of the Clean Air Act adds additional uncertainty and delay since no one manufactures clean air buses
- It is clearly preferable from an air quality, as well as fuel economy, perspective to buy new buses now enabling removal from operation of older, more polluting, less efficient buses.

Tri-Met is currently committed to testing two natural gas fueled buses and proposes to procure eight more which are included in the currently proposed TIP amendment package. These natural gas engines are available from Cummins on a demonstration basis only; they are not available for purchase.

Tri-Met Transit Development Plan--Capital Requirements

A. Overview

In the last several Financial Issues Reports, we have stated that a new source of revenues to fund capital maintenance and replacement and new capital purchases is among Tri-Met's top legislative priorities. In fact, the most critical financial issue Tri-Met faces today is its capital funding situation.

Today, Tri-Met's annual Section 9 capital allocation, which just five years ago was $9.5 million, is now just $6.5 million, barely enough for on-going bus replacement needs. $94 million of one-time Letter of Intent, Regional Reserve and Section 9 reserve funds which were available just two years ago for capital are either spent of programmed. Five years ago, Tri-Met did not have the local revenues necessary to match federal funds. Today, there are not enough federal funds for the capital maintenance and replacement that is necessary for the efficient operation of the district. (See UMTA Funding Proposal).

At the same time, new federal requirements are adding to costs. The Americans with Disabilities Act will increase Tri-Met costs over $1 million a year. The Clean Air Act will increase bus costs $30,000 or 15%. Finally, FY92 marks the first year in many that Tri-Met will receive no state aid for capital purchases.

Because of the decline in federal funding levels, more and more, Tri-Met funds are required to finance capital that was once federally funded. (See "Tri-Met Capital Match Contribution"). So while the demand for additional transit service is growing because the region is growing, more and more Tri-Met funds must be devoted, not to service expansion, but to replacing and maintaining capital required for current service levels.

In addition, while federal funds are declining and local governments are expected to contribute more, Tri-Met's capital needs are growing. We now have additional capital maintenance and replacement responsibilities in light rail, most of which do not qualify for federal funds. Our bus maintenance facilities are no longer new and need greater maintenance. Tri-Met is just beginning to experience the cost of new rules regulating the storage and disposal of toxic waste. All bus purchases after 1993 must comply with the Clean Air Act. Expected increases in peak hour patronage require an expansion of the bus and rail fleet now. Public pressure for more service and park and ride lots will continue.

B. Surface Transportation Act

The Surface Transportation Act, which funds mass transit programs, is up for reauthorization this fall. It is impossible to tell which direction Congress will take with it. UMTA has recommended the elimination of all operating assistance and an increase in the local match ratio from 20% to 40%.

While the elimination of operating assistance is unlikely, what Tri-Met needs is just as unlikely--a restoration of on-going federal support for transit to the levels of the early 1980s. What is most likely, is that federal support for transit will continue to be uneven and unpredictable, at least until the federal budget deficit is reduced.

C. Five Year Capital Plan

To effectively manage the agency through these changes, Tri-Met will develop a five year capital plan (actually an eight year plan).

D. Role of the Technical Advisory Committee

One of the most important thing you can do as members of this committee, is to understand Tri-Met's capital requirements, their relationship to service levels and the district's financial situation and to help us develop solutions to resolve it because until Tri-Met has a stable and reliable source of funding for ongoing capital maintenance and replacement, there will be no money for additional service or additional park and ride lots, etc. Capital and service on the street are simply two sides of the same coin.

E. Categories of Capital Expenditures--Summary

Tri-Met's capital requirements fall into three categories:

First, on-going capital maintenance and replacement. This is what we refer to as Stage I capital. Existing capital assets get old, wear out, need to be need to be maintained in good condition, and eventually, need to be replaced. Buses, for example, maintained in good condition, last about twelve to fifteen years. At the end of fifteen years depending on their condition, they need to be replaced with new buses. Park and ride lots need to be resealed every seven years, ticket vending machines need to be replaced every fifteen years and overhauled every four years, and so forth. Capital replacement generally constitutes the largest portion of the capital budget, with bus replacement the largest portion of the on-going capital budget (80%).

Our concern is that during the last few years, Tri-Met has continued to add to its capital infrastructure, while deferring the maintenance and replacement of existing capital assets. The

construction of the Hillsboro Transit Center before we have replaced our fleet of 20 year old buses is just one example.

Yet on-going funding of capital maintenance, rehabilitation and replacement is critical for the financial stability of the district:

- It helps maintain safe, reliable, and attractive service.
- Inadequate on-going maintenance and replacement can cause unnecessary rehabilitation costs or early retirements, while proper maintenance can extend the useful life of equipment and facilities, saving costs over the long run.
- Deferring capital replacement expenditures may delay the recognition of financial problems by supporting service levels and new capital expenditures that would be unaffordable if the full costs of the existing infrastructure had to be paid on a continuing basis.

If Tri-Met cannot afford to replace and maintain its existing capital plant, it cannot afford current service levels.

The second category is new capital. For our purposes, we have divided new capital into two categories. Stage II is new capital that is directly related to putting new service on the street. Additional buses for more service. Additional park and ride lots. Service Planning breaks this category down into Basic, Improved and Comprehensive.

Stage III is additions to the capital plant that would improve service delivery and service quality and improve operational efficiency. Once new capital becomes a part of the existing capital plant it has, of course, a maintenance and replacement component.

F. Existing Capital - Maintenance and Replacement Requirements.

To identify the annual expenditures Tri-Met needs to maintain and replace existing capital assets, an inventory with life expectancy and condition of all existing capital assets, whether or not the asset will be up for replacement or repair within the next five years was completed by the staff. The staff was asked to calculate replacement costs for an "optimum" and a "minimum" replacement cycle. For example twelve years would be an optimum bus replacement cycle, eighteen would be a minimum replacement requirement.

The results show that during the next five years, Tri-Met will spend, in 1990 dollars, about $13 million a year in capital maintenance and replacement. About 60% of that will be federally funded. Other categories of on-going maintenance and replacement

include: customer facilities such as bus shelter replacement, light rail station maintenance, road maintenance and repair, SNT vehicle replacement; operations facilities maintenance, including underground storage and toxic waste disposal; maintenance of light rail structures such as track realignment, grade crossing replacements, overhead wire replacement; bus shop equipment; computer equipment; dispatch system hardware; etc.

The thirteen million figure does not reflect costs in several areas: bus replacements (as the bar graph illustrates) are not evenly distributed, but are concentrated within a few years. Ticket vending replacement, registering farebox replacement, light rail vehicle replacement are all large costs that fall outside of the five to eight year planning period.

If Tri-Met were to establish a vehicle replacement fund and begin contributing each year to the fund so that the local match would be available to fund necessary bus replacement in 2003 and rail vehicle replacement in 2016, the district should be contributing about $5.3 million a year to a vehicle acquisition fund. In fact, Tri-Met already has such a fund established with $17 million in it, but these costs are not included in the $13 million dollar figure.

G. Stage II--New Capital, Additional Service

This segment includes additional capital expenditures required for new service and includes buses, LRVs, bus shelters related to additional service hours only, park and ride lots and other capital items, directly related to providing additional vehicle hours at the same level of quality as existing services or to implement the Westside.

Annual planned expenditures for Stage II average about $ million a year. As Tri-Met's present approach is to increase service annually, in small increments, these expenditures tend to be similar each year--about 17 new buses a year, plus a new park and ride, and could be thought of as on-going. (See Stage II summary).

H. Stage III--New Capital Service Quality Enhancements and Efficiency Improvements

This segment includes additional capital assets that are indirectly related to providing additional service on the street. These would be items that might heighten the level of service quality or service delivery, they might improve operating efficiency, or begin a new program. AVL, additional bus shelters, additional customer communications capabilities, retrofitting the Banfield to Westside light rail standards would fall into this category.

Both Stage II and Stage III, of course, have to be replaced and maintained, or become Stage I as soon as they become a part of the existing capital plant.

I. Completing the Capital Plan

To complete the capital plan several things are needed:

- Agreement on the capital concepts. (TAC role)
- Agreement on the service plan. (TAC role)
- Criteria for capital maintenance and replacement (T-M Staff)
- Mandatory replacement and repair
  - Programmed replacement and repair.
- Criteria for new capital purchases. (TAC role)
  - Service plan.
  - Maintenance and replacement costs.
- Financial Forecast (T-M Staff)
- Funding solutions and approaches (TAC Role)

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 91-1440 FOR THE PURPOSE OF ENDORSING DEMONSTRATION GRANTS FOR MANAGEMENT OF TRANSPORTATION MOBILITY

Date: April 17, 1991 Presented by: Andrew Cotugno

PROPOSED ACTION

Adopt Resolution No. 91-1440 endorsing two proposed demonstration grants:

1. Multi-Modal Service Delivery System to assist in the formation of carpools and vanpools, provision of consumer information, dispatching of demand-responsive transit services and integration with fixed route transit service. Proposed applicant: Tri-Met with assistance from Metro, Washington County, Hillsboro and Portland.

2. Development of an areawide traffic management system for the freeways and major arterials and an incident-response system. Proposed applicant: ODOT with assistance from the City of Portland.

TPAC has reviewed the proposed demonstration grants and recommends endorsement of Resolution No. 91-1440.

FACTUAL BACKGROUND AND ANALYSIS

The Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA) are considering applications for demonstration grants for low-cost methods to manage urban transportation systems and improve urban mobility. Indications from FHWA and UMTA are that several categories of urban mobility demonstration programs are being established. This resolution endorses two possible applications in response to these solicitations.

Multi-Modal Service Delivery System

This proposal will develop a regionwide addressed-based system to match specific customers to the most appropriate type of service: carpool, vanpool, demand-responsive transit service or fixed route transit service. The system will be developed based upon an upgraded TIGER file under development by Metro and will be compatible with Metro's Regional Land Information System (RLIS). The result will be detailed information on bus routes and schedules and the ability to match specific addresses to routes or provide the basis for matching carpools or dispatching demand-responsive transit service (both special needs service to the elderly and handicapped and general public service).

The project will be developed with the assistance of actual implementation of a pilot project in the Sunset Corridor in the region's Westside. Experience from the pilot project will assist in designing the regionwide program. The Sunset Corridor is recommended for the pilot project because it includes the following pertinent applications:

- The need to serve a growth area;

- Provision of service to a diverse market consistent with the findings of Tri-Met's Suburban Transit Study, including intra-suburban work and non-work travel, inner-city neighborhood to suburban job commute, and suburban resident to downtown Portland commute; and

- Initiation of service to an area where a broader corridor application will be needed to mitigate construction of the Westside LRT and highway project.

Areawide Traffic Management System

This will develop a system for the region's freeways and major arterials to be implemented over the next several years. One component will be to manage daily traffic movements through "real-time" monitoring of traffic conditions and optimization of ramp meters and traffic controls to balance the traffic flow with available capacity. This has proved effective with the existing downtown Portland traffic control system and on freeways elsewhere in the country.

The second component is to develop an incident-response system to quickly target responses to accidents and other traffic impediments. In doing so, the facility can be restored to normal flow.

Both programs will rely on further implementation by the sponsoring jurisdictions.

At the April 26 TPAC meeting, interest was expressed on the part of the Port of Portland representative to include closed-circuit television surveillance of the I-84 and I-205 freeways to maintain reliability for these routes to Portland International Airport.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 91-1440.

91-1440.RES
4-29-91
ACC:lmk

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ENDORSING DEMONSTRATION GRANTS FOR MANAGEMENT OF TRANSPORTATION MOBILITY	RESOLUTION NO. 91-1440 Introduced by David Knowles, Chair Joint Policy Advisory Committee on Transportation

WHEREAS, the Regional Transportation Plan calls for Transportation Demand Management measures to reduce the need for new transportation facilities and maximize the utilization of existing and planned transportation facilities; and

WHEREAS, The Federal Highway Administration and the Urban Mass Transportation Administration are soliciting proposals for grants to demonstrate innovative urban mobility projects; and

WHEREAS, The Oregon Department of Transportation and Tri-Met are proposing two such demonstration grants with the assistance of Metro, Portland, Washington County, and Hillsboro; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District:

1. Endorses the Multi-Modal Service Delivery System (as described in concept in Exhibit A).

2. Endorses the Areawide Traffic Management System (as described in concept in Exhibit B).

3. Intends to amend the Transportation Improvement Program upon notification that grant proposals will be accepted.

ADOPTED by the Council of the Metropolitan Service District this ____ day of ___, 1991.

Tanya Collier, Presiding Officer

91-1440.RES/lmk

- DRAFT -

EXHIBIT A

FHWA/UMTA Action Program for Improving Mobility

Introduction

The Portland metropolitan area proposes to develop a multi-modal service delivery system for determining the most appropriate carpool, vanpool, demand-responsive or fixed route transit service to deliver and to aid in delivering the selected service to the targeted market. The approach will be to develop a region-wide geographic information system (GIS) with the capability to match requesting riders and targeted markets to the most appropriate mode and to dispatch the information and/or the service to meet the need. The system will be designed through a pilot application in the region's Sunset Corridor. Experience will be gained through the application of this pilot project in an actual service application, thereby assisting in designing the GIS for application at a broader regional scale.

The final result will be direct delivery of service in an area of recent high growth now lacking in service plus the availability of a regionwide tool for improving response to requests for carpool information and for determining the most appropriate type of transit service for different parts of the region.

Overview

The regionwide GIS will be designed to integrate the following major functions into a "real time" planning, analysis, trip planning, matching and dispatching tool:

A. Carpool matching - Using an enhanced TIGER map, carpool matching information services will be improved to respond to address-specific requests more quickly, more accurately and for a broader potential service area (such as along the travel route).

B. Transit Trip Planning - Using a route planning system designed to be linked to the TIGER address information, requests for route and schedule information will be improved to respond to requests more quickly and accurately. In addition, both transit and carpool information will be supplied when appropriate.

C. Special Needs Demand Responsive Service Dispatch - The system for dispatching demand responsive vehicles will be automated

and integrated with the TIGER address information for locating desired origins and destinations and will be integrated with the fixed route information system to facilitate routing of connecting trips to the fixed route transit system. Connecting rides to the fixed route system will be in accordance with the availability of wheelchair equipped buses on the connecting fixed route service. This will shorten the lead time required to request rides, hopefully to a "real time" application. The addition of automatic vehicle locator (AVL) devices to the demand responsive vehicles will aid in revising the trip itinerary en route as trip requests are received.

D. General Demand Responsive Dispatch - The Special Needs Dispatching System will be extended to provision of demand responsive transit services to the general public. Although selected group rides will be dispatched strictly to certain client groups, the special needs and general public service will generally be integrated.

   Analysis of demand-responsive rider patterns will assist in determining areas to deploy full or partial fixed route service and where to form privately operated vanpools or subscription bus services.

E. Guaranteed Ride Home - In areas where full time transit service (whether fixed route or demand responsive) cannot be supported, a guaranteed ride home program will be established to supplement carpool, vanpool and partial transit service.

F. Vanpool Program - Existing and potential riders will be matched to form vanpools where feasible. Consideration will be given to provision of vehicles and addition of AVL equipment to allow use for occasional demand responsive service.

G. Travel Time Information - With the aid of AVL equipped demand responsive and fixed route buses, data collection of actual transit and highway system operating characteristics will be facilitated. This information will feed back to upgrade data regarding the performance of the system, modify trip planning and dispatching databases and input requirements for forecasting future travel demands.

This GIS tool will be developed with the aid of a pilot project in the Sunset Corridor on the region's Westside. Although existing experience with fixed route trip planning and special needs demand responsive dispatch will aid in guiding the development of these parts of the system, further experience in the Portland region is needed in the areas of real time carpool matching, carpool matching for en route origins and destinations, vanpool formation, general public demand responsive transit service and integration of demand responsive with fixed route transit service. The Sunset Corridor provides an area of recent growth

in residential and large new employers in close proximity to timed transfer connections to the fixed route system. In addition, its location on the westside will provide valuable experience in designing and implementing a broader system to mitigate the lengthy Westside LRT and highway construction period and to aid in implementing restructured feeder bus service with the inauguration of LRT service in 1998.

The benefits of this project are as follows:

- delivery of innovative transit service in a growing suburban market;

- development of a westside prototype system for extension during westside LRT and highway construction;

- immediate improvement of Special Needs demand responsive transit dispatch regionwide;

- immediate capability to connect Special Needs demand responsive trips to the fixed route system regionwide;

- immediate improvement of trip planning information and carpool matching services to customers regionwide;

- availability of a tool to expand demand-responsive service to the general public regionwide.

- availability of a tool for vanpool formation.

Problem Definition (Expand)

Suburban travel market difficult for transit to serve.
Inner city access to suburban jobs insufficient due to lack of transit access to suburban job sites.
Need for faster, more reliable address-based trip planning and dispatch (existing manual system inadequate).
Complicated to connect demand-responsive service to fixed route service.
Need to tailor service most appropriate to the market to encourage evolution of markets as they grow to different types of service.
Need to deliver complex variety of services to a complex travel market throughout the region.
Need to prepare for chaos during LRT construction.

Project Participation (to be completed)

Metro, Tri-Met, Hillsboro, PDC, employers (TMA), Portland, Washington County, ODOT

Project Description

A. System Design

B. Pilot Project

C. Relationship to other projects

1. Metro GIS

2. Metro Travel Forecasting system (EMME-2)

3. Tri-Met Elderly & Handicapped Demand Responsive Dispatch

4. Tri-Met Automatic Vehicle Locator Devices

5. Tri/Met/ODOT Westside Corridor Project construction mitigation

6. Tri-Met transit service restructuring and expansion upon opening Westside LRT

7. ODOT Areawide Traffic Management System

8. Tri-Met FOCCS System

9. PDC Jobnet Program

Estimated Cost

Implementation Time Frame

91-1440.RES
4-29-91
ACC:LMK

EXHIBIT B

OREGON STATE HIGHWAY DIVISION

Freeway Management Program

PROPOSAL

For a Planning Study of an AREA-WIDE TRAFFIC MANAGEMENT SYSTEM IN THE PORTLAND METROPOLITAN AREA

by

Gary McNeel
Freeway Management Facilitator
Oregon State Highway Division
Oregon Department of Transportation
9002 SE McLoughlin Blvd.
Milwaukie, Oregon 97222

A Proposal Submitted to
Federal Highway Administration
U.S. Department of Transportation

March 12, 1991

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PROPOSAL FOR DESIGN OF TRAFFIC MANAGEMENT SYSTEM AND DEVELOPMENT OF INCIDENT RESPONSE PROGRAM

THE PROBLEM

Congestion on the Freeway System within the Portland Metropolitan Area is escalating at an alarming rate. By the year 2005, traffic in the Portland area is expected to be 45 percent greater than it is today. This reflects a 32 percent growth in population and a 43 percent growth in employment during the same period.[1]

Most of Portland's Interstate freeways are carrying nearly all of the traffic they were designed to carry. Much of this freeway system was designed and built more than 15 years ago. Total freeway travel has grown by 140 percent over the last 18 years while the number of freeway miles has grown by only 16 percent and the number of lane miles by only 41 percent. Portland is not anticipating any new freeway links at this time. A map of Portland's freeway system is shown on Fig. 1.

Today's rush-hour congestion affects nearly one-third of the system. Portland's Regional Transportation plan predicts a four fold increase in the total number of vehicle hours of delay over the next 15 years.

In addition to the congestion caused by traffic demand exceeding the available capacity, there is also considerable congestion from non-recurring incidents (accidents, load spills, etc.). These unpredictable events account for nearly all the congestion that occurs during off-peak hours. Of the 1,998 urban freeway accidents in the State of Oregon during 1988, 67% were within the Portland Metropolitan area.[2] When incidents restrict the freeway, motorists often divert to adjacent arterials or surface streets, which cannot accommodate the additional demand.

Effective traffic management and incident response in the Portland area is impeded by the number of jurisdictions (32) and the "home rule" nature of traffic enforcement. For instance, the Oregon State Police do not patrol the freeways within the Portland city limits. Detection, response, and clearance of roadway incidents is handled by a number of different

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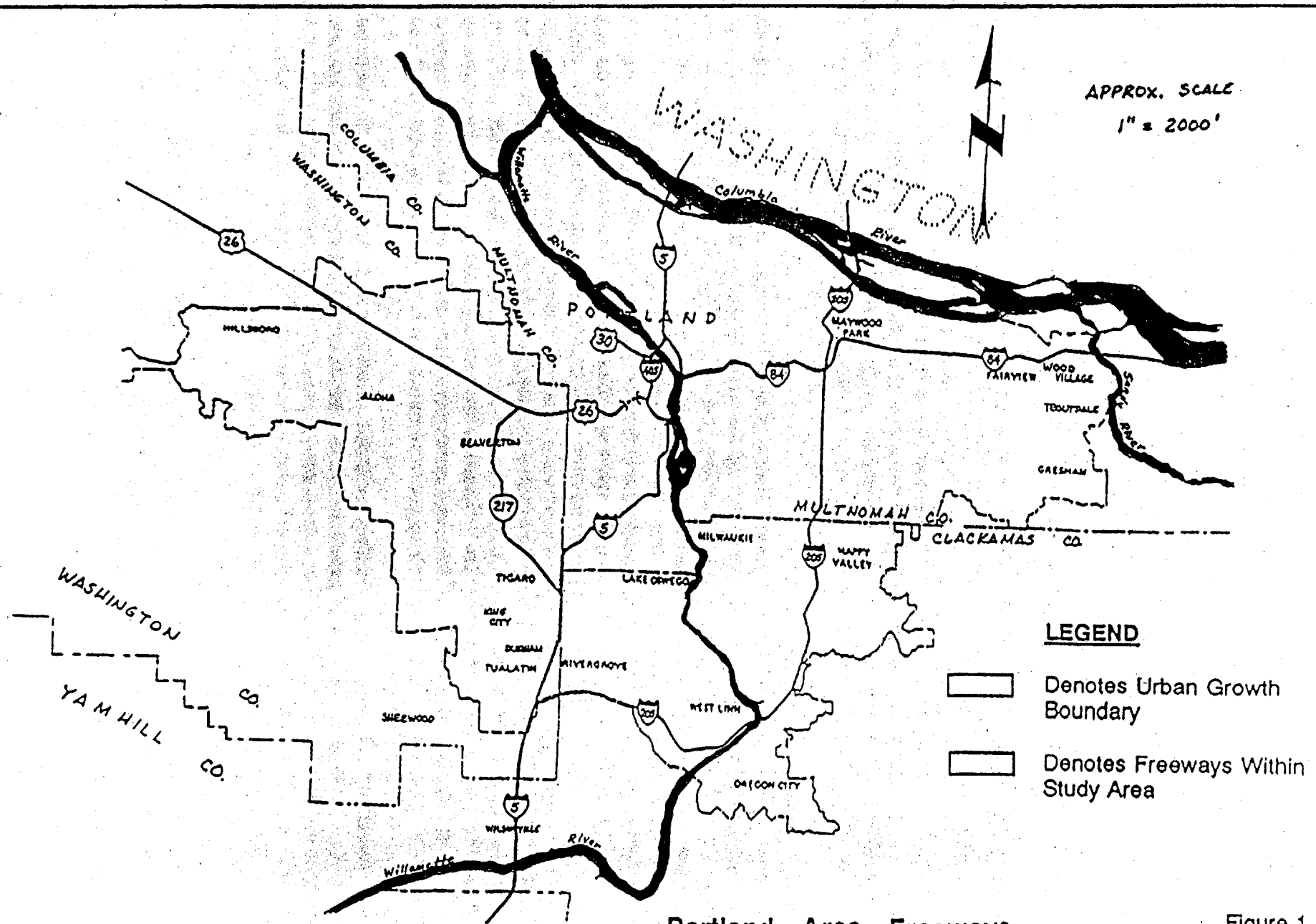
[1] Source: 1989 Update of the Regional Transportation Plan Metropolitan Service District

[2] Source: 1989 Summary of Reported Accidents Oregon Department of Motor Vehicles



Portland Area Freeways

Figure 1

agencies using their own procedures and various local policies and ordinances.

BACKGROUND

These congestion and accident problems emphasize the need for improved management of the Portland area freeway/arterial system. The specific areas being addressed by this proposal are:

1. Future freeway/arterial management system design
2. Improvement of incident management
3. Participation in the congestion reduction measures by all the jurisdictions in the area.

For the past 75 years, the focus of the Oregon State Highway Division (OSHD) has been highway construction. As traffic volumes and vehicle miles travelled steadily increased, new highways were built, extended, or widened. Since the 1960's the costs of right-of-way and physical construction have spiraled. Congestion and delay to motorists have steadily increased, as growth within the region out-paced development of the transportation network.

In January of 1981, OSHD installed the state's first ramp control signals, which were intended to balance demand with available capacity during peak periods. This ramp control program has been expanded to include 37 metered ramps on four segments of the Portland freeway system.

In 1989, the Oregon Transportation Commission approved the formation of a freeway management program. The Commission also approved a series of projects to be funded and constructed as part of the 1991-96 Six Year Highway Improvement Program. (Portions of which are included in Appendix C). The projects programmed include variable message signs, additional ramp meters, connection of all ramp meters to central monitoring, an incident "hot line", and closed-circuit television cameras. In addition, OSHD will expend capital improvement funds to construct a freeway management operations center (FMOC) and form an incident management program.

As a first step in implementing the freeway management program, the position of Freeway Management Facilitator was established by OSHD for the Portland metropolitan area in March of 1990. This position's duties include development of plans for the FMOC, and guiding the progress of the series of programmed

freeway management projects in the Six Year Highway Improvement Program.

Other duties include coordinating and overseeing consultant contracts for those tasks requiring specialized or technical expertise. A recent example of this is the contract OSHD signed with DKS Associates to prepare a study of the ultimate communications network for the freeway management program, and an interim, compatible design of four subsystems to interconnect the existing ramp meters to the FMOC.

As further evidence of their commitment to a coordinated, multimodal effort to manage urban congestion, the Department also created a position of Demand Management/Rideshare Program Manager in July of 1990. While the manager works primarily in the Portland metropolitan area, the scope of this program is statewide. The principal objectives of this position are to assess existing demand management/rideshare activities in Oregon, and to develop a statewide program of fundable projects consistent with Regional Transportation Plans (by June 1991).

The OSHD has aggressively undertaken the task of managing the growing problems caused by congestion on the Portland area freeway system. The Department has a vision for how optimization of traffic flow will be developed. Their support of the Freeway Management and Demand Management programs demonstrates commitment toward achieving this vision.

A Portland Traffic Operations Team has been meeting regularly since 1989 to discuss traffic management issues in the Portland metropolitan area. Regularly participating members of that team include persons from ODOT, Portland City Bureaus of Traffic Management, Police, Fire, and FHWA. The OSHD freeway management facilitator has been a regular participant in these team meetings since his appointment.

The City of Portland has demonstrated their commitment to relieving congestion on their surface street system by installation of a state-of-the-art computerized signal control system. Nearly all of the signals in the central business district are now being centrally controlled, and the city is expanding the number of interconnected intersections, utilizing the institutional network portion of the local cable television company.

There remain some unanswered questions in the effort to implement the best program for the Portland area. Additional funds from the Federal Highway Administration will enhance and

accelerate the identification of alternatives and recommendations to help answer those questions.

OBJECTIVES

One objective of this study is to **provide direction for the design of an area-wide advanced traffic management system (ATMS)** which can be implemented by OSHD within the next few years. Operation of the system would include multi-jurisdictional cooperation among participating agencies inside the "area of influence" shown on Fig. 1. The system will coordinate traffic flow on Portland area freeways and adjacent arterials while optimizing the efficiency of the roadway facilities. The system will be responsive to the impacts of any mainline adjustment (freeway or arterial) on adjacent arterial or surface streets.

Another objective is to **develop an incident management program which can be rapidly implemented within the framework of each agency.** This study will document existing practices, identify improvements in procedures, policies, and regulations that will reduce time needed for detection, response, and clearance of incidents in the Portland area. As part of this study, one of the work elements will identify one or more demonstration corridors. Plans for incident response strategies within these corridors will be developed, incidents and the responses will be documented, analyzed, and evaluated. The safety of both the travelling public and the personnel managing the incidents will be enhanced by a well organized program.

The third objective of the study will be **improved working relationships between area jurisdictions.** This will be accomplished by identifying, prioritizing, and recommending solutions for inter- and intra-jurisdictional issues and necessary agreements to establish a clear and concise structure.

BENEFITS

The design of an area-wide traffic management system and development of an incident management program will provide significant benefits to the motoring public. The primary goal of these efforts is to reduce motorists delay and congestion, which will decrease gasoline consumption, air pollution, and accident frequency. This study will provide plans which can be implemented in stages over several years. Each component will be compatible with the overall system. A comprehensive plan will enable OSHD to identify the appropriate elements and conceptual design of a central control system; the benefits of those elements; and staffing, operating and maintenance costs.

This study will also help OSHD and other Portland area jurisdictions determine how to plan for and spread the total cost of implementing the programs over several years. It can identify the impact on each department's overall budget, and recommend strategies for funding continuing operations and maintenance without negatively impacting other programs.

Improved interagency cooperation in incident management can be achieved through review of communications, personnel, equipment, and services currently provided by each agency. This analysis would reveal areas of overlapping, redundant, or missing elements in traffic management and incident response. The recommendations which result from this study would clarify each agency's role and foster better understanding of their mission and goals during and after an incident.

SCOPE OF WORK

The priority and magnitude of each task accomplished in this project has been determined utilizing input from the Oregon State Highway Division and the City of Portland. Priorities as we see them are listed on Page 11. The work performed will include three major elements, each containing several tasks and subtasks, which can be developed concurrently as follows:

TASK I. SYSTEM CONFIGURATION

A. Area-Wide Corridor Assessment

1. Inventory: This task will be to review Portland area freeways, adjacent arterials and surface streets (within corridors provided to the consultant by OSHD and other agencies). The review will determine which roadway facilities should be included in an area-wide traffic management and incident response system. As the inventory is developed, existing volumes, capacities (and/or capacity deficiencies) shall be mapped which would help identify areas which should be targeted for traffic flow enhancement projects.

2. Signal Review: This task will examine signal control along major arterials defined in the Portland area system and make specific recommendations on progression and control improvements (flow enhancement techniques) within the objectives of an area-wide traffic management system, which include integration of systems across jurisdictional boundaries.

3. Problem Areas: This task will review known "bottle- necks" (geometric constrictions) and "hot spots" (frequent accident sites), and potential mitigating actions. Products of this task will help identify and prioritize facilities and operational improvements needed as part of an ATMS.

4. Existing Communications and Coordination: This task will identify and document existing traffic management procedures in the Portland area. It will provide the types and limits of signal control, formal and informal methods of communication, and work planning procedures. Interviews will be conducted with appropriate personnel within various agencies responsible for operation, maintenance, and enforcement within major traffic corridors. The summary will then be used to prepare recommendations on the area-wide communications system which may best fit the Portland areas needs, utilizing existing equipment and jurisdictional procedures wherever possible.

B. Centralized Control

1. FMOC Needs Study: This task will include a comparison of other agencies' control centers, an examination of how their hardware and software needs were developed, and their integration with other local control centers. An informal evaluation of the benefits, costs, and operational considerations will be included.

2. FMOC Features: This task will identify which elements of central control are appropriate for the Portland system, and propose a strategy for staging the implementation of the various components. Products of this task will include complete life-cycle costs and benefits analysis of proposed features of the FMOC.

3. Advanced Technology Study: This task will involve evaluating emerging technologies in centralized control, particularly those involving advanced surveillance and detection/verification of incidents; dynamic two-way use of field devices (such as ramp meters) for more than recurrent congestion problems; and their feasibility for inclusion in the Portland program.

C. Detection Techniques Study

1. Technology Review: This task will involve compiling available research and demonstration reports of vehicle detection systems used by other agencies. The spacing, magnitude, service life, operation costs, and maintenance costs of detection systems that would serve Portland's needs will be compared. In addition to inductive loops, current research on radar, microwave, and video imaging techniques will be evaluated. Other detection possibilities such as volunteer observers and dedicated cellular telephone lines will also be evaluated.

2. Cost Effectiveness: This task will include a thorough evaluation of the benefits versus costs of detection systems with a recommendation as to the extent of the ultimate ATMS detection system for Portland along with a plan for staging the imple-

mentation of such a system. Costs listed in the evaluation will be complete life cycle costs including construction, operation, and maintenance.

D. ATMS System Configuration

The summary element in this task will provide a plan for an entire ATMS system in the Portland area with complete staging and life-cycle cost estimates. This will include recommendations of funding options, staffing requirements, facilities, software and equipment needs.

TASK II. INCIDENT MANAGEMENT

A. Existing Incident Management Practices

1. Inventory: This task will identify all response agencies within the defined Portland area traffic corridors which may include: police, fire, hazardous materials teams, rescue, ambulance, tow companies, and roadway maintenance crews. Current procedures for incident detection, response clearance, and driver information will be identified. Key individuals from the various responsible agencies will be interviewed.

2. Communication processes: This task will examine communication processes during detection and response phases and will document field procedures related to decision-making processes, lines of authority, and field communications. Other incident management issues that this task will address include vehicle clearance policies and procedures, equipment availability, and personnel training.

3. Incident Management Improvements: This task will identify deficiencies and shortcomings and recommend corresponding improvements in the current incident management efforts. Part of this work will include summarizing and evaluating incident data collected by OSHD, which may be useful in supporting benefits of program improvements. Improvement recommendations will be supported with life-cycle cost estimates and benefit/cost evaluations.

B. Incident Documentation

OSHD has been collecting incident data for several years. Data presently recorded include times of incident, response and clearance times. This task will involve a review and evaluation of the current record keeping process with recommendations for improvements. This program can be an effective tool in the evaluation of changes in the incident management program.

Issues to be examined in this task will include type of data collected, means of compiling and utilizing data, measures of

effectiveness for the incident management program, applicability of the program to other jurisdictions and roadway types, and software/hardware requirements.

C. Incident Site Communications

This task will focus on communications between the personnel responding to an incident. A single medium, such as multiple channel hand-held radios, will be studied. The most compatible type will be recommended, and an implementation plan will be prepared that will enable the recommended medium to be available to all agencies for use during incidents. The study will include complete itemized life-cycle cost estimates.

D. "HELP" Signs

OSHD is currently designing a project to install ten signs informing motorists of a central number to call to report "traffic problems" they experience or observe. This task will be to evaluate the effectiveness of this project and recommend future use of such signing (expansion, deletion, relocation, cellular phone use, etc.).

E. Incident Response Corridor Plan

This task will identify one or more corridors where incidents occur frequently and cause significant traffic problems. Specific response plans, including emergency access, signing, diversion routes, nearby resources for dealing with the incident and its aftermath will be developed. The task will also provide recommendations for documenting and evaluating each incident that occurs within the test area. Examining the cause of these incidents rather than simply treating the symptoms may provide us insight toward prevention of similar situations.

TASK III. INTER-JURISDICTIONAL ISSUES

This task will address issues related to the involvement of numerous agencies and jurisdictions in an ATMS for the Portland area. The issues include but are not limited to: jurisdiction and enforcement boundaries; legal and legislative authority and responsibilities; implementation, operation and maintenance responsibilities; staffing and funding; continuing evaluation; cooperative efforts in public information; and the role of the Metropolitan Service District (local planning organization) in the overall structure of operations. The examination will result in recommended working arrangements or agreements between agencies and a plan for the transition from existing conditions to ultimate system configurations as identified by other tasks in this project.

A. ATMS Structure

B. Incident Management Issues

This task is similar to III.A with specific focus on the inter-jurisdictional issues related to incident management. It will include recommendations on incident chain-of-command, which may change depending on the nature and/or magnitude of the incident. It may include agreements on jurisdiction and responsibility, as well as procedures such as selecting towing companies or equipment to be used at the incident.

C. Other Participants

The possibility of including agencies which currently have no operational relationship with OSHD should be explored. This task would identify, for instance, Tri-Met (the regional transit system), taxi cab companies, media organizations, and other private sector involvement which may be utilized to enhance the department's Freeway Management and Incident Response programs.

IMPLEMENTATION

Results of this study will be used to provide guidelines for further development of Portland's Area-wide Advanced Traffic Management System. Remodeling of the building to accommodate the Freeway Management Operations Center (FMOC) will occur over the next two years. The results of this study will provide direction for prioritizing the acquisition of hardware and software for that facility. It will also help OSHD plan and prepare for staffing, operations, and maintenance of the FMOC.

In conjunction with the "start-up" of the FMOC, OSHD will be developing the incident response program. Results of this study will identify potential obstacles such as "turf", staffing, funding, enforcement, maintenance, and communications. Exploring these issues will clarify each agency's role and enable the development of complete and effective agreements.

PROJECT STAFF

Staff for this project shall come from the Oregon State Highway Division, the City of Portland, and outside consultants. Costs shown in Appendix A are estimated consultant costs only and OSHD and City personnel will be providing in-kind manpower as their local match. OSHD and City of Portland participants and their estimated hours of involvement with this study are:

- Mr. Dwayne Hofstetter, P.E., (OSHD) State Traffic Engineer, will be the Project Principle. His involvement in the project is anticipated to be as Senior Advisor, and as such will be reviewing all work performed as part of this project. Mr. Hofstetter will coordinate any activities which require input from a legal or legislative source.
  Estimated hours: 150

- Mr. Thomas Schwab, P.E., (OSHD) Region 1 Transportation Analysis Manager, will be Senior Project Engineer. Mr. Schwab's involvement in the project will be primarily advisory. His research into Portland's freeway management program has been extensive, and he authored the executive summary approved by the Transportation Commission.
  Estimated hours: 150

- Mr. William Kloos, P.E., (C.O.P.) Signal System Manager, will be Senior Project Engineer. Mr. Kloos's involvement in the project will be primarily advisory. He will be reviewing all tasks which involve communications and/or integration of systems between the city and the state.
  Estimated hours: 100

- Mr. Ronald Failmezger, P.E., (OSHD) Region 1 Traffic Operations Supervisor, will be Project Manager. Mr. Failmezger has over twenty years of experience with traffic engineering in the Portland area. This has provided him with the ability to evaluate local traffic problems and recommend potential solutions.
  Estimated hours: 150

- Mr. Michael Bauer, T.E., (C.O.P.) Senior Traffic Engineer, will be Project Engineer. Mr. Bauer has considerable experience with Portland area traffic patterns and conditions, and will be reviewing all analyses and proposals for altering flows, detours and diversions for incidents.
  Estimated hours: 100

- Mr. Richard Johnson, (C.O.P.) Communications Engineer III, will be Project Engineer. Mr. Johnson has several years of experience with data and video communications. He will be reviewing all technical tasks, particularly the life cycle cost and recommendation sections.
  Estimated hours: 150

- Mr. Gary McNeel, (OSHD) Region 1 Freeway Management Facilitator, will be Project Coordinator. His primary task will be to monitor the progress of the selected consultant(s), provide their firm(s) with any materials or data they need, and to keep them on task and schedule, within their scope of work.
  Estimated hours: 300

PRIORITIZATION OF TASKS

PRIORITY	TASK NO.	COST	TASK DESCRIPTION
1	ID*	10,000	ATMS Configuration
2	IA	90,000	Corridor Assessment
3	IIIA	40,000	ATMS Structure
4	IIIB	30,000	Incident Management Issues
5	IIE	10,000	Incident Corridor Plan
6	IIA	40,000	Exist. Incident Management
7	IB*	50,000	Centralized Control
8	IC*	45,000	Detection Techniques
9	IIIC	30,000	Other Participants
10	IIB	15,000	Incident Documentation
11	IIC	20,000	Incident Communications
12	IID	20,000	"HELP" Signs Evaluation
	TOTAL	400,000	

*NOTE: Without inclusion of Task IB and IC, Task ID must be increased by 55,000.

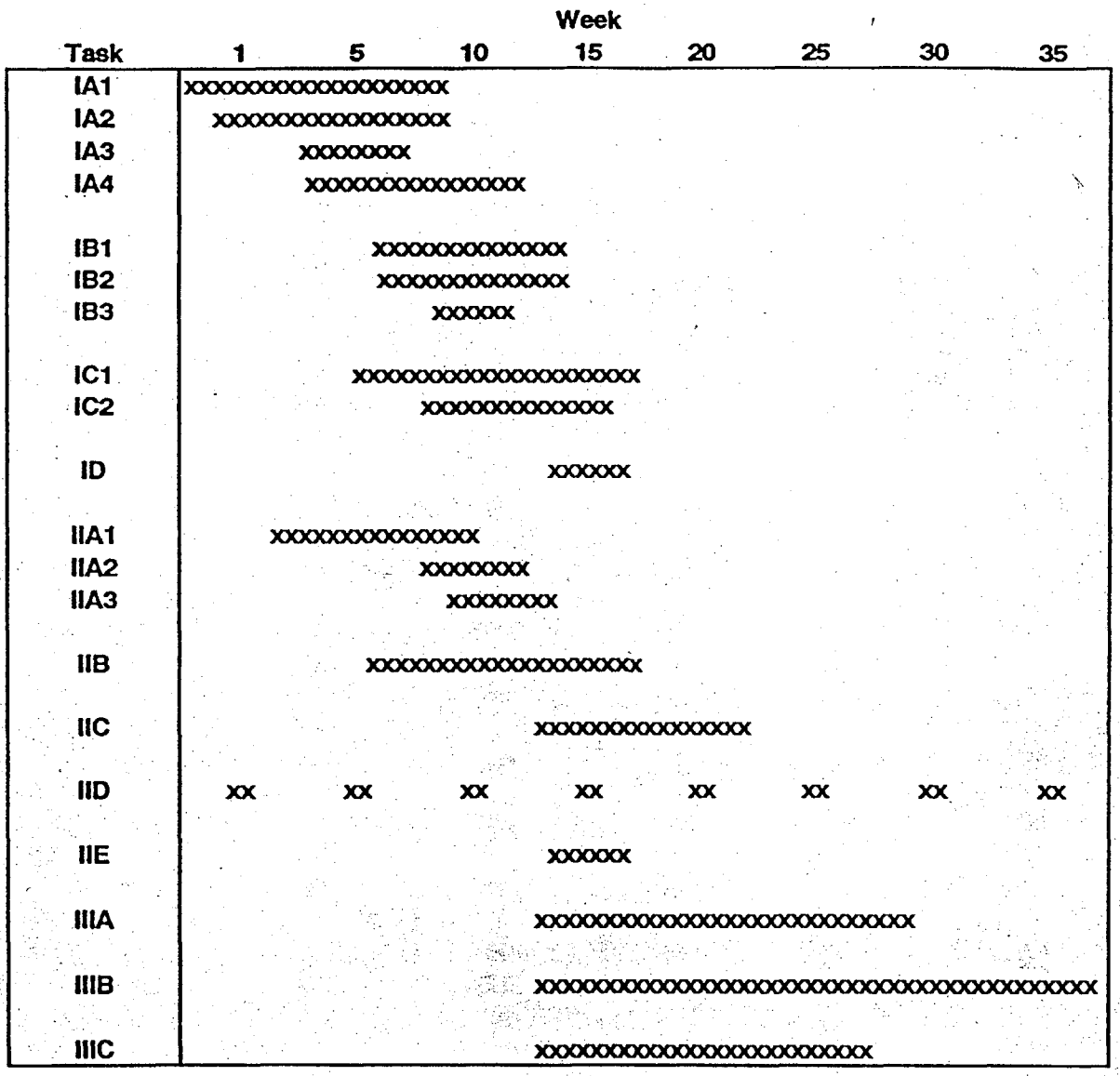
APPENDIX A
SUMMARY OF ESTIMATED TIME AND COSTS OF EACH TASK

Shown in Hours

Task	Project Admin.	Senior Advisors	Project Engineers	Support Staff	Total	Value
IA1	40	40	220	40	340	$25,000
IA2	20	25	130	25	200	$15,000
IA3	40	40	220	40	340	$25,000
IA4	45	50	200	45	340	$25,000
IB1	40	40	150	40	270	$20,000
IB2	35	40	160	40	275	$20,000
IB3	15	20	80	20	135	$10,000
IC1	50	60	200	50	360	$25,000
IC2	35	40	160	40	275	$20,000
ID	15	20	80	20	135	$10,000
Task I Total	335	375	1600	360	2670	$195,000
IIA1	30	30	110	30	200	$15,000
IIA2	25	25	100	30	180	$15,000
IIA3	15	15	80	20	130	$10,000
IIB	30	30	100	40	200	$15,000
IIC	35	40	160	40	275	$20,000
IID	35	40	160	40	275	$20,000
IIE	15	15	85	20	135	$10,000
Task II Tot.	185	195	795	220	1395	$105,000
IIIA	70	80	320	80	550	$40,000
IIIB	50	60	200	40	350	$30,000
IIIC	50	60	240	50	400	$30,000
Task III Tot.	170	200	760	170	1300	$100,000

APPENDIX B
FREEWAY MANAGEMENT AND INCIDENT RESPONSE PROGRAM

WORK SCHEDULE



CONSTRUCTION

REGION 1

MAP INDEX	ROUTE NO. HIGHWAY NAME	COUNTY	SECTION NAME MILEPOINT	WORK DESCRIPTION	COST ($1,000)	FUND SOURCES
			FEDERAL FISCAL YEAR 1991 PROJECTS			
034	OR-213 CASCADE SOUTH	CLACKAMAS	CASCADE SOUTH @ HENRICI ROAD M.P. 4.3	CONSTRUCT A LEFT TURN REFUGE.	170	FA
035	OR-213 CASCADE SOUTH	CLACKAMAS	CASCADE HWY S @ S GREENTREE DRIVE M.P. 5.0	CONSTRUCT A LEFT TURN REFUGE.	80	STATE
036	OR-213 CASCADE SOUTH	CLACKAMAS	CASCADE SOUTH @ LELAND ROAD M.P. 5.7	REALIGN THE INTERSECTION & INSTALL TRAFFIC SIGNAL.	180	FA
037	OR-224 CLACKAMAS	CLACKAMAS	RUSK ROAD - LAWNFIELD M.P. 2.7- 4.2	INSTALL NEW SIGNAL CONTROLLERS @ 7 SITES & REPLACE EXISTING INTERCONNECT SYSTEM.	350	STATE OTHERS 2/
		STATEWIDE	ASSIGNED FOR SURFACE PRESERVATION, REGION 1		2,000	STATE
038	BEAVERTON-TUALATIN	WASHINGTON	BEAVERTON/TUALATIN HWY @ SW WASHINGTON DR M.P. 3.7	CONSTRUCT A LEFT TURN REFUGE.	100	STATE
039	BEAVERTON-TUALATIN	WASHINGTON	BEAVERTON/TUALATIN HWY @ SW OAK M.P. 4.2- 4.3	CONSTRUCT LEFT TURN LANES.	190	STATE
040	BEAVERTON-TUALATIN	WASHINGTON	BEAVERTON/TUALATIN HWY @ SW PFAFFLE ST M.P. 4.6	CONSTRUCT LEFT TURN LANE.	60	STATE
041	BEAVERTON-TUALATIN	WASHINGTON	PACIFIC HIGHWAY WEST - SW MCDONALD ST (BIKEWAY) M.P. 5.0- 6.1	CONSTRUCT BIKEWAY.	200	BIKE
042	BEAVERTON-TUALATIN	WASHINGTON	BEAVERTON/TUALATIN HWY @ SW BURNHAM ST M.P. 5.5	INSTALL A SIGNAL AND CONSTRUCT A LEFT TURN REFUGE.	130	STATE
*	VARIOUS FREEWAYS	MULTNOMAH	PORTLAND AREA FREEWAYS 'HELP' SIGNS	INSTALL SIGNS INDICATING PHONE NUMBERS FOR 'HELP'.	40	I-4R

2/ REQUIRES WRITTEN PROJECT AGREEMENT

* Denotes projects in Six-Year Program related to Traffic Management System.

CONSTRUCTION

REGION 1

MAP INDEX	ROUTE NO. HIGHWAY NAME	COUNTY	SECTION NAME MILEPOINT	WORK DESCRIPTION	COST ($1,000)	FUND SOURCES
			FEDERAL FISCAL YEAR 1992 PROJECTS			
052	US-30 LOWER COLUMBIA RIVER	COLUMBIA	LOST CREEK HILL M.P. 55.0- 55.7	INSTALL GUARDRAIL.	70	STATE
053	US-30 LOWER COLUMBIA RIVER	COLUMBIA	LOWER COLUMBIA RIVER HWY @ MIDLAND ROAD M.P. 63.7	CONSTRUCT A LEFT TURN REFUGE.	150	STATE
054	OR-8 TUALATIN VALLEY	WASHINGTON	CANYON LANE - WALKER ROAD M.P. 0.3- 2.2	INSTALL 3 TRAFFIC SIGNALS.	240	STATE
055	OR-8 TUALATIN VALLEY	WASHINGTON	TUALATIN VALLEY HIGHWAY @ SW 209TH M.P. 7.8	INSTALL TRAFFIC SIGNAL CONTROLLER.	20	STATE
056	OR-35 MT HOOD & HOOD RIVER	HOOD RIVER	13TH & OAK STREET (HOOD RIVER) M.P. 103.3	INSTALL TRAFFIC SIGNAL.	70	FA
057	OR-99E PACIFIC EAST	CLACKAMAS	PACIFIC HWY EAST @ S NEW ERA RD M.P. 18.2	REALIGN INTERSECTION.	300	FA
058	OR-210 SCHOLLS	WASHINGTON	SCHOLLS HWY @ SW JAMIESON ROAD M.P. 11.5	CONSTRUCT A LEFT TURN REFUGE.	150	STATE
059	OR-212 CLACKAMAS	CLACKAMAS	CLACKAMAS @ 130TH AVENUE M.P. 6.9	INSTALL A TRAFFIC SIGNAL.	80	STATE
060	OR-212 CLACKAMAS	CLACKAMAS	CLACKAMAS @ 135TH AVENUE M.P. 7.2- 7.2	INSTALL A TRAFFIC SIGNAL.	70	STATE
061	OR-213 CASCADE SOUTH	CLACKAMAS	E PORTLAND FREEWAY - HOLCOMB BLVD M.P. 0.1- 0.6	CORRECT ROADWAY SETTLEMENT AND DRAINAGE.	750	STATE
* 062	OR-217 BEAVERTON-TIGARD	WASHINGTON	SUNSET INTERCHANGE - I-5 M.P. 0.1- 7.4	INSTALL RAMP METERS AT ALL RAMPS.	450	FA

* Denotes projects in Six-Year Program related to Traffic Management System.

CONSTRUCTION

REGION 1

MAP INDEX	ROUTE NO. HIGHWAY NAME	COUNTY	SECTION NAME MILEPOINT	WORK DESCRIPTION	COST ($1,000)	FUND SOURCES
			FEDERAL FISCAL YEAR 1992 PROJECTS			
		STATEWIDE	ASSIGNED FOR SURFACE PRESERVATION, REGION 1		1,800	STATE
063	BEAVERTON-TUALATIN	WASHINGTON	HALL BLVD - UPPER BOONES FERRY ROAD (BIKEWAY) M.P. 7.1- 7.7	CONSTRUCT A BIKE LANE.	200	BIKE
064	CROWN POINT	MULTNOMAH	KENDALL - KIBLING M.P. 1.0- 1.2	RECONSTRUCT & WIDEN ROADWAY.	240	STATE OTHERS 2/
065	CROWN POINT	MULTNOMAH	MP 2.3 - MP 22.9 M.P. 2.3- 22.9	INSTALL GUARD RAIL @ INTERMITTENT LOCATIONS.	230	STATE
	VARIOUS HIGHWAYS	STATEWIDE	TRAFFIC LOOP REPAIR PROJECT, UNIT 4	REPLACE SIGNAL LOOP DETECTORS AND FEEDER CABLES.	400	STATE
*	VARIOUS HIGHWAYS	MULTNOMAH	RAMP METER MONITORING SYSTEM	INSTALL COMMUNICATIONS SYSTEM.	920	I-4R
				YEAR TOTAL	59,680	
			FEDERAL FISCAL YEAR 1993 PROJECTS			
066	I-5 PACIFIC	WASHINGTON	I-5 EXPANSION JOINT REPAIR M.P. 283.2-290.0	REPAIR EXPANSION JOINTS.	60	I-4R
067	I-5 PACIFIC	WASHINGTON	I-5 @ HWY 217/KRUSE WAY INTERCHANGE, UNIT 1 M.P. 291.9-292.4	CONSTRUCT A FREEWAY TO FREEWAY INTERCHANGE.	28,500	I-4R 3/
068	I-5 PACIFIC	MULTNOMAH	E MARQUAM INTCHGE GRAND AV/UNION AV RAMPS; COMB-1A M.P. 300.6-301.6	CONSTRUCT RAMPS FROM MARQUAM BRIDGE TO GRAND AND UNION AVE.	25,700	FAI I-4R
* 069	I-5 PACIFIC/EAST PORTLAND	MULTNOMAH	MOTORIST ADVISORY SYSTEM (PORTLAND), PHASE 1	PROVIDE VARIABLE MESSAGE SIGNS ON I-5 & I-205.	1,000	I-4R

* Denotes projects in Six-Year Program related to Traffic Management System.

2/ REQUIRES WRITTEN PROJECT AGREEMENT

3/ CANDIDATE FOR DISCRETIONARY FUNDING.

CONSTRUCTION

REGION 1

MAP INDEX	ROUTE NO. HIGHWAY NAME	COUNTY	SECTION NAME MILEPOINT	WORK DESCRIPTION	COST ($1,000)	FUND SOURCES
			FEDERAL FISCAL YEAR 1994 PROJECTS			
089	I-5 PACIFIC	WASHINGTON	S TIGARD INTERCHANGE - E PORTLAND FWY M.P. 285.9-289.5	LANDSCAPE.	700	I-4R
090	I-5 PACIFIC	WASHINGTON	STAFFORD RD INTERCHANGE M.P. 285.9-286.4	WIDEN BRIDGE TO 5 LANES.	7,550	I-4R
091	I-5 PACIFIC	MULTNOMAH	NB CONNECTION - SB STADIUM FWY M.P. 303.0-303.5	DECK RESTORATION.	950	I-4R
092	I-84 COLUMBIA RIVER	MULTNOMAH	WOOD VILLAGE & EAST HOOD RIVER INTERCHANGE M.P. 15.4- 64.7	INSTALL VARIABLE MESSAGE SIGNS.	250	I-4R
093	US-26 MT HOOD	CLACKAMAS	RHODODENDRON - LAUREL HILL M.P. 44.4- 48.5	RECONSTRUCT & WIDEN TO 4 LANES.	7,000	AOH
094	US-26 SUNSET	CLATSOP	JEWELL JCT - OSWEG CREEK (CLIMBING LANE) M.P. 20.4- 23.1	CONSTRUCT EB CLIMBING LANE AND COMPLETE SLIDE REPAIRS & CONST MEDIAN TURN LANE.	3,500	FA
095	US-26 SUNSET	WASHINGTON	WEST FORK DAIRY CREEK - MALLER ROAD M.P. 48.3- 52.3	OVERLAY PAVEMENT.	1,010	FA
096	US-26 SUNSET	WASHINGTON	MP 47.0 - 48.5 (TURN LANE) M.P. 47.0- 48.5	CONSTRUCT A CONTINUOUS LEFT TURN LANE.	800	FA
097	US-26 SUNSET	WASHINGTON	STOREY CREEK - CEDAR HILLS BLVD M.P. 62.2- 68.3	OVERLAY PAVEMENT.	2,100	FA
098	US-26 SUNSET	WASHINGTON	KATHERINE LANE - SYLVAN INTERCHANGE M.P. 70.3- 71.3	WIDEN IN CONJUNCTION WITH LIGHT RAIL PROJECT.	30,000	STATE 2/
* 099	US-26 SUNSET	MULTNOMAH	VISTA RIDGE TUNNEL, UNIT 3 M.P. 72.0- 74.0	INSTALL VARIABLE MESSAGE SIGNS AND CLOSED CIRCUIT TV EQUIPMENT.	1,300	FA

/2 REQUIRES WRITTEN PROJECT AGREEMENT

* Denotes projects in Six-Year Program related to Traffic Management System.

CONSTRUCTION

REGION 1

MAP INDEX	ROUTE NO. HIGHWAY NAME	COUNTY	SECTION NAME MILEPOINT	WORK DESCRIPTION	COST ($1,000)	FUND SOURCES
			FEDERAL FISCAL YEAR 1996 PROJECTS			
* 114	I-5 PACIFIC	MULTNOMAH	METRO ADVANCE WARNING SIGNS M.P. 299.0	DEVELOP AND INSTALL A MOTORIST INFORMATION SYSTEM.	1,000	I-4R
115	I-84 COLUMBIA RIVER	MULTNOMAH	MULTNOMAH FALLS PARKING AREA (EB OFFRAMP) M.P. 31.0- 31.5	REALIGN EASTBOUND OFF RAMP.	660	I-4R
116	I-84 COLUMBIA RIVER	HOOD RIVER	HOOD RIVER BR #2444A M.P. 64.1	DECK RESTORATION.	620	I-4R
117	I-205 EAST PORTLAND FREEWAY	CLACKAMAS	WILLAMETTE RIVER BRIDGE ICE DETECTOR M.P. 8.8- 9.3	INSTALL ICE DETECTORS IN BRIDGE DECK & LINK TO MONITOR @ MAINTENANCE STATION.	140	I-4R
118	US-26 SUNSET	MULTNOMAH	SYLVAN INTCH - VISTA RIDGE (ZOO INTCH); COMB-1C M.P. 70.9- 73.0	CONSTRUCT CLIMBING LANE AND BIKE SHOULDER.	7,300	STATE
119	US-26 SUNSET	MULTNOMAH	SYLVAN INTCH - VISTA RIDGE (ZOO WB ONRAMP);COMB-1C M.P. 71.8- 72.0	CONSTRUCT ONRAMP.	1,650	STATE
120	OR-99E PACIFIC EAST	CLACKAMAS	OREGON CITY - COALCA M.P. 12.6- 17.7	PROVIDE ROCKFALL PROTECTION.	2,550	FA
121	OR-219 HILLSBORO-SILVERTON	WASHINGTON	FARMINGTON HIGHWAY - SCHOLLS M.P. 5.6- 10.1	OVERLAY EXISTING HIGHWAY.	2,320	STATE
		STATEWIDE	ASSIGNED FOR SURFACE PRESERVATION, REGION 1		1,500	STATE
122	HOOD RIVER	HOOD RIVER	HOOD RIVER HWY @ ODELL HWY M.P. 5.0	REALIGN INTERSECTION.	380	FA
		STATEWIDE	ASSIGNED FOR SURFACE PRESERVATION, REGION 1		2,800	FA
				YEAR TOTAL	21,580	
				REGION TOTAL	372,310	

* Denotes projects in Six-Year Program related to Traffic Management System.

CITY OF
PORTLAND, OREGON
FIRE PREVENTION DIVISION

Dick Bogle
Commissioner of Public Safety
Lynn C. Davis, Fire Marshal
55 S.W. Ash Street
Portland, Oregon 97204-3590
(503) 823-3700

February 8, 1991

Mr. Don Adams, Region Engineer
Oregon Department of Transportation
9002 SE McLoughlin Blvd.
Milwaukie, Oregon 97222

Dear Mr. Adams:

The Portland Bureau of Fire, Rescue and Emergency Services was extremely encouraged to learn of the progress the Portland Traffic Operations Team has made in working with the Oregon Department of Transportation (ODOT) on ODOT's proposal for an Area-Wide Traffic Management System. This bureau is highly supportive of this work.

If I may, please let me list some of the benefits which we feel this Area-Wide Traffic Management System will create for improved fire service to Portland and our neighboring communities.

1. First, we believe an Advanced Traffic Management System (ATMS) will improve response times and fire service in the Portland metropolitan area by allowing fire apparatus to avoid traffic tie-ups and reroute to open traffic corridors.

2. Second, this bureau believes that an Area-Wide Traffic Management system employing ATMS will aid in the control of hazardous materials and other incidents which require freeway or arterial blockage and traffic rerouting.

3. Third, we feel that such a freeway management system will allow much greater levels of coordination and control in managing evacuations which may be necessitated by fire, hazardous materials incidents,earthquake or other major disaster.

These benefits are very important for the region to realize so that we may keep control of our growing traffic control problems and the impact they have on emergency services. Two-thirds of the urban freeway accidents occur in the Portland Metropolitan area now. With a six-fold increase in the rush hour congestion anticipated between now and 2005 and a projected increase in population to 1,789,428 from the current estimated 1,400,000 in the next 20 years, the flexibility that ATMS will bring within an Area-Wide Traffic Management System is indispensable.

This bureau has already devoted the services of two of its staff members to this project and has already begun the contacts with the Metropolitan Fire Chief's Association which we feel are needed to aid this important process.

We strongly commend and support this effort.

Sincerely,

George Monogue
Chief of the Bureau

CITY OF
PORTLAND, OREGON
BUREAU OF POLICE

J.E. BUD CLARK, MAYOR
Tom Potter, Chief of Police
1111 S.W. 2nd Avenue
Portland, OR 97204

February 6, 1991

Don Adams
Region Engineer
Oregon Department of Transportation
9002 S.E. McLoughlin Blvd.
Milwaukie, OR 97220

Dear Mr. Adams,

As the primary agency responsible for traffic enforcement and accident response activities on the highway systems in Portland, we are always supportive of traffic management projects.

As the population of the Portland Metropolitan area continues to grow, and police traffic resources struggle to keep up, it is imperative that our agencies work together on traffic safety and traffic management issues.

The Portland Police Bureau fully supports and endorses your agency's proposal for an area-wide Traffic Management System Research Grant which you will be submitting to the Federal Highway Administration of the U.S. Department of Transportation.

Very truly yours,

Tom Potter
TOM POTTER
Chief of Police

TP:BWP/vah

CITY OF
PORTLAND, OREGON
OFFICE OF TRANSPORTATION

Earl Blumenauer, Commissioner
Felicia Trader, Director
1120 S.W. Fifth Avenue
Suite 702
Portland, Oregon 97204-1957
(503) 796-7016

February 11, 1991

Mr. Don Adams, Region Engineer
Oregon State Highway Division
Metro Region
9002 S.E. McLoughlin Boulevard
Milwaukie, OR 97222

RE: Proposal for Federal Funding for an Area Wide Traffic Management System (ATMS)

Dear Mr. Adams:

The City of Portland Office of Transportation is a strong supporter of the Freeway Management Program that is being developed for the Portland area. The series of projects funded as part of the 1991-96 Six Year Highway Improvement Program, and the funding of a full-time position of Freeway Management Facilitator in the Metro Region, are all positive signs of a commitment by the Oregon State Highway Division to better manage the freeway system in this Region. The strategies proposed in the Freeway Management Program will help to maintain the Portland Region as a livable and accessible area, which is competitive in developing new industries.

The Office of Transportation views the proposal to the Federal Highway Administration, for federal funding for an Area Wide Traffic Management System (ATMS), as an enhancement to the current program. The additional funding would not only enhance the current program, but also allow the program development and project identification for future year's needs to be moved ahead at a much faster pace.

Staff from the Bureau of Traffic Management, and other City Bureaus (Police and Fire), have been working for the past two years with State Highway Division staff as part of a Portland Traffic Operations Team. City staff are committed to a continued involvement with the Freeway and Arterial Management program, and will participate throughout the project. We are committed to working with the Oregon State Highway Division, and other area agencies, in a team effort to manage the transportation system and make it work to its maximum potential in the Portland area.

Sincerely,

Felicia Trader

Felicia Trader, Director
Portland Office of Transportation

MB/jp
GRP$PAD:[FWYMGMT]DON_ADAMS.WP

METRO

2000 SW First Avenue
Portland, OR 97201-5398
(503) 221-1646
Fax 241-7417

May 7, 1991

TO: Joint Policy Advisory Committee on Transportation

We the undersigned do hereby recommend pursuing the LRT development strategy as outlined below:

1. After the Westside LRT project to Hillsboro, construction of the next LRT corridor in the Portland/Vancouver metropolitan area will include a terminus in Clackamas County. Consideration will be given to either:

   - the I-205 corridor from Gateway to the Clackamas Town Center and/or Oregon City; or
   - the corridor from downtown Portland to Milwaukie, and/or Clackamas Town Center and/or Oregon City.

   The next regional Section 3 priority for initiating Alternatives Analysis is currently approved as the corridor from Portland to Milwaukie.

2. An UMTA funded Pre-Alternatives Analysis study will be initiated as a coordinated effort on the full range of possible corridors to Clackamas County and the airport, including:

   - the Milwaukie corridor, including routes on the east and west sides of the Willamette River;
   - the corridor segment from Milwaukie to Oregon City;
   - the corridor segment from Milwaukie to Clackamas Town Center;
   - the I-205 corridor segment from Gateway to the Clackamas Town Center;
   - the I-205 corridor segment from Clackamas Town Center to Oregon City; and
   - the I-205 corridor segment from Gateway to the Portland International Airport.

The intent of the I-205/Milwaukie study will be:

- to determine which corridor and corridor segments will be selected to proceed to the UMTA Section 3 Alternatives Analysis process when the Westside project to Hillsboro has completed the Final EIS process;

- to prepare the required submittals to initiate the Section 3 Alternatives Analysis process; this will include establishing that an adequate existing transit market exists and determining that an LRT option is sufficiently cost effective to warrant initiation of AA;
- to identify the alternatives to be pursued in the Alternatives Analysis;
- to determine the short and long range improvement strategy for the corridor segments not selected to proceed into the UMTA Section 3 Alternatives Analysis process; and
- to determine the financing strategy for the recommended short-term improvements, both in the corridor to proceed to Alternatives Analysis process and the remaining corridor.

The work scope currently under development for this study will provide the basis for finalizing a submittal to UMTA.

3. A locally funded Pre-Alternatives Analysis study will be initiated for the I-5 corridor from downtown Portland to Vancouver and other parts of Clark County and the I-205 corridor into Clark County. The intent of this study will be:

   - to determine which corridor should be advanced to the Alternatives Analysis step;
   - to determine whether it should be advanced into Alternatives Analysis as a Section 3 funded or a locally funded project;
   - to prepare the required submittals to initiate the Section 3 Alternatives Analysis process; this will include establishing that an adequate existing transit market exists and determining that an LRT option is sufficiently cost effective to warrant initiation of AA;
   - to identify the alternatives to be pursued in the Alternatives Analysis; and
   - to determine the financing strategy for the recommended short-term improvements, both for the corridor to proceed to Alternatives Analysis process and the remaining corridors.

   Further definition of work scope details, decision-making process, budget and jurisdictional responsibilities is required.

4. The I-205/Milwaukie Pre-Alternatives Analysis and the I-5/Vancouver Pre-Alternatives Analysis will be completed on a concurrent schedule to ensure coordination of:

- Oregon and Washington decision making;
- functional integration of study methodology, service plans and assumptions;
- state, regional and local financing strategies; and
- plans for initiation of UMTA sponsored Section 3 Alternatives Analysis.

5. It is the region's objective to initiate these Pre-AA's with the support and cooperation of UMTA. To facilitate this, the following steps will be taken:

   - the Chair of JPACT will consult with the Congressional delegation to determine whether to proceed immediately with these Pre-AAs or delay until execution of the Westside Full-Funding Agreement;
   - we will consult with UMTA to determine if a mutually agreeable work scope can be developed; and
   - we will seek UMTA funding for the I-205/Milwaukie Pre-AA and local funds (principally Clark County) for the I-5/Vancouver Pre-AA.

6. Action should be taken in the next Surface Transportation Act to protect the I-205 bus lane withdrawal funds from the airport to Clackamas Town Center and retain their availability for I-205 LRT.

7. Any request by any party to pursue federal funds for transit or highway improvements will first be brought to JPACT for approval.

Note: This agreement is made in the context of current federal regulations. Should the new STA significantly alter the federal process, this agreement will need to be revisited.

Earl Blumenauer

Ed Lindquist

Mike Hollern

Tom Walsh by JR Post

David Knowles

Dave Sturdevant

Ron Hart

ACC:bc
JPAC0502.ltr
05-07-91

METRO

2000 SW First Avenue
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Earl Blumenauer

Ed Lindquist

SIGNED BY:
Mike Hollern

Tom Walsh by JR Post

David Knowles

Dave Sturdevant

Ron Hart

ACC:bc
JPAC0502.ltr
05-07-91

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 91-1441 FOR THE PURPOSE OF INITIATING THE PUBLIC INVOLVEMENT PROCESS AND ADOPTING THE PURPOSE AND NEED STATEMENT FOR THE WESTERN BYPASS STUDY

Date: April 18, 1991 Presented by: Andrew Cotugno

PROPOSED ACTION

Adopt Resolution No. 91-1441 initiating the intergovernmental public involvement process and adopting the statement of Purpose and Need developed by ODOT for the Western Bypass Study.

This action is an element in the Intergovernmental Agreement (Resolution No. 91-1425).

TPAC has reviewed the public involvement process and Purpose and Need Statement for the Western Bypass Study and recommends approval of Resolution No. 91-1441 with the addition of Resolves 5 through 8.

FACTUAL BACKGROUND AND ANALYSIS

The Metro Council approved the recommendations of the Southwest Corridor Study by Resolution No. 87-763 and incorporated the recommendations into the Regional Transportation Plan (RTP) by Ordinance 89-282.

Included as a contingent recommendation was construction of a Western Bypass from I-5 near Tualatin to U.S. 26 near Hillsboro as part of a package of highway, arterial, light rail and bus service improvements. The Western Bypass recommendation was made contingent on satisfying state and local land use requirements. In accordance with Resolution No. 87-763, Metro executed an intergovernmental agreement with Washington County defining responsibilities for addressing these requirements.

At the request of Metro and Washington County, ODOT initiated the Western Bypass Study to proceed with these recommendations. Metro Councilor Richard Devlin sits on the study Policy Committee and Transportation staff person Keith Lawton sits on the Technical Committee. In addition, ODOT has contracted with Metro to provide technical support to the project.

In order to adequately address land use requirements, the ODOT Western Bypass Study is reexamining the "needs" in the study area, developing and evaluating a full range of alternatives and will base the recommendation on an exhaustive re-analysis of these issues, including land use implications.

This resolution initiates the public involvement process for this study (I.A. and I.B. in the Intergovernmental Agreement requiring this action within thirty (30) days of the agreement) and adopts the Purpose and Need Statement (II.E. in the Intergovernmental Agreement requiring adoption by JPACT and Metro Council following endorsement by the cities and counties).

At the April 26 TPAC meeting, concern was expressed that the Statement of Purpose and Needs is not consistent with the goals set forth in the RTP, RUGGO or the pending LCDC Transportation Rule. However, since it is intended to be a problem statement assuming a "No-Build" condition exists in 2010, it is not appropriate to reflect these policies at this time. In recognition of this, several "Resolves" were added to the resolution to clarify that the Statement does not reflect these policies but they will be applicable to the evaluation of alternatives that are considered later in the study. A "Resolve" was also added to provide for review of the evaluation criteria for the project to ensure applicable goals and requirements are reflected.

In recognition of the changing regional policy framework created by RUGGO, the LCDC Transportation Rule and the new Surface Transportation Act, TPAC recognized that further consideration is needed for a strategy on how to address all major projects throughout the region over the next several years.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 91-1441.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF INITIATING THE PUBLIC INVOLVEMENT PROCESS AND ADOPTING THE PURPOSE AND NEED STATEMENT FOR THE WESTERN BYPASS STUDY	RESOLUTION NO. 91-1441 Introduced by David Knowles, Chair Joint Policy Advisory Committee on Transportation

WHEREAS, The Oregon Department of Transportation (ODOT) is conducting a Western Bypass Study to identify and resolve issues related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs within the project study area; and

WHEREAS, ODOT is conducting the Western Bypass Study in an open, objective and expeditious manner, allowing input from all sectors of the community; and

WHEREAS, (city/county) has executed a Western Bypass Study Planning Coordination Agreement ("the Agreement") with ODOT, the Metropolitan Service District ("Metro"), and other affected local governments within the project study area; and

WHEREAS, The Agreement requires the (city/county) to consider endorsement of the Purpose and Need Statement as the foundation of the continued study following public notice and a public hearing consistent with local public notice and hearing requirements; and WHEREAS, ODOT's staff has prepared a Purpose and Need Statement specifying the underlying purpose and need for the Western Bypass Study based upon an analysis of existing conditions, demand forecasts, and projected transportation deficiencies for the planning period using acknowledged

comprehensive plan map designations and zoning; and

WHEREAS, following public notice, the Metro Council held a public hearing on _____, 199_ to take testimony on and consider endorsement of the Purpose and Need Statement; and

WHEREAS, The Metro Council has considered the testimony and the evidence on this matter; now, therefore,

BE IT RESOLVED:

1. That Metro hereby includes the regular schedule of meetings of the Western Bypass Study Citizen Advisory Committee and Technical Advisory Committee as part of its citizen involvement process and encourages its citizens to participate in that public process.

2. That Metro anticipates that the results of the Oregon Department of Transportation (ODOT) study, including public involvement of its citizens, will be utilized to develop its planning alternatives for circumferential travel in coordination with state, regional, and other local governments.

3. That the following "Public Notice" of Metro participation in the Western Bypass Study process shall be published once in a newspaper of general circulation consistent with the citizen involvement program:

PUBLIC NOTICE

"Notice is hereby given that, with respect to Western Bypass Study issues, in addition to the public involvement provisions set forth in Metro's Regional Transportation Plan, the regularly scheduled meetings of the Western Bypass Study Citizen Advisory Committee and Technical Advisory Committee shall be part of Metro's citizen involvement process.

"This is consistent with adoption of the Western Bypass Study Coordination Agreement by Metro. Under this Intergovernmental Agreement, Metro will consider during the two-

year study process: 1) the Purpose and Need Statement; 2) recommended strategies; 3) selection of a Preferred Alternative strategy; 4) consistency of the Preferred Alternative with Metro's Regional Transportation Plan; and 5) design or alignment decisions. To obtain information on meeting dates, contact the Oregon Department of Transportation's Project Manager at 653-3298."

4. The Council of the Metropolitan Service District (Metro) hereby adopts the Purpose and Need Statement recommended by the staff of the Oregon Department of Transportation and endorsed by the several cities and counties as the foundation of the Western Bypass Study. With this adoption, Metro approves of, accepts, and endorses the methodology and assumptions upon which the Statement is based, including local governments' acknowledged comprehensive plan maps and zoning designations.

5. It is understood that the Statement of Purpose and Need serves to document the future transportation conditions without implementation of the Regional Transportation Plan or other shifts in policy direction. Furthermore, this Statement will be refined as new information becomes available for inclusion in the Environmental Impact Statement for recommended improvements.

6. It is understood that alternative transportation strategies will be evaluated based upon the conditions defined in this Statement and the degree to which they satisfy the project goals and pertinent federal, state and regional goals and regulations.

7. That ODOT is requested to consult with TPAC on the evaluation criteria for the project before the alternatives are submitted for approval.

8. That TPAC is directed to develop a recommended strategy for dealing with all major regional transportation projects during the next several years as the effect of the Regional Urban Growth Goals and Objectives is determined.

ADOPTED by the Council of the Metropolitan Service District this ____ day of _____, 1991.

Tanya Collier, Presiding Officer

TKL:lmk
91-1441.RES/4-30-91

WASHINGTON
COUNTY,
OREGON

May 9, 1991

To : Joint Policy Advisory Committee on Transportation

From : Roy Rogers, JPACT Member, Washington County
Cliff Clark, JPACT Alternate Member, Cities of Washington County

Subject: **CLARIFICATION REQUESTED ON RESOLUTION NO. 91-1441 ADOPTING PURPOSE AND NEED STATEMENT FOR THE WESTERN BYPASS STUDY**

On May 8th, the Washington County Transportation Coordinating Committee discussed and considered Resolution No. 91-1441. It was the consensus of the Committee that two aspects of the Resolution needed further consideration.

1. In the seventh resolve, it is unclear what "...consult with TPAC on the evaluation criteria..." means. It is the opinion of the Committee that discussing the evaluation criteria with TPAC may be appropriate, but that "consult" should not be read to mean that TPAC or JPACT has approval authority over review criteria for a particular ODOT project.

2. The eighth resolve is also unclear as to its application. What is meant by "...all major regional transportation projects..."? While the Committee would agree that a strategy will be necessary given the Regional Urban Growth Goals and Objectives and other changing transportation rules and regulations, such a strategy needs to be considered in a broader context than the Western Bypass Study. Therefore, it is recommended that the eighth resolve be deleted from Resolution No. 91-1441 and drafted as a separate agenda item with a separate resolution to be considered at a future JPACT meeting. Another option would be that the eighth resolve be clarified to indicate that TPAC will do its work outside of the Western Bypass Study process.

MB:lt (mb911441)

Department of Land Use and Transportation, Planning Division
155 North First Avenue
Hillsboro, Oregon 97124
Phone: 503/648-8761
FAX #: 503/693-4412

WESTERN BYPASS STUDY

Oregon Department of Transportation

Statement of Purpose and Need

Prepared for
OREGON DEPARTMENT OF TRANSPORTATION
(ODOT)

Prepared by
Parsons Brinckerhoff Quade & Douglas, Inc.

PARSONS
BRINCKERHOFF
QUADE &
DOUGLAS, INC.

This statement of purpose and need was adopted in concept by Western Bypass Study committees on the following dates:

Technical Advisory Committee	January 08, 1991
Steering Committee	January 16, 1991
Citizens Advisory Committee	January 29, 1991

This document summarizes information developed on the study to date and provides a framework to begin development of alternative strategies. Although the language of the conclusions was specifically adopted by study committees, several recommendations to text changes have been received. This is a fluid document and will continue to be modified throughout the study. It will be summarized as the purpose and need chapter of the Environmental Impact Statement.

WESTERN BYPASS

Statement of Purpose and Need

APPENDIX

A Background Reports and Studies Upon Which the Statement of Purpose and Need was Developed

B Western Bypass Study Goals and Objectives

C Levels-of-Service Definitions

D Select Link Analysis

STATEMENT OF PURPOSE AND NEED

OVERVIEW

The Oregon Department of Transportation (ODOT) has initiated preparation of a "Corridor-Level" or First Tier Environmental Impact Statement (EIS) and associated alternatives analysis to address the broad transportation needs in the Southwest Portland Metropolitan area. This first tier analysis will be followed by a detailed "Design-Level" EIS to develop specific design parameters of the alternatives selected through the corridor level EIS. This First Tier study focuses on regional transportation needs, primarily circumferential, in the southwestern Portland metropolitan area. These traffic conditions, examined over a twenty-two year period from 1988 to 2010, are expected to worsen based on growth in travel due to continued implementation of adopted land use plans, regional population and employment forecasts and shifts in trip-making characteristics. Future regional transportation demands within the study area are expected to overtax the capability of existing and future committed transportation facilities, thus making some form of action necessary.

This Statement of Purpose and Need Report identifies the need for major transportation improvements within the Western Bypass Study Area, and describes the context in which the project planning is being carried out. The report details major components of the existing transportation system within the Western Bypass study area, including an analysis of the current and future demands on the existing transportation system and the need for additional transportation improvements. A summary of the planning context and study structure is provided to identify local jurisdictions involved in the study, and to briefly document planning activities which preceded the Western Bypass study.

STUDY AREA

Geographic Description-Metropolitan Area

The Western Bypass Study Area is a part of the Portland metropolitan area as shown in Figure 1. The Portland Metropolitan area is the fastest growing region in the State and encompasses portions of Multnomah, Washington and Clackamas Counties in Oregon and Clark County, Washington. With a total population of 1,334,200 persons, the regional population is almost half that of the State. The metropolitan area is located in northwest Oregon, in the Willamette Valley at the convergence of two rivers, the Columbia River, which forms the Washington/Oregon boundary, and the Willamette River. The region is uniquely situated between the Oregon Coast, 75 miles to the west, and the Cascade Mountains, 50 miles to the east. The Interstate 5/205 corridors pass through the region and provide a link between southern California and Vancouver, Canada.

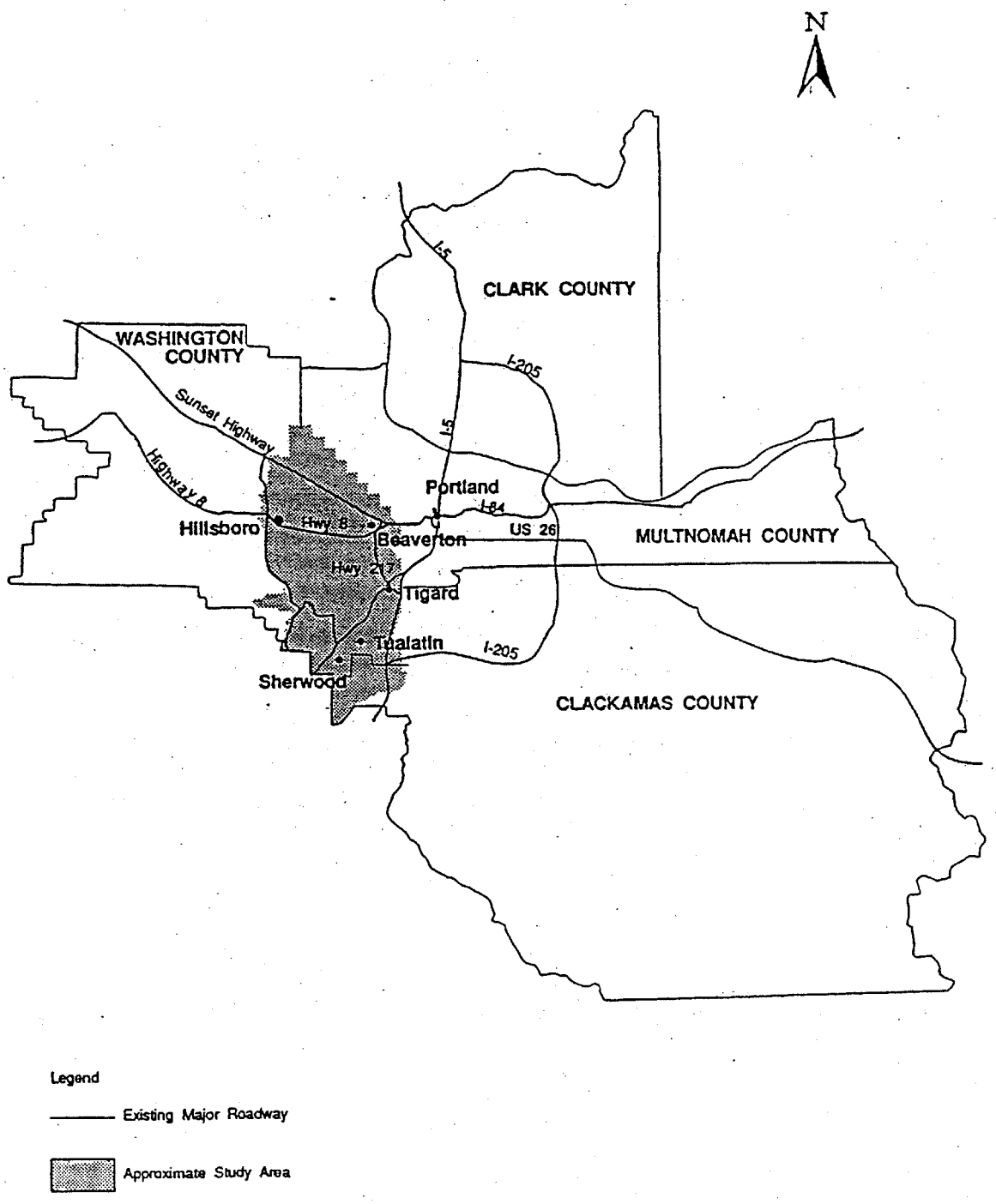

Figure 1
PORTLAND METROPOLITAN AREA

PARSONS BRINCKERHOFF

Western Bypass Study

The Portland area also links other major transportation routes, including Interstate 84, which is an east-west route connecting the region with Idaho, Utah and points east, and Highway 26, which links the metropolitan area to the Oregon coast as well as Mt. Hood and eastern Oregon. Many visitors travel through the metropolitan area, and many visitors stay in the area.

The City of Portland is the commercial and financial center for the region, with major activity centers including the Port of Portland and Portland International Airport, both of which provide a trade and commerce connection with Japan and the Pacific Rim. The City is also a center of government, with federal, state, regional and local government offices located in the Central Business District (CBD), including federal and county courthouses.

Western Bypass Study Area

The Western Bypass Study Area is located in the western Portland metropolitan area and is the fastest growing portion of the region. The study area is roughly bounded on the north and east by the Washington County-Multnomah County and Washington County-Clackamas County lines. On the south, the study area is bounded by the Willamette River and the Washington County-Yamhill County lines. On the west, the study area is approximately bounded by Oregon State Highway 219 and McKay Creek. The size of the study area is approximately 20 miles north by south, and 10 miles east by west, covering over 200 square miles.

Geography in the study area ranges from the Chehalem Mountains in the southern portion, across the Tualatin Valley floor to the rolling terrain approaching the Tualatin Mountains in the northern portion of the area. Cooper and Bull Mountains rise in the middle of the study area, posing a physical barrier to direct access among some of the major population centers because of steep terrain. The area is also crossed by the Tualatin River and several major creeks and numerous tributaries. This network of waterways results in many areas of wetlands and aquatic environments throughout the study area.

The Portland area Urban Growth Boundary (UGB) separates land that is designated for urban development from land that is designated for farm and/or forest use, as shown in Figure 2. A large portion of land in Washington County and in the study area is located outside the UGB and is currently in farm or forest use. Urban development within the study area has generally concentrated within the UGB.

The study area contains several centers of high technology development, in the Sunset Corridor along Highway 26 between Hillsboro and Beaverton, and in the cities of Beaverton, Tualatin and Wilsonville. There are several large companies located in these areas, including the U.S. headquarters for a number of firms. Other business centers include large business parks located in Beaverton, Tigard, Tualatin and Hillsboro.

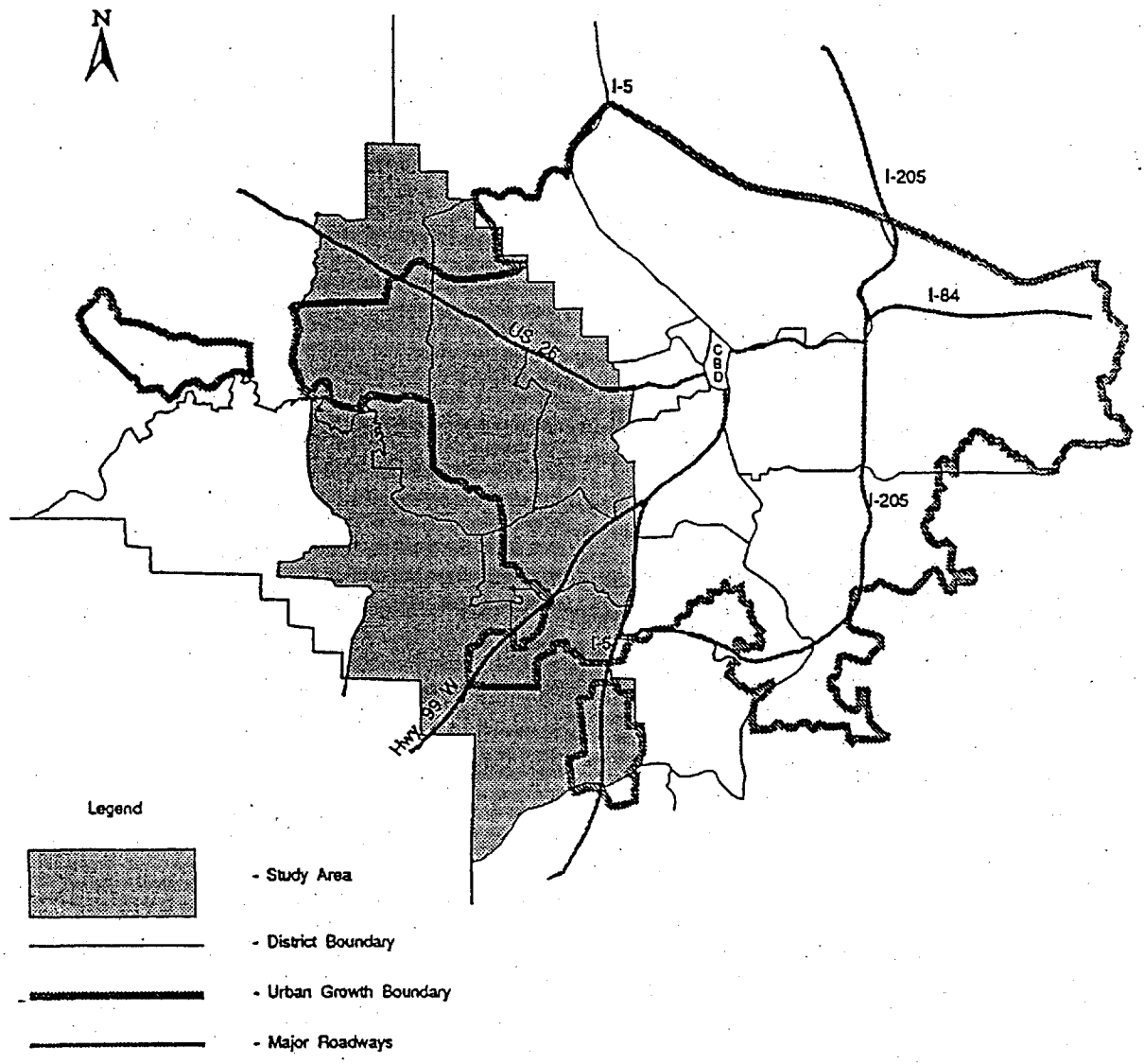

Figure 2
URBAN GROWTH BOUNDARY

PARSONS BRINCKERHOFF

Western Bypass Study

The City of Hillsboro is also the center of county government, with County offices and the County Courthouse and Jail Facility. Hillsboro is the location of the primary general aviation airport in the Portland Metropolitan area, and the County Fairgrounds, which attracts visitors from both inside and outside the region. The fairgrounds has an average annual attendance of 750,000 persons, with growth projected to increase to 2,440,000 visitors per year over a potential of 200 use-days by 2002.

Other recreational attractions include the Hagg Lake Recreational Area located between Gaston and Forest Grove, which offers boating, swimming and picnicking, and the numerous wineries located in Washington County. Various transportation routes that pass through the study area provide direct links to the Oregon coast, including Highway 26 and Highway 99W.

Jurisdictions Affected

The study area encompasses a number of cities including Beaverton, Durham, Hillsboro, King City, Tigard, Tualatin, Sherwood, and Wilsonville, in addition to numerous communities in unincorporated Washington County. Each of the jurisdictional entities has representation within the Western Bypass Study Committee structure.

The nature of the transportation problem under study is of regional significance and the outcome of the study will also have a significant effect on other jurisdictional entities outside the immediate study area. These jurisdictions rely on travel to and through the study area for employment and the movement of goods and services. Several such as the City of Portland and Clackamas and Multnomah Counties, will have the opportunity to formally participate in the study, as they are members of the Joint Policy Advisory Committee on Transportation (JPACT), the regional transportation committee for METRO. Other jurisdictions are provided regular updates on the study and can participate through a variety of public and agency outreach programs.

Population and Economic Base

Population and number of households have steadily increased since 1960 and reflect a period of overall economic growth for the region. Washington County has been the fastest growing county in the State in the 1980s. Total population within the study area in 1988 amounted to 245,600 persons, nearly 18.5 percent of the region's total 1,334,200 residents. This population tended to be concentrated in or near the existing municipalities of Beaverton, Tigard, Tualatin, Sherwood, Wilsonville, and Hillsboro.

The 1988 employment base within the study area accounted for 136,300 jobs, more than 19 percent of the total 704,600 jobs within the metropolitan region. Eighteen percent of the jobs within the study area were retail oriented, while the other 82 percent were distributed amongst various non-retail employment categories. Employment within the

study area also tended to be concentrated near existing municipalities. The cities of Beaverton, Tigard, Tualatin, Wilsonville, and Hillsboro had the highest concentrations of employment in both the retail and other employment fields.

Strong economic growth in Washington County has accompanied the rapid population growth that has characterized the County in the past several years. Population growth in the County has attracted employers to the area, while growth in population has created the demand for many supporting business activities. Several cities already experiencing growth continue to be attractive with the availability of large tracts of industrial land and proximity to the Portland CBD and international airport and port facilities.

In addition to the employment centers within the Western Bypass study area, employment centers in the Portland Central Business District (CBD), on Portland's Eastside, and in Clackamas County, provide destinations for cross-town commuters traveling from Washington County. These areas also provide workers who commute to jobs in Washington County.

The fertile soils, moderate temperature and damp climate make the Tualatin Valley one of the most productive agricultural regions in Oregon and the nation. These factors produce an opportunity for a wide variety of farm crops with above average yields. Approximately 60 agricultural commodities are produced commercially in Washington County. Farmers in the County have tended to assemble a number of small parcels of land which are not necessarily contiguous and may be rented to form one productive unit. Existing trends indicate a decline in the production of fruits and vegetables resulting in the closure of food processing plants in Washington County. The value of farm lands in the County is many times higher than the State average for farmland. Agriculture continues to play an important role in the County's diverse economy.

By the year 2010, the existing patterns of residential development and employment within the study area are expected to intensify, supported by adopted land use plans. The study area is expected to grow by over 60 percent in population and over 73 percent in employment. Furthermore, retail employment is expected to garner a greater percentage of the study area's total employment as compared to 1988. This study area growth will nearly double that of the region as a whole (See: 1988 Existing and 2010 No-Build, Forecasting Analysis Results, October 26, 1990).

WESTERN BYPASS STUDY GOALS AND OBJECTIVES

In order to identify key issues within the study area and therefore the need for improvement, the goals and transportation objectives of the community must be identified. These goals and objectives provide a framework by which various transportation alternatives can be developed, evaluated, and compared against each other. The goals and objectives were synthesized from land use plans of communities within the study area, from state-wide planning goals and objectives, and from concerns expressed by citizens and from study committee representatives. The goals and objectives for the study were adopted by the Citizens and Technical Advisory Committees, the Steering Committee, and by ODOT and are contained in the appendix to this report. Goals as adopted are as follows:

Goal 1: Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Goal 2: Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area:

Goal 3: Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state, and federal plans and regulations.

Goal 4: Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

THE PLANNING PROCESS

Supporting Documentation and History of Previous Studies

The need to address circumferential travel in the study area has been discussed since the 1950's. This discussion has intensified because of rapid growth in the region which is projected to continue. In 1987, the Metropolitan Service District (METRO) completed the Southwest Corridor Study which documented system deficiencies, evaluated alternatives, and recommended construction of a major new highway, or bypass, from Tualatin to Hillsboro to serve this circumferential travel demand. Other arterial and transit-related improvements were also recommended. The Southwest Corridor Study concluded that this new circumferential transportation facility was needed to accommodate the future development of the southwest metropolitan area supported by adopted local land use plans.

The Tualatin-Hillsboro corridor was adopted into the 1988 Washington County Transportation Plan as a transportation facility for further evaluation. Other improvements in the county's system were planned under the assumption that a bypass facility would be constructed.

The Tualatin-Hillsboro corridor was adopted into the Regional Transportation Plan (RTP) 1989 update. The RTP stated that "The circumferential and suburban radial corridors provide the capacity for statewide travel through the region and for travel among developing suburban areas without the need to enter the downtown Portland sector. Sufficient highway capacity to serve the level of growth contained in the adopted local comprehensive plans in these corridors cannot be adequately provided through improvements to the existing system and additional facilities are required." The RTP stipulated that actual construction of the facility was to be subject to a determination that the facility is consistent with local comprehensive plans and state land use policies, and recommended a detailed assessment of the impacts through the EIS process.

Following the adoption of the Southwest Corridor Study by METRO into the RTP, the Oregon Department of Transportation initiated the Western Bypass Study to conduct an environmental analysis including developing and evaluating alternatives for providing the increased circumferential transportation capacity proposed in the Southwest Corridor Study. New data on the population and employment base for 1988 and 2010 have been developed for this study to document regional transportation problems and evaluate alternatives. This first tier environmental analysis and Statement of Purpose and Need is a part of that effort.

A series of studies and reports, as well as various engineering and planning maps, have been prepared to develop this Statement of Purpose and Need. These reports include the 1988 Existing and 2010 No-Build, Forecasting Analysis Results Report, published October 26, 1990; the Statement of Goals and Objectives, adopted June 27, 1990; and various background report summaries. A list of the background studies and reports used in the development of this Statement of Purpose and Need is included in Appendix A.

Tiered EIS Process

The environmental analysis and First Tier Environmental Impact Statement will be prepared in accordance with the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA). Sections 40 CFR 1502.20 and 1508.28 of the NEPA regulations regarding "Tiering" are specifically applicable to the Western Bypass Study. These sections allow the lead agency (Federal Highway Administration-FHWA) and support agency to use tiering to "eliminate repetitive discussions of the same issues and focus on the actual issues ripe for decision at each level of environmental review" (40 CFR 1502.20). Furthermore, FHWA's Rules and Regulations suggest and encourage that for major transportation actions, the tiering of the EIS process is appropriate. "The first tier EIS would focus on broad issues such as general location, mode choice, and area wide air quality and land use implications". The second tier would address site-specific details of project impacts, costs, and mitigation measures" (Federal Register/Vol. 52, No. 167, 8-28-97).

As stated in both NEPA and the FHWA regulations, the purpose of using a tiered environmental analysis method is to facilitate timely decisions on complex issues. Once such decisions are made, the process allows the lead agency to proceed without needing to revisit or repeat analysis of previous decisions. Thus, once decisions are made, they provide a firm and stable foundation on which to base future decisions.

In recognition of the importance in gaining inter-jurisdictional, agency, and community support at each step in the tiering process, ODOT assembled a Citizens Advisory Committee, a Technical Advisory Committee, and a Steering Committee. The responsibility of these committees is to communicate local concerns to the process and to provide technical and political guidance and advice.

ODOT is also conducting a Public Involvement Program to encourage public participation in the study process. A series of workshops and open houses are being held at decision points in the study. A mailing list of over 2000 citizens has been compiled for notification of public events and periodically, newsletters are mailed.

EXISTING AND FUTURE TRANSPORTATION FACILITIES

Existing Regional Roadway System

As shown in Figure 3, the existing regional roadway system consists of radial and circumferential facilities in relationship to the location of the Portland CBD. East to west or southwest-oriented facilities tend to be radial providing passage from the Portland CBD to major activities in the suburbs on the west side. A few circumferential roads connect these radial facilities to provide north-south mobility. Circumferential roadways on the southern end of the study area provide for east-west movement. The unique geography of the study area underlies the lack of a north-south road system infrastructure. An extensive network of creeks and tributaries, the wide flood plain of the Tualatin River, and the hilly terrain across the study area provide a system of constraints that have prevented construction of a continuous grid system through the study area especially circumferentially north and south. The existing roads in the study area have evolved from a network of farm-to-market roads that have been upgraded and maintained over time. This road system followed the existing terrain which was not conducive to a grid system.

Unless otherwise noted, listed traffic volumes in the following discussion of the existing roads and traffic volumes were recorded in 1988.

East-West or Radial Facilities

Interstate 5, Sunset Highway (US 26), Highway 99W, Canyon Road/Tualatin Valley Highway, Beaverton-Hillsdale Highway/Farmington Road, and Scholls Ferry Road are radial facilities connecting the Portland CBD to suburban areas to the west and southwest of Portland.

Interstate 5 is a major West Coast transportation route, providing a direct link between southern California and Canada and passing through the Portland CBD. It is a two-way, six-lane facility which serves between 6,000 and 6,500 vehicles per hour (vph) per direction during the PM peak hour. In 1988, Interstate 5, just south of Highway 99W, west of Tigard junction, carried a weekday traffic volume of 68,500 vehicles per day (vpd). The same facility, just south of Highway 217, carried an average weekday traffic volume of 102,400 vpd.

Highway 99W provides a primary connection between Tigard and Sherwood. It diverges from Interstate 5 prior to entering the study area and continues south to Newberg. It is a five-lane roadway with two northbound lanes, two southbound lanes, and a center median/two-way left-turn lane. It carried between 11,900 vpd south of Beaverton Hillsdale Highway and 47,600 vpd near Highway 217 in 1988. Major intersections along Highway 99W are located at Highway 217, Durham Road, and Tualatin-Sherwood/Edy Road.

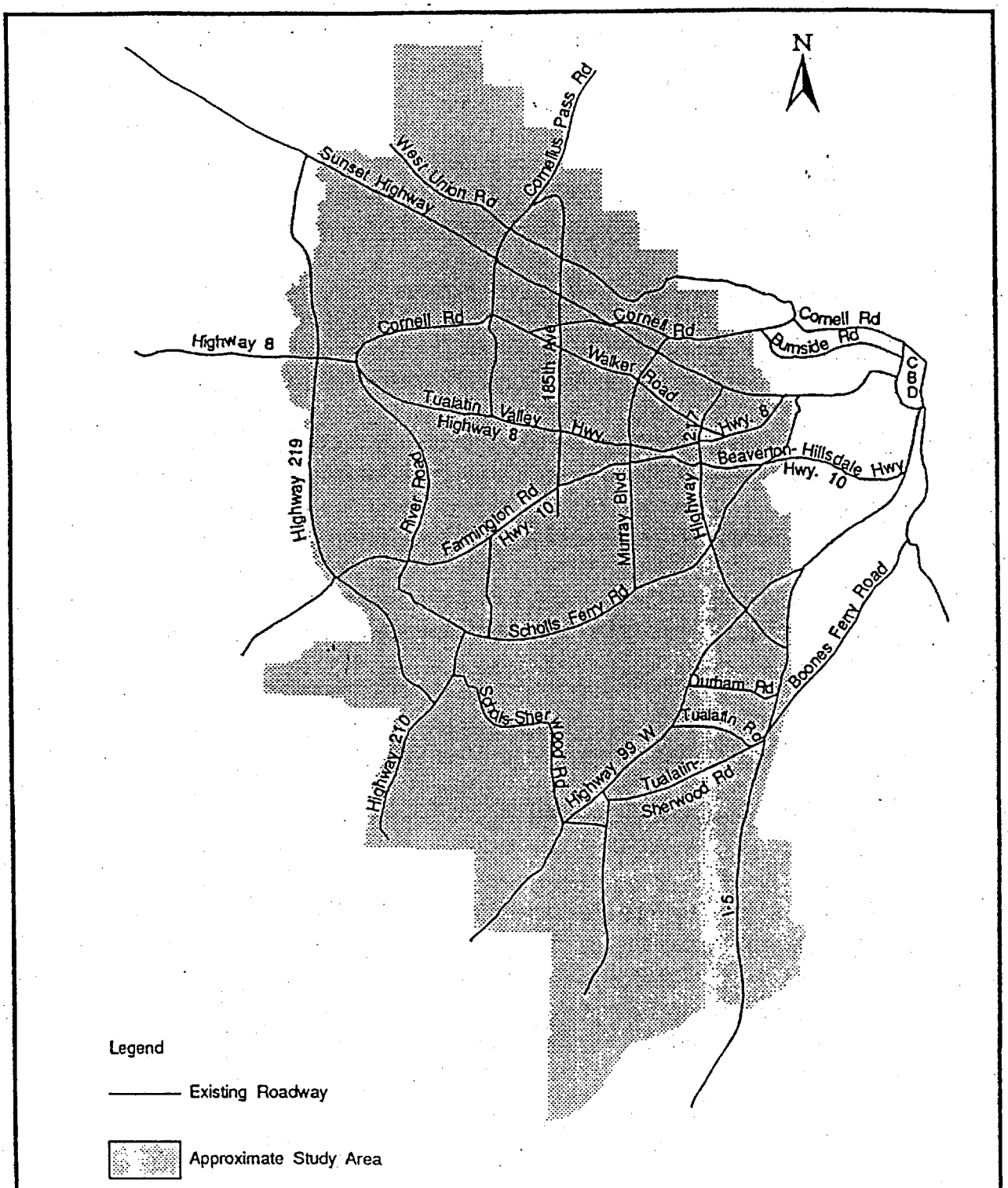

Figure 3
ROADWAY NETWORK

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Western Bypass Study

Sunset Highway is a major commuter route connecting the Portland CBD to Hillsboro, Beaverton, and the northern Sunset Corridor suburbs, and continuing on to the Oregon coast. It is a four-lane highway in the study area. Its average weekday traffic volumes range from 17,000 vpd, near the North Plains Interchange, to 125,500 vpd, recorded east of the Washington Park/Zoo Interchange. Major interchanges within the study area include Sylvan (Scholls Ferry Road), Canyon Road, Highway 217/Barnes Road, Murray Boulevard, Cornell Road, 185th Avenue, and Cornelius Pass Road.

The Tualatin Valley Highway (Highway 8) is a five-lane principal route. It stretches from Highway 217 to Forest Grove. East of Highway 217, Highway 8 becomes Canyon Road and it ends at Sunset Highway. It carried between 19,100 vpd, recorded southwest of Canyon Lane, and 41,800 vpd, recorded east of 185th Avenue.

Farmington Road (Highway 10) is a two-lane roadway from Highway 219 to Murray Boulevard where it becomes a five-lane roadway, and finally merges with Beaverton-Hillsdale Highway as it nears Highway 217. In 1988, traffic volume ranged from 2,700 vpd, at the west edge of the study area, and 20,200 vpd, recorded east of SW 160th Avenue.

Other major radial facilities are Walker Road, linking Beaverton to Hillsboro via Cornell Road; Cornell Road, connecting North Sunset Corridor to Hillsboro; Farmington Road, connecting Portland to Gaston and western Washington County; and Scholls Ferry Road, connecting Portland to Scholls.

North-South or Circumferential Facilities

There are a limited number of north-south or circumferential facilities in the study area. Many of the circumferential links in the Western Bypass study area stretch between Scholls Ferry Road and Sunset Highway including: Murray Boulevard, 185th Avenue, 170th Avenue, Cornelius Pass Road/216th Avenue/219th Avenue, and Glencoe Road/First Avenue/Highway 219. These roadways consist of both major and minor arterials, with the exception of Highway 217 which is classified as a freeway facility. Almost all of these facilities serve as major connections between the Sunset Corridor and the Beaverton, Tigard, areas, but they are discontinuous routes and can result in out-of-direction travel and use of circuitous road systems.

The only continuous circumferential facility within the Western Bypass study area is Highway 217, connecting Sunset Highway on the north to Interstate 5 on the south. It is a four-lane freeway facility linking Lake Oswego, Tualatin, Tigard and Beaverton. Its capacity ranges between 4,000 and 4,500 vph per direction. Average weekday traffic volumes ranged between 73,200 vpd, recorded south of Beaverton-Hillsdale Highway (Highway 10) Interchange, and 99,000 vpd, recorded south of the next southbound interchange at SW Allen Boulevard. There are no alternate north-south facilities in the study area to relieve

the traffic demands on this highway, which in 1988 included a significant portion of trips made between the north and the south/southeast portions of the study area.

Tualatin, Durham, and Tualatin-Sherwood/Edy Roads are located south of the City of Tigard. These roadways are the primary links on the southern end of the study area, connecting Highway 99W and Interstate 5.

Existing Transit System

The study area is currently served with transit by the Tri-County Metropolitan Transportation District (Tri-Met) as is the rest of the Portland metropolitan area. Within the Western Bypass study area an all-bus network of radial routes is strongly orientated toward the Portland CBD. Routes typically run west, southwest, and south along major regional arterials and transportation corridors, depending upon their orientation within the study area. A timed-transfer system involves transit centers where buses in the area meet at regular intervals, a system of feeder buses and trunk line buses, and a "pulse" scheduling system to provide timely, interconnected service. Primary arterials accommodating transit within the study area include the Tualatin Valley Highway, Sunset Highway, I-5, Farmington Road, Scholls Ferry Road, Beaverton-Hillsdale Highway, and Highway 99W. These primary arterial routes are shown in Figure 4.

Although the radial trunk routes are primarily oriented to serve work-related commute trips to and from the Portland CBD, they also accommodate some demand for non-work trips destined for the CBD. However, because these routes are designed to provide direct service to the CBD, and thus rarely deviate from their direct paths, their ability to collect and distribute large numbers of passengers within the study area is limited to their immediate corridors. These trunk routes must rely on feeder routes to supply such collection and distribution functions. Most trunk routes in the study area run on headways of 20 minutes during peak operations, and on 30 minute headways during off-peak operations. Capacities of the various routes depend on the number of buses being used, headway spacing, and the size of the vehicles being operated on the route.

Non-CBD bound trips (i.e., cross-town trips and local trips) are generally not served well by CBD-oriented trunk routes. To provide better service to potential cross-town transit patrons, Tri-Met has developed a network of suburban transit centers. These transit centers are fed by a number of local transit routes which provide collection and distribution operations. The various suburban transit centers are connected by several cross town routes which allow for travel and for cross-town trips between transit centers. The CBD oriented transit routes also interact with this transit center network, providing direct access to the CBD. This suburban transit service suffers from the lack of roadway grid continuity and circumferential routes in the study area.

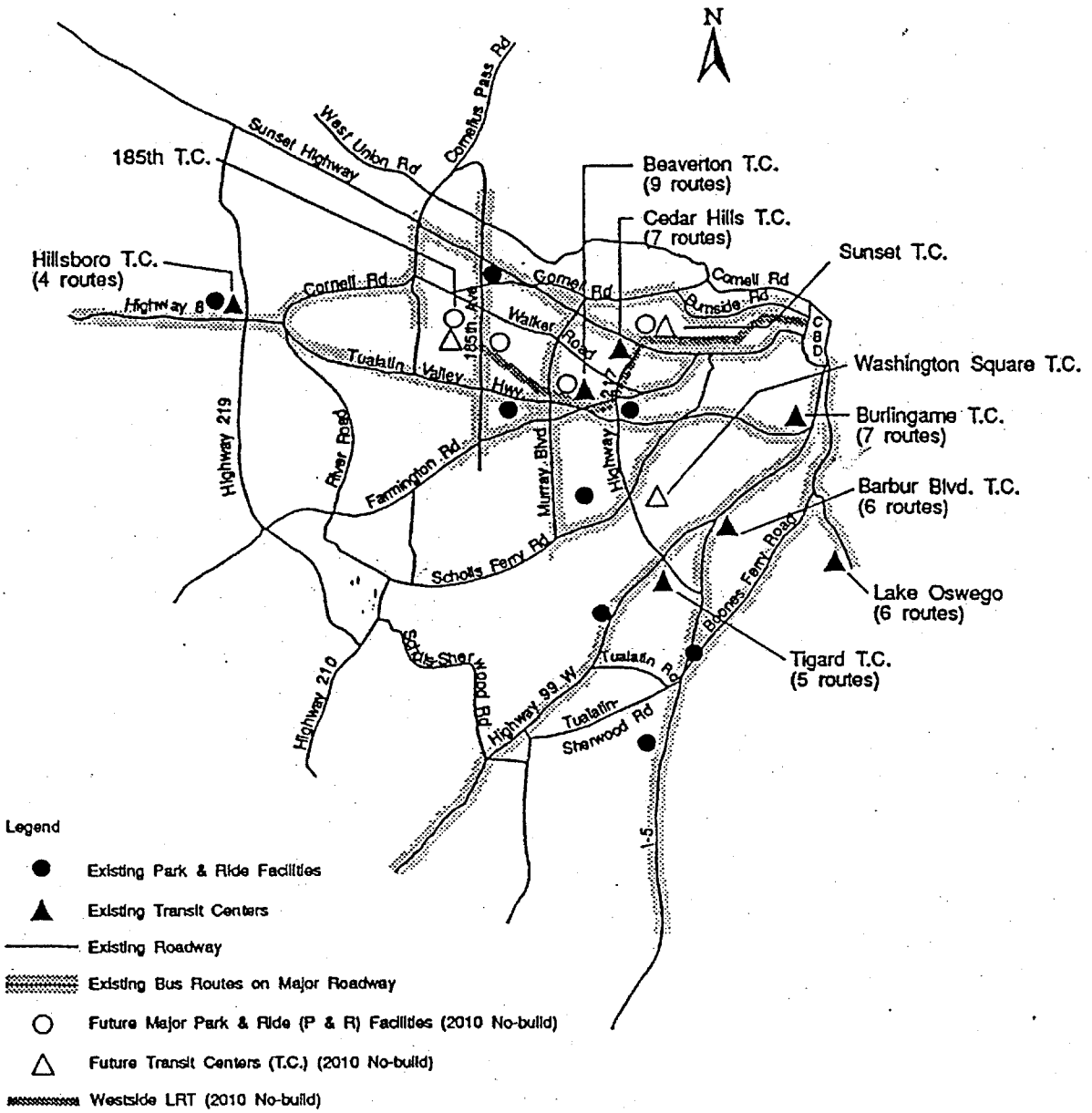


Figure 4
1988 EXISTING TRANSIT FACILITIES AND 2010 NO-BUILD TRANSIT FACILITIES SERVING THE STUDY AREA
Western Bypass Study

PARSONS BRINCKERHOFF

Within the Western Bypass study area, travelers are served by a transit center network which includes four suburban transit centers: Tigard, Beaverton, Cedar Hills, and Hillsboro Transit Centers. Additionally, another three transit centers (Lake Oswego, Barbur Boulevard, and Burlingame) are within close proximity to Western Bypass study area communities, as shown in Figure 4.

In addition to the network of transit centers, Tri-Met also maintains a number of park-and-ride facilities within, or on the perimeter of the Western Bypass study area. Currently, the study area is served by eight park-and-ride lots of 200 or more spaces each. These facilities are pictured in Figure 4.

The system of suburban transit centers, local routes, cross-town connectors, CBD-oriented trunk routes, and park-and-ride facilities is effective in allowing Tri-Met to continue serving their traditional transit market (i.e., CBD-oriented commuter trips) while at the same time providing some measure of local connectivity and circulation. However, limitations on the transit system such as a lack of through-roads oriented towards cross-town travel, lower densities, and dispersed employment centers, reduce transit effectiveness in the Western Bypass study area.

In addition to the all-bus network in the Western Bypass study area, Tri-Met provides the Tri-County LIFT Program, a door to door dial-a-ride service for persons with special transportation needs.

Future No-Build Transportation System

In order to develop future base traffic projections, a future No-Build transportation system for the Western Bypass study area was defined. The analysis of the deficiencies associated with the future No-Build alternative will be used to develop alternative solutions for improved travel. The No-Build is the alternative against which the other alternatives will be compared. This system consists of both transit- and highway-oriented facilities. The system includes all transportation facilities and networks which existed in 1988 plus any transportation projects with committed funding as of 1990 which will be implemented by the year 2010 (see Figure 5). In addition to these funded projects, the future No-Build transportation system also includes the Westside Light Rail Line to 185th Avenue and its accompanying improvements (see Figure 4). The definition of the No-Build alternative was adopted by the Citizens Advisory, Technical Advisory, and Steering Committees.

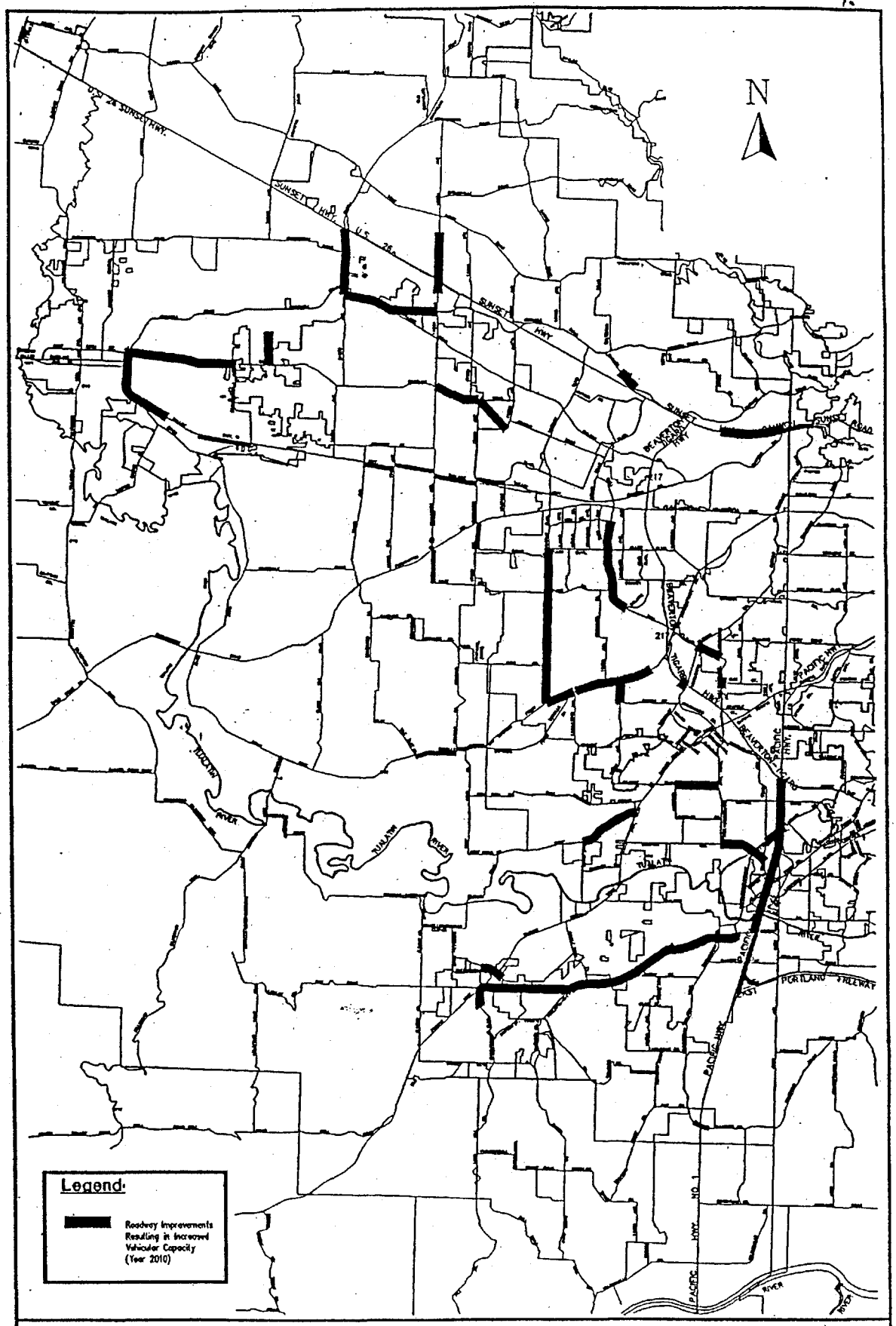


Figure 5
ROADWAY CAPACITY IMPROVEMENTS
INCLUDED IN YEAR 2010 TRAFFIC MODEL
Western Bypass Study

PARSONS BRINCKERHOFF

REGIONAL AND STUDY AREA GROWTH

Population and Employment Growth

The region is growing at a very fast rate and the study area is the most significant area of growth for both population and employment within the region. The study area will continue to become a more significant regional force, and the demand for mobility will increase accordingly.

Population growth in the Portland Metropolitan region is expected to continue to lead the State and, as can be seen in Table 1, will increase by 34.8 percent between 1988 and 2010. Within the region, the study area is expected to continue to be the area of greatest growth with a population increase of 60.3 percent. The same relationship is true in the economic sector, where employment will increase by 38.2 percent in the region and 73.4 percent in the study area. With the past trends in growth in population and employment continuing, the study area's share of the region's population will increase from 18.5 percent in 1988 to 22.0 percent in 2010, while the study area's share of the region's employment will increase from 19.3 percent to 24.3 percent during that same period.

Travel Growth

Person trips are projected to grow significantly in the region, and person trips will grow proportionally faster in the study area than the region as a whole. As the study area grows more quickly in both employment and population there will be more opportunity to travel for work, commercial, retail and recreational activities to and within the study area. Data related to person trips are summarized in Table 1.

The study area accounted for 19.5 percent of the total trips in the region in 1988. This percentage is expected to increase to 23.8 percent by the year 2010. Overall, person trips related to the study area will grow by about 66.8 percent between 1988 and the year 2010. In comparison, person trips related to the region will grow by 36.8 percent.

The higher rate of growth observed for non-work person trips may occur because there will be more opportunities to travel within the region and the study area, as the environment becomes more urbanized and as the economy shifts to a service-oriented base.

By definition, work purpose trips include those from home to work and from work to home only. Non-work purpose trips include school, college, shopping, recreation, and other trips. Neither of these trip purposes include walk and bike person trips. However, shown in Table 2 is a distribution of the total regional and total study area trips by mode, including walk and bike trips. As can be seen, walk and bike trips comprise a minimal proportion of the total trips in both 1988 and 2010.

TABLE 1

POPULATION, EMPLOYMENT, AND TRAVEL GROWTH IN THE REGION AND STUDY AREA (IN THOUSANDS)
1988 Existing and 2010 No Build

	REGION			STUDY AREA		
	1988	2010	Percent Growth	1988	2010	Percent Growth
POPULATION	1,334.2	1,799.0	34.8%	246.5	395.2	60.3%
Percent of Region				18.5%	22.0%	
EMPLOYMENT						
Retail	118.5	184.1	55.4%	25.4	46.7	83.9%
Other	586.1	789.7	34.7%	110.9	189.7	71.1%
Total Employment	704.6	973.8	38.2%	136.3	236.4	73.4%
Percent of Region				19.3%	24.3%	
PERSON TRIPS BY PURPOSE						
Work Trips	937.9	1,226.7	30.8%	183.9	297.5	61.8%
Auto Trips	743.0	942.2	26.8%	154.5	248.8	61.0%
Carpool Trips	128.5	171.2	33.2%	24.3	39.3	61.7%
Transit Trips	66.3	113.3	70.9%	5.0	9.4	88.0%
Non-Work Trips	3,531.3	4,887.7	38.4%	689.4	1,159.1	68.1%
Auto Trips	3,447.7	4,779.7	38.6%	683.9	1,150.0	68.2%
Transit Trips	83.6	108.0	29.2%	5.5	9.1	65.5%
Total Person Trips*	5,407.0	7,341.1	35.8%	1,057.1	1,754.1	65.9%
Percent of Region				19.6%	23.9%	
PERSON TRIPS BY MODE						
Auto Trips	4,190.7	5,721.8	36.5%	838.4	1,398.8	66.8%
Transit Trips	149.9	221.4	47.7%	10.5	18.5	76.2%
Carpool Trips**	128.5	171.2	33.2%	24.3	39.3	61.7%
Total Person Trips*	4,469.1	6,114.4	36.8%	873.2	1,456.6	66.8%
Percent of Region				19.5%	23.8%	
VEHICLE TRIPS BY PURPOSE						
Work Trips	796.3	1,008.4	26.6%	164.1	264.3	61.1%
Non-Work Trips	2,647.2	3,665.4	38.5%	526.5	884.5	68.0%
Total Vehicle Trips***	3,443.5	4,673.8	35.7%	690.6	1,148.8	66.3%
Percent of Region				20.1%	24.6%	

Notes:

*Does not include walk and bicycle trips.

** Carpool Trips are not defined for non-work purpose

***Excludes commercial vehicle trips as well as external vehicle trips (i.e., trips coming from areas outside the region).

TABLE 2
DAILY PERSON TRIPS BY MODE (IN THOUSANDS)
1988 Existing and 2010 No-Build

	1988 Existing				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	33.9 3.7%	838.4 92.4%	24.3 2.7%	10.5 1.2%	907.1 100.0%
Region	214.8 4.6%	4,190.7 89.5%	128.5 2.7%	149.9 3.2%	4,683.9 100.0%
Region without Study Area	180.9 4.8%	3,352.3 88.8%	104.2 2.8%	139.4 3.7%	3,776.8 100.0%
	2010 No-Build				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	59.2 3.9%	1,398.8 92.3%	39.3 2.6%	18.5 1.2%	1,515.8 100.0%
Region	334.2 5.2%	5,721.8 88.7%	171.2 2.7%	221.4 3.4%	6,448.6 100.0%
Region without Study Area	275.0 5.6%	4,323.0 87.6%	131.9 2.7%	202.9 4.1%	4,932.8 100.0%
	Growth between 1988 and 2010				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	74.6%	66.8%	61.7%	76.2%	67.1%
Region	55.6%	36.5%	33.2%	47.7%	37.7%
Region without Study Area	52.0%	29.0%	26.6%	45.6%	30.6%

Mode Choice

Modal transportation options available to travelers within the Portland region and the Western Bypass study area includes the single occupant vehicle, shared ride or carpool option, and transit. Although biking and walking are also modal options available to travelers, they comprise only a small portion of the total trips in the region in comparison to the mechanized modes. These non-mechanized modes will be discussed in subsequent sections.

As shown in Table 3, the single occupant vehicle is and will continue to be the primary mode of choice for work trips in both the region and the study area. Carpool trips, defined only for work-related trips, comprised a much smaller portion of the trip-making totals within the region and study area. They represented only 13.7 percent of the total work trips in 1988 and only 13.2 percent in 2010 (see Table 3). The proportion of the total study area work trips by carpool will remain nearly constant, ranging between at 13.3 percent and 13.2 percent (see Table 3). Transit, consisting of a bus only system in 1988 and a combination bus and light rail system under the 2010 No-Build scenario, is shown to carry fewer work travelers than do carpools in both 1988 and 2010 within the study area.

Reliance on the automobile is even more dominant for non-work purposes than work purposes. The definitions of modal options differ slightly for work and non-work purposes. For non-work purposes, single occupancy vehicles and multi occupancy vehicles are not differentiated between in Metro's modeling process. These two modes are included in a single mode identified as the auto mode. Transit is defined for the non-work purpose as it was for the work purpose trip.

For the non-work purpose, auto trips accounted for nearly 98 percent of the region's trips in both 1988 and 2010 (3,447,700 trips and 4,779,700 trips respectively). For study area non-work trips, the auto mode accounted for 99 percent of the total in both 1988 and 2010 (683,900 trips and 1,150,000 trips, respectively). Transit accounted for the remaining 2 percent of the total non-work trips in the region and 1 percent in the study area in both 1988 and 2010.

Trip Types

For the study, trips within the region and the study area were grouped into four trip types: local (or shorter than average trip lengths of six miles), regional, interregional, and through trips. These trip types are defined for the region and the study area as shown in Figure 6 and 7. For this analysis, "study area trips" were defined as those trips which were either attracted to the study area, generated within the study area, or passing through the study area.

TABLE 3
MODE CHOICE BY PURPOSE IN THE REGION AND STUDY AREA (IN THOUSANDS)
1988 Existing and 2010 No-Build

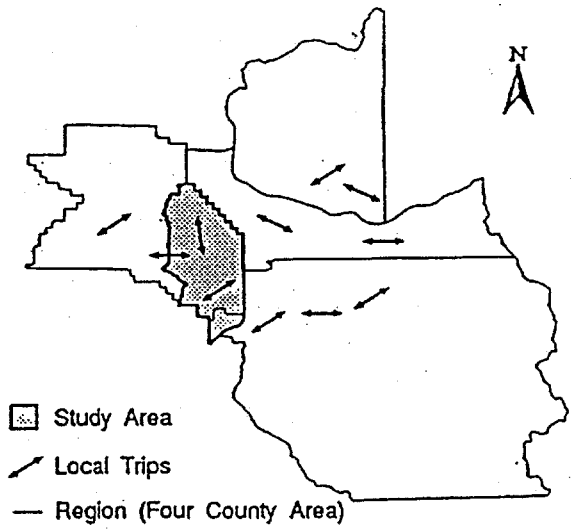
	REGION				STUDY AREA			
	1988	Percent	2010	Percent	1988	Percent	2010	Percent
PERSON TRIPS BY PURPOSE								
Work Trips								
Auto Trips	743.0	79.2%	942.2	76.8%	154.5	84.0%	248.8	83.6%
Carpool Trips	128.5	13.7%	171.2	14.0%	24.4	13.3%	39.3	13.2%
Transit Trips	66.4	7.1%	113.3	9.2%	5.0	2.7%	9.4	3.2%
Total Trips	937.9	100.0%	1,226.7	100.0%	183.9	100.0%	297.5	100.0%
Non-Work Trips								
Auto Trips	3,447.7	97.6%	4,779.7	97.8%	683.9	99.2%	1,150.0	99.2%
Transit Trips	83.6	2.4%	108.0	2.2%	5.5	0.8%	9.1	0.8%
Total Trips	3,531.3	100.0%	4,887.7	100.0%	689.4	100.0%	1,159.1	100.0%
Total Person Trips*	4,469.2		6,114.4		873.3		1,456.6	

Note:
*Does not include walk and bicycle trips.

Local Trips

A local trip is defined as one of less than 6 miles in length which has both its origin and destination within the region.

The 6 mile length used to define the local trip is equal to the average trip length observed within the region.



Regional Trips

A regional trip is defined as one of more than 6 miles in length, with both its origin and destination within the region.

Note that regional trips can pass through the study area while remaining within the region.

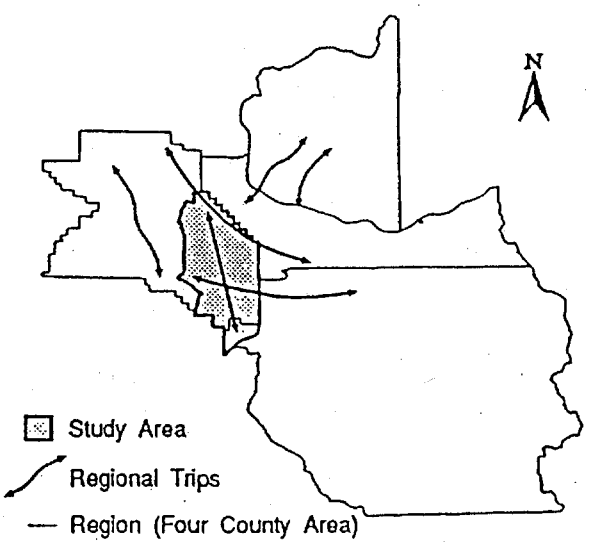


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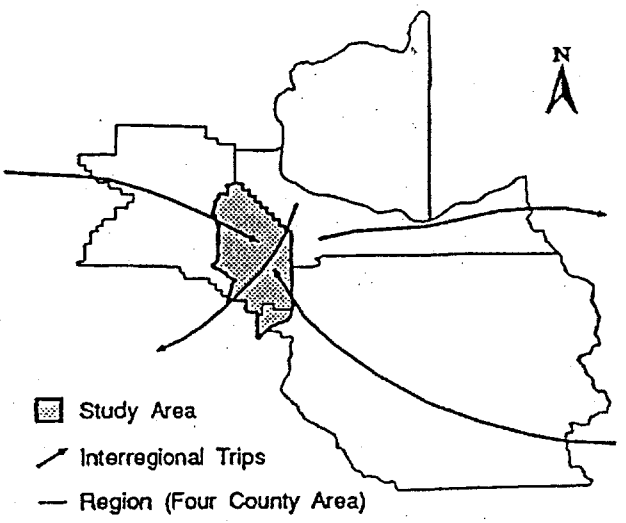
Figure 6
TRIP TYPE DEFINITION

Western Bypass Study

Interregional Trips

An interregional trip is defined as having one trip end within the region and one trip end outside the region. Thus, an interregional trip will have either its origin or its destination within the region, but not both.

Note that interregional trips can pass through the study area while fulfilling the criteria of an interregional trip.



Through Trips

A through trip is one which has neither its origin nor its destination within the region. These trips may pass through the study area or skirt around it.

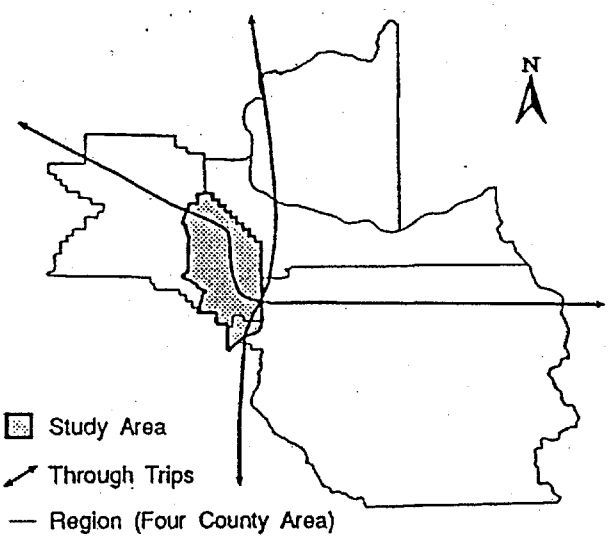


Figure 7
TRIP TYPE DEFINITION ... CONTINUED

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A high percentage of trips in the study area were (in 1988) and will be (in 2000) less than six miles in length. This high percentage of local trips in both 1988 and 2010 is not unique to the study area, and in fact is characteristic of the Portland region and most other urban areas. Individual households within the region and the study area are estimated to make on average ten trips per day. Many of these trips will be of less than six miles in length. These numerous local trips will generally outnumber regional, interregional, and through trips and are a major component of regional travel demand.

As demonstrated in Figure 8, the analysis of trip types showed that 62 percent of the total daily study area trips which occurred in 1988 were local trips. This compares to 28 percent daily regional trips, 9 percent daily interregional trips, and 1 percent daily through trips. However a high proportion of longer than six mile regional trips are tied to the study area. Although interregional trips beginning or ending within the study area account for only 9 percent of the total daily study area trips, they represent 23 percent of the regions total daily interregional trips. Similarly, although trips passing through the study area and the region amount to only 1 percent of the total study area trips, they represent 73 percent of all the through trips passing through the Portland Metropolitan region on an average daily basis.

Likewise for the 2010 No-Build Scenario, the analysis of trip types indicates that 68 percent of the total daily study area trips will be local, 22 percent will be regional, 9 percent will be interregional, and 1 percent will be through trips. Interregional trips beginning or ending within the study area will represent 27 percent of the region's total daily interregional trips while through trips traversing the study area will represent 76 percent of the total daily trips passing through the region.

As shown in Figure 9, the distribution of trips from the region is similar to that demonstrated by the study area for both 1988 and 2010. A notable difference between the study area and regional distributions of trip types is the fact that, for the study area, the regional, interregional, and through trip categories generally reflect higher percentages of the total study area trips than do their regional counterparts. This fact reflects the high percentage of total interregional and through trips which pass through or begin and end within the study area. It also is indicative of a suburban environment in which many of the trips made by local residents to access employment and retail centers must be greater than six miles. However, the shift away from regional trips to more local trips within the study area, as shown in Figure 8, demonstrates that the study area is expected to gradually become more integrated in its land uses reducing the need for its residents to travel long distances to access work or local amenities.

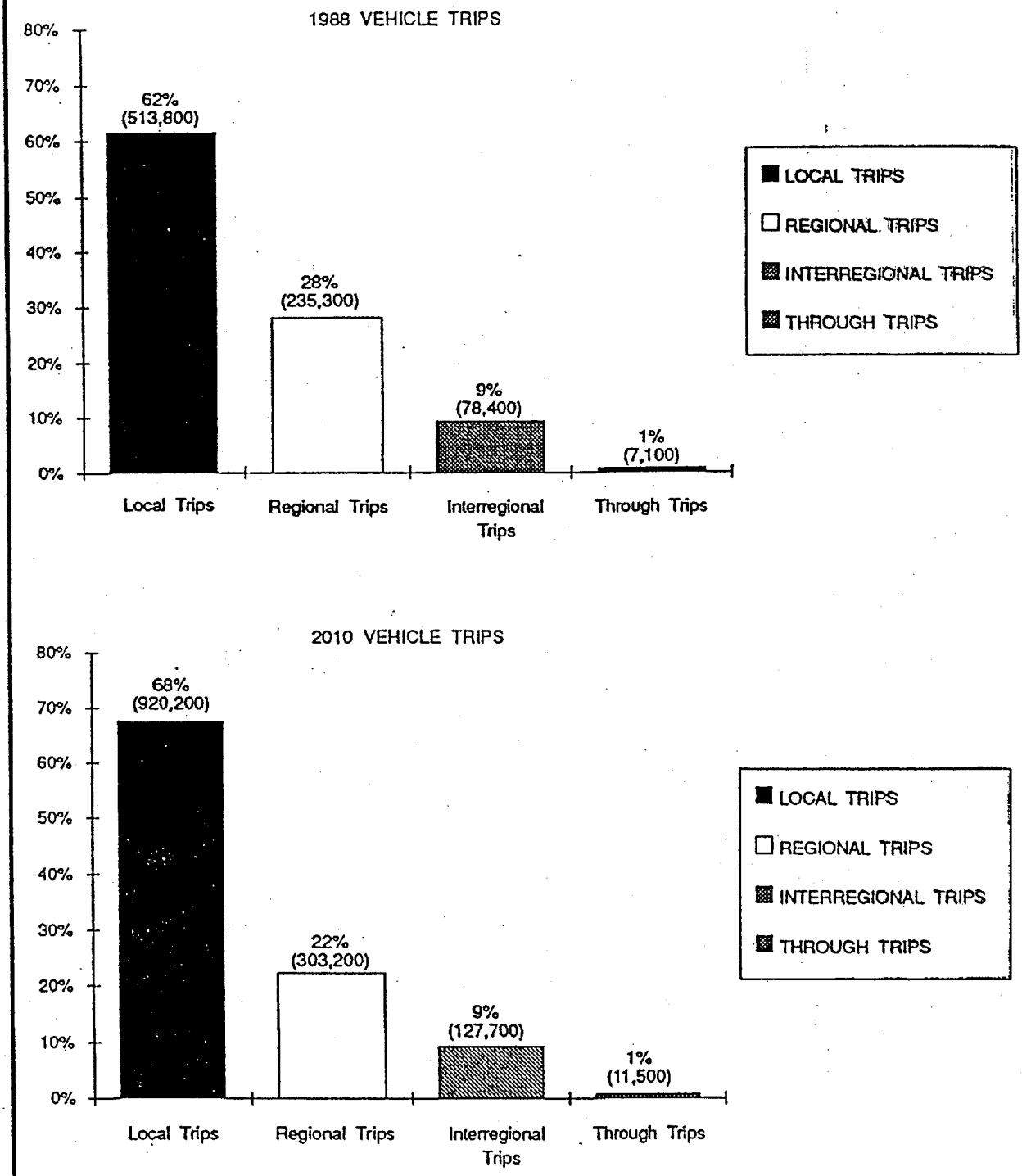

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Figure 8
DISTRIBUTION OF 1988 AND 2010 VEHICLE TRIPS ORIGINATING IN, DESTINED TO, OR PASSING THROUGH THE STUDY AREA
Western Bypass Study

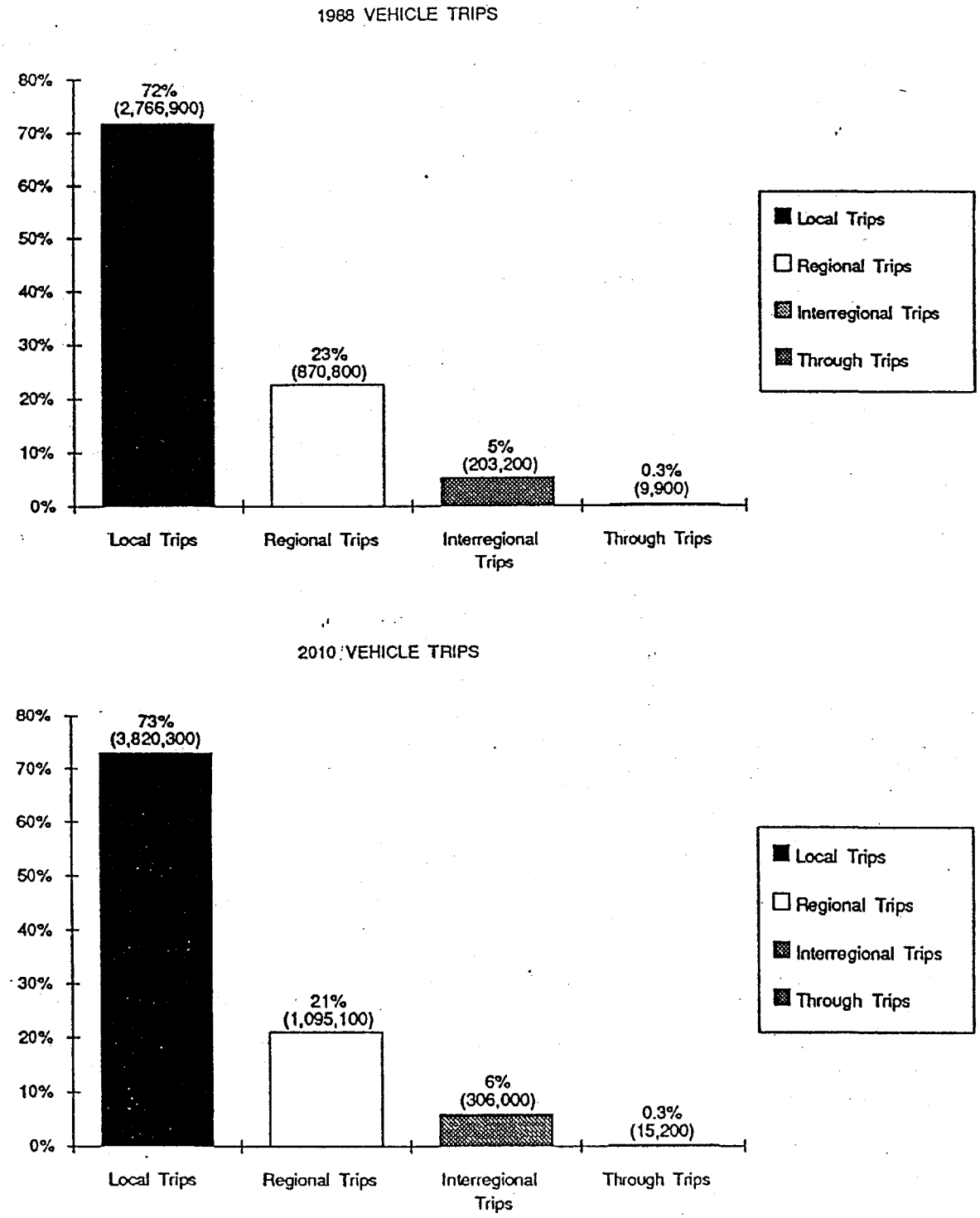

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Figure 9
DISTRIBUTION OF 1988 AND 2010 VEHICLE TRIPS ORIGINATING IN, DESTINED TO, OR PASSING THROUGH THE REGION
Western Bypass Study

Vehicle Trip Distribution

Between 1988 and 2010 the percentage of study area vehicle trips will grow as a whole. Moreover the percentage of these vehicle trips which remain in the study area will increase. These increases in percentages of both work and non-work trips remaining within the study area reflect the fact that both population and employment are expected to increase significantly within the study area and at a faster rate than for the region as a whole, thus providing more opportunities to both live, work, and shop within the study area.

Within the region, total work and non-work vehicle trips will grow by 35.7 percent. Total work and non-work vehicle trips generated by the study area are expected to grow by 66.3 percent during the same period. The study area's share of the region's work and non-work vehicle trips in 1988 amounted to 20.1 percent. This proportion is expected to increase to 24.6 percent by the year 2010.

Of the total work vehicle trips generated in the study area in 1988, 60 percent stayed within the study area and the remaining 40 percent was dispersed to other parts of the region. By the year 2010, study area internal trips are expected to increase to over 70 percent of total vehicle trips while almost 30 percent will continue to be distributed to other parts of the region.

Analysis of North-South or Circumferential Travel Between Districts Within the Study Area

An adopted goal (Goal 2) for the Western Bypass Study is to develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area. Circumferential travel is any person trip which is directed between or across radial routes, and is not limited by trip length or purpose. Circumferential travel in most of the study area (north and central portions) would be oriented north-south. Circumferential travel in the southeastern portion of the study area would be oriented east-west. Certain trips in this category may use radial routes for a portion of the trip to travel in the circumferential direction.

In order to further investigate travel patterns an analysis was conducted to estimate north-south or circumferential travel between districts within the study area. This analysis did not include study area trips that both begin and end within the same district, some of which would be directed north-south or circumferential. Districts were defined as a means to aggregate information for simplifying the detailed data available for analysis. The location or boundaries of these eight districts are shown in Figure D-1 of Appendix D.

There is a significant demand for north-south or circumferential travel within the study area. Table 4 lists the number of trips between and within the eight districts in the study area. The shaded volumes in Table 4 indicate trips that are north-south or circumferential between these eight districts in the study area. North-south or circumferential trips which begin and end within the same district within the study area are not included in the shaded volumes. Trips which do not have both ends in the study area are not included in this table.

In 1988, these circumferential trips between districts comprised 29 percent of the total internal study area person trips. In 2010, these trips are expected to constitute 28 percent of the total internal study area trips.

If trips are divided by mode, transit versus auto, it can be seen that for 1988, 30 percent of transit trips and 29 percent of auto trips remaining within the study area were north- south or circumferential between districts. In 2010, the proportion of circumferential transit trips between districts will reduce slightly to 28 percent, while the auto percentage will reduce slightly to 28 percent.

These levels of circumferential trips between districts in the study area, by both auto and transit modes, are significant. They represent a significant proportion of the trips being made within the study area. In 1988, they account for 183,452 trips, and in 2010 for 323,168 trips daily, or a 76 percent increase in north-south or circumferential travel between districts within the study area, between 1988 and 2010.

TABLE 4

ANALYSIS OF NORTH-SOUTH / CIRCUMFERENTIAL TRAVEL BETWEEN DISTRICTS WITHIN THE STUDY AREA

1988 Study Area Summary Matrix

WJ	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS			(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	117,475	863	118,338	27,422	179	27,601	8,756	19	8,774	785	2	787	38,135	225	38,359	4,960	29	4,989	18,159	101	18,260	305	1	306	210,997	1,418	212,414
(7) TIGARD	27,422	179	27,601	45,563	266	45,830	8,407	34	8,441	848	2	850	5,960	33	5,993	803	8	808	2,282	13	2,295	45	0	45	91,330	534	91,864
(8) TUALATIN / WIL	8,756	19	8,774	8,407	34	8,441	29,965	122	30,106	959	2	961	998	6	1,004	248	2	250	423	3	426	11	0	11	44,768	187	44,975
(9) SCHOLLS	785	2	787	848	2	850	959	2	961	1,541	3	1,544	733	3	736	412	2	414	121	1	122	7	0	7	5,406	16	5,422
(11) ALOHA	38,135	225	38,359	5,960	33	5,993	998	6	1,004	733	3	736	63,613	427	64,040	15,079	68	15,147	13,848	156	14,024	767	1	768	139,172	899	140,071
(12) HILLSBORO	4,960	29	4,989	803	8	808	248	2	250	412	2	414	15,079	68	15,147	56,776	285	57,062	4,713	56	4,769	1,014	1	1,015	84,007	446	84,454
(13) N. SUNSET	18,159	101	18,260	2,282	13	2,295	425	3	428	121	1	122	13,848	156	14,024	4,714	55	4,769	19,383	134	19,517	1,017	0	1,017	59,989	442	60,431
(14) HELVETIA	305	1	306	45	0	45	11	0	11	7	0	7	766	2	768	1,013	2	1,015	1,012	5	1,017	372	0	372	3,530	10	3,541
TOTAL→	210,996	1,418	212,414	91,330	534	91,864	44,788	187	44,975	5,406	16	5,422	139,171	900	140,071	84,007	448	84,454	59,983	448	60,431	3,537	3	3,541	639,218	3,955	643,173
N/S CIR. →	49,336	299	49,635	44,918	266	45,184	14,804	66	14,869	2,232	8	2,240	22,344	180	22,525	7,191	66	7,257	39,566	309	39,897	1,844	2	1,846	182,256	1,196	183,452
% N/S CIR. →	23%	21%	23%	49%	50%	49%	33%	35%	33%	41%	51%	41%	16%	20%	16%	9%	15%	9%	66%	69%	66%	52%	67%	52%	29%	30%	29%

2010 Study Area Summary Matrix

WJ	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS			(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	137,357	864	138,221	35,031	185	35,216	8,172	31	8,203	771	2	773	59,086	322	59,408	5,853	29	5,882	23,487	137	23,624	363	1	365	268,120	1,573	269,693
(7) TIGARD	35,031	185	35,216	66,509	388	66,897	20,060	89	20,149	1,014	3	1,018	11,175	63	11,239	1,091	8	1,099	2,850	19	2,869	61	0	61	137,743	756	138,499
(8) TUALATIN / WIL	8,172	31	8,203	20,060	89	20,149	79,187	342	79,530	2,191	6	2,197	2,794	17	2,812	500	4	503	726	6	734	22	0	22	111,654	496	112,150
(9) SCHOLLS	771	2	773	1,014	3	1,018	2,191	6	2,197	1,579	7	1,586	1,814	7	1,821	1,118	4	1,122	149	2	150	10	0	10	8,447	31	8,478
(11) ALOHA	59,086	322	59,408	11,175	63	11,239	2,794	17	2,812	1,814	7	1,821	174,382	1,265	175,647	35,829	171	36,000	36,668	272	36,940	1,675	5	1,680	325,222	2,125	327,347
(12) HILLSBORO	5,853	29	5,882	1,091	8	1,099	500	4	503	1,118	4	1,122	35,829	171	36,000	121,818	688	122,506	9,901	109	10,010	1,367	4	1,371	177,477	1,016	178,493
(13) N. SUNSET	23,487	137	23,624	2,850	19	2,869	726	6	734	149	2	150	36,668	272	36,940	9,901	109	10,010	42,676	371	43,048	1,219	6	1,225	119,625	925	120,550
(14) HELVETIA	363	1	365	61	0	61	22	0	22	10	0	10	1,675	5	1,680	1,367	4	1,371	1,219	6	1,225	282	1	283	4,999	18	5,017
TOTAL→	268,120	1,573	269,693	137,743	756	138,499	111,654	496	112,150	8,447	31	8,478	325,222	2,125	327,347	177,477	1,016	178,493	119,625	925	120,550	4,999	17	5,017	1,153,287	6,938	1,160,225
N/S CIR. →	64,690	353	65,044	70,220	365	70,584	32,467	153	32,620	5,082	19	5,101	55,925	368	56,292	13,976	129	14,105	75,730	547	76,278	3,135	9	3,144	321,225	1,942	323,168
% N/S CIR. →	24%	22%	24%	51%	48%	51%	29%	31%	29%	60%	60%	60%	17%	17%	17%	8%	13%	8%	63%	59%	63%	63%	53%	63%	28%	28%	28%

PERCENT INCREASE IN TRIPS BETWEEN 1988 AND 2010

WJ	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS			(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
TOTAL→	27%	11%	27%	51%	41%	51%	149%	165%	149%	56%	93%	56%	134%	136%	134%	111%	127%	111%	99%	106%	99%	41%	409%	42%	80%	75%	80%
N/S CIR. →	31%	18%	31%	56%	37%	56%	119%	133%	119%	128%	128%	128%	150%	104%	150%	94%	94%	94%	91%	77%	91%	70%	0%	70%	76%	62%	76%

Identifies circumferential movements staying within the study area

Note:

This table includes trips with both ends (origin and destination) in the study area.

It does not include north-south or circumferential trips within the study area but with either the origin or destination outside the study area.

EXISTING AND FUTURE DEFICIENCIES

The analysis of existing and future transportation deficiencies within the study area was based on a study of roadway levels-of-service during the PM peak hour using Metro's regional forecasting model refined for use on this study. It should be noted that this information was developed at a systems level using updated population, employment and traffic data projected through the year 2010. Individual roadways are analyzed based on volumes of traffic on sections of roadways rather than at an intersection level of detail. Congestion on roadways, therefore, may differ somewhat from those identified in the Washington County transportation plan and the Metro RTP.

Level-of-service (LOS) ratings are used to describe how well traffic flows on a particular facility or through an intersection. Level-of-service is defined by such factors as freedom to maneuver, speed, driver discomfort and frustration, fuel consumption, lost travel time, and delay. Level-of-service on arterials is heavily affected by the type of arterial (principal, minor, suburban, or urban), number of signalized intersections per mile, speed limits, separate left-turn lanes, parking, pedestrian interference, and roadside developments.

Congestion is measured by comparing the relationship between the volume of traffic during the peak hour of travel for a certain section of roadway with the capacity which that same section can reasonably accommodate. The volume of traffic is either recorded in the field or estimated from regional forecasts. Capacity is determined by a number of criteria including number of traffic lanes, type of traffic control, roadway geometry, and speed of travel.

Levels-of-service ratings range from "A" to "F", with "A" being the best rating and "F" the worst. At LOS D small increases in traffic volumes will cause level of service to deteriorate rapidly, and driver comfort is poor. LOS E is indicative of significant congestion, while LOS F represents severe congestion or failure with high driver frustration. Characteristics of each Level-of-Service are detailed in the appendix.

For the purpose of analysis, the relationship between level of service and volume-to-capacity ratios (V/C) was defined such that a V/C ratio of 0.80 or less indicated a LOS of C or better; a V/C ratio of 0.80 to 1.0 indicated a LOS of D or E; and a V/C ratio of 1.0 or greater indicated a LOS of F. These definitions were based on the Highway Capacity Manual, TRB Special Report 209, 1986.

Table 5 summarizes peak hour traffic volumes and levels of service in 1988 and 2010 on selected roadways within the study area. As depicted in Figures 10 and 11, roadway congestion in both 1988 and the 2010 No-Build Scenario occurs throughout the Western Bypass study area. Significant portions of the study area were subject to roadway LOS of D or worse during 1988. This pattern of congestion is expected to worsen by 2010 under the No-Build scenario, spreading over much of the developed portions of the study area. The existing major north-south or circumferential roadways within the study area currently are, or are projected to experience, significant traffic congestion over the next two decades. Due to the lack of these circumferential roadways in the study area, a certain amount of circumferential traffic will use radial routes to move north-south, increasing congestion on them (See Appendix D).

Previous analysis showed that vehicle hours of delay will increase by 246 percent between 1988 and 2010 in the study area and 179 percent in the region. (Forecasting Analysis Results, October 26, 1990). People will spend more time traveling between origins and destinations. As congestion spreads on primary arterials and highway networks such as those identified on Table 5 and Figures 10 and 11, traffic will likely divert to rural roadways and arterials which provide less frustration and possibly shorter travel times. These secondary networks have not been designed for higher traffic volumes and do not provide direct routes. Vehicle miles of travel will increase and safety is likely to become a significant issue.

From the analysis of regional congestion levels, the worst congestion levels tend to be located in the northern and southeast portions of the study area. Bull and Cooper Mountains divide the congestion in the study area into a northern and southern grouping and pose a geographical limitation in extending north-south routes to the southern portion of the study area. These two areas are linked via the congested Highway 217, the only continuous major circumferential facility in the study area. Thus this creates a problem related to both travel within districts at ends of the study area, and travel through the study area affecting mobility within and through the western portion of the region.

To fully describe the congestion occurring within the study area, and to understand the growth in traffic causing the deterioration in levels-of-service, it is instructive to examine a few of the congested roadways within the study area network. In general it can be concluded that many of the major roadways experienced significant congestion in 1988. Over the next two decades these already congested roadways will not be able to accommodate additional volumes of traffic within the peak hour without significant capacity improvements and level of service will further deteriorate. Other major roadways will become congested as traffic shifts to the available capacity on these currently less congested segments. By 2010 there will not be enough capacity to meet the travel demand within the study area in either the radial or circumferential direction.

TABLE 5
SERVICE DEFICIENCIES ON MAJOR ROADWAYS

SEGMENT	1988 Peak Hour Volume (veh/hr)	1988 LOS	2010 Peak Hour Volume (veh/hr)	2010 LOS
Tualatin-Sherwood/Edy Road	1,375	D/E	2,200	F
Highway 99W				
South of Tualatin Road	1,375	C	2,700	C
North of Tualatin Road	1,900	D/E	3,500	D/E
North of Highway 217	4,100	F	4,475	F
Interstate 5				
South of Nyberg Road	8,100	C	11,600	D/E
North of Nyberg Road	9,700	D/E	13,325	F
Sunset Highway				
West of 185th	3,550	F	5,600	F
West of Canyon Road	6,850	F	11,850	F
Highway 217				
North of Hall Boulevard	7,875	D/E	8,700	F

* LOS C indicates a level of service of C or better

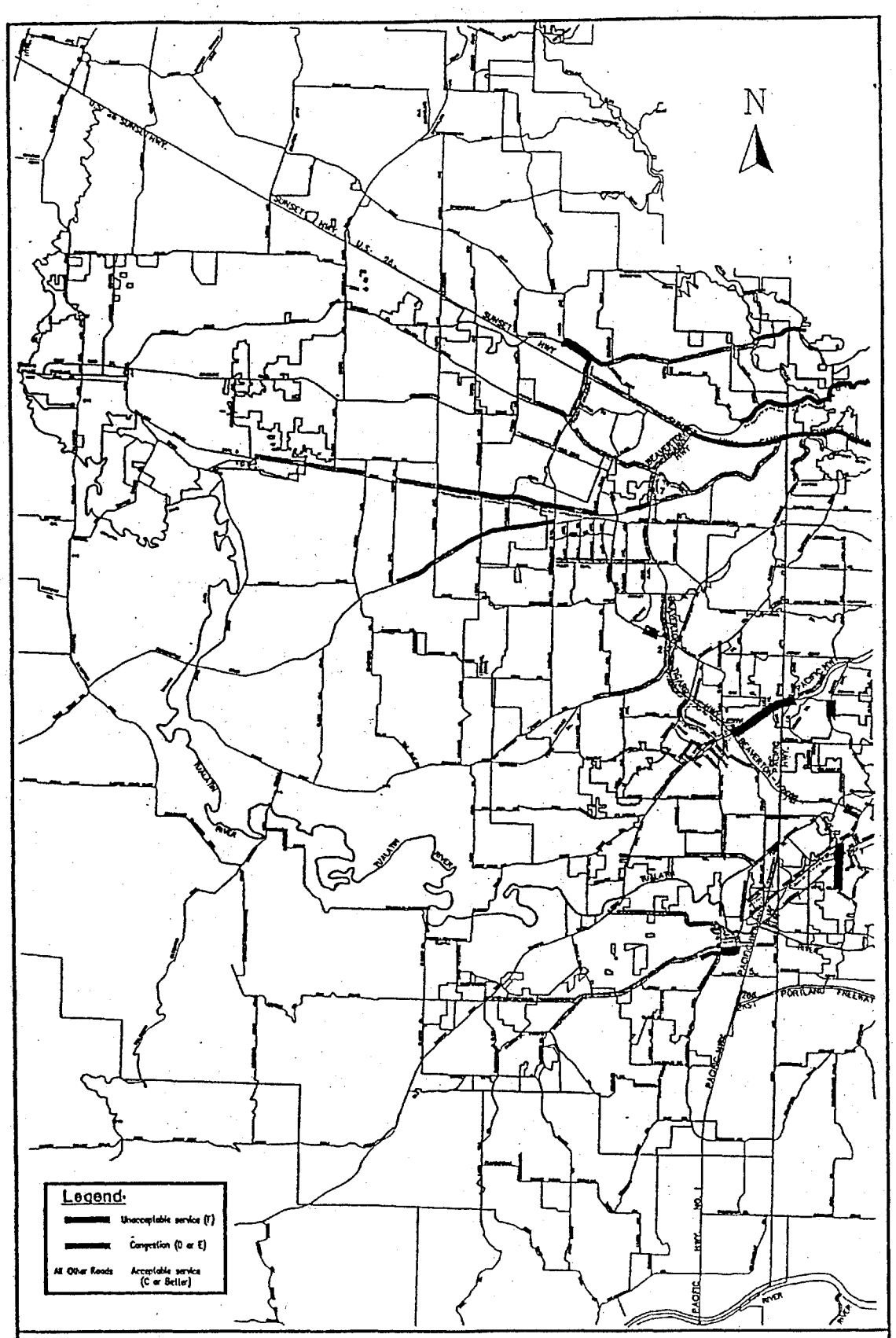

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Figure 10
ROADWAY LEVEL OF SERVICE
1988 EXISTING PM PEAK HOUR
Western Bypass Study

NOTE: Levels of service are for roadway segments, based on traffic estimates from Metro's model; they may differ from intersection levels of service from other studies.

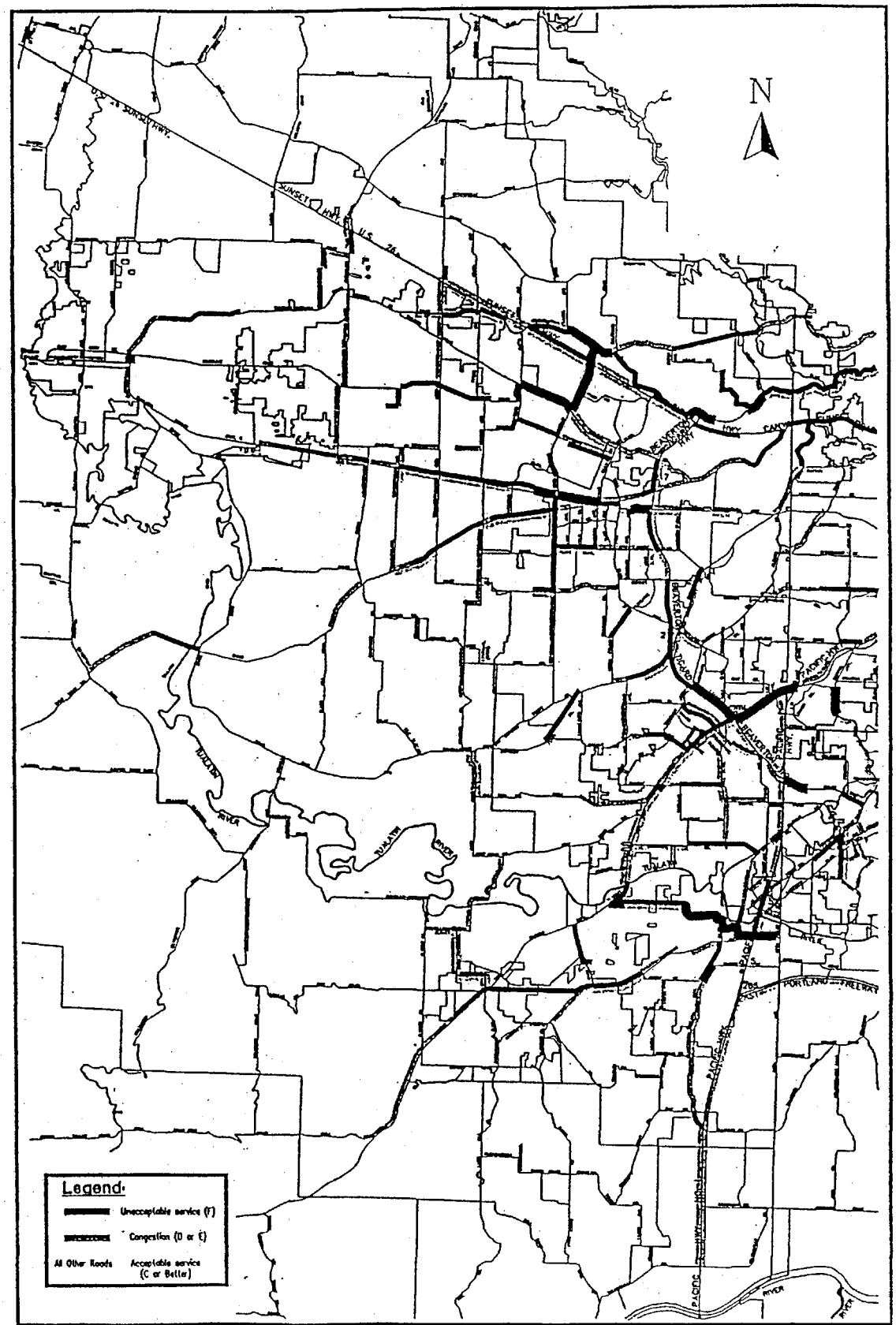

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Figure 11
ROADWAY LEVEL OF SERVICE
2010 NO-BUILD PM PEAK HOUR
Western Bypass Study

NOTE: Levels of service are for roadway segments, based on traffic estimates from Metro's model; they may differ from intersection levels of service from other studies.

Southern End of the Study Area

Tualatin-Sherwood/Edy Road

Tualatin-Sherwood/Edy Road serves as a major connection between Highway 99W and Interstate 5 in the southwest part of Washington County. Traffic conditions on this roadway were at LOS E in 1988. By the year 2010, traffic demand on this roadway segment will increase by 59.4 percent during the PM peak hour. The roadway will not be adequate to serve the traffic demands forecasted even with the committed improvements under the No-Build scenario. Level-of-Service on significant portions of the roadway is expected to deteriorate to LOS F.

Highway 99W

Highway 99W within the study area north of the Tualatin Road Intersection either was operating at poor level of service in 1988 or will be in 2010 under the No-Build Scenario even with committed improvements. Just north of the Tualatin Road Intersection, traffic levels-of-service will worsen from acceptable levels of service in 1988 to LOS of D or E by the year 2010. Traffic volumes on this section will grow by 84 percent.

North of Highway 217, level of service on highway 99W in 1988 was LOS F, and for the 2010 No-Build Scenario will continue at LOS F. Traffic north of Highway 217 will increase by 9 percent between 1988 and 2010. This portion of Highway 99W is already operating at full capacity during 1988 and, as the minimal increase in traffic over the twenty year period indicates, it can accommodate very little additional traffic.

Interstate 5

Interstate 5 is already congested north of Nyberg Road, and conditions will become worse and extend south by 2010 even with committed improvements under the No-Build Scenario. Interstate 5, north of the Nyberg Road interchange during the typical 1988 PM peak hour operated at a LOS of D or E. The total volume carried by this section of I-5 is expected to grow by 37 percent, and the traffic condition will worsen to LOS F.

Traffic conditions on Interstate 5, south of the Nyberg Road interchange in the study area were at a LOS C or better in 1988. This level-of-service will worsen to a LOS D or E by the year 2010 under the No-Build Scenario. Traffic volume will increase by over 43 percent on this portion of Interstate 5.

Other roadways in the southern portion of the study area such as Durham Road, Tualatin Road and portions of Scholls Ferry Road show similar levels of congestion to those described above.

Northern End of the Study Area

Sunset Highway

Much of the Sunset Highway east of Highway 217 is currently congested and, as can be seen in Figure 10, operated at a LOS F in 1988. These poor levels-of-service will continue to exist in the year 2010 even with committed improvements under the No-Build Scenario and, as can be seen in Figure 11 will spread westerly through the Sunset Corridor as travel demand to these areas increases. During the PM peak period, traffic volumes on Sunset Highway, just north of 185th, are expected to increase by 57.7 percent. On the same facility, west of Sylvan traffic volumes are expected to grow by 20.3 percent.

Highway 217 and Other North-South Roadways (north end of the study area)

Highway 217 serves as a major circumferential connection between Tigard and Beaverton and between Interstate 5 and the Sunset Corridor. Most of the facility is currently congested, and this condition will become worse and encompass almost all of this facility by 2010 under the No-Build Scenario.

In 1988, the facility operated at LOS D or E, with the exception of isolated segments between Interstate 5 and Highway 99W and between Allen Boulevard and Denney Road which operated at levels-of-service of C or better. The levels-of-service on the entire facility except the short section between Canyon road and Beaverton-Hillsdale Highway is expected to deteriorate to levels of service D or worse by the year 2010 under the No-Build Scenario.

Other roadways in the northern portion of the study area such as Murray Boulevard, 185th Avenue, Walker Road, Cornell Road, Tualatin Valley Highway, and Farmington Road show similar levels of congestion to those described above in both 1988 and 2010.

MAJOR FINDINGS AND CONCLUSIONS

The analysis of existing (1988) transportation conditions in the study area confirms what travelers in the study area are currently experiencing every day, namely, that peak hour travel demand has exceeded available capacity on many of the major roadways, causing traffic back-ups and delay. Over the next twenty years, peak hour travel conditions will deteriorate even further under the future No-Build alternative. Delay on both radial and circumferential routes will increase as the residents of the study area, as well as workers commuting to the area from other parts of the region, go about their daily activities. The one-hour peak will extend to two or more hours as travelers are delayed in traffic for increasingly longer periods of time or adjust their schedules to travel on the "shoulder" of the peak to try and avoid congestion. Delay on major routes will cause travelers to search for alternate local routes to bypass this congestion. The significant increases in congestion forecast to occur between 1988 and 2010 can be directly linked to population and employment growth in the study area and region, numerous socioeconomic factors and travel characteristics, including the following:

Population, Employment and Travel Growth

- Population and employment is expected to grow at a much faster rate in the study area compared to the region over the next two decades.

- The study area's share of the region's population and employment will increase due to these higher rates of growth relative to the rest of the region. Population in the study area will increase from 18.5 percent of total region population in 1988 to 22.0 percent in 2010 while employment will grow from 19.3 percent to 24.3 percent during that same period. The study area is thus expected to become not only an increasingly important economic component of the Portland metropolitan area but also of the State of Oregon given Portland's dominance in the state economy.

- Employment is expected to grow at a faster rate than population within the study area, with retail employment growing at a faster rate than other types of employment.

- Consistent with adopted comprehensive plans, the type and rate of growth will result in land uses within the study area becoming increasingly more mixed relative to today. The number of trips remaining within the study area will become a greater percentage of the total study area trips, that is, the trips which both begin and end within the study area will become a greater percentage of all trips with one or both ends in the study area.

- With increasing numbers of retail and employment centers, and recreational facilities being located within the study area, the opportunities for travel within the study area will multiply, resulting in increased numbers of shorter (under six mile) trips.

- The major proportion of existing 1988 and future 2010 No-Build trips in both the study area and the region will be trips of six miles or less. This is typical for any major urban area because non-work trips (social, recreational, shopping, and school trips) constitute close to 80 percent of the trip-making in the study area and in the region and tend to be shorter than work-related trips.

- Regional trips with one or both ends in the study area (defined as those trips greater than six miles in length and remaining entirely within the region) will decline from 28 to 22 percent between 1988 and 2010.

- Although interregional and through trips associated with the study area make up a relatively small proportion of total study area trips (10 percent), they represent a significant proportion of the total interregional and through trips attracted and produced or passing through the region (between 40 and 43 percent). Therefore a significant proportion of the metropolitan area's overall longer trips pass through the study area on the existing facilities.

- Work-related trips are forecast to increase by 30.8 percent between 1988 and 2010, reaching 1,226,700 daily work person trips in the study area by year 2010. The study area's share of the region's work trips will increase from 19.5 percent in 1988 to 23.8 percent in 2010, consistent with the fact that the study area is projected to experience more rapid growth in both population and employment than the region as a whole.

- Between 1988 and 2010, study area trips for non-work purposes will increase at an even faster rate than will work-related trips (68.1 versus 61.8 percent), eventually reaching a total of 4,887,700 daily person trips by the year 2010. The study area's share of the region's non-work trips will increase from 19.5 percent to 23.7 percent over the twenty-year period as increasing amounts of non-work related travel attractions are located within the study area to accommodate the growing population.

Travel Mode

- The predominant mode of travel in both the study area and in the region today is the private automobile. However, transit service and use are significantly less in the study area than in the region as a whole (e.g., three percent of work trips in the study area are by transit compared to seven percent for the region).

- Both demand and supply factors influence people's mode of travel. The land use patterns in the study area are characterized by low density employment centers and single-family subdivisions thus making trip origins and destinations relatively dispersed. The road system, serving both buses and cars, is not a complete grid system such as is found in many parts of Portland. Because of the many geographical constraints, the

road network has discontinuities and in some areas is built on slopes too steep for transit to maneuver. It is thus difficult to serve many parts of the study area efficiently with fixed-route transit. Existing transit centers and park-and-ride lots provide a means to focus travelers and service at a single location and thereby improve the effectiveness of transit service.

- The automobile will continue to be the predominant mode of travel in both the study area and in the region under the future 2010 No-Build alternative. Some increases in transit use are expected to occur due to the investment in light rail in the Westside Corridor, although these increases in transit use are related primarily to radially oriented trips.

- The percentage of commuters carpooling to work are the same for both the study area and the region in 1988 and under the 2010 No-Build alternative. This mode of transportation has potential for helping relieve traffic congestion in the study area since it requires a lower concentration of households and employment to be attractive relative to fixed route transit. However, time or cost savings need to be realized relative to driving alone in order to get people to carpool.

Analysis of North-South or Circumferential travel

- North-south or circumferential travel represent a significant proportion of the trips being made within the study area. In 1988 north-south or circumferential travel remaining within the study area and travelling between districts comprised 29 percent of the total study area person trips. By 2010 these study area trips between districts are expected to decrease slightly to 28 percent proportion of the total internal study area trips. The total number of the north-south or circumferential trips between districts within the study area will grow by 76 percent between 1988 and 2010. Some of the other trips within the study area beginning and ending within the same district would also be north-south or circumferential, but these are not included in the north-south or circumferential proportions of this analysis.

- An analysis of the existing traffic on Highway 217, the only continuous circumferential roadway within the study area, indicates that a significant portion of trips on that facility in 1988 were made between the northern study area and the southern and southeastern portion of the region. This trend becomes even more pronounced in the 2010 analysis which showed that during the PM peak, as much as one lane of traffic on Highway 217 will be devoted to long distance, circumferential movements between or beyond the northern and southern ends of the study area.

- In both 1988 and 2010, 16 percent of the PM peak hour trips on the major links between I-5 and Highway 99W are destined for Clackamas County or circumferential travel destined outside the study area. An additional 16 percent are destined for the

Portland area. Two-thirds are begin or end in the southeast end of the study area. Only 2 to 3 percent of trips on these east-west/circumferential routes were or will be distributed to the northwestern portion of the study area.

- By contrast, the Sunset Highway does not currently carry large numbers of long-distance, circumferential trips during the PM peak. The majority of study area PM peak hour travel destinations on the Sunset Highway for 1988 and 2010 are distributed between Beaverton and Hillsboro, conveying principally trips westbound from the Portland CBD.

Traffic Congestion

- Because of the large increases in population and employment and the continued reliance on the private auto as the primary mode of transportation in the study area into the future, the existing and future No-Build transportation systems will not provide sufficient capacity for forecasted traffic demands. High levels of congestion on many of the study area roadways, as measured by levels of service, are expected by 2010.

- Major radial roadways will experience significant traffic congestion and delay under the No-Build alternative. Movement of traffic circumferentially, some of which must now be accomplished via radial routes because of a lack of direct circumferential routes, will become more difficult.

- The current deficiency in north-to-south or circumferential roadways within the Western Bypass study area will hamper the movement of both transit and private automobiles. Existing north-south or circumferential roadways such as Highway 217, Murray Boulevard, Tualatin Road, and the Tualatin-Sherwood/Edy Road are or will be heavily congested or do not continue far enough to provide effective circumferential connections between the southern and northern portions of the study area.

- Because of the lack of adequate circumferential routes and the increasing congestion expected by 2010, traffic will likely divert from primary arterials and highway networks to the rural roadway and minor arterial networks within the study area. These secondary networks have not been designed for high traffic volumes. Safety, both on and off the roadway, is likely to become a significant issue.

- Many of the committed roadway improvements included in the No-Build condition were designed under the assumption that a Western Bypass would be in place by 2010 to supply additional transportation capacity. These facilities, in the absence of a Western Bypass, will be insufficient to handle future traffic demands.

- Many of the roadway improvements, included in the 2010 No-Build scenario, were designed for horizon years falling significantly short of the 2010 horizon year of the Western Bypass Study. Because many of these roads will not have been designed for 2010 traffic levels, they will provide insufficient capacity for the traffic demands within the study area.

SUMMARY OF PURPOSE AND NEED

Based on the analysis of expected growth and travel patterns, it is clear that transportation problems in the Study area will be significant by 2010 without major strategies to reduce or alleviate existing and future traffic congestion. Analysis of regional congestion levels and specific roadways within the study area indicates that the worst congestion levels are located in the northeast and southeast portions of the study area. Analysis further shows that Highway 217 and existing radial routes are currently relied upon to serve significant north-south or circumferential movements within the study area.

Strategies to reduce or alleviate traffic congestion need to:

- Address the demand for north-south or circumferential travel focusing on the major travel movements and deficiencies within the study area such as movements between economic centers and residential developments. The purpose of the study is not to solve every traffic congestion problem in the study area;

- Recognize the diversity of trip types and trip lengths to be served within the study area, including work versus non-work and local, regional, interregional, and through trips;

- Consider opportunities to not only increase capacity but also potentially reduce demand in the study area, recognizing that there is currently a very heavy reliance on the private automobile;

- Take into account the geographic and environmental constraints and land uses within the study area;

- Consider travel demand in the northeast and in the southeast portions of the study area, as well as travel demand between the northern and southern ends of the study area and through the study area.

APPENDIX A

BACKGROUND REPORTS AND STUDIES

Study	Date Published
Statement of Goals and Objectives	June 1990
Summary of Southwest Corridor Study	October 1990
1988 Existing and 2010 No-Build, Forecasting Analysis Results	October 26, 1990
Travel Patterns and Conditions, Major Findings and Conclusions	October 29, 1990
Evaluation Methodology, Technical Memorandum	October 1990
Select Link Analysis, Technical Memorandum	November 1990

APPENDIX B

WESTERN BYPASS STUDY
GOALS AND OBJECTIVES

Goal 1

Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Objectives

1.1 Keep citizens, local, regional and state agencies and officials, as well as other interest groups, involved in the study process through public forums and workshops and through newsletters and other media.

1.2 Identify and assess major existing and future state, regional and intra-county travel needs, primarily as they relate to north-south or circumferential access within and through the study area.

1.3 Identify and evaluate the widest range of reasonable alternative solutions to transportation problems, including but not limited to, transit/HOV, street, and highway improvements, and transportation demand management measures, regardless of current funding availability.

1.4 Maintain the study schedule in order to move forward towards the implementation of a feasible and effective solution in a timely manner.

Goal 2

Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area:

Objectives

2.1 Reduce congestion on existing streets and highways, as compared to a no-action alternative.

2.2 Improve access through, to/from, and within the study area.

2.3 Reduce through-traffic diversion to rural roads and residential streets.

2.4 Improve safety for both motorized and non-motorized traffic.

2.5 Reduce reliance on the private automobile and reduce or delay the need for additional vehicular capacity through support of transit, ride sharing (carpools/vanpools), and other demand management strategies.

2.6 Develop alternatives that have flexibility to be improved to meet longer term, future needs (beyond the year 2010 and looking toward anticipated growth within the urban area).

Goal 3

Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state, and federal plans and regulations.

Objectives

3.1 Avoid or minimize negative impacts on the natural environment, e.g., wetlands, water, air, energy, noise, visual, agricultural and forest land.

3.2 Avoid or minimize negative impacts on the built environment, e.g., on existing urban and rural land uses and cultural, historical, and recreational resources.

3.3 Support an urban development pattern that provides for the efficient delivery of urban services, including public transportation, in a manner consistent with state-wide planning goals and with local and regional planning.

3.4 Minimize negative impacts or pressures on the Urban Growth Boundary and identify how various alternatives might affect the rate, type or form of urbanization.

Goal 4

Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

Objectives

4.1 Consider the construction, operation and maintenance costs of each alternative.

4.2 Avoid or minimize negative impacts on the integrity and social fabric of the diverse neighborhoods and business communities in the study area (urban and rural).

4.3 Support the economic health of the study area and communities that depend on access through the study area.

APPENDIX C

LEVELS-OF-SERVICE DEFINITIONS

Level-of-Service (LOS) ratings are used to describe how well traffic flows on a particular facility or through an intersection. LOS is defined by such factors as, freedom to maneuver, speed, driver discomfort and frustration, fuel consumption, lost travel time, and delay. Level-of-service on arterials is heavily affected by the type of arterial (principal, minor, suburban, or urban), number of signalized intersections per mile, speed limits, separate left-turn lanes, parking, pedestrian interference, and roadside developments. Levels-of-service ratings range from "A" to "F", with "A" being the best rating and "F" the worst. Characteristics of each Level-of-Service are as follow:

Level-of-Service A
- Free flow conditions
- Vehicles unaffected by other users on the roadway
- Driver comfort is generally excellent for all users
- Very little or no delay

Level-of-Service B
- Stable flow conditions
- Users are aware of other vehicles on the roadway, but no interruption in speed occurs
- Maneuverability is somewhat more restricted than LOS A, but is still relatively uninhibited
- Level of driver comfort is high, but lower than for LOS A
- Very little delay

Level-of-Service C
- Stable flow conditions
- Speed and maneuverability are affected by other users on the roadway
- Level of driver comfort begins to decline
- Some delay is noticeable

Level-of-Service D
- High density stable flow
- Speed and vehicle maneuverability are limited by other vehicles on the roadway
- Level of driver comfort is poor
- Small increases in traffic volumes will cause level-of-service to deteriorate rapidly, and may cause operational problems
- Delay is moderate

Level-of-Service E

Highly unstable flow, at or near the capacity of the roadway
Speeds are low and maneuverability is extremely limited
Small increases in traffic volumes may cause the transportation facility to exceed its capacity, thus causing system failure
Driver comfort is extremely poor and frustration is often high
Delay is typically high

Level-of-Service F

System failure, the roadway is fully saturated
Traffic operation characterized by stop-and-go conditions
Traffic operations are unacceptable to most drivers, frustration is extremely high
Delay is severe and unacceptable

APPENDIX D

SELECT LINK ANALYSIS

A select link analysis is part of the transportation planning software used by METRO. It allows the transportation planner to identify the origins and destinations of travelers on specific roadways.

Based on the analysis of congestion described in the report titled 1988 existing and 2010 No-Build, Forecasting Analysis Results dated October 26, 1990 the study area was broken into a southern and a northern section for the purpose of the select link analysis. The southern portion of the study area consisted of the Tigard, Tualatin/Wilsonville, Sherwood, and Scholls districts while the northern portion included the Beaverton, Hillsboro, Helvetia, North Sunset Corridor and Aloha districts (Figure D-1). These districts are sizeable areas in themselves, and a significant amount of trips can be expected to occur within a given district.

The 1988 analysis is based on the existing transportation system, and the 2010 analysis is based on the No-Build Scenario. Specific roadways in the southern portion of the study area, analyzed for select link information, during the PM peak hour included:

- Highway 99 W, north and south of Tualatin Road, and north of Highway 217
- Interstate 5, north and south of Nyberg Road, and
- The Tualatin and Tualatin-Sherwood Road pair.

The Sunset Highway was evaluated as the major roadway in the northern portion of the study area. Select links on Sunset Highway west of Sylvan Creek and just west of 185th have been analyzed. Highway 217 was included as the major circumferential facility connecting the two parts of the study area. Data from each of the select link analyses follows.

Select Link Analysis: Southern Portion of the Study Area

Tualatin Road and Tualatin-Sherwood Road

During the PM peak hour for year 2010, the trips produced by Tigard, Scholls, Sherwood, King City, and Wilsonville, are expected to increase by almost 74 percent (from 3,000 trips in 1988 to 5200 trips in 2010). Trips attracted to these areas will grow by 72 percent (from 1,400 trips to 2,800 trips). Additionally, the number of trips staying within these areas is expected to grow by 103 percent (from 1,400 trips to 2,800 trips).

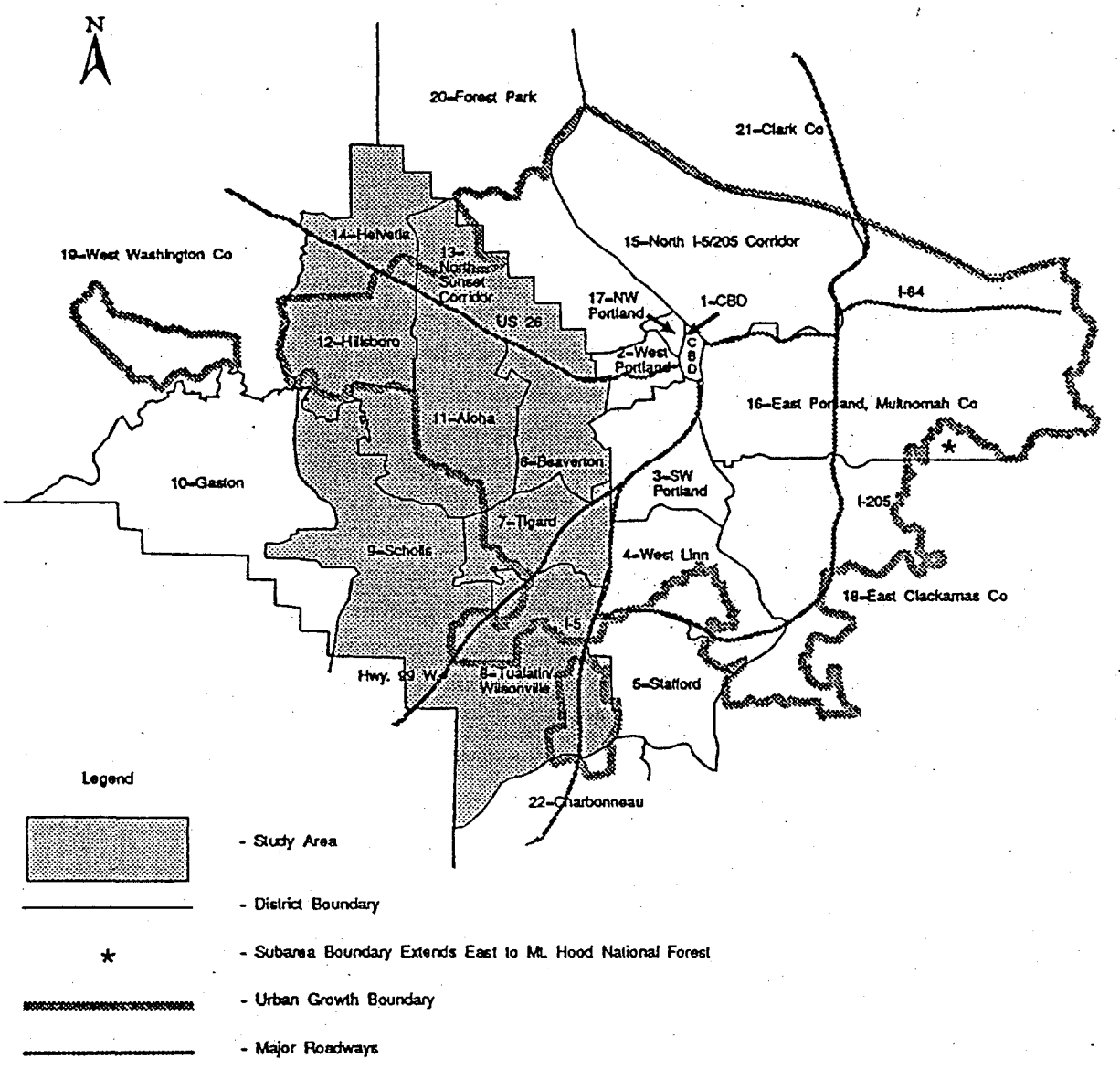

Figure D-1
DISTRICT IDENTIFICATION

PARSONS BRINCKERHOFF

Western Bypass Study

In 1988, during the PM peak hour, almost 64 percent of the total trips on the Tualatin Road and the Tualatin-Sherwood Road began or ended in Tigard, Scholls, Sherwood, King City, and Wilsonville. Almost 16 percent of the total trips were produced or attracted to Clackamas County and another 16 percent were generated or attracted to the Portland area, Multnomah County, and Clark County. Less than 2 percent were distributed to the northwestern portion of the study area along the Sunset Highway corridor. Likewise, only a little more than two percent were destined for locations in the I-5 South Corridor, Gaston, and Western Washington County areas. Of the total trips using these links, over 29 percent stayed within Tigard, Scholls, Sherwood, King City, and Wilsonville.

In comparison, in the year 2010 during the PM peak hour, more than 66 percent of total trips using Tualatin Road and Tualatin-Sherwood Road are expected to begin or end in Tigard, Scholls, Sherwood, King City, and Wilsonville. Fourteen percent will originate in or travel to Clackamas County, and more than 14 percent will travel to or come from the Portland area, Multnomah County, and Clark County. Less than three percent will travel to the northern part of the study area along the Sunset Corridor, and less than three percent will go to the south of the I-5 Corridor. Furthermore, at least 35 percent of the total trips will stay within Tigard, Scholls, Sherwood, King City, and Wilsonville areas.

In conclusion, origins and destinations of trips on connectors between Highway 99W and Interstate 5 are dispersed throughout the region. Trips from the northwest portion of the study area are a small percentage of the total trips using the Tualatin and Tualatin-Sherwood Roads. The majority of all trips using the Tualatin Road and Tualatin-Sherwood Road were generated or attracted to Tigard, Scholls, Sherwood, King City, and Wilsonville, and not the northwest portions of the study area. However, almost a third of the trips were generated or attracted in the Portland area or Clackamas County.

Highway 99W, North and South of Tualatin Road

Highway 99W, north and south of Tualatin Road, demonstrated travel patterns strongly related to the Tualatin, King City, Wilsonville, and Sherwood areas. In 1988, trips within these areas accounted for 44 percent of the total peak hour vehicles using Highway 99W at these locations. This compares to an expected 52 to 55 percent proportion for 2010.

Furthermore, in 1988, about 70 percent of the trips using Highway 99W in the vicinity of the Tualatin Road were generated in the southern portion of the study area. About 27 percent of the trips were generated in areas north and east of the study area, and only about 2 to 3 percent were generated along the Sunset Corridor.

Highway 99W north of Highway 217

Travel patterns on Highway 99W north and south of highway 217 differed significantly from the section north and south of the Tualatin Road intersection. Major trip destinations on the section north of Highway 217 included Beaverton and Tigard, accounting for 52 percent of total trips during the peak hour. Of the total trips, 15 percent originated in Beaverton, 38 percent originated in Tigard. Twenty-two percent were destined for the Portland area, while 14 percent were headed towards the east and north of Portland.

In 2010, travel patterns on this section of Highway 99W remain similar to those in 1988.

Interstate 5, North and South of Nyberg Road

In 1988 during the PM peak hour, approximately 26 percent of the total users on this facility originated in the southwestern part of the study area, 21 percent were produced in Clackamas County, and more than 22 to 26 percent were drawn from the Portland area. Another 13 to 16 percent of the total trips on this portion of I-5 were generated within the I-5 south corridor while the remaining 15 percent originated in areas east and north of Portland, and in the Sunset Corridor.

By the year 2010 during the PM peak hour, travel patterns of traffic using Interstate 5, at the Nyberg Road interchange, will change somewhat. More trips as a percent of the total trips on the link will be produced in the southwestern part of the study area while fewer will be produced in Clackamas County, and from within Portland.

Select Link Analysis: Northern Portion of The Study Area

The analysis of travel patterns in the northern portion of the study area centered on an evaluation of the characteristics of the Sunset Highway near the Canyon Road Interchange and near the 185th interchange, and the northern portion of Highway 217.

Sunset Highway

Because of its primary linkage between the study area and the Portland CBD, the Sunset Highway showed significant numbers of trips interchanging between the Portland area and the Northern part of the study area which create a large amount of east-west movement on this facility. There are fewer trips destined for the southern portion of the study area.

A PM peak hour select link analysis was conducted on the Sunset Highway where it crosses Sylvan Creek, near the Canyon Road interchange. Of the 9900 vehicles using the Sunset Highway at this point during the 1988 PM peak hour, 29.1 percent were destined for the northern portion of the study area, including the Aloha, Hillsboro, Helvetia, and North Sunset Corridor districts. Another 21.4 percent were headed for the Beaverton district.

Only 1.0 percent of the total trips using this facility were headed for the southwest of Beaverton, in the Tigard, Scholls, or Tualatin/Wilsonville districts. This fact suggests that few trips destined for the southern portion of the study area are made via the Sunset Highway.

The remaining 48.5 percent of the vehicle trips using the Sunset Highway near Sylvan Creek during the 1988 PM peak hour were destined for various locations outside the study area. Twenty-four percent were headed for East Portland, the North I-5/I-205 Corridor, and Clark County districts. More than seventeen percent were headed for areas in the Portland CBD, Northwest Portland, West Portland, Forest Park, and Southwest Portland districts. Only 1.7 percent of the vehicles were headed for districts located to the immediate south and west of the Portland CBD, and only 5.6 percent were headed for districts to the west of the study area.

The 2010 PM peak hour distribution of vehicles using the Sunset Highway near Sylvan Creek is similar to the 1988 distribution. 30.9 percent of the traffic was destined for the northern portion of the study area, 19.3 percent for Beaverton, and 1.4 percent for the Tigard, Scholls, and Tualatin/Wilsonville districts. The remaining 46.2 percent of the traffic was destined for various districts to the east of the study area, of which only 2.1 percent was to the southeast.

Traffic using the Sunset Highway near 185th Avenue was similar to that seen near the Sylvan Creek crossing. Traffic at this point on the Sunset suggested that traffic not destined for neighborhoods in the Northern portion of the study area had already left the facility. In 1988, 40.6 percent of the 3,600 vehicles using the facility during the PM peak were destined for the Helvetia, North Sunset Corridor, Hillsboro, and Aloha districts. Another 32.3 percent were headed for districts west of the study area. Only 19.8 percent of the traffic was headed for districts east of the study area and only 7.2 percent was headed for the southern portion of the study area or Beaverton.

In 2010, traffic on the Sunset Highway near 185th Avenue will remain strongly oriented towards the northern portion of the study area. Of the 5,600 PM peak hour vehicles in 2010, 48.1 percent will be destined for the Helvetia, North Sunset Corridor, Hillsboro, and Aloha districts. Approximately 25.3 percent of the trips will be destined for districts to the west of the study area, while 17.6 percent of the trips will be destined for districts east of the study area. Only 9.0 percent of the traffic using the Sunset Highway near 185th Avenue in the 2010 PM peak hour will be destined for the southern portion of the study area and Beaverton.

Highway 217

Highway 217, because of its continuous circumferential link between the northern and southern portions of the study area, can be used to identify potential demand for additional circumferential links within the study area. A significant amount of travel between the northern districts and those districts to the east and south of Beaverton were identified, showing a demand for a circumferential route.

A select link analysis was conducted on Highway 217, north of Hall Boulevard near Scholls Ferry Road. That analysis demonstrated for the 1988 PM peak hour, that 36.5 percent of the 7900 vehicles using Highway 217 near the Hall Boulevard interchange were destined for Beaverton, 20.9 percent were headed for the northern portion of the study area (the Aloha, Hillsboro, Helvetia, and North Sunset Corridor districts), 15.1 percent were headed for Tigard, and that 14.8 percent were headed for districts to the southeast of the study area (the West Linn, Stafford, Charbonneau, and East Clackamas County districts). In addition, 5.2 percent of the vehicles where destined for the Portland CBD and surrounding districts (West Portland, Southwest Portland, Northwest Portland, and Forest Park districts), 1.5 percent were headed for the North I-5/I-205 Corridor, East Portland, and Clark County districts, and only 1.9 percent were destined for districts to the west of the study area. 4.2 percent of the traffic using this portion of Highway 217 was destined for the Tualatin/Wilsonville and Scholls districts.

Traffic distributions in the year 2010 on Highway 217 north of Hall Boulevard and Scholls Ferry Road will be similar to those demonstrated for 1988. Of the 8700 vehicles using this section of Highway 217 during the 2010 PM peak hour, 30.8 percent will be destined for Beaverton, 22.5 percent for the northern portion of the study area, 15.7 percent for Tigard, 18.6 percent for areas to the southeast of the study area and 4.1 percent for the Portland CBD and surrounding districts. Only 1.4 percent will be headed for the North I-5/I-205 Corridor, East Portland, and Clark County districts, 1.4 percent for districts west of the study area, and 5.5 percent to the Tualatin/Wilsonville and Scholls districts.

The 1988 and 2010 select link analyses on Highway 217 also demonstrated that a significant proportion of the traffic using Highway 217 north of Hall Boulevard and Scholls Ferry Road was generated by the northern portion of the study area and by Beaverton (58.6 percent in 1988, and 57.3 percent in 2010).

Trip distributions developed for Highway 217 north of Hall Boulevard and Scholls Ferry Road show that approximately 27.5 percent of the vehicle trips on the facility in 1988 and approximately 30.1 percent in 2010 will be traveling between the Northern portion of the study area (the Aloha, Hillsboro, North Sunset Corridor, and Helvetia districts) and the

districts to the east and south of Beaverton (i.e., Southwest Portland, West Linn, Stafford, Tigard, Tualatin/Wilsonville, Scholls, East Clackamas County, and Charbonneau districts). In addition, another 35.5 percent of the traffic in 1988, and another 32.2 percent in 2010, will be traveling between Beaverton and the districts to the east and south of Beaverton.

Select Link Analysis: Other Radial Routes

Farmington Road between 209th Avenue and Highway 217

Relatively few people are traveling on Farmington Road to go north and south through the study area. Approximately 66 percent of the trips using Farmington Road between 209th Avenue and Highway 217 during the 1988 PM peak hour were produced in the Beaverton and Aloha Districts. Fifteen percent were produced in the Portland area (i.e. the Portland CBD, East Portland, and North Portland districts). Eleven percent were produced in the southern and eastern parts of the study area and five percent in the northern part of the study area (i.e., the Hillsboro, Helvetia, and North Sunset Corridor districts). Only three percent of the trips were generated by districts to the west of the study area.

Only 6 percent of the trips using this section of Farmington Road where traveling between the extreme northern and southern parts of the study area, indicating that the majority of the trips were either headed towards the Portland CBD or using Farmington Road locally.

By the year 2010, there is little change expected in the overall distribution of trips using Farmington Road. Trips traveling between the extreme northern and southern portions of the study area are expected to increase slightly and will make up 7.5 percent of the total trips using the facility.

Tualatin Valley (TV) Highway between 219 Avenue and Highway 217

These distributions for the TV Highway indicate that the majority of trips using this facility are traveling east and west accessing residential and employment communities within it.

Trips using this section of the TV Highway were primarily generated or destined for the northern portion of the study area. Twenty-five percent of the 1988 peak hour trips were produced in the Beaverton district, 37 percent in the Aloha district, and 11 percent in the Hillsboro district. The Portland CBD, East Portland, and North Portland districts produced 16 percent of the trips in 1988 along this section of TV Highway. Only 4 percent of the trips were generated by districts in the southern portion of the study area.

Relatively few trips were found to be traveling between the extreme northern portion of the study area and the extreme southern portion of the study area were relatively few. In 1988, only 4 percent of the total trips were of the long circumferential type.

In 2010, distributions of trips are expected to remain similar to those observed in 1988. The Beaverton district is expected to produce 23 percent of the trips, the Aloha district: 44 percent of the trips; and the Hillsboro area: 10 percent of the trips. Again, few trips will be traveling between the extreme northern and southern portions of the study area.

METRO

2000 S.W. First Avenue
Portland, OR 97201-5398
503/221-1646

Memorandum

Date: May 6, 1991

To: JPACT

From: Andrew C. Cotugno, Transportation Director

Re: Omission from JPACT Agenda Packet

Enclosed please find Sensible Transportation Options for People's response to ODOT's Statement of Purpose and Need which was inadvertently omitted as an attachment to Resolution No. 91-1441 in the JPACT agenda packet. We hope this hasn't caused you any inconvenience.

ACC:lmk

Attachment

Sensible Transportation Options for People

April, 1991

RESPONSE TO ODOT'S STATEMENT OF PURPOSE AND NEED

SYNOPSIS

ODOT's Statement of Purpose and Need (SOPAN) is a flawed document. It does not clearly identify the transportation needs of the study area and it does not address its own Goals and Objectives in describing the study's purpose.

* ODOT misuses and misrepresents its own statistics to justify predetermined results. It fails to acknowledge that demand for long distance, circumferential travel is only a small fraction of the travel demand in the study area.

* ODOT assumes that the transportation world in 2010 will look exactly like today, with more cars, fewer bikes, and no pedestrians.

* ODOT fails to address the Goals and Objectives identified in public workshops and refined by its advisory committees.

* ODOT ignores the requirements of the Federal Clean Air Act and its impact on regional transportation planning. Ironically, ODOT's study even ignores the Transportation Planning Rule it has developed with the Department of Land Conservation and Development.

In short, ODOT's study is so inadequate, so shortsighted, and so far off the mark as a framework for discussion that it demands reconsideration and revision.

Therefore, STOP recommends that local jurisdictions:

1. Reject the Statement of Purpose and Need as written, since it provides neither an accurate nor complete foundation for the Western Bypass Study.

2. Require ODOT to:

   a. Include all applicable local, regional, state, and federal regulations, including the Federal Clean Air Act and Oregon's Transportation Planning Rule.

   b. Describe the probable effect these regulations will have on the 2010 No Build Scenario.

   c. Clearly describe the purpose of the Western Bypass Study in terms of the study's stated Goals and Objectives.

RESPONSE TO ODOT'S STATEMENT OF PURPOSE AND NEED

In December of 1990, ODOT's Western Bypass Study released its Statement of Purpose and Need (SOPAN). According to ODOT, this document "identifies the need for major transportation improvements within the Western Bypass Study Area, and describes the context in which the project planning is being carried out."

STOP believes this document to be flawed and incomplete for the following reasons:

1. ODOT defines future travel needs in terms of automobile trips, since they are the predominant travel mode in 1988. We question the wisdom of this logic, since it projects our current problems into the future, assuming that this is the future we want. In essence, it confuses trend with destiny.

   A far better approach is to define the future we want, then to develop transportation solutions to create it.

2. ODOT does not address two key state and federal regulations concerned with transportation planning.

   * According to the Federal Clean Air Act, the Portland metropolitan area is currently only a marginal air quality zone -- and getting worse. Locally, 1990 was the worst year in a decade for air quality. Certainly, our marginal air quality cannot tolerate our continuing automobile dependency, especially when the population of the study area is expected to increase 60% by the year 2010.

   * The Transportation Planning Rule developed by ODOT and the Department of Land Conservation and Development (scheduled for adoption by LCDC on April 26) requires local jurisdictions to reduce both parking spaces and VMT (Vehicle Miles Traveled) by 10% by the year 2010. Local jurisdictions will also be required to adopt ordinances to provide better pedestrian, bicycle, and transit access to new residential, commercial, and retail developments <u>within the next two years</u>.

   Certainly, there are numerous state and federal regulations to be met by any proposed transportation solution. But the Federal Clean Air Act and the Transportation Planning Rule will have a significant impact on transportation planning and mode choices -- yet neither is even mentioned in the 2010 No Build Scenario. The result is a highly inaccurate picture of our future, and a fatally flawed framework for discussing transportation solutions.

3. ODOT's document does not reflect the current thinking of decision-makers in the region.

   * Metro's Regional Growth Conference last month focused on new development patterns to reduce our current auto-dependency.

* Governor Roberts' Symposium on Growth last month emphasized the need to move away from an auto-dominated transportation system. Chairman Mike Hollern of the Oregon Transportation Commission asserted that "we can no longer expand capacity to meet demand". Keynote speaker Anthony Downs of the Brookings Institute spoke of the dangers inherent in continuing to develop automobile-dependent communities.

* Metro's Regional Urban Growth Goals and Objectives, currently under discussion throughout the region, emphasize mixed-use zoning and increased density to reduce the escalating VMT throughout the region.

ODOT's 2010 No Build Scenario does not incorporate any of these ideas. The result? Travel projections that remain the same as they have always been: 96% auto-dependent. According to ODOT, the year 2010 will not be very different from today - except that we will have more traffic.

In short, ODOT emphasizes the projected increase in automobile trips, ignores key state and federal regulations that will impact future transportation choices, and totally disregards regionally supported alternatives to continued automobile dependency. The result is a poorly defined problem that can have nothing but a highly auto-dependent solution.

By framing the discussion around the increasing number of automobile trips, ODOT confines the problem statement to accommodating these trips. We can only conclude, then, that the purpose of the Western Bypass Study is to accommodate more cars.

If this is the case, pouring more concrete is probably the best solution. The result will undoubtedly be new freeways, huge interchanges, wider urban arterials, and bigger intersections. The impact of these "improvements" on our entire region will be profound: we will lose not only productive farmland and valuable open space, but vital neighborhoods as well. And we'll still be dealing with increasing traffic congestion.

STOP, however, believes the purpose of the Western Bypass Study is not to accommodate more cars, but to address the Study's own Goals and Objectives. These Goals and Objectives were compiled from ODOT's public workshops and refined by each of the study's three committees. Yet ODOT's Statement of Purpose and Need fails to address a single one!

Following are brief summaries of the Western Bypass Study Goals and Objectives, compared to the "Summary of Purpose and Need" (page 41 of SOPAN): (Full descriptions of the adopted Goals and Objectives are attached.)

Goal 1 addresses the study process, requiring ODOT to allow input from the community; to keep citizens, local, regional, and state agencies and organizations informed; to identify future travel needs; to identify and evaluate the widest range of alternatives that comply with local, regional, state, and federal plans and regulations; and to maintain the study schedule.

How does ODOT's Statement of Purpose and Need address this goal?

* ODOT physically includes the Goals and Objectives as Appendix B of its Statement of Purpose and Need, but never mentions them as part of the study's purpose. Therefore the study has not fulfilled its primary goal of allowing input from the community.

* By ignoring key federal and state regulations, ODOT has not accurately described future travel needs.

* ODOT fails to mention key travel patterns indicated by its data (based on ODOT's assumptions that 96% of all trips will be made by single occupant vehicles):

  1. Over two-thirds of all trips in the study area will be less than 6 miles in length. Of these, fully half will be less than 4 miles in length.

  2. Most trips will begin and end within the urbanized areas.

  3. Through trips will increase only slightly over the next 20 years.

  4. Demand for long-distance "circumferential" travel is only about 3.3% of trips that begin and end in the study area.

  (Details of these travel patterns can be found in the attached document "Transportation Needs in the Western Bypass Study Area".)

  As a result of these omissions, ODOT's analysis of travel patterns is incomplete. How can the Western Bypass Study possibly provide a workable solution if the traffic problems are not accurately defined?

Goal 2 identifies the objectives of a transportation solution:

* To reduce congestion
* To improve access
* To reduce through-traffic diversion to local roads and streets
* To improve safety for both motorized and non-motorized traffic
* To reduce reliance on the private automobile
* To develop alternatives that will meet long-term as well as immediate needs.

ODOT addresses these objectives in the Statement of Purpose and Need (page 41) as follows:

* "The purpose of the study is not to solve every traffic congestion problem in the study area." (Emphasis added)

* ODOT's document makes no mention of improving access, reducing through-traffic diversion, or improving safety.

* ODOT provides only a tentative reference to reducing reliance on private automobiles: "Consider opportunities to ... potentially reduce demand in the study area".

* ODOT describes future travel needs as heavily auto-dependent. In fact, ODOT's language would have the reader believe that longer and more frequent trips are a desirable aspect of a growing region. In describing the projected travel growth, ODOT concludes that "As the study area grows more quickly in both employment and population, there will be more opportunity to travel for work, commercial, retail and recreational activities...." [Emphasis added]

* Only one of ODOT's generalized strategies addresses alternatives to automobile travel:

> "Consider opportunities to not only increase capacity but also potentially reduce demand in the study area, recognizing that there is currently a very heavy reliance on the private automobile."

The other stated purposes focus on meeting the projected automobile demand:

- "Address the demand for north-south or circumferential travel...."

- "Recognize the diversity of trip types and trip lengths... including work versus non-work and local, regional, interregional, and through trips."

- "Consider travel demand in the northeast and in the southeast portions of the study area, as well as travel demand between the northern and southern ends of the study area and through the study area."

Goal 3 addresses the need for the transportation solution to be sensitive to environmental issues, community needs, the built environment, urban services, and the Urban Growth Boundary.

ODOT does not include the Federal Clean Air Act, the Transportation Planning Rule, or Metro's proposed Regional

Urban Growth Goals and Objectives as part of its Statement of Purpose and Need. Therefore, ODOT fails to meet this Goal as well.

Goal 4 addresses the economic and social factors of a solution, including costs, impact on the social fabric of neighborhoods and business communities, and the economic health of the study area communities.

ODOT makes no mention of this goal at all in its Statement of Purpose and Need.

We wonder why ODOT has gone to such publicized efforts to involve the public and its committees in developing Goals and Objectives if it is not going to use them in describing the purpose of the Western Bypass Study.

CONCLUSION

The Statement of Purpose and Need plays a critical role in the Western Bypass Study, for it defines the framework for further discussion and development of alternatives. The ultimate solution to the transportation problems in the study area can only be as creative and effective as the identified needs; a poorly defined problem analysis has no chance of generating a successful solution.

ODOT has stated that the Statement of Purpose and Need is a fluid document, subject to change and revision as the study progresses. The time to revise and improve this document is now, lest the study waste time and scarce dollars pursuing alternatives based on incomplete and inaccurate assumptions.

Therefore, STOP urges you to take the following actions:

1. Reject the Statement of Purpose and Need as written. It provides neither an accurate nor a complete foundation for the Western Bypass Study.

2. Return the Statement of Purpose and Need to ODOT for revision.

3. Require ODOT to:

   a. Include all applicable local, regional, state, and federal regulations, including the Federal Clean Air Act and Oregon's Transportation Planning Rule.

   b. Describe the probable effect these regulations will have on the 2010 No-Build scenario.

   c. Clearly describe the purpose of the Western Bypass Study in terms of the study's stated Goals and Objectives.

APPENDIX B

WESTERN BYPASS STUDY
GOALS AND OBJECTIVES

Goal 1

Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Objectives

1.1 Keep citizens, local, regional and state agencies and officials, as well as other interest groups, involved in the study process through public forums and workshops and through newsletters and other media.

1.2 Identify and assess major existing and future state, regional and intra-county travel needs, primarily as they relate to north-south or circumferential access within and through the study area.

1.3 Identify and evaluate the widest range of reasonable alternative solutions to transportation problems, including but not limited to, transit/HOV, street, and highway improvements, and transportation demand management measures, regardless of current funding availability.

1.4 Maintain the study schedule in order to move forward towards the implementation of a feasible and effective solution in a timely manner.

Goal 2

Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area:

Objectives

2.1 Reduce congestion on existing streets and highways, as compared to a no-action alternative.

2.2 Improve access through, to/from, and within the study area.

2.3 Reduce through-traffic diversion to rural roads and residential streets.

2.4 Improve safety for both motorized and non-motorized traffic.

2.5 Reduce reliance on the private automobile and reduce or delay the need for additional vehicular capacity through support of transit, ride sharing (carpools/vanpools), and other demand management strategies.

2.6 Develop alternatives that have flexibility to be improved to meet longer term, future needs (beyond the year 2010 and looking toward anticipated growth within the urban area).

Goal 3

Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state, and federal plans and regulations.

Objectives

3.1 Avoid or minimize negative impacts on the natural environment, e.g., wetlands, water, air, energy, noise, visual, agricultural and forest land.

3.2 Avoid or minimize negative impacts on the built environment, e.g., on existing urban and rural land uses and cultural, historical, and recreational resources.

3.3 Support an urban development pattern that provides for the efficient delivery of urban services, including public transportation, in a manner consistent with state-wide planning goals and with local and regional planning.

3.4 Minimize negative impacts or pressures on the Urban Growth Boundary and identify how various alternatives might affect the rate, type or form of urbanization.

Goal 4

Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

Objectives

4.1 Consider the construction, operation and maintenance costs of each alternative.

4.2 Avoid or minimize negative impacts on the integrity and social fabric of the diverse neighborhoods and business communities in the study area (urban and rural).

4.3 Support the economic health of the study area and communities that depend on access through the study area.

Transportation Needs in the Western Bypass Study Area

Prepared by Sensible Transportation Options for People, Inc.

SYNOPSIS

The proposed Western Bypass freeway has been promoted as a solution to transportation problems in Washington County. The Western Bypass Study's *Statement of Purpose and Need* shows that traffic in the bypass study area is mostly short local trips taken within the urbanized area. Only about 3% of trips beginning and ending within the study area are long distance trips between the southern and north-northwestern districts. Less than 5% of such trips might use a new rural bypass freeway. Traffic that might use a rural bypass is a small fraction of traffic on critically congested arterials. We conclude that constructing a bypass freeway would not relieve existing congestion. Given the projected funding shortfalls for highway and arterial construction in the Metropolitan region and the state, highway dollars would be better spent solving local congestion problems.

Sensible Transportation Options for People (STOP) is a nonprofit grassroots organization dedicated to promoting a wide range transportation options to meet the needs of Washington County and the Metropolitan region. Originally incorporated in response to the proposed Western Bypass freeway, STOP has grown to view transportation issues as inseparable from land use, growth management, urban form, and a host of related issues. STOP is a participant in the Oregon Department of Transportation (ODOT) Western Bypass Study ("Study").

This analysis examines two documents from the Study to determine the nature of traffic problems in the bypass Study area and the effect a new bypass freeway would have in solving those problems. The bypass Study area includes most of Washington County from Hillsboro eastward and contains most of the county's urbanized area and population. For trip analysis purposes the Study area is broken into eight districts: Tualatin/Wilsonville, Scholls, Tigard, Beaverton, North Sunset, Aloha, Hillsboro, and Helvetia .

The Study document *1988 Existing and 2010 No-Build Forecasting Analysis Results* ("*2010*") uses demographic projections and existing land use designations to forecast traffic conditions in the bypass Study area in the year 2010.

The Study document entitled *Statement of Purpose and Need* ("*SOPAN*") interprets the *2010* numbers to highlight demand for additional circumferential transportation capacity in the Study area. Circumferential travel is defined as "any person trip which is directed between or across radial routes, and is not limited by trip length or purpose" (*SOPAN*, p. 15). A trip from Wilsonville to Hillsboro, for example, would be circumferential. "Radial" is relative to the Portland CBD. A trip from Scholls to downtown Portland, for example, would be radial.

WASHINGTON COUNTY TRAFFIC IN 2010

Data from the *SOPAN* show unequivocally that...

The county will remain extremely auto-dependent entering the 21st century. The greatest concern expressed at Study public workshops held in Washington County was reducing automobile dependency. Single-occupancy-vehicle (SOV) trips will comprise 96% of all person-trips in the Study area, exactly as in 1988 (fig. 1). The proportion of trips using transit will remain essentially unchanged at 1.3% (*2010*, Major Findings and Conclusions, p. 1).

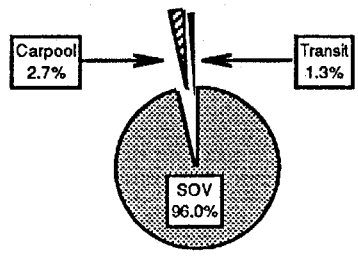

Figure 1
Bypass Study Area Mode Split In 2010

Over two-thirds of all vehicle trips will be local trips less than 6 miles in length in 2010 (fig. 2). Other kinds of trips will be a smaller proportion of all trips in 2010 than they are today (*2010*, fig. 8).

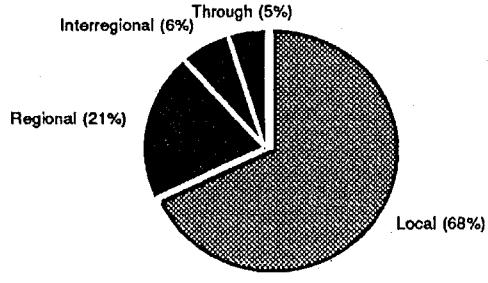

Figure 2
2010 Trip Types

Most trips within the study area will be trips within urbanized areas. Trips within each of the six substantially urbanized districts (Hillsboro, Aloha, North Sunset, Beaverton, Tigard, and Tualatin-Wilsonville), e.g. a trip from Aloha to Aloha or from Beaverton to Beaverton, account for over half of all trips within the study area. Trips between geographically adjacent urbanized districts (e.g. Aloha to Beaverton or Beaverton to North Sunset) account for over a third of all trips within the study area. Together these shorter urban-to-urban trips comprise over 92% of all trips within the study area (fig. 3).

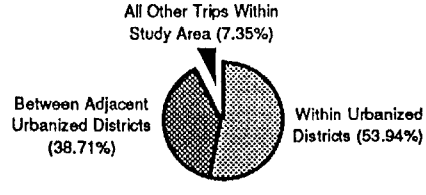

Figure 3
Urban Trips Within the Study Area

Trips entering and/or leaving the Study area will increase only slightly from 1988 to 2010, in contrast to trips beginning and ending within the Study area, which increase greatly. Numbers from the *SOPAN* (fig. 4) demonstrate this disparity in relative increase.

	1988	2010
All vehicle trips (SOPAN Fig. 8)	834,600	1,362,600
Change 1988 to 2010		63.26%
Auto trips beginning and ending within the study area (SOPAN Table 4)	643,173	1,160,225
Change 1988 to 2010		80.39%
Auto trips not beginning and ending within the study area (difference)	191,427	202,375
Change 1988 to 2010		5.72%

Figure 4
Relative Increase Of Trips

Demand for long distance "circumferential" travel is a small fraction of travel demand within the Study area. Data from the Study (*SOPAN*, Table 4) is analyzed in Table 1 (attached) to demonstrate this fact. Trips between the southern end of the Study area and the north-northwestern end comprise about 3.3% of trips beginning and ending within the Study area (fig 5).

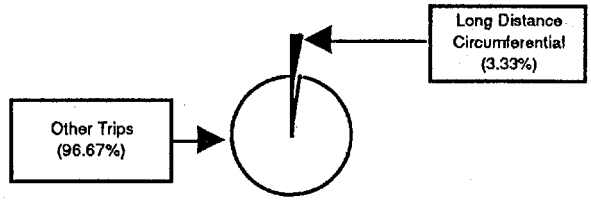

Figure 5
Long Distance Circumferential Trips

Conclusions: Entering the 21st century Washington County will be extremely reliant on the single-occupant private automobile. Most trips will be short single-occupant automobile trips within the urbanized areas. Other kinds of trips will be relatively less important. Long distance "circumferential" trips (from the southern districts to the north-northwest districts) will be a small fraction of trips within the Study area.

HOW MUCH TRAFFIC WOULD USE A RURAL BYPASS FACILITY?

No more than 4.9% of trips beginning and ending within the Study area might use a bypass freeway through the rural area south of Cooper Mountain, between US 99W and TV Highway (fig. 6). Table 2 (attached) uses data from the *SOPAN* to identify trips that would use a bypass, based on origin and destination . All long distance circumferential trips are assumed to use the bypass, as are shorter circumferential trips and local trips near the rural bypass segment. *This assignment of trips to the rural bypass is extremely generous.* Note that Aloha/Tigard and Tigard/North Sunset trips are assumed to use the rural bypass, though for most of these trips use of the bypass would require a great deal of out-of-direction travel. If these trips are not included in the bypass category the percentage of trips using the rural bypass drops to 2.44%.

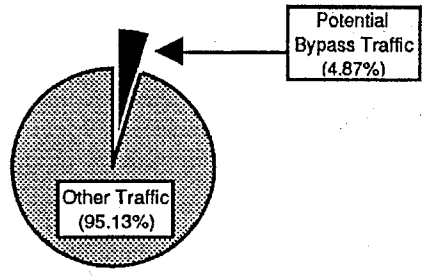

Figure 6
Proportion of Potential Bypass Traffic
Within the Study Area

Potential bypass traffic is not a rapidly growing component of traffic within the Study area. The proportion of person trips within the Study area that would use a rural bypass is approximately constant from 1988 to 2010 (Table 2). In absolute numbers, potential bypass trips will increase by about 25,000 while other trips will increase by about half a million - a twentyfold difference (Fig. 7).

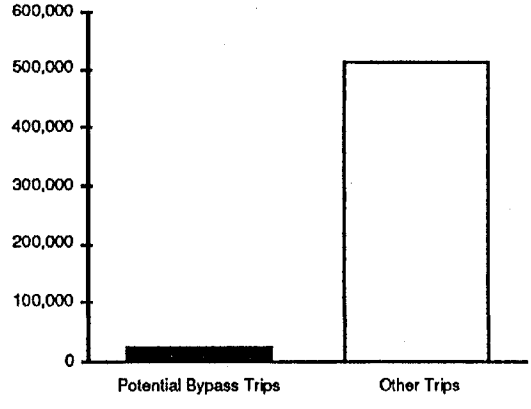

Figure 7
Absolute Growth of Person Trips Within the Study Area - 1988 to 2010

Conclusions: A small fraction of trips beginning and ending within the Study area would use a rural bypass freeway. In absolute terms potential bypass traffic will increase relatively little by 2010, while other traffic will increase dramatically.

OBSERVED CONGESTION IS NOT DUE TO POTENTIAL BYPASS TRAFFIC

Congestion between I-5 and US 99W near Tualatin is not caused by potential bypass traffic. In 2010 during the PM peak hour less than 3% of trips on Tualatin and Tualatin-Sherwood Roads will be traveling to the northern part of the Study area along the Sunset Corridor, and less than three percent will be destined south of the I-5 corridor. Over 66% of such trips will be local traffic beginning or ending in Tigard, Scholls, Sherwood, King City, or Wilsonville (*SOPAN*, Appendix D).

Congestion on 99W near Tualatin Road is not caused by potential bypass traffic. In 1988 about 2 to 3 percent of trips there were generated along the Sunset Corridor. The biggest category of trips was those local to the southern end of the Study area. Local trips will be an even larger percentage of trips in 2010 (*SOPAN*, Appendix D).

Congestion on US 26 near 185th is not caused by potential bypass traffic. In 2010 traffic on this highway will remain strongly oriented towards the northern portion of the Study area. Only 9.0 percent of the traffic in the PM peak hour will be destined for the southern portion of the Study area and Beaverton (*SOPAN*, Appendix D). The Beaverton portion of this 9% would not use a rural bypass.

Congestion on TV Highway is not caused by potential bypass traffic. In 1988 only 4% of PM peak hour trips on TV Highway between 219th Avenue and OR 217 was generated in the southern part of the Study area. Trips on this highway were primarily generated by or destined for districts in the northern portion of the Study area. This situation will remain unchanged in 2010 (*SOPAN*, Appendix D).

Congestion on Farmington Road is not caused by potential bypass traffic. In 1988 only 4% of PM peak hour trips on Farmington Road between 209th Avenue and OR 217 were generated in the southern part of the Study area. Trips on this highway were primarily generated by or destined for districts in the northern portion of the Study area, and will be so in 2010 (*SOPAN*, Appendix D).

Congestion on Oregon 217 is not caused by potential bypass traffic. Although data in the *SOPAN* show a significant fraction of PM peak hour traffic on Oregon 217 in 2010 will be "long distance circumferential trips", much of this traffic would not use a rural bypass. Detailed PM peak traffic data obtained at STOP's request (Table 3) show the *SOPAN* breakout of "long distance circumferential trips" and STOP's breakout of potential bypass trips using Oregon 217 in 2010. The *SOPAN* "long distance circumferential" grouping includes trips for which the rural bypass would be an extremely long out-of-direction detour (e.g. trips between Beaverton and I-5 South). STOP's generous estimate of bypass traffic on 217 at evening rush hour is about 15% of traffic volume, equivalent to much less than one lane of traffic, in contrast to the *SOPAN*'s two full lanes of long distance circumferential traffic.

PM peak hour congestion on 217 (*SOPAN*, fig. 11) is discontinuous and segmented, suggesting that much is due to local and radial traffic. The segment between 99W and Greenburg Road will be extremely congested in both directions in 2010, while the segment between Denny and Allen will be less congested southbound and uncongested northbound. STOP has requested a more detailed data set from ODOT.

Conclusions: The implied promise of relief from congestion when a rural bypass is constructed is an unfortunate misrepresentation. Chronic congestion on the Study area's arterials can not be attributed to traffic that would use a new rural bypass. Even on highway 217, which currently carries nearly all the long distance circumferential traffic, trips that could use a rural bypass are a small component of rush hour traffic. Shorter trips within the existing urbanized area are by far the greatest contributors to rush hour congestion.

SUMMARY

- **Traffic in Washington County is dominated by short urban trips in single occupant automobiles**

- **Traffic that might use a rural bypass is a small fraction of all Washington Country traffic**

- **A rural bypass would have little effect on existing congestion problems**

Long Distance Circumferential Trips				
TRIP ENDPOINTS	1988 TRIPS	2010 TRIPS	PERCENT CHANGE	PERCENT OF ALL TRIPS IN 2010
Aloha / Tigard	11,986	22,478	87.54%	1.94%
Tigard / North Sunset	4,590	5,640	22.88%	0.49%
Aloha / Tualatin	2,008	5,624	180.08%	0.48%
Hillsboro / Tigard	1,616	2,198	36.01%	0.19%
Tualatin / North Sunset	856	1,468	71.50%	0.13%
Hillsboro / Tualatin	500	1,006	101.20%	0.09%
Tigard / Helvetia	90	122	35.56%	0.01%
Tualatin / Helvetia	22	44	100.00%	0.00%
Subtotals ->	21,668	38,580	78.05%	3.33%
Percent of All Trips->	3.37%	3.33%		
Other Trips				
Aloha / Aloha	64,040	175,647	174.28%	15.14%
Beaverton / Beaverton	118,338	138,221	16.80%	11.91%
Hillsboro / Hillsboro	57,062	122,506	114.69%	10.56%
Beaverton / Aloha	76,718	118,816	54.87%	10.24%
Tualatin / Tualatin	30,106	79,530	164.17%	6.85%
Aloha / North Sunset	28,048	77,880	177.67%	6.71%
Aloha / Hillsboro	30,294	72,000	137.67%	6.21%
Beaverton / Tigard	55,202	70,432	27.59%	6.07%
Tigard / Tigard	45,830	66,897	45.97%	5.77%
Beaverton / North Sunset	36,520	47,248	29.38%	4.07%
North Sunset / North Sunset	19,517	43,048	120.57%	3.71%
Tualatin / Tigard	16,882	40,298	138.70%	3.47%
Hillsboro / North Sunset	9,538	20,020	109.90%	1.73%
Beaverton / Tualatin	7,548	12,406	64.36%	1.07%
Beaverton / Hillsboro	9,978	11,764	17.90%	1.01%
Tualatin / Scholls	1,922	4,394	128.62%	0.38%
Aloha / Helvetia	1,536	3,360	118.75%	0.29%
Aloha / Scholls	1,472	3,242	120.24%	0.28%
Hillsboro / Helvetia	2,030	2,742	35.07%	0.24%
North Sunset / Helvetia	2,034	2,450	20.45%	0.21%
Hillsboro / Scholls	828	2,244	171.01%	0.19%
Tigard / Scholls	1,700	2,036	19.76%	0.18%
Scholls / Scholls	1,544	1,586	2.72%	0.14%
Beaverton / Scholls	1,574	1,546	-1.78%	0.13%
Beaverton / Helvetia	612	730	19.28%	0.06%
North Sunset / Scholls	244	300	22.95%	0.03%
Helvetia / Helvetia	372	283	-23.92%	0.02%
Scholls / Helvetia	14	20	42.86%	0.00%
Subtotals ->	621,503	1,121,646	80.47%	96.67%
Percent of All Trips->	96.63%	96.67%		
ALL TRIPS ->	643,171	1,160,226	80.39%	100%

Table 1

Long Distance Circumferential Trips Within The Study Area

Rural Bypass Trips				
TRIP ENDPOINTS	1988 TRIPS	2010 TRIPS	PERCENT CHANGE	PERCENT OF ALL TRIPS IN 2010
Aloha / Tigard	11,986	22,478	87.54%	1.94%
Tigard / North Sunset	4,590	5,640	22.88%	0.49%
Aloha / Tualatin	2,008	5,624	180.08%	0.48%
Tualatin / Scholls	1,922	4,394	128.62%	0.38%
Aloha / Helvetia	1,536	3,360	118.75%	0.29%
Aloha / Scholls	1,472	3,242	120.24%	0.28%
Hillsboro / Helvetia	2,030	2,742	35.07%	0.24%
Hillsboro / Scholls	828	2,244	171.01%	0.19%
Hillsboro / Tigard	1,616	2,198	36.01%	0.19%
Scholls / Scholls	1,544	1,586	2.72%	0.14%
Tualatin / North Sunset	856	1,468	71.50%	0.13%
Hillsboro / Tualatin	500	1,006	101.20%	0.09%
North Sunset / Scholls	244	300	22.95%	0.03%
Tigard / Helvetia	90	122	35.56%	0.01%
Tualatin / Helvetia	22	44	100.00%	0.00%
Scholls / Helvetia	14	20	42.86%	0.00%
Subtotals ->	31,258	56,468	80.65%	4.87%
Percent of All Trips->	4.86%	4.87%		
Other Trips				
Aloha / Aloha	64,040	175,647	174.28%	15.14%
Beaverton / Beaverton	118,338	138,221	16.80%	11.91%
Hillsboro / Hillsboro	57,062	122,506	114.69%	10.56%
Beaverton / Aloha	76,718	118,816	54.87%	10.24%
Tualatin / Tualatin	30,106	79,530	164.17%	6.85%
Aloha / North Sunset	28,048	77,880	177.67%	6.71%
Aloha / Hillsboro	30,294	72,000	137.67%	6.21%
Beaverton / Tigard	55,202	70,432	27.59%	6.07%
Tigard / Tigard	45,830	66,897	45.97%	5.77%
Beaverton / North Sunset	36,520	47,248	29.38%	4.07%
North Sunset / North Sunset	19,517	43,048	120.57%	3.71%
Tualatin / Tigard	16,882	40,298	138.70%	3.47%
Hillsboro / North Sunset	9,538	20,020	109.90%	1.73%
Beaverton / Tualatin	7,548	12,406	64.36%	1.07%
Beaverton / Hillsboro	9,978	11,764	17.90%	1.01%
North Sunset / Helvetia	2,034	2,450	20.45%	0.21%
Tigard / Scholls	1,700	2,036	19.76%	0.18%
Beaverton / Scholls	1,574	1,546	-1.78%	0.13%
Beaverton / Helvetia	612	730	19.28%	0.06%
Helvetia / Helvetia	372	283	-23.92%	0.02%
Subtotals ->	611,913	1,103,758	80.38%	95.13%
Percent of All Trips->	95.14%	95.13%		
ALL TRIPS ->	643,171	1,160,226	80.39%	100%

Table 2

Rural Bypass Trips Within The Study Area

ENDPOINT	<--> ENDPOINT	SOPAN "Long Distance Circumferential"	POTENTIAL BYPASS TRIPS
West Linn (4)	Beaverton (6)	534	
Tigard (7)	North Sunset (13)	450	
Aloha (11)	I-5 South (32)	436	436
West Linn (4)	Aloha (11)	373	
Beaverton (6)	Tual/Wils (8)	369	
Beaverton (6)	I-5 South (32)	262	
Tual/Wils (8)	Aloha (11)	206	206
West Linn (4)	North Sunset (13)	184	
Tual/Wils (8)	North Sunset (13)	142	142
North Sunset (13)	I-5 South (32)	127	127
Tigard (7)	Hillsboro (12)	101	101
West Linn (4)	Hillsboro (12)	82	
Hillsboro (12)	I-5 South (32)	74	74
North Sunset (13)	99W South (31)	43	43
Aloha (11)	99E South (33)	32	32
Tual/Wils (8)	Hillsboro (12)	29	29
Beaverton (6)	99E South (33)	24	
Tigard (7)	W Wash Co. (19)	24	24
Tigard (7)	US 26 West (26)	20	
Aloha (11)	Oregon 211 (34)	16	16
Aloha (11)	Oregon 213 (35)	14	14
Beaverton (6)	Oregon 211 (34)	12	
Tigard (7)	Helvetia (14)	11	
Stafford (5)	Beaverton (6)	10	
Beaverton (6)	Oregon 213 (35)	10	
Tual/Wils (8)	W Wash Co. (19)	10	10
North Sunset (13)	99E South (33)	9	9
Beaverton (6)	Helvetia (14)	8	
Tigard (7)	Wilson River (27)	8	8
West Linn (4)	Helvetia (14)	7	
Helvetia (14)	I-5 South (32)	7	7
Stafford (5)	Aloha (11)	6	6
Tual/Wils (8)	US 26 West (26)	6	6
Tigard (7)	I-5 North (24)	5	
Stafford (5)	North Sunset (13)	4	4
Tigard (7)	US 30 North (25)	4	
Tual/Wils (8)	Helvetia (14)	4	4
Scholls (9)	North Sunset (13)	4	4
Hillsboro (12)	99E South (33)	4	4
North Sunset (13)	Oregon 211 (34)	4	4
North Sunset (13)	Oregon 213 (35)	4	4
Tual/Wils (8)	Wilson River (27)	3	3
Hillsboro (12)	Oregon 211 (34)	2	2
Hillsboro (12)	Oregon 213 (35)	2	2
North Sunset (13)	Oregon 219 South (30)	2	2
Stafford (5)	Hillsboro (12)	1	1
TOTAL TRIP COUNT ON 217 = 8666			
	COLUMN TOTALS ->	3689	1324
	PERCENT OF TOTAL TRIP COUNT ->	42.57%	15.28%

Table 3

Traffic Breakout for Oregon 217
At PM Peak Hour

National Growth Management Leadership Project
534 SW 3rd Ave., 300 Willamette Building, Portland, OR. 97204 (503) 223-4396

TRANSMIT BY FAX

FAXED 5/21

May 7, 1991

The Honorable Daniel Patrick Moynihan, Chair
Subcommittee on Water Resources,
Transportation, and Infrastructure
The United States Senate
464 Russell Senate Office Building
Washington, D.C. 20510

Re: The Surface Transportation Efficiency Act of 1991 (S. 965)

Dear Senator Moynihan:

I am writing to congratulate you and your colleagues on the Environment and Public Works Committee for introducing S. 965, The Surface Transportation Efficiency Act of 1991, a bill that, if enacted, would establish a bold new approach to meeting the nation's transportation needs. The bill represents a substantial improvement over current law and the Administration's recent proposal for a new highway program.

By enabling the majority of funds to be spent on the best means of meeting transportation needs, rather than dedicating them just to highways as the Administration has proposed, S. 965 assures that states and localities are able to address the key national interests of transportation and energy efficiency, economic competitiveness, and environmental quality. This is the kind of national program we must have to stay competitive and at the same time maintain our quality of life.

The National Growth Management Leadership Project (NGMLP)[1] does

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[1] The NGMLP is a confederation of seventeen regional and statewide organizations promoting sound growth management throughout America. Representing more than 125,000 individuals, NGMLP members include organizations from California, Colorado, Florida, Georgia, Hawaii, Illinois, Maine, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island,

have some concerns with certain details of the bill. For example, the section on transportation planning is not, in our opinion, adequate to assure that federally funded transportation projects are integrated with energy efficient land uses. If not corrected, this deficiency could lead to further waste of federal funds by squandering transportation capacity on energy-wasteful sprawl development. Attached is a list of several concepts that could be used to alleviate this problem.

The planning provisions aside, the bill's creation of a "Surface Transportation Program" is a monumental improvement. Particularly impressive are the provisions assuring mode neutrality, proportional allocation within each state, and federal match incentives to promote alternatives to single occupancy automobile travel. These are precisely the types of program measures that are essential to providing sustainable, liveable communities across the nation. As the Committee has recognized, current transportation funding priorities are in dire need of adjustment. The Surface Transportation Program of S. 965 provides that adjustment.

NGMLP strongly supports S. 965's program structure and we offer our sincere thanks to you for the leadership you have shown in introducing this important legislation. We would be happy to work with you on possible improvements to the planning sections of the bill.

Very truly yours,

Keith A. Bartholomew,
Staff Attorney

South Carolina, Vermont, Virginia, and Washington.

National Growth Management Leadership Project

534 SW 3rd Ave., 300 Willamette Building, Portland, OR. 97204 (503) 223-4396

ADDRESSING THE CAUSE OF CONGESTION

Probably the single largest contributor to America's increasing congestion crisis is the pattern of sprawl development occurring in our urban and suburban areas. Such development frequently is low density in nature, making the provision of public transit inefficient, if not impossible. In addition, sprawl development is rarely designed to facilitate pedestrian or bicycle traffic. Consequently, such development is almost uniformly automobile-dependent, thereby placing significant demands on existing roadways, creating substantial pressures for the construction of new highways, limiting mobility for major segments of our society, consuming substantial amounts of energy, and producing prodigious quantities of air pollution.

To address these problems, we recommend that the provisions of the Surface Transportation Assistance Act relating to metropolitan transportation planning (23 U.S.C. § 134) be amended to require that plans produced under that section

- effectuate reductions in the demand for automobile travel;
- be based on comparative analysis of various regional and local land use configurations and transportation modes;
- demonstrate consistency and integration between planned transportation improvements and energy efficient land use designations, densities, and designs for development in the improvement area;
- promote or reinforce land use patterns and design standards for residential and employment uses that enhance the attractiveness and feasibility of mass transportation; and
- demonstrate why alternative transportation modes, management strategies, or alternative land use development patterns are not feasible substitutes to any proposed substantial expansions of highway capacity.

OFFICE OF GOVERNMENTAL RELATIONS (503) 378-4547
Room 405, Transportation Building
Salem, OR 97310

Oregon

DEPARTMENT OF TRANSPORTATION

TRANSPORTATION DEPT.

APR 3 0 1991

FILE CODE:

April 29, 1991

PLA 16-7

Andy Cotugno
Director of Transportation
2000 SW First Avenue
Portland, OR 97201-5398

Enclosed are copies of United States Senate proposals for the new Surface Transportation Bill. Included are a Senate Leadership bill entitled "Surface Transportation Efficiency Act (STEA) of 1991"; a bill introduced by Sen. Bond entitled, "The Federal Highway Act of 1991"; and a white paper describing the "FAST" bill which may be introduced in the Senate or used to offer amendments during Senate mark-up currently scheduled for May 14. A copy of the Senate leadership transit bill is expected to be introduced soon (upon receipt, a copy will be transmitted to you). – attached

With the introduction of the Leadership's STEA bill, the Bond bill, and possible introduction of the FAST proposal, all anticipated Senate highway bills will be on the table. Your review of proposal components in terms of their relationship to your interests and concerns, *Ad Hoc Task Force Comments and Recommendations on the Administration's Proposal for New Surface Transportation Assistance Act of 1991* and *Oregon's Position on Surface Transportation Assistance Act* would be appreciated.

A summary of ODOT staff comments and recommendations will be faxed to you Thursday, May 2. If you wish to amend and/or add to ODOT analyses, please transmit your analysis, comments, and recommendations to me by 5:00 p.m., Friday, May 3. If I do not hear from you, I will assume that you agree with the ODOT comments and recommendations.

Transportation Building
Salem, OR 97310

A summary of task force comments and recommendations will be made available for your review by May 6. Upon approval, a final version of ad hoc task force member comments and recommendations on the Senate proposals will be sent to our Congressional Delegation, members and staff of the Senate Environment and Public Works and Senate Banking Committees, and other interested parties.

If you have any questions, please call me.

John Baker
Economist

Enclosures

Summary

Surface Transportation Efficiency Act of 1991

Introduced by Senator Moynihan

1. Surface Transportation Program

   - $7.3 to $12.3 billion per year (92-96)
   - Apportioned to states based upon 87 to 91 apportionments
   - 75 percent suballocated within states to each urbanized area and balance of state
   - 25 percent allocated at discretion of state to any area
   - 80/20 match on all rehabilitation-type projects
   - 75/25 match on all modernization projects
   - Flexible to be spent on highways, transit, passenger and commuter rail, high-speed rail, mag-lev, HOV lanes, bus systems, carpool programs
   - Urbanized area funds allocated through MPO process
   - Rural funds allocated by states
   - States can notify USDOT that federal review and approval will not be sought for any project off the Interstate system

2. Interstate Maintenance Program

   - $2.5 to $3.3 billion per year (92-96)
   - Apportioned to states based upon current FAI-4R Program
   - Available for preservation projects only
   - 80/20 match ratio
   - Federal share increased based upon federal lands

3. Congestion Mitigation and Air Quality Improvement Program

   - $1 billion per year (92-96)
   - Apportioned to states by non-attainment area population weighted according to the severity of air quality problem (1.0x for Portland, up to 1.4x for L.A.)
   - Available for implementing projects in the EPA-approved air quality plan
   - Not available for new capacity for single occupant vehicles
   - 80/20 match ratio
   - Funds allocated through MPO process

4. Bridge Program

   - $2.4 to $3.0 billion per year (92-96)
   - 80/20 match except that portion which is new capacity intended for single occupant vehicles which would be 75/25

5. Interstate Completion

- $1.8 billion per year (92-96)
- Available to complete all pre-existing elements of the Interstate Cost Estimate (ICE)
- Apportioned to each state based upon each state's share of the Interstate cost-to-complete
- Match ratio remains unchanged (92/8)

6. Interstate Substitution

- $.24 billion per year (92-95)
- Intended to complete the highway portion of the Interstate Substitution program
- Apportionment remains unchanged (75% formula/25% discretionary)
- Match ratio remains unchanged (85/15)

7. Metropolitan Planning Requirements

- Added MPO emphasis on consideration of congestion relief, energy conservation, air quality and effect on land use
- Increased responsibility for programming of funds
- Required involvement of the state and transit operators
- New requirement for a congestion management plan consistent with air quality plan
- Federal certification of compliance annually; certification failure restricts MPO role in programming of funds
- In air quality non-attainment areas, federal funds cannot be used for new capacity for single occupant vehicles unless it is part of a congestion management plan which meets clean air standards
- TIP must identify 3-year increments of proposed projects
- In non-attainment areas, after the 3-year TIP period lapses, any project intended for air pollution reduction must have a binding implementation schedule or the air quality benefit of that project must be dropped from the analysis of conformity of the TIP with clean air requirements
- Set aside for planning increased from 0.5 percent to 1 percent of federal funding apportionments except Interstate Completion and Interstate Substitution

8. State Planning Requirements

- Added requirement for Bridge, Pavement, Safety and Congestion Management Plans
- Added requirement for traffic monitoring system
- Requirements to consider energy plans, local land use plans, access to ports, airports, freight distribution routes, national parks, historic sites, military installations

- Must provide for comprehensive surface transportation planning for non-metropolitan areas and be consistent with MPO plans
- Incorporate without amendment provisions of MPO air quality plans

9. General Provisions

- Tolls prohibited on existing free Interstate routes
- New toll facilities can be constructed with 35 percent federal participation
- Future toll revenues may be used for any Title 23 purpose
- A congestion pricing pilot project is to be undertaken
- A National Mag-Lev Design Program is established to include:

  Up to 6 Phase I grants @ 90/10 for Research and Development
  Up to 3 Phase II grants @ 80/20 for Final Design
  Construction of 1 full-scale prototype grant @ 75/25

ACC:lmk
5-7-91
STASUM.OL

INTRODUCED BY SENATOR MOYNIHAN
TO THE
SENATE COMMITTEE ON PUBLIC WORKS AND ENVIRONMENT

THE SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

Section by Section Summary
April 24, 1991

NOTE: This is the "Highway Bill" only; the "Transit Bill" will be introduced to the Senate Banking Committee.

Sec. 1. Short Title

The bill is entitled "The Surface Transportation Efficiency Act of 1991."

Sec. 2. Table of Contents

Sec. 3. Secretary Defined

Any reference in the bill to "the Secretary" means the Secretary of Transportation.

TITLE I – THE FEDERAL-AID HIGHWAY ACT OF 1991

Sec. 101. Short Title

Title I is named "The Federal-Aid Highway Act of 1991."

Sec. 102. Declaration of Policy

It is declared that the National System of Interstate and Defense Highways is complete, and that the purpose of federal highway assistance shall now be to improve the efficiency of the transportation system.

It is further declared that this is best done by giving greater flexibility to the States to make transportation decisions.

Sec. 103. Authorization of Appropriations

Surface Transportation Program: $44.8 billion is authorized for the Surface Transportation Program created by Section 106, as follows:

$7.3 billion for fiscal year 1992
$7.7 billion for fiscal year 1993
$8.3 billion for fiscal year 1994
$9.2 billion for fiscal year 1995
$12.3 billion for fiscal year 1996

Congestion Mitigation and Air Quality Improvement Program: $5 billion is authorized for the Congestion Mitigation and Air Quality Improvement Program created by Section 107, at $1 billion per year.

Bridge Program: $13.3 billion is authorized for the Bridge Program, as follows:

$2.4 billion for fiscal year 1992
$2.5 billion for fiscal year 1993
$2.6 billion for fiscal year 1994
$2.8 billion for fiscal year 1995
$3.0 billion for fiscal year 1996

Interstate Maintenance Program: $14.2 billion is authorized for the Interstate Maintenance Program, as follows:

$2.5 billion for fiscal year 1992
$2.6 billion for fiscal year 1993
$2.8 billion for fiscal year 1994
$3.0 billion for fiscal year 1995
$3.3 billion for fiscal year 1996

Interstate Construction Program. $7.2 billion is authorized to complete construction of all remaining Interstate System projects. (This is $1.8 billion per year for fiscal years 1992-1996.) The existing FY 1993 authorization of $1.4 billion is repealed. These amounts are taken from the administration bill. (This program is apportioned to the States one year ahead of the authorization. This means the program will actually end in FY 1995.)

Interstate Substitution Program. A total of $960 million ($240 million per year for fiscal years 1992-1995) is authorized to fund all outstanding commitments under the highway portion of the Interstate Substitution program.

Federal Lands Highways Program. This program has 3 parts. $200 million per year is authorized for public lands highways, $100 million per year for parks and parkways, and $150 per year for Indian roads.

Territorial Highway Program. $15 million per year is authorized for Territorial highways.

National Magnetic Levitation Design Program. $750 million over 5 years is authorized for this program created by section 115 of this bill, as follows:

$50 million for fiscal year 1992
$75 million for fiscal year 1993
$125 million for fiscal year 1994
$250 million for fiscal year 1995
$250 million for fiscal year 1996

Federal Highway Administration Research Programs. $120 million per year is authorized for the Federal highway Administration to conduct research. This amount is to be made available from within funds deducted each year for program administration.

University Transportation Centers Research Program. $5 million per year is authorized for the highway component of this program. In the past, one-half of this program has been funded from the highway account and one-half from the mass transit account.

Highway Use Tax Evasion Projects. $2 million per year is authorized to fund federal or state highway use tax enforcement programs.

Use of Safety Belts and Helmets. $100 million is authorized over 3 years to funds the grant program created in section 122.

Sec. 104. Obligation Ceiling

Obligation ceilings for FY 1992-1996 would be as follows:

$15.5 billion for fiscal year 1992
$16.0 billion for fiscal year 1993
$16.8 billion for fiscal year 1994
$18.4 billion for fiscal year 1995
$20.2 billion for fiscal year 1996

These ceilings apply to all programs except for emergency relief and minimum allocation, and would lead to outlays in fiscal year 1992-1996 equal to CBO baseline outlays.

Sec. 105. Unobligated Balances

Unobligated contract authority created in past years for the Primary, Secondary, Urban, Hazard Elimination and Railway-Highway Crossings programs will be available for obligation under the Surface Transportation program.

Sec. 106. Surface Transportation Program

A new Surface Transportation funding program is created to fund transportation projects of all kinds. Fifty percent of the funds authorized for the next five years would go to this program.

States and metropolitan planning organizations (described below in section 113) would chose whether to spend federal funds on highways, transit, passenger and commuter rail, high speed rail, magnetic levitation systems, HOV lanes, bus systems, carpool programs, or other eligible projects.

The federal/State cost share for these funds would be 80/20 for projects to maintain existing facilities or use them more efficiently, and 75/25 for projects to build new facilities that could be used by single occupant vehicles.

Each State us required to spend 8 percent of the funds received under this program on "transportation enhancement activities." This includes highway safety programs, scenic and historic preservation, control of billboards, and environmental mitigation.

Funds would be given out under this program so that each State would receive a share of <u>total</u> federal funds given out each year (other than funds to complete the Interstate Construction and Substitute programs, and funds given out under the Congestion Mitigation and Air Quality Improvement Program) equal to the percent of federal funds from 1987 to 1991 (other than those for the Interstate Construction and Substitute Programs.)

Sec. 107. Congestion Mitigation and Air Quality Improvement Program

<u>Apportionment</u>. Funds will be apportioned to states based on their non-attainment area population, adjusted for the severity of the non-attainment problem. Each area's population will be multiplied by a severity factor. The adjustments are:

a factor of 1.0 for marginal areas;
a factor of 1.1 for moderate areas;
a factor of 1.2 for serious areas;

a factor of 1.3 for severe areas;
a factor of 1.4 for extreme areas.

The population of carbon monoxide non-attainment areas would be subject to an additional factor of 1.2.

The federal-state match will be 80/20.

Eligible Projects. Funds can be spent on projects that will contribute to attainment of air quality standards. This will be determined by EPA guidance to be issued under the Clean Air Act, a state implementation plan under the Clean Air Act, or review of proposed projects by DOT and EPA.

Sec. 108. Bridge Program

The bridge program is continued as before with the following changes:

- Consistent with the Surface Transportation Program, the federal-state match to repair or replace existing bridges without increasing capacity is 80/20. The match for construction of new capacity on existing bridges or construction of new bridges is 75/25.
- Bridge painting is made an eligible use of federal funds.
- The discretionary bridge program is repealed.
- DOT is directed to issue "level of service" criteria for determining apportionment of bridge program funds.

Sec. 109. Interstate Maintenance Program

The Interstate 4R program is renamed "Interstate Maintenance" and continued as before with the following changes:

- Interstate Maintenance funds can no longer be used to widen existing Interstate highways.
- States could transfer up to 20 percent Interstate Maintenance money to the Surface Transportation Program. Larger amounts could be transferred if the State can demonstrate to DOT that they are adequately maintaining their Interstate highways.
- The federal-state match would change from 90/10 to 80/20.
- Segments added to the Interstate System before January 1, 1984 would be counted towards a state apportionment of Interstate Maintenance funds.

Sec. 110. Interstate Construction Program

Apportionments will be made to the states to finish outstanding Interstate System projects, except that specific amounts are enacted for Massachusetts. This special provision will allow other states to receive their funds for FY 1992 and FY 1993 on October 1 rather than August 1 of these years due to anticipated lapses by Massachusetts.

Sec. 111. Federal Lands Highways Program

The current federal lands program is simplified by combining the Public Lands Highways and Forest Highways accounts. Funds are apportioned based on the existing formula for the Forest Highways program.

Sec. 112. Toll Facilities

The current national policy against tolls on roads built or maintained with federal funds is repealed. Federal funds could be used to build new toll roads at a 35/65 federal/non-federal cost share. Federal funds could be used to convert existing non-tolled facilities to toll facilities at an 80/20 cost share.

New tolls would continue to be prohibited on the Interstate system.

A pilot program to introduce and test congestion pricing programs in up to 5 cities would be set up by DOT. Cities that volunteered to introduce congestion pricing would receive federal funds to plan their programs and install necessary equipment.

Sec. 113. Metropolitan Planning

Current requirements for transportation planning in metropolitan areas would be strengthened. New requirements include:

- Projects in any metropolitan area that involve federal funds would be controlled by a metropolitan planning organization (MPO), which would include representatives of local communities and the State.
- Plans developed by an MPO would take into account the requirements of the Clean Air Act, local land use or energy plans, and other factors.
- The MPO would decide how to split federal funds between highway and transit projects.
- Each MPO would have to receive an annual certification from DOT that it was carrying out its responsibilities and treating the different portions of the metropolitan area fairly.
- The current federal set-aside for metropolitan planning of 0.5 percent of federal highway funds is increased to 1 percent.

Sec. 114. Statewide Planning

Each state is required to have management systems for bridges, pavement, safety and congestion, and a monitoring system for congestion. All states must have a planning process that takes into account land use, energy requirements, transportation needs, and other factors.

States that contain areas that are in non-attainment under the Clean Air Act will be required to produce an annual state transportation plan. This plan will incorporate any plan produced for a metropolitan area under section 113 without amendment.

State planning would continue to be funded by the current 1.5 percent set aside States must make for planning and research.

Sec. 115. Research and Data Collection

The Federal Highway Administration is directed to conduct research on Interactive Vehicle Highway Systems (IVHS) and other new technologies, develop indicators for the performance of the surface transportation system with respect to productivity, efficiency, energy use, air quality and other factors. DOT would create a Dwight D. Eisenhower transportation research fellowship program.

The federal-state match for state research activities would change from 85/15 to 80/20. States would be allowed to program research funds without the approval of DOT.

A Bureau of Transportation Statistics is created inside DOT to collect, analyze and disseminate information about the condition and performance of the entire transportation system. This Bureau is headed by a Director who is appointed by the President. The Bureau must produce annual reports.

Sec. 116. National Magnetic Levitation Design Program

A federal program run by DOT and the Corps of Engineers will solicit bids from the private sector to design and construct a prototype magnetic levitation system.

Phase one grants would be given to up to 6 applicants to develop system concepts at a 90/10 cost share. Phase two grants would be given to up to 3 participants to develop detailed plans at an 80/20 cost share. A contract for construction of a prototype system of approximately 30 miles in length would be awarded at a 75/25 cost share.

The prototype would constructed within 5 years, and would be converted to revenue producing commercial service after testing is complete. The location of the prototype would be chosen based on bids submitted for various potential corridors.

Sec. 117. Access to Rights of Way

States would be allowed to make rights-of-way available with or without charge for mass transit, high speed rail or magnetic levitation systems.

Sec. 118. Report on Reimbursement for Segments Constructed Without Federal Assistance.

The Secretary of Transportation must produce a report by October 1, 1993 that describes what the federal government may potentially owe States that allowed existing roads built at State expense to be incorporated into the Interstate system. This updates a report completed in 1958 to current dollars.

Sec. 119. Disadvantaged Business Enterprises

Current law is continued, except that the dollar amount used to define a small business is adjusted for inflation, from $14 million to $15.4 million. Provision is taken from the administration bill.

Sec. 120. Availability of Funds

Funds are available in the year in which they are apportioned or allocated and in the next 3 years.

Sec. 121. Program Efficiencies

This section makes several procedural changes to the highway program:

- States may design, construct, and maintain many projects without federal engineering review;
- States may set their own occupancy requirements for HOV lanes.
- States may have up to ten years before they must reimburse DOT for engineering costs on projects that have yet to be built.
- Projects that affect historic and scenic values may be designed to protect these values.
- A State may authorize the transportation department of any city if over 1 million people to deal directly with the Federal Highway Administration.

Sec. 122. Use of Safety Belts and Motorcycle Helmets

States that do not adopt laws requiring the use of safety belts and motorcycle helmets would be required to set aside a portion of funds received under the Surface Transportation Program for safety programs. This fraction is 1.5 percent for noncompliance in 1994 and 3 percent thereafter.

States will receive grants for safety eduction, training, monitoring and enforcement if they adopt safety belt and helmet laws.

Sec. 123. Definitions

New definitions are created for the terms carpool project, hazard elimination, magnetic levitation system, metropolitan area, open to public travel, operational improvement, public authority, public lands highway, railway-highway crossing, reconstruction, and transportation enhancement activities.

Existing definitions for highway and Indian reservation roads are conformed to the new program.

Existing definitions for federal-aid highways, federal-aid system, federal-aid primary system, federal-aid secondary system, federal-aid urban system, forest highway, project, and urban area are repealed.

Sec. 124. Functional Reclassification

The Secretary of Transportation is directed to cooperate with the states on a comprehensive revision of the functional classifications of all public roads. This revision must be completed by the end of FY 1992.

Sec. 125. Repeal of Certain Sections of Title 23 United States Code

Sections of title 23 USC no longer in use or made unnecessary by this bill are repealed. Sections to be repealed are:

Section 105, relating to state program submissions;
Section 117, relating to certification of state programs;
Section 122, relating to bond retirement;
Section 124, relating to advances to States;
Section 126, relating to diversion of state funds;
Section 130, relating to railway-highway crossings;
Section 137, relating to parking facilities;
Section 146, relating to carpools;
Section 147, relating to priority primary projects;
Section 148, relating to a national recreational highway;
Section 150, relating to urban system funds;
Section 152, relating to hazard elimination;
Section 155, relating to lake access highways;
Section 201, relating to authorizations;
Section 212, relating to the Inter-American Highway;
Section 216, relating to the Darien Gap Highway;
Section 218, relating to the Alaska Highway;
Section 309, relating to foreign countries;
Section 310, relating to civil defense;
Section 311, relating to strategic highway improvements;
Section 312, relating to military officers;
Section 318, relating to highway relocation; and
Section 320, relating to bridges on federal dams.

Other portions of the bill have the effect of repealing section 102, relating to pre-1956 authorizations, and section 149, relating to truck lanes, by replacing them with new sections.

Sec. 126. Conforming and Technical Amendments

This section makes conforming and technical amendments to title 23 USC, the Highway Safety Act of 1978, the Surface Transportation Assistance Act of 1978, and title 42 USC. The most common change is to remove all references in these statutes to the federal-aid primary, secondary and urban systems.

In addition, this section continues the authorization for the Department of Transportation's public information program Operation Lifesaver at $250,000 per year. This program has been funded by a set aside from the railway-highway crossing program, which is repealed by this bill.

Sec. 127. Recodification

This section requires the Secretary of Transportation to submit a proposed recodification of title 23 United States Code to the Congress.

TITLE II – THE NATIONAL RECREATIONAL TRAILS TRUST FUND ACT

Sec. 201. Short Title.

This title is named "The National Recreational Trails Trust Fund Act."

Sec. 202. Creation of Fund.

A National Recreational Trails Trust Fund is established. The Secretary of the Treasury is required to deposit non-highway recreational fuel taxes (defined as 0.3 percent of total, adjusted as necessary to track actual receipts) into the National Recreational Trails Trust Fund. All current refund provisions for such taxes are eliminated.

Sec. 203. Administration of Fund.

A national recreational trails program is created to spend money from the trust fund. A state can receive money under the program during the three years after enactment by applying for it for recreational trail projects. To receive money after the first three years, States must establish a State Recreational Trails Advisory Board, and dedicate any tax imposed on non-highway recreational fuel to recreational trails.

No more than 3 percent of money spent from the trust fund may be used to cover administrative costs. The remainder must be allocated to states under a formula that allocates one-half of the money evenly among eligible states (each state gets the same base amount) and one-half based on each States proportion of non-highway recreational fuel use.

Money may be used for maintenance, rehabilitation, and construction of recreational trails (where a need is demonstrated), acquisition of easements, development of trail-side and trail-head facilities, urban trail linkages, and environmental and safety education programs.

Money may not be used for building motorized trails in recommended wilderness areas. Motorized and non-motorized recreation uses must each receive the benefit of no less than 30 percent of a State's money.

Sec. 205. Recreational Trails Committee.

A National Recreational Trails Advisory Committee is established, which is composed of 10 members representing various recreational trail interests. Duties of the Committee include reviewing utilization of Fund moneys, establishing criteria for trail-side and trail-head facilities, and making recommendations on pertinent federal policies.

102d Congress
1st Session

To amend title 23 United States Code, and for other purposes.

IN THE SENATE OF THE UNITED STATES

April 24, 1991

MR. _____ introduced the following bill, which was referred to the Committee on _____.

A BILL

To amend title 23 United States Code and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled,

Sec. 1. Short Title.--

This Act may be cited as the "Surface Transportation Efficiency Act of 1991".

Sec. 2. Table of Contents. --

Sec. 3. Secretary Defined.

As used in this Act, the term "Secretary" means the Secretary of Transportation.

Title I -- Federal-Aid Highway Act of 1991

Sec. 101. Short Title.

This title may be cited as the "Federal-Aid Highway Act of 1991".

Sec. 102. Declaration of Policy.

(a) Subsection 101(b) of title 23 United State Code is amended to read as follows:

"(b) DECLARATION OF POLICY.--It is hereby declared that the National System of Interstate and Defense Highways, established by the Federal-Aid Highway Act of 1956, is complete. The principal

purpose of federal highway assistance shall now be to improve the efficiency of the nation's exisiting surface transportation system.

"It is further declared that this shall be accomplished by allowing the States to use federal assistance on the types of projects that best meet the needs of their citizens.

"It is the policy of the United States to encourage the proper pricing of surface transportation facilities in order to more efficiently allocate their use.".

(b) Subsections 101(d) and 101(e) of title 23 United States Code are hereby repealed.

Sec. 103. Authorization of Appropriations.

(a) REPEAL OF FISCAL YEAR 1993 AUTHORIZATION FOR INTERSTATE CONSTRUCTION.--Section 108(b) of the Federal-Aid Highway Act of 1956 is amended by--

(1) inserting "and" after "1991";

(2) striking the comma after "1992" and inserting in lieu thereof a period; and

(3) striking "and the additional sum of $1,400,000,000 for the fiscal year ending September 30, 1993".

(b) AUTHORIZATIONS.--The following sums are authorized to appropriated out of the Highway Account of the Highway Trust Fund:

(1) SURFACE TRANSPORTATION PROGRAM. -- For the Surface Transportation Program $7,330,000,000 for fiscal year 1992, $7,700,000,000 for fiscal year 1993, $8,260,000,000 for fiscal year 1994, $9,250,000,000 for fiscal year 1995, and $12,260,000,000 for fiscal year 1996.

(2) CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM.-- For the Congestion Mitigation and Air Quality Improvement Program $1,000,000,000 per fiscal year for each of fiscal years 1992, 1993, 1994, 1995 and 1996.

(3) BRIDGE PROGRAM.-- For the Bridge Program $2,370,000,000 for fiscal year 1992, $2,460,000,000 for fiscal year 1993, $2,600,000,000 for fiscal year 1994, $2,840,000,000 for fiscal year 1995, and $3,050,000,000 for fiscal year 1996.

(4) INTERSTATE MAINTENANCE PROGRAM. -- For resurfacing, restoring and rehabilitating the National System of Interstate and Defense Highways, $2,530,000,000 for fiscal year 1992, $2,620,000,000 for fiscal year 1993, $2,770,000,000 for fiscal year 1994, $3,020,000,000 for fiscal year 1995, and $3,250,000,000 for fiscal year 1996.

(5) INTERSTATE CONSTRUCTION PROGRAM.-- For construction to complete the Interstate System, $1,800,000,000 for each of fiscal years 1993, 1994, 1995, and 1996, Provided that section 102(c) of the Federal-Aid Highway Act of 1987, regarding minimum apportionments, is hereby repealed, and Provided Further that such sums shall be obligated as if authorized by section 108(b) of the Federal-Aid Highway Act of 1956.

(6) INTERSTATE SUBSTITUTION PROGRAM.--For the Interstate Substitution Program for projects under highway assistance programs $240,000,000 for each of fiscal years 1992, 1993, 1994 and 1995, Provided that such sums shall be obligated as if authorized by 23 U.S.C. 103(e)(4)(G), and Provided Further

that section 103(e)(4)(H)(i) and section 103(e)(4)(H)(iii) of title 23 United States Code are amended by striking "and 1991" the three places in occurs and inserting lieu thereof "1992, 1993, 1994, and 1995".

(7) FEDERAL LANDS HIGHWAY PROGRAM.--

(A) For Indian reservation roads $150,000,000 for each of fiscal years 1992, 1993, 1994, 1995 and 1996.

(B) For public lands highways $200,000,000 for each of the fiscal years 1992, 1993, 1994, 1995, and 1996.

(C) For parkways and park highways $100,000,000 for each of the fiscal years 1992, 1993, 1994, 1995, and 1996.

(8) TERRITORIAL HIGHWAY PROGRAM.-- For the Territorial Highway Program $15,000,000 for each of fiscal years 1992, 1993, 1994, 1995, and 1996.

(9) NATIONAL MAGNETIC LEVITATION DESIGN PROGRAM.-- For the National Magnetic Levitation Design Program $50,000,000 for fiscal year 1992, $75,000,000 for fiscal year 1993, $125,000,000 for fiscal year 1994, $250,000,000 for fiscal year 1995, and $250,000,000 for fiscal year 1996.

(10) FEDERAL HIGHWAY ADMINISTRATION RESEARCH PROGRAMS.-- For the purpose of carrying out research as authorized by Section 307, the amount of $120,000,000 for each of fiscal years 1992, 1993, 1994, 1995 and 1996, Provided that such amount shall be made available from within the amount of the deduction authorized pursuant to section 104(a) of title 23

United States Code.

(11) UNIVERSITY TRANSPORTATION CENTERS PROGRAM.--For carrying out the University Transportation Centers Program pursuant to the Urban Mass Transportation Act of 1964, as amended, $5,000,000 for each of fiscal years 1992, 1993, 1994, 1995 and 1996.

(12) HIGHWAY USE TAX EVASION PROJECTS.--For highway use tax evasion projects $2,000,000 for each of fiscal years 1992, 1993, 1994, 1995 and 1996, Provided that these sums shall be available until expended and may be allocated to the Internal Revenue Service or the States at the discretion of the Secretary, and Provided Further that these funds shall be used to expand efforts to enhance motor fuel tax enforcement, fund additional Internal Revenue Service Staff, supplement motor fuel tax examination and criminal investigation, develop automated data processing tools, evaluate and implement registration and reporting requirements, reimburse state expenses that supplement existing fuel tax compliance efforts and analyze and implement programs to reduce the tax evasion associated with other highway use taxes.

(13) SAFETY BELT AND MOTORCYCLE HELMET USE.--For the purpose of carrying out programs under section 153 of title 23 United States Code $45,000,000 for fiscal year 1992, $30,000,000 for fiscal year 1993, and $25,000,000 for fiscal year 1994.

Sec. 104. Obligation Ceiling.

(a) GENERAL LIMITATION.-- Notwithstanding any other provision of law, the total of all obligations for Federal-aid highway programs shall not exceed--

(1) $15,480,000,000 for fiscal year 1992;

(2) $15,940,000,000 for fiscal year 1993;

(3) $16,840,000,000 for fiscal year 1994;

(4) $18,410,000,000 for fiscal year 1995; and

(5) $20,190,000,000 for fiscal year 1996;

Provided that limitations under this section shall not apply to obligations for emergency relief pursuant to section 135 and obligations for minimum allocation pursuant to section 157.

(b) DISTRIBUTION OF OBLIGATION AUTHORITY.-- For each of fiscal years 1992, 1993, 1994, 1995 and 1996, the Secretary shall distribute the limitation imposed by (a) by allocation in the ratio which sums authorized to be appropriated for Federal-aid highways which are apportioned or allocated to each State for such fiscal year bears to the total of the sums authorized to be appropriated for Federal-aid highways which are apportioned or allocated to all the States for such fiscal year.

(c) LIMITATION ON OBLIGATION AUTHORITY.-- During the period October 1 through December 31 of each of fiscal years 1992, 1993, 1994, 1995, and 1996 no State shall obligate more than 35 percent of the amount distributed to that State under subsection (b) for that fiscal year, and the total of all State obligations during the period shall not exceed 25 percent of the total amount distributed to all States under subsection (b) for that fiscal year.

(d) REDISTRIBUTION OF UNUSED OBLIGATION AUTHORITY.--Notwithstanding subsections (c) and (d), the Secretary shall --

(1) provide all States with authority sufficient to prevent lapses of sums authorized to be appropriated for Federal-aid highways and highway safety construction which have been apportioned or allocated to a State;

(2) after August 1 of each of fiscal years 1992, 1993, 1994, 1995 and 1996, revise a distribution of funds made available under (c) for that fiscal year if a State will not obligate amounts in addition to those previously distributed during the fiscal year giving priority to those States having large unobligated balances of funds apportioned under section 104 and section 144 of title 23, United States Code; and

(3) not distribute amounts authorized for administrative expenses, the Federal lands highways program, and the National Magnetic Levitation Design Program.

Sec. 105. Unobligated Balances.

Unobligated balances of funds apportioned for the primary, secondary and urban systems and the railway-highway crossing and hazard elimination programs may be obligated for the Surface Transportation Program as if they had been apportioned for that Program.

Sec. 106. Surface Transportation Program.

(a) ESTABLISHMENT OF PROGRAM.--Title 23 United States Code is amended by adding the following new section:

"Sec. 133. Surface Transportation Program.--The Secretary

shall establish a Surface Transportation Program in accordance with this section.

"(a) ELIGIBILITY.--Projects eligible under the Surface Transportation program shall include--

"(1) construction, reconstruction, resurfacing, restoration, rehabilitation, and operational improvements for highways (including Interstate highways) and bridges, including any such construction or reconstruction necessary to accommodate other transportation modes, and including the routine painting of facilities;

"(2) capital and operating costs for mass transit, rail, and magnetic levitation systems, including expenditures on rights of way and associated facilities;

"(3) carpool projects and fringe and corridor parking facilities and programs, and bicycle facilities and programs;

"(4) surface transportation safety improvements and programs, including highway safety improvement projects, hazard eliminations, and railway-highway grade crossings.

"(5) surface transportation research and development programs;

"(6) capital and operating costs for traffic monitoring, management and control facilities and programs;

"(7) surface transportation planning programs;

"(8) transportation enhancement activities as defined in section 101; and

(9) any other purpose approved by the Secretary.

Provided that projects other than those described in paragraphs (3)

and (4) may not be undertaken on roads functionally classified as local or rural minor collector, except as approved by the Secretary.

"(b) GENERAL REQUIREMENTS.--

"(1) For at least 75 percent of funds apportioned to a state for the Surface Transportation Program in any year, the state shall assure that such funds are programmed based on a division between the metropolitan and non-metropolitan areas of the state, as determined pursuant to section 134, in direct proportion to their relative share of the state's population. The remaining 25 percent of funds may be programmed for any area of the state.

"(2) Programming and expenditure of funds for projects in metropolitan areas shall be consistent with the requirements of section 134, regarding metropolitan planning.

"(3) Programming and expenditure of funds for projects in non-metropolitan shall be consistent with the provisions of section 135, regarding statewide planning.

"(4) Of the apportionments made available to a State under this section, each state must assure that no less than 8 percent of such funds are programmed for transportation enhancement activities, as defined in section 101.

"(5) In the case where a state constructs a facility under this program with a federal share of 80 percent and later converts the facility to operation such that the project would originally have been undertaken with a federal share of

75 percent, the state shall repay to the United States, with interest, the amount of the difference in the cost to the United States.

"(c) ADMINISTRATION.--

(1) If the Secretary determines that a State or local government has failed to comply substantially with any provision of this section, the Secretary shall notify the State, that, if it fails to take corrective action within 60 days from the receipt of the notification, the Secretary will withhold future payments under this section until the Secretary is satisfied that appropriate corrective action has been taken.

"(2) The Governor of each State shall certify prior to the beginning of each fiscal year that the State will meet all the requirements of this section and shall notify the Secretary of the amount of obligations expected to be incurred for Surface Transportation Program projects during the fiscal year, Provided that the State may request adjustment to the obligation amounts later in the fiscal year. Acceptance of the notification and certification shall be deemed a contractual obligation of the United States for the payment of the Surface Transportation Program funds expected to be obligated by the State in that fiscal year for projects not subject to review by the Secretary.

"(3) Projects must be designed, constructed, operated and maintained in accordance with state laws, regulations,

directives, safety standards, design standards and construction standards.

"(4) If the Secretary determines that a state or local government has failed to comply substantially with any provision of this section, the Secretary shall notify the State of its noncompliance and, if it fails to take corrective action within 60 days from the receipt of the notification, the Secretary may withhold future payments under this section until the Secretary is satisfied that appropriate corrective action has been taken.

"(5) Any State may notify the Secretary that it no longer wishes the Secretary to review and approve design and construction standards for any project other than a project on an Interstate highway or other multi-lane limited access control highways, except as provided in section 102(b), regarding resurfacing projects. After any such notification the Secretary shall undertake only such project review as is requested by the State.

"(6) The Secretary shall make payments to a State of costs incurred by it on the program. Payments shall not exceed the Federal share of costs incurred as of the date the State requests payments."

(b) APPORTIONMENT.--Section 104(b) of title 23 United States Code is amended by--

(1) amending paragraph (1) to read as follows:

"(1) SURFACE TRANSPORTATION PROGRAM.-- For the Surface

Transportation Program, in a manner such that--

(A) a state's percent share of all funds allocated or apportioned pursuant to this title for fiscal year 1992 and any fiscal year thereafter, excluding funds apportioned or allocated for the Interstate Construction, Interstate Substitute, Federal Lands Highways, Congestion Mitigation and Air Quality Improvement, Minimum Allocation, and Emergency Relief programs;

shall be equal to--

(B) such state's percent share of all apportionments and allocations received under this title for fiscal years 1987, 1988, 1989, 1990 and 1991, excluding apportionments and allocations received for the Interstate Construction, Interstate Substitute, Federal Lands Highways and Emergency Relief Programs, all apportionments and allocations received for demonstration projects, and the portion of allocations received pursuant to section 157, regarding minimum allocation, that is attributable to apportionments made under the Interstate Construction and Interstate Substitute programs in such years, Provided that in calculating a state's percent share under this subparagraph for the purpose of making apportionments for fiscal years 1992, 1993, 1994, and 1995, each state shall be deemed to have received one-half of one percent of all funds apportioned for the Interstate Construction Program in fiscal years 1987, 1988, 1989, 1990, and 1991.";

distribute based upon 87-91 apportionment less FAI/FAIX/Demo/Fed. lands

(2) striking "upon the Federal-aid systems" and inserting in lieu thereof "upon the Surface Transportation Program, the Congestion Mitigation and Air Quality Improvement Program, and the Interstate System";

(3) striking "paragraphs (4) and (5)" and inserting in lieu thereof "subparagraph (5)(A)"; and

(4) striking "and sections 118(c) and 307(d)" and inserting in lieu thereof "and section 307".

(c) FEDERAL SHARE.--Section 120(a) of title 23 United States Code is amended by striking "Subject to the provisions of subsection (d) of this section, the" and inserting in lieu thereof "The"; by striking ", primary, secondary, or urban funds, on the Federal-aid primary system, the Federal-aid secondary system, and the Federal-aid urban system" and inserting instead "Surface Transportation Program funds"; and by inserting "for capital projects that add capacity available to single occupant vehicles, except where the project consists of a high occupancy vehicle facility available to single occupant vehicles at other than peak travel times, and 80 per centum of the cost of construction for other projects", in two places after the words "cost of construction".

(d) GUIDANCE.--The Secretary shall develop and make available to the states guidance on how to determine what portion of any project under section 133 of title 23 United States Code is eligible for an 80 percent federal share.

(e) CONFORMING AMENDMENTS.--The analysis of title 23 United States Code is amended by striking "133. [Repealed P.L. 90-495]." and inserting in lieu thereof "133. Surface Transportation Program.".

Sec. 107. Congestion Mitigation and Air Quality Improvement Program.

(a) ESTABLISHMENT OF PROGRAM.--Section 149 of title 23 United States Code is amended to read as follows:

"Sec. 149. Congestion Mitigation and Air Quality Improvement Program.--The Secretary shall establish a congestion mitigation and air quality improvement program pursuant to the requirements of this section.

"(a) ELIGIBLE PROJECTS.--A project may be funded under the congestion mitigation and air quality improvement program only if--

"(1) guidance issued by the Environmental Protection Agency pursuant to section 108(f) of the Clean Air Act, as amended, shows to the satisfaction of the Secretary, after consultation with the Administrator of the Environmental Protection Agency, that the project is likely to contribute to the attainment of any national ambient air quality standard;

"(2) the project is listed in a state implementation plan that has been approved pursuant to the Clean Air Act, as amended and the project will have air quality benefits; or

"(3) the Secretary, after consultation with the Administrator of the Environmental Protection Agency, determines that the project is likely to contribute to the

attainment of any national ambient air quality standard, whether through reductions in vehicle miles travelled, fuel consumption, or through other factors; and

only if the project does not result in the construction of new capacity available to single occupant vehicles, except where the project consists of a high occupancy vehicle facility available to single occupant vehicles at other than peak travel times.

"(b) PROGRAMMING OF FUNDS.--Funds apportioned pursuant to this section shall be programmed in accordance with the provisions of section 134.

"(c) FEDERAL SHARE.--The Federal Share payable for a project under this section shall not exceed 80 percent of the cost of the project."

(b) APPORTIONMENT.--Section 104(b)(2) is amended to read as follows:

"(2) FOR THE CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM.--In the ratio which the weighted non-attainment area population of each state bears to the total weighted non-attainment area population of all states, where weighted non-attainment area population shall be calculated by multiplying the population of any non-attainment areas within any state that is in non-attainment for ozone by a factor of--

"(A) 1.0 if the area is classified as a marginal non-attainment area;

"(B) 1.1 if the area is classified as a moderate

non-attainment area;

"(C) 1.2 if the area is classified as a serious non-attainment area;

"(D) 1.3 if the area is classified as a severe non-attainment area; and

"(E) 1.4 if the area is classified as an extreme non-attainment area;

where the classification of non-attainment areas is that used in the Clean Air Act, as amended, and by further multiplying the population of any non-attainment area by a factor of 1.2 if such area is in non-attainment for carbon monoxide."

(c) PROGRAMMING OF FUNDS.--Apportionments made under this section shall be made available in metropolitan areas within each state in proportion to the relative share of weighted non-attainment area population within the state, and shall be programmed for expenditure by the metropolitan planning organization for each such area in accordance with the provisions of section 134 of title 23 United States Code.

(d) CONFORMING AMENDMENTS.--The analysis of chapter 1 of title 23, United States Code is amended by striking "Sec. 149. Truck lanes." and inserting instead "Sec. 149. Congestion Mitigation and Air Quality Improvement Program."

Sec. 108. Bridge Program.

(a) FEDERAL SHARE.-- Section 144(f) of title 23, United States Code is amended to read as follows:

"(f) The federal share payable for any project undertaken

under this subsection shall be 80 percent, except for any costs attributable to the expansion of the capacity of any bridge or the construction of any new bridge where such new capacity or new bridge is primarily available to single occupant vehicles, in which case the federal share payable shall be 75 percent. In the case where a state constructs a bridge or portion thereof not primarily available to single occupant vehicles pursuant to this section, and later converts the bridge or portion thereof to be available to single occupant vehicles, the state shall repay to the United States, with interest, the amount of the additional cost born by the United States that would have been born by the state had the bridge or portion thereof been originally available to single occupant vehicles."

(b) NEW CAPACITY GUIDANCE.--The Secretary shall develop and make available to the States criteria for determining what share of any project undertaken pursuant to section 144 of title 23 United States Code is attributable to the expansion of the capacity of a bridge where the new capacity is available to single occupant vehicles.

(c) BRIDGE PAINTING.--Section 144(e) of title 23 United States Code is amended by adding at the end "Funds apportioned pursuant to this subsection shall be available for the painting of any bridge eligible for assistance under this section."

(d) REPEAL OF DISCRETIONARY BRIDGE PROGRAM.--Paragraphs (1), (2), and (3) of section 144(g) of title 23 United States Code are repealed.

(e) LEVEL OF SERVICE CRITERIA.--The Secretary shall, by January 1, 1992, in consultation with the States, establish level of service criteria for the Bridge Program.

(f) CONFORMING AMENDMENTS.--

(1) The analysis of chapter 1 of title 23 United States Code is amended by striking "Sec. 144. Highway bridge replacement and rehabilitation program." and inserting in lieu thereof "Sec. 144. Bridge program."

(2) Section 144 of title 23 United States Code is amended as follows:

(A) The title is amended to read "Sec. 144. Bridge Program.".

(B) Subsection (b) is repealed; and subsection (c) is amended by striking ", other than those on any Federal-aid system," and by striking "on and off the federal-aid system.".

(C) Subsection (e) is amended by striking "(1) Federal-aid system bridges eligible for replacement, (2) Federal-aid system bridges eligible for rehabilitation, (3) off-system bridges eligible for replacement, and (4) off-system bridges eligible for rehabilitation" and inserting instead "(1) Bridges categorized for rehabilitation and (2) bridges categorized for replacement"; and (2) by striking "on the Federal-aid primary system" and inserting instead "under the Surface Transportation Program"

Sec. 109 Interstate Maintenance Program.

(a) LIMITATION ON NEW CAPACITY.-- Section 119(a) of title 23 United States Code is amended by inserting after the end of the first sentence: "Notwithstanding any other provision of this title, the portion of the cost of any project undertaken pursuant to this section that is attributable to the expansion of the capacity of any Interstate highway, where such new capacity is primarily available to single occupant vehicles, shall not be eligible for funding under this section.";

(b) ADEQUATE MAINTENANCE OF THE INTERSTATE SYSTEM.--Section 119(f)(1) of title 23 United States Code is amended by inserting at the end of the paragraph "The Secretary must find that the State is adequately maintaining the Interstate System to accept such a certification.";

(c) NON-FEDERAL MATCH REQUIREMENT.--

(1) Section 119(a) of title 23 United States Code is amended by striking "section 120(c)" and inserting in lieu thereof "section 120(d)".

(2) Section 120(d) of title 23 United States Code is amended to read as follows:

"(d) INTERSTATE MAINTENANCE.--The federal share payable on account of any project undertaken for the maintenance of Interstate highways under the provisions of section 119 shall either--

"(1) not exceed 80 percent of the cost of construction, except that in the case of any State containing nontaxable Indian lands, individual and tribal, and public domain lands

(both reserved and unreserved) exclusive of national forests and national parks and monuments, exceeding 5 percent of the total area of all lands therein, the federal share shall be increased by a percentage of the remaining cost equal to the percentage that the area of all such lands in such state, is of its total area; or

"(2) not exceed 80 percent of the cost of construction, except that in the case of any state containing nontaxable Indian lands, individual and tribal, public domain lands (both reserved and unreserved), national forests, and national parks and monuments, the federal share shall be increased by a percentage of the remaining cost equal to the percentage of the area of all such lands in such state is of its total area, except that the federal share payable on any project shall not exceed 95 percent of the total cost of the project.

In any case where a state elects to have the federal share as provided in paragraph (2), the State must enter into an agreement with the Secretary covering a period of not less than one year, requiring the State to use solely for purposes eligible under this title (other than paying its share of projects undertaken pursuant to this title) during the period covered by the agreement the difference between the State's share as provided in paragraph (2) and what its state's share would be if it elected to pay the share provided in paragraph (1) for all projects subject to the agreement.".

(d) GUIDANCE TO THE STATES.--The Secretary shall develop and

make available to the States criteria for determining--

(1) what share of any project funded under section 119 of title 23 United States Code is attributable to the expansion of the capacity of an Interstate Highway; and

(2) what constitutes adequate maintenance of the Interstate System for the purposes of section 119(f)(1) of title 23 United States Code.

(e) NON-CHARGEABLE SEGMENTS.--Section 104(b)(5)(B) of title 23 United States Code is amended by adding "and routes on the Interstate system designated under section 139(a) of this title before January 1, 1984" after the phrase "under sections 103 and 139(a) of this title" each of the two times it appears in the first sentence.

(f) CONFORMING AMENDMENTS.--

(1) NEW TITLE.--The title of section 119 of title 23 United States Code is amended to read "Sec. 119. Interstate Maintenance Program.";

(2) ANALYSIS.--The analysis for chapter 1 of title 23 United States Code is amended by striking "Sec. 119. Interstate System Resurfacing." and inserting in lieu thereof "Sec. 119. Interstate Maintenance Program.".

(3) Section 119 of title 23 United States Code is amended--

(A) by striking out subsection (c), with regard to reconstruction;

(B) by striking out subsection (e), with regard to

toll facilities;

(C) by striking out, in subsection (a), ", rehabilitating, and reconstructing" and inserting in lieu thereof "and rehabilitating";

(D) in subsection (f)--

(i) by striking "PRIMARY SYSTEM" from the title and inserting in lieu thereof "SURFACE TRANSPORTATION PROGRAM";

(ii) by striking "rehabilitating, or reconstructing" and inserting in lieu thereof "or rehabilitating"; and

~~(iii) by striking paragraph (3).~~

(4) APPORTIONMENT.-- Section 104(b)(5)(B) of title 23 United States Code is amended by striking "rehabilitating, and reconstructing" and inserting instead "and rehabilitating".

Sec. 110. Interstate Construction Program.

(a) MASSACHUSETTS.-- Paragraph 104(b)(5)(A) of title 23 United States Code is amended by striking "upon the approval by Congress, the Secretary shall use the Federal share of such approval estimates in making apportionments for the fiscal year 1993" and inserting in lieu thereof--

"The Secretary shall use the Federal share of the 1991 Interstate Cost Estimate, adjusted to reflect (i) all previous credits, apportionments of Interstate construction funds and lapses of previous apportionments of interstate construction funds, (ii) previous withdrawals of Interstate segments, (iii) previous

allocations of Interstate discretionary funds, and (iv) transfers of Interstate construction funds, to make apportionments for fiscal years 1993, 1994, 1995 and 1996 in the ratio in which the Federal share of the estimated cost of completing the Interstate System in a State bears to the Federal share of the sum of the estimated cost of completing the Interstate System in all of the States, except Massachusetts, Provided that Massachusetts shall be apportioned $100,000,000 for the fiscal years 1993, $800,000,000 for the fiscal year 1994, $800,000,000 for the fiscal year 1995, and $850,000,000 for the fiscal year 1996.".

(b) CONFORMING AMENDMENTS.--Paragraph 104(b)(5)(A) of title 23 United States Code is further amended by striking "1960 through 1990" the two places it appears and inserting instead "1960 through 1996"; and by striking "1967 through 1990" and inserting instead "1967 through 1996".

Sec. 111. Federal Lands Highways Program.

(a) ALLOCATIONS.--Section 202 of title 23 United States Code is amended as follows:

(1) Subsection (c) is amended by inserting at the end "The secretary shall allocate 66 percent of the remainder of the authorization for public lands highways for each fiscal year as is provided in section 134 of the Federal-Aid Highway Act of 1987."; and by inserting after "allocate" the words "34 percent of".

(2) Subsection (a) is repealed.

(b) PROJECTS.--Section 204 of title 23 United States Code is

amended as follows:

(1) Subsection (b) is amended by inserting at the end "Funds available for each class of federal lands highways shall be available for any kind of transportation project eligible for assistance under this title that is within or adjacent to or provides access to the areas served by the particular class of federal lands highways."; and by striking "forest highways and".

(2) Subsection (a) is amended by striking "forest highways,"; and by inserting at the end "Notwithstanding any other provision of this title, no project may be undertaken in any state pursuant to this section unless the state concurs in the selection and planning of the project.".

(3) Subsection (c) is amended by striking "on a federal aid system and inserting in lieu thereof "eligible for funds apportioned under section 104 or section 144 of this title".

(c) CONFORMING AMENDMENTS.--Section 203 of title 23 United States Code is amended by striking "forest highways" in two places.

Sec. 112. Toll Facilities.

(a) REPEAL OF NATIONAL POLICY.--Section 301 of title 23 United States Code is hereby repealed.

(b) NEW REQUIREMENTS.--Section 129 of title 23 United States Code is amended to read as follows:

"Sec. 129. Toll Facilities.

"(a) PROHIBITION.--Tolls may not be imposed on any existing free Interstate Highway.

"(b) FEDERAL SHARE PAYABLE.--Except as provided in subsection (e), the federal share payable for any project under this section shall not exceed 35 percent of the cost of the project for construction of new toll facilities, and shall not exceed 80 percent of the cost of the project for rehabilitation of existing toll facilities or conversion of existing free facilities to toll facilities.

"(c) CONSTRUCTION OR CONVERSION OF FACILITIES.--Except as otherwise provided in this section, federal funds to carry out this title may not be obligated on toll facilities or to convert free facilities to toll facilities. The Secretary may permit federal participation, on the same basis and in the same manner as participation in projects on free highways under this title, in the construction of any toll highway, bridge, tunnel, or approach thereto, or the conversion of any free highway, bridge, tunnel or approach thereto to a toll facility, upon compliance with the provisions of this subsection, except that no federal funds may be used to impose tolls on any existing free Interstate Highway. The highway, bridge, tunnel, or approach thereto must be publicly owned. The appropriate State transportation or highway department or departments must be party to an agreement with the Secretary that provides that--

"(1) all tolls received from the operation of the facility, less the actual cost of operation and maintenance, shall be applied to repayment, including debt service and reasonable return on investment, of the party financing the

facility, except for amounts contributed by the United States; and

"(2) after the date of final repayment, revenues from tolls in excess of revenues needed to recover actual costs of operation and maintenance shall be used for any transportation project eligible under this chapter.

"(d) CONSTRUCTION OF FERRYBOATS AND FERRY APPROACHES.--The Secretary may permit Federal participation under this title in the construction of ferryboats and ferry approaches, whether toll or free, subject to the following conditions:

"(1) It is not feasible to build a bridge, tunnel, or other normal highway structure in lieu of the ferry.

"(2) The operation of the ferry shall not be on a route that is classified as local, as a rural minor collector, or as a route on the Interstate System.

"(3) The ferry shall be publicly owned and operated.

"(4) The operating authority and the amount of fares charged for passage on the ferry shall be under the control of the State, and all revenues shall be applied to actual and necessary costs of operation, maintenance, and repair, including replacement of ferryboats.

"(5) The ferry shall be operated only within the State (including the islands which comprise the State of Hawaii and the islands which comprise the Commonwealth of Puerto Rico) or between adjoining States. Except with respect to operations between the islands which comprise the State of Hawaii,

operations between the islands which comprise the Commonwealth of Puerto Rico, operations between the islands of Maine, and operations between any two points in Alaska and between Alaska and Washington, including stops at appropriate points in the Dominion of Canada, no part of the ferry operations shall be in any foreign or international waters.

"(6) No ferry shall be sold, leased, or otherwise disposed of without the approval of the Secretary. The Federal share of any proceeds from a disposition shall be credited to the unprogrammed balance of Surface Transportation Program funds last apportioned to the State. Any amounts credited shall be in addition to other funds then apportioned to the State and shall be available for expenditure in accordance with the provisions of this title.

"(e) CONGESTION PRICING PILOT PROGRAM.--(1) The Secretary shall solicit the participation of State and local governments and public authorities for one or more congestion pricing pilot projects. The Secretary may enter into cooperative agreements with as many as five such State or local governments or public authorities to establish, maintain, and monitor congestion pricing projects.

"(2) Notwithstanding subsection (c), the federal share payable for such programs shall be 100 percent. The Secretary shall fund all of the development and other start up costs of such projects, including salaries and expenses, for a period of at least one year, and thereafter until such time that

sufficient revenues are being generated by the program to fund its operating costs without federal participation, except that the Secretary may not participate at 100 percent federal cost in any project for more than 3 years.

"(3) Revenues generated by any pilot project under this section must be applied to projects eligible under this title.

"(4) The Secretary shall monitor the effect of such projects for a period of at least 10 years, and shall report to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives every 2 years on the effects such programs are having on driver behavior, traffic volume, transit ridership, air quality, and availability of funds for transportation programs.

"(5) Of the sums made available the Secretary pursuant to section 104(a), not to exceed $5,000,000 shall be made available each fiscal year to carry out the requirements of this subsection.".

(c) EXISTING TOLL FACILITY AGREEMENTS.--At the request of the non-federal parties to any toll facility agreement reached before October 1, 1991 under section 105 of the Federal-Aid Highway Act of 1978 or section 129 of title 23 United States Code as in effect immediately prior to the date of enactment of this Act, the Secretary shall renegotiate such agreement to allow for the continuance of tolls without repayment of federal funds.

Sec. 113. Metropolitan Planning

(a) NEW REQUIREMENTS.--Section 134 of title 23, United States Code is amended to read as follows:

"Sec. 134. Metropolitan Planning.

"(a) METROPOLITAN PLANNING ORGANIZATIONS.--A metropolitan planning organization shall be designated for each urbanized area of a state of over 50,000 in population by agreement among the Governor and the units of general purpose local government representing at least 90 percent of the affected population. Each metropolitan planning organization shall designate boundaries for a metropolitan area pursuant to subsection (b) and shall carry out the transportation planning process required by this section. With the cooperation of the affected states, metropolitan planning organizations that represent portions of multi-state metropolitan areas shall, where feasible, provide for coordinated transportation planning for the entire metropolitan area.

"(b) METROPOLITAN AREA BOUNDARIES.--For the purposes of this title, the boundaries of any metropolitan area shall be determined by the metropolitan planning organization. Each metropolitan area shall cover at least the existing urbanized area and the area expected to become urbanized within the forecast period, and may encompass the entire Metropolitan Statistical Area/Consolidated Metropolitan Statistical Area (MSA/CMSA) as defined by the Bureau of the Census. For areas designated as non-attainment for ozone or carbon monoxide under the Clean Air Act, as amended, the boundaries of the metropolitan area shall be the boundaries of the non-attainment area, except as otherwise provided by the metropolitan

planning organization.

"(c) GENERAL REQUIREMENT FOR PLANNING.--In developing transportation plans and programs pursuant to this section, the metropolitan planning organization shall, at a minimum--

"(1) consider preservation of existing transportation facilities and, where practical, meet transportation needs by using existing transportation facilities more efficiently;

"(2) provide that transportation planning is consistent with applicable federal, state and local energy conservation programs, goals and objectives;

"(3) consider the need to relieve congestion;

"(4) conform with the applicable requirements of the Clean Air Act as amended;

"(5) consider the effect of transportation policy decisions on land use and development, and the provisions of all applicable short- and long-term land use and development plans;

"(6) recommend, where appropriate, the use of innovative financing mechanisms, including value capture, tolls, and congestion pricing to finance needed projects and programs;

"(7) provide for the programming of expenditure on transportation enhancement activities as required in section 133;

"(8) consider the effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded;

"(9) consider the overall social, economic, and environmental, affects of transportation decisions; and

"(10) develop a long range transportation plan.

"(d) TRANSPORTATION IMPROVEMENT PROGRAMS.--

"(1) DEVELOPMENT OF PROGRAMS.--The metropolitan planning organization, in cooperation with the State and relevant transit operators, shall develop a transportation improvement program that includes all projects within the metropolitan area proposed for funding pursuant to this title and the Urban Mass Transportation Act, and that is consistent with the long range plan developed by the metropolitan planning organization. The program may only include a project if full funding can be reasonably anticipated to be available for such project within the period of time contemplated for its completion. The program shall be updated at least annually.

"(2) PRIORITY OF PROJECTS.--The program shall establish sets of projects that shall be carried out for each three-year period after the initial adoption of the program.

"(3) PROGRAMMING OF FUNDS.--Notwithstanding any other provision of law, all projects carried out with federal participation pursuant to this title or the Urban Mass Transportation Act within the boundaries of a metropolitan area shall be programmed by the metropolitan planning organization with regard to the transportation improvement plan for such area and the priorities established therein.

"(e) ADDITIONAL REQUIREMENTS FOR AREAS OF OVER 250,000

POPULATION.--

"(1) For metropolitan areas of more than 250,000 population, transportation plans and programs shall be based on a continuing and comprehensive transportation planning process carried out by a metropolitan planning organization in cooperation with the State and transit operators.

"(2) The planning process shall include a congestion management system that provides for effective management of new and existing transportation facilities through the use of travel demand reduction and operational management strategies. In non-attainment areas for transportation-related pollutants, the development of the congestion management system shall be coordinated with the development of the transportation element of the State Implementation Plan required by the Clean Air Act as amended.

"(3) The Secretary shall assure that each metropolitan planning organization is carrying out its responsibilities under applicable provisions of federal law, and shall so certify at least once per annum. The Secretary shall fail to certify a metropolitan planning organization that is not carrying out applicable requirements of federal law. The provisions of subsection (d)(3) shall not apply in areas where the metropolitan planning organization has not received certification from the Secretary.

"(f) ADDITIONAL REQUIREMENTS FOR NON-ATTAINMENT AREAS.--

"(1) Notwithstanding any other provision of law, for

areas classified as non-attainment for ozone or carbon monoxide pursuant to the Clean Air Act, as amended, federal funds may not be programmed in such area for any highway project that will result in a significant increase in carrying capacity for single occupant vehicles unless the project is part of an approved congestion management system.

"(2) If, at the end of any three year planning period established pursuant to subsection (d), a project to be carried within such period has not been carried out, any changes in emissions of pollutants that contribute to non-attainment for ozone or carbon monoxide pursuant to the Clean Air Act, as amended, that have been attributed to such project shall be discounted for the purposes of conformity review pursuant to section 176(c) of the Clean Air Act, as amended, (42 U.S.C. 7506(c)) until such time as binding commitments have been made to complete the project by a date certain.

"(3) For the purpose of determining conformity pursuant to section 176(c) of the Clean Air Act, as amended, (42 U.S.C. 7506(c)), the metropolitan planning organization shall take into account emissions expected to result from all projects to be carried out within the metropolitan area, without regard to whether such projects are publicly or privately funded.

"(g) REPROGRAMMING OF SET ASIDE FUNDS.--Any funds set aside pursuant to section 104(f) of this title that are not used for the purpose of carrying out this subsection may be made available by the metropolitan planning organization to the state for the purpose

of funding activities under section 135.".

(b) ONE PERCENT SET ASIDE.--Section 104(f)(1) of title 23 United States Code is amended by striking "one-half per centum" and inserting in lieu thereof "one percent"; by striking "the Federal-aid systems" and inserting in lieu thereof "programs authorized under this title"; and by striking all after the third comma and inserting in lieu thereof "except that the amount from which such set aside is made shall not include funds authorized to be appropriated for the Interstate Construction and Interstate Substitute programs.".

(c) APPORTIONMENT WITHIN A STATE.--Section 104(f)(4) of title 23 United States Code is amended by striking "and metropolitan area transportation needs" and inserting in lieu thereof "attainment of air quality standards, metropolitan area transportation needs, and other factors necessary to provide for an appropriate distribution of funds to carry out the requirements of section 134 and other applicable federal law.".

(d) CONFORMING AMENDMENTS.--

(1) The analysis of chapter 1 of title 23 United States Code is amended by striking "Sec. 134 Transportation planning in certain urban areas." and inserting in lieu thereof "Sec. 134. Metropolitan Planning.".

(2) Section 104(f)(3) of title 23 United States Code is amended by striking "designated by the State as being".

Sec. 114. Statewide Planning.

(a) NEW REQUIREMENTS.--Section of 135 of title 23, United

States Code is amended to read as follows:

"Sec. 135. Statewide Planning.

"(a) MANAGEMENT SYSTEMS.--Each State shall have a Bridge Management System, a Pavement Management System, a Safety Management System, and Congestion Management System developed in accordance with regulations prescribed by the Secretary. Systems shall include inventories and use current condition data to identify needs. The Secretary may withhold project approvals under section 106 and may decline to accept a notice and certification under section 133(c)(2) if a State fails to have approved systems. The regulations shall provide for periodic Federal review of the Management Systems.

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"(b) TRAFFIC MONITORING SYSTEM.--Each State shall have a Traffic Monitoring System to provide statistically based data necessary for pavement management, bridge evaluation, safety management, congestion management, national studies, and other activities under this title. The Secretary shall establish guidelines and requirements for the Traffic Monitoring System."

"(c) STATE PLANNING PROCESS.--Each state shall undertake a continuous transportation planning process which shall--

"(1) take into account the results of the management systems required pursuant to subsection (a);

"(2) take into account any federal, state or local energy use goals, objectives, programs or requirements;

"(3) take into account any valid state or local development or land use plans, programs, or requirements;

"(4) take into account international border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations.

"(5) provide for comprehensive surface transportation planning for non-metropolitan areas;

"(6) be consistent with any metropolitan area plan developed pursuant to section 134; and

"(7) be coordinated with the development of any state implementation plan required under the Clean Air Act, as amended, and provide for compliance with any relevant requirements of such plan and such Act.

"(d) ADDITIONAL REQUIREMENTS FOR STATES CONTAINING NON-ATTAINMENT AREAS.--Any state containing an area in non-attainment for ozone or carbon monoxide pursuant to the Clean Air Act, as amended, shall develop and update on an annual basis a state transportation plan. In addition to the requirements in subsection (c), such plan shall--

"(1) incorporate without amendment the provisions of any metropolitan area plan developed pursuant to section 134; and

"(2) provide for coordination in the development of the state transportation plan required pursuant to this section any the state implementation plan required pursuant to the Clean Air Act, as amended.

"(e) FUNDING.--Funds set aside pursuant to section 307(c)(1)

and section 307(c)(2) of title 23 United States Code shall be available to carry out the requirements of this section."

(b) CONFORMING AMENDMENTS.--The analysis of chapter 1 of title 23 United States Code is amended by striking "Sec. 135. Traffic operations improvement programs." and inserting in lieu thereof "Sec. 135. Statewide Planning.".

Sec. 115. Research and Data Collection.

(a) RESEARCH PROGRAM.--Section 307 of title 23 United States Code is amended as follows:

(1) NEW REQUIREMENTS.--Subsection (b) is redesignated (b)(1), and the following new paragraphs are added thereafter:

"(2) The highway research program shall include a coordinated long term program of research on Intelligent Vehicle Highway Systems.

"(3) The highway research program shall include a coordinated long term program of research for the development, use and dissemination of performance indicators to measure the performance of the surface transportation system, including indicators for productivity, efficiency, energy use, air quality, congestion, safety, maintenance, and other factors that reflect the overall performance of the surface transportation system.

"(4) The highway research program shall continue those portions of the work of the Strategic Highway Research Program that the Secretary deems to be important.

"(5) The Secretary shall create and administer a

transportation research fellowship program to attract qualified students to the field of transportation engineering and research, which shall be known as The Dwight David Eisenhower Transportation Fellowship Program. No less than $2 million per fiscal year of the funds set aside pursuant to section 307 shall be made available to carry out this paragraph."

(2) Subsection (c) is amended by striking "highway programs and local public transportation systems" and inserting in lieu thereof "transportation programs"; by striking "highway usage" and inserting in lieu thereof "transportation"; and by striking "highways and highway systems" and inserting in lieu thereof "transportation systems".

(b) FEDERAL SHARE FOR STATE RESEARCH ACTIVITIES.--Section 120(j) is amended by striking "85 per centum" and inserting in lieu thereof "80 percent"; and by striking "exclusive of" and inserting in lieu thereof ", and".

(c) STATE AUTHORITY TO PROGRAM FUNDS.--Section 307(c) of title 23 United States Code is amended by striking "upon the request of the State highway department, with the approval of the Secretary, with or without State funds," in paragraph (1); and by repealing paragraph (3).

(d) DATA COLLECTION AND ANALYSIS.--

(1) Bureau [redacted] OF TRANSPORTATION STATISTICS.--There is hereby established within the Department of Transportation a Bureau [redacted]

of Transportation Statistics. The Bureau shall be headed by a Director (hereafter referred to as 'the Director'), who shall be appointed by the President with the advice and consent of the Senate, and who shall be removable only for cause.

(2) NEW REQUIREMENTS.--Section 303 of title 23 United States Code is amended to read as follows:

"Sec. 303. Data Collection and Analysis.

"(a) PROGRAM.--The Director of the Bureau of Transportation Statistics, in cooperation with the states, shall pursue a comprehensive, long-term program for the collection and analysis of data relating to the performance of the national transportation system. This effort shall--

"(1) be coordinated with the efforts undertaken pursuant to section 307(b)(3) to develop performance indicators for the national transportation system;

"(2) assure that data and other information is collected in a manner to maximize the ability to compare data from different regions and time periods; and

"(3) assure that data is quality controlled for accuracy and is disseminated to the states and other interest parties.

"(b) ESTIMATES.--The Director shall produce, on an annual basis, unbiased and comparable estimates of factors including but not limited to productivity in the various portions of the transportation sector, traffic flows, travel times, vehicle weights, variables influencing traveller behavior including choice

of mode, travel costs of intracity commuting and intercity trips, frequency of vehicle and transportation facility repairs and other interruptions of service, accidents, collateral damage to the human and natural environment, and the condition of the transportation system, which estimates shall be suitable for conducting cost-benefit studies and other analysis necessary for prioritizing transportation system problems and analyzing proposed solutions.

"(c) REPORTS.--Beginning on October 1, 1992, and every 12 months thereafter, the Director shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives a report containing the estimates described in subsection (b) and otherwise describing the status of the transportation system in the United States.

"(d) COLLECTION OF DATA.--The Secretary may use any authority granted under this or any other title, or any Act to collect data the Secretary deems to be important in carrying out the provisions of this section."

(3) FUNDING.--Section 104(a) of title 23 United States Code is amended by inserting ", data collection, and other programs" after "research"; and by inserting ", and section 303" after "section 307".

(4) ANALYSIS.--The analysis for chapter 3 of title 23 United States Code is amended by striking "Sec. 303. [Repealed. P.L. 97-449]." and inserting in lieu thereof "Sec. 303. Data Collection and Analysis.".

Sec. 116. Magnetic Levitation Transportation.

(a) DECLARATION OF POLICY.--Section 101(c) of title 23 United States Code is amended to read as follows:

"(c) It is the policy of the United States to establish in the shortest time practicable a United States designed and constructed magnetic levitation transportation technology capable of operating along federal-aid highway rights-of-way, as part of a national transportation system of the United States.".

(b) NATIONAL MAGNETIC LEVITATION DESIGN PROGRAM.--

(1) MANAGEMENT OF PROGRAM.--There is hereby established a National Magnetic Levitation Design Program to be managed jointly by Secretary and the Assistant Secretary of the Army for Civil Works (hereafter referred to as 'the Assistant Secretary'.) In carrying out such program, the Secretary and the Assistant Secretary shall consult with appropriate federal officials, including the Secretary of Energy and the Administrator of the Environmental Protection Agency. The Secretary and the Assistant Secretary shall establish a National Maglev Joint Project Office (hereafter referred to as the 'Maglev Project Office') to carry out such program, and shall enter into such arrangements as may be necessary for funding, staffing, office space, and other requirements that will allow the Maglev Project Office to carry out its functions.

(2) PHASE ONE GRANTS.--(A) Not later than 3 months after the date of enactment of this Act, any eligible participant

may submit to the Maglev Project Office a proposal for research and development of a conceptual design for a maglev system and an application for a grant to carry out that research and development.

(B) Not later than 6 months after the date of enactment of this Act, the Secretary and the Assistant Secretary shall award grants for one year of research and development to no less than six applicants. If fewer than six complete applications have been received, grants shall be awarded to as many applicants as is practical.

(C) The Secretary and the Assistant Secretary may approve a grant under subparagraph (B) only after consideration of factors relating to the construction and operation of a magnetic levitation system, including the cost-effectiveness, ease of maintenance, safety, limited environmental impact, ability to achieve sustained high speeds, ability to operate along the Interstate highway rights of way, the potential for the guideway design to be a national standard, and the bidder's resources, capabilities, and history of successfully designing and developing systems of similar complexity, Provided that the applicant agrees to submit a report to the Maglev Project Office detailing the results of the research and development, and agrees to provide for matching of the phase one grant at a 90 percent federal, 10 percent non-federal cost share.

(D) For purposes of this section, the term 'eligible participant' means United States private businesses, United States public and private education and research organizations, Federal laboratories, and consortia of such businesses, organizations and laboratories.

(3) PHASE TWO GRANTS.--Within 3 months of receiving the reports under paragraph (2), the Secretary and the Assistant Secretary shall select not more than 3 participants to receive one-year grants for research and development leading to a final design for a maglev system. The Secretary and the Assistant Secretary may only award grants under this paragraph if they determine that the applicant has demonstrated technical merit for the conceptual design and the potential for further development of such design into a national system, and if the applicant agrees to provide for matching of the phase two grant at a 80 percent federal, 20 percent non-federal cost share.

(4) PROTOTYPE.--(A) Within 6 months of receiving the final designs developed under paragraph (3), the Secretary and the Assistant Secretary shall select one design for development into a full scale prototype. Not more than 3 months after the selection of such design, the Secretary and the Assistant Secretary shall award one prototype construction grant to a State government, local government, organization of State and local governments, consortium of United States private businesses or any combination of these entities for

the purpose of constructing a prototype maglev system in accordance with the selected design.

(B) Selection of the grant recipient under this paragraph shall be based on the following factors:

(i) The project shall utilize Interstate highway rights of way.

(ii) The project shall have sufficient length to allow significant full speed operations between stops.

(iii) No more than 75 percent of the cost of the project shall be borne by the United States.

(iv) The project shall be constructed and ready for operational testing within 3 years after the award of the grant.

(v) The project shall provide for the conversion of the prototype to commercial operation after testing and technical evaluation is completed.

(vi) The project shall be located in an area that provides a potential ridership base for future commercial operation.

(vii) The project shall be located in an area that experiences climatic and other environmental conditions that are representative of such conditions in the United States as a whole.

(viii) The project shall be suitable for eventual inclusion in a national magnetic levitation system network.

(c) LICENSING.--

(1) PROPRIETARY RIGHTS.--No trade secrets or commercial or financial information that is privileged or confidential, under the meaning of section 552(b)(4) of title 5, United States Code, which is obtained from a United States business, research, or education entity as a result of activities under this Act shall be disclosed.

(2) COMMERCIAL INFORMATION.--The research, development and use of any technology developed pursuant to an agreement reached pursuant to this section, including the terms under which any technology may be licensed and the resulting royalties may be distributed, shall be subject to the provisions of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701-3714). In addition, the Secretary and the Assistant Secretary may require any grant recipient to assure that research and development shall be performed substantially in the United States, and that the products embodying the inventions made under any agreement pursuant to this section or produced through the use of such inventions shall be manufactured substantially in the United States.

(d) AVAILABILITY OF FUNDS.--Funds authorized to be appropriated to carry out this section shall remain available until expended.

(e) REPORTS.--The Secretary and the Assistant Secretary shall provide periodic reports on progress made under this section to the Committee on Environment and Public Works of the Senate and the

Committee on Public Works and Transportation of the House of Representatives.

Sec. 117. Access to Rights of Way.

(a) AVAILABILITY OF RIGHTS OF WAY.--Subsection 142(g) of title 23 United States Code is amended to read as follows:

"(g) In any case where sufficient land exists within the publicly acquired rights-of-way of any highway, constructed in whole or in part with Federal-aid highway funds, to accommodate needed passenger or commuter rail, high speed ground transportation systems including magnetic levitation systems, highway and non-highway public mass transit facilities the Secretary shall authorize a State to make such lands and rights-of-way available without charge to a publicly or privately owned authority or company for such purposes.".

(b) AVAILABILITY OF AIRSPACE.--Section 156 of title 23 United States Code is amended by adding before the period at the end of the first sentence the following: ", Provided that the States may permit governmental use, use by public or private entities for high speed ground transportation systems, including magnetic levitation systems, or other transit, utility use and occupancy where such use or occupancy is necessary for a transportation project allowed under this section, or use for transportation projects eligible for assistance under this title, without charge.".

(c) CONFORMING AMENDMENTS.--Section 142 of title 23, United State Code, is amended as follows:

(1) Paragraph (a)(1) is amended by striking "of the

Federal-aid systems"; and by striking "project on any Federal-aid system" and inserting in lieu thereof "Surface Transportation Program project or as an Interstate construction project".

(2) Paragraph (a)(2) is repealed.

(3) Subsection (c) is repealed.

(4) Paragraph (e)(2) is repealed.

(5) Subsections (i), (j) and (k) are repealed.

Sec. 118. Report on Reimbursement for Segments Constructed Without Federal Assistance.

The Secretary shall update the findings of the report required by Section 114 of the Federal-Aid Highway Act of 1956 to determine what amount the United States could pay to the States to reimburse the States for segments incorporated into the Interstate System that were constructed at non-federal expense. The report required under this section shall be completed by October 1, 1993, and shall be transmitted to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives.

Sec. 119. Disadvantaged Business Enterprises.

(a) CONTINUATION OF CURRENT LAW.--Section 106(c)(1) of the Surface Transportation and Uniform Relocation Assistance Act of 1987 is amended by striking "I and III of this Act or obligated under " and inserting instead "I of the Surface Transportation Efficiency Act of 1991 or obligated under titles I and III of this Act and ".

(b) ADJUSTMENT FOR INFLATION.--Sec. 106(c)(2)(A) of such 1987 Act is amended by striking "14,000,000" and inserting instead "15,370,000".

Sec. 120. Availability of Funds.

(a) Section 118 of title 23 United States Code is amended to read as follows:

"(a) DATE AVAILABLE FOR OBLIGATION.--Except as otherwise specifically provided, authorizations from the Highway Account of the Highway Trust Fund to carry out this title shall be available for obligation when apportioned or allocated, or on October 1 of the fiscal year for which they are authorized, whichever first occurs.

"(b) PERIOD OF AVAILABILITY.--

"(1) INTERSTATE CONSTRUCTION FUNDS.--Funds apportioned or allocated for Interstate Construction in a state shall remain available for obligation in that State until the close of the fiscal year in which they are apportioned or allocated Provided that all sums apportioned or allocated on or after October 1, 1994 shall remain available in the State until obligated and Provided Further that all sums apportioned or allocated to Massachusetts on or before October 1, 1989 shall remain available until obligated.

"(2) OTHER FUNDS.--Except as otherwise specifically provided, funds (other than Interstate Construction) apportioned or allocated pursuant to this title in a State shall remain available for obligation in that State for a

period of three years after the close of the fiscal year for which the funds are authorized. Any amounts so apportioned or allocated that remain unobligated at the end of that period shall lapse.

"(c) ALASKA AND PUERTO RICO.--Funds made available to the State of Alaska and the Commonwealth of Puerto Rico under this title may be expended for construction of access and development roads that will serve resource development, recreational, residential, commercial, industrial, and other like purposes.".

Sec. 121. Program Efficiencies.

(a) Section 102 of title 23 United States Code is amended to read as follows:

"Sec. 102. Program Efficiencies.

"(a) DESIGN, SAFETY AND CONSTRUCTION STANDARDS.--Except as provided in section 133(c), projects undertaken pursuant to the Surface Transportation Program must be designed, constructed, operated, and maintained in accordance with State laws, regulations, directives, safety standards, design standards, and construction standards.

"(b) PAVEMENT REHABILITATION PROJECTS.--Notwithstanding any other provision of this title, a State highway or transportation department may approve the design of a pavement rehabilitation project or highway resurfacing project on any project constructed pursuant to this title.

"(c) HIGHWAY MAINTENANCE STANDARDS.--Notwithstanding any other provision of this title, a state highway or transportation

department may establish maintenance standards for projects constructed pursuant to this title, which shall be subject to annual approval by the Secretary. The Secretary may not withhold project approval pursuant to section 166 if a State is meeting maintenance standards approved by the Secretary under this section.

"(d) HOV PASSENGER REQUIREMENTS.--A State highway or transportation department shall establish the occupancy requirements of vehicles operating in high occupancy vehicle lanes Provided that no fewer than two occupants may be required.

"(e) ENGINEERING COST REIMBURSEMENT.--A State shall refund to the Highway Trust Fund all federal funds for preliminary engineering for any project if the project has not yet advanced to construction or acquisition of right-of-way within 10 years.".

(b) HISTORIC AND SCENIC VALUES.--Section 109 of title 23 United States Code is amended by adding at the end the following new subsection:

"(p) Where a proposed project under sections 103(e)(4), 133, or 144 involves a historic facility or where such project is located in an area of historic or scenic value, the Secretary may approve such project notwithstanding the requirements of subsections (a) and (b) and section 133(c) only if such project is designed to standards that allow for the preservation of these values, Provided that such project is designed with mitigation measures to allow preservation of these values and ensure safe operation of the project.".

(c) DELEGATION OF RESPONSIBILITIES.--Section 302 of title 23

United States Code is amended by adding at the end the following new subsection:

"(c) At the request of the Governor of any State, the Secretary is authorized to interact with the highway or transportation department of a municipality of over 1 million population within the State in lieu of the state highway or transportation department for the purpose of project review for projects proposed to be undertaken within the municipality.".

(d) CONFORMING AMENDMENTS.--The analysis of chapter 1 of title 23 United States Code is amended by striking "Sec. 102. Authorizations." and inserting in lieu thereof "Sec. 102. Program efficiencies.".

Sec. 122. Use of Safety Belts and Motorcycle Helmets.

(a) NEW REQUIREMENTS.--Section 153 of title 23, United States Code, is amended to read as follows:

"153. Use of Safety Belts and Motorcycle Helmets.

"(a) STATE LAWS.--

"(1) FISCAL YEAR 1995.--If, at any time in fiscal year 1994 a State does not have in effect--

"(A) a State law which makes it unlawful for an individual to operate a motorcycle if an individual on the motorcycle is not wearing a motorcycle helmet; and

"(B) a State law which makes it unlawful for an individual to operate a passenger vehicle if an individual in a front seat of the vehicle (other than a child who is secured in a child restraint system) does

not have a safety belt properly fastened about the individual's body;

the State shall expend for highway safety programs in accordance with subsection (b) 1.5 percent of the amount apportioned to such State for fiscal year 1995 under section 104(b)(1).

"(2) AFTER FISCAL YEAR 1995.--If, at any time in a fiscal year beginning after September 30, 1994, a State does not have in effect--

"(A) a State law which makes it unlawful for an individual to operate a motorcycle if an individual on the motorcycle is not wearing a motorcycle helmet; and

"(B) a State law which makes it unlawful for an individual to operate a passenger vehicle if an individual in a front seat of the vehicle (other than a child who is secured in a child restraint system) has a safety belt properly fastened about the individual's body;

the State shall expend for highway safety programs in accordance with subsection (b) 3 percent of the amount apportioned to such State for the succeeding fiscal year under section 104(b)(1). A State which is required to expend funds for highway safety programs this subsection shall expend such funds for purposes eligible under section 402.

"(3) FEDERAL SHARE.--The federal share of the cost of any project carried out under this subsection shall be 100

percent.

"(4) AVAILABILITY.--Notwithstanding the requirements of section 118, funds subject to the set aside under this subsection shall be available only in year for which they were apportioned, and shall thereafter lapse. For the purposes of making expenditures of such funds, a State shall use an amount of the obligation authority distributed for the Surface Transportation Program for the fiscal year in which the set aside apportionments were made equal to the amount required to be expended under this subsection.

"(b) GRANTS TO STATES.--

"(1) STATE ELIGIBILITY.--The Secretary may make grants to a State in accordance with this section if such State has in effect--

"(A) a State law which makes it unlawful for an individual to operate a motorcycle if an individual on the motorcycle is not wearing a motorcycle helmet; and

"(B) a State law which makes it unlawful for an individual to operate a passenger vehicle if an individual in a front seat of the vehicle (other than a child who is secured in a child restraint system) does not have a safety belt properly fastened about the individual's body.

"(2) USE OF GRANTS.--a grant made to a State under this section shall be used to adopt and implement a traffic safety program to carry out the following purposes:

"(A) To educate the public about motorcycle and passenger vehicle safety and motorcycle helmet, safety belt, and child restraint system use and to involve public health education agencies and other related agencies in these efforts.

"(B) To train law enforcement officers in the enforcement of State laws described in paragraph (1).

"(C) To monitor the rate of compliance with State laws described in subsection (a).

"(D) To enforce State laws described in paragraph (1).

"(3) MAINTENANCE OF EFFORT.--A grant may not be made to a State under this section in any fiscal year unless the State enters into such agreements with the Secretary as the Secretary may require to ensure that such State will maintain its aggregate expenditures from all other sources for any traffic safety program described in subsection (b) at or above the average level of such expenditures in the State's 2 fiscal years preceding the date of the enactment of this section.

"(4) FEDERAL SHARE.--A State may not receive a grant under this section in more than 3 fiscal years. The Federal share payable for a grant under this section shall not exceed-

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"(A) in the first fiscal year such State receives a grant, 75 percent of the cost of implementing in such fiscal year a traffic safety program described in

subsection (b);

"(B) in the second fiscal year such State receives a grant, 50 percent of the cost of implementing in such traffic safety program; and

"(C) in the third fiscal year such State receives a grant, 25 percent of the cost of implementing in such fiscal year such traffic safety program.

"(5) MAXIMUM AGGREGATE AMOUNT OF GRANTS.--The aggregate amount of grants made to a State under this section shall not exceed 90 percent of the amount apportioned to such State for fiscal year 1990 under section 402.

"(6) ELIGIBILITY FOR GRANTS.--

"(A) A State is eligible in a fiscal year for a grant under this section only if the State enters into such agreements with the Secretary as the Secretary may require to ensure that the State implements in such fiscal year a traffic safety program described in subsection (b).

"(B) A State is eligible for a grant under this section in a fiscal year succeeding the first fiscal year in which a State receives a grant under this section only if the State in the preceding fiscal year-

"(i) has in effect at all times a State law described in paragraph (1)(A) and achieves a rate of compliance with such law of not less than 75 percent; and

"(ii) has in effect at all times a State law described in paragraph (1)(B) and achieves a rate of compliance with such law of not less than 50 percent.

"(C) A State is eligible for a grant under this section in a fiscal year succeeding the second fiscal year in which a State receives a grant under this section only if the State in the preceding fiscal year-

"(i) has in effect at all times a State law described in paragraph (1)(A) and achieves a rate of compliance with such law of not less than 85 percent; and

"(ii) has in effect at all times a State law described in paragraph (1)(B) and achieves a rate of compliance with such law of not less than 70 percent.

"(c) MEASUREMENTS OF RATES OF COMPLIANCE.--For the purposes of subsection (b)(2) and (3), a State shall measure compliance with State laws described in subsection (b)(1) using methods which conform to guidelines to be issued by the Secretary ensuring that such measurements are accurate and representative.

"(d) DEFINITIONS.--For the purposes of this section, the following definitions apply:

"(1) The term 'child restraint system' means a device which is designed for use in a passenger vehicle to restrain, seat, or position a child who weighs 50 pounds or less.

"(2) The term 'motorcycle' means a motor vehicle with motive power which is designed to travel on not more than 3 wheels in contact with the surface.

"(3) The term 'passenger vehicle means a motor vehicle with motive power which is designed for transporting 10 individuals or less, including the driver, except that such term shall not include a vehicle which is constructed on a truck chassis, a motorcycle, a trailer, or any motor vehicle which is not required on the date of the enactment of this section under a Federal motor vehicle safety standard to be equipped with a belt system.

"(4) The term 'safety belt' means--

"(A) with respect to open-body vehicles and convertibles, and occupant restraint system consisting of a lap belt or a lap belt and a detachable shoulder belt; and

"(B) with respect to other passenger vehicles, an occupant restraint system consisting of integrated lap and shoulder belts.".

"(e) AUTHORITY.--All provisions of chapter 1 of this title that are applicable to Surface Transportation Program funds, other than provisions relating to the apportionment formula, shall apply to funds authorized to be appropriated to carry out this section, except as determined by the Secretary to be inconsistent with this section and except that sums authorized by this section shall remain available until expended.".

(b) STUDY.--The Secretary shall conduct a study to collect and analyze data from trauma centers regarding differences in injuries, medical costs, payor mix, and unreimbursed costs of restrained and unrestrained, helmeted and non-helmeted victims of motor vehicle and motorcycle crashes. Of the amounts authorized to be appropriated for fiscal year 1992 to carry out the requirements of this section, not less than $5,000,000 shall be available to carry out this subsection. Public education and information activities in support of State and community motorcycle safety and safety belt programs shall be eligible for funds authorized to be appropriated for this study. Approval by the Secretary of Transportation of the payment of such sums shall establish a contractual obligation of the United States to pay such sums.

(c) REGULATIONS.--Not later than 180 days after the date of the enactment of this Act, the Secretary shall issue regulations to carry out section 153 of title 23, United States Code.

(d) CONFORMING AMENDMENT.--The analysis for chapter 1 of title 23 United States Code is amended by striking "Sec. 153. [Repealed.] and inserting in lieu thereof "Sec. 153. Use of Safety Belts and Motorcycle Helmets.".

Sec. 123. Definitions.

(a) NEW DEFINITIONS.--Section 101(a) of title 23 United States Code is amended adding definitions for "carpool project", "hazard elimination", "magnetic levitation system", "metropolitan area", "open to public travel", "operational improvement", "public authority", "public lands highway", "railway-highway crossing",

"reconstruction", and "transportation enhancement activities" as follows:

"The term 'carpool project' means any project to encourage the use of carpools and vanpools, including but not limited to provision of carpooling opportunities to the elderly and handicapped, systems for locating potential riders and informing them of carpool opportunities, acquiring vehicles for carpool use, designating existing highway lanes as preferential carpool highway lanes, providing related traffic control devices, and designating existing facilities for use for preferential parking for carpools.

"The term 'hazard elimination' means the correction or elimination of hazardous locations, sections or elements, including roadside obstacles and unmarked or poorly marked roads which may constitute a danger to motorists or pedestrians.

"The term 'magnetic levitation system' means any facility (including vehicles) using magnetic levitation for transportation of passengers or freight that is capable of operating at high speeds, and capable of operating along Interstate highway rights of way.".

"The term 'metropolitan area' means an area so designated by a metropolitan planning organization pursuant to section 134.".

"The term 'open to public travel' means that the road section is available, except during scheduled periods, extreme weather or emergency conditions, passable by four-wheel standard passenger cars, and open to the general public for use without restrictive gates, prohibitive signs, or regulations other than restrictions

based on size, weight, or class of registration. Toll plazas of public toll roads are not considered restrictive gates."

"The term 'operational improvement' means a capital improvement other than (1) a reconstruction project; (2) additional lanes except high occupancy vehicle lanes; (3) interchange and grade separations; or (4) the construction of a new facility on a new location. The term includes the installation of traffic surveillance and control equipment; computerized signal systems; motorist information systems, integrated traffic control systems; incident management programs; transportation demand management facilities, strategies, and programs; high occupancy vehicle preferential treatments including the construction of high occupancy vehicle lanes; and spot geometric and traffic control modifications to alleviate specific bottlenecks and hazards."

"The term 'public authority' means a Federal, State, county, town, or township, Indian tribe, municipal or other local government or instrumentality with authority to finance, build, operate or maintain toll or toll-free facilities.

"The term 'public lands highway' means any highway through national forest lands, unappropriated or unreserved federal lands, nontaxable Indian lands, or other federal reservations, which is under the jurisdiction of, and maintained by, a public authority and open to public travel.

"The term 'railway-highway crossing project' means any project for the elimination of hazards of railway-highway crossings, including the protection or separation of grades at crossings, the

reconstruction of existing railroad grade crossing structures, and the relocation of highways to eliminate grade crossings.

"The term 'reconstruction' means the addition of travel lanes and the construction and reconstruction of interchanges and overcrossings, including acquisition of right-of-way where necessary.

"The term 'transportation enhancement activities' means, with respect to any project or the area to be served by the project, highway safety improvement projects, railway-highway crossing projects, provision of facilities for pedestrians and bicycles, acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures or facilities including historic railroad facilities and canals, preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails, control and removal of outdoor advertising, archaeological planning and research, and mitigation of water pollution due to highway runoff.

(b) CONFORMING AMENDMENTS.--

(1) The definition for "highway" is amended by inserting "scenic easements" after "and also includes".

(2) The definitions for "Federal-aid highways", "Federal-aid system", "Federal-aid primary system", "Federal-aid secondary system", "Federal-aid urban system", "forest highway", "project", and "urban area" are repealed.

(3) The definition for "Indian reservation roads" is amended by striking ", including roads on the Federal-aid systems,".

Sec. 124. Functional Reclassification.

A functional reclassification, which shall be updated periodically, should be undertaken by each State (as that term is defined in section 101 of title 23, United States Code), the United States Virgin Islands, American Samoa, Guam and the Commonwealth of the Northern Mariana Islands, by September 30, 1992, and shall be completed by September 30, 1993 in accordance with guidelines that will be issued by the Secretary. The functional reclassification shall classify all public roads (as that term is defined in section 101 of title 23, United States Code).

Sec. 125. Repeal of Certain Sections of Title 23 United States Code.--(a) The following portions of title 23 United States Code are hereby repealed:

(1) Section 105, relating to programs;

(2) Section 117, relating to certification acceptance;

(3) Section 122, relating to bond retirement;

(4) Section 124, relating to advances to States;

(5) Section 126, relating to diversion of funds;

(6) Section 130, relating to railway-highway crossings;

(7) Section 137, relating to parking facilities;

(8) Section 146, relating to carpools;

(9) Section 147, relating to priority primary projects;

(10) Section 148, relating to a national recreational highway;

(11) Section 150, relating to urban system funds;

(12) Section 152, relating to hazard elimination;

(13) Section 155, relating to lake access highways;

(14) Section 201, relating to authorizations;

(15) Section 210, relating to defense access roads;

(16) Section 212, relating to the Inter-American Highway;

(17) Section 216, relating to the Darien Gap Highway;

(18) Section 218, relating to the Alaska Highway;

(19) Section 309, relating to foreign countries;

(20) Section 310, relating to civil defense;

(21) Section 311, relating to strategic highway improvements;

(22) Section 312, relating to military officers;

(23) Section 318, relating to highway relocation; and

(24) Section 320, relating to bridges on federal dams;

Sec. 126. Conforming and Technical Amendments.

(a) AMENDMENTS TO TITLE 23 UNITED STATES CODE.--Title 23, United States Code is amended as follows:

(1) Section 103 is amended as follows:

(A) Subsections (a), (b), (c), (d), and (g) are repealed.

(B) Paragraph (e)(1) is amended by striking "All highways or routes included in the Interstate System as finally approved, if not already coincident with the primary system, shall be added to said system without regard to the mileage limitation set forth in subsection (b) of this section".

(C) Paragraph (e)(4)(B) is amended by striking the last two sentences and inserting instead "Each highway project constructed under this paragraph shall be subject to the provisions of this title applicable to highway projects constructed under the Surface Transportation Program."

(D) Paragraph (e)(4)(H)(i) is amended by striking "and 1991" the three places it appears and inserting instead "1991, 1992, 1993, 1994 and 1995".

(E) Subsection (f) is amended to read as follows: "(f) The Secretary shall have authority to approve in whole or in part the Interstate System, or to require modifications or revisions thereof."

(2) Section 104 is amended as follows:

(A) Subsection (a) is amended by striking "the Federal-aid systems" and inserting in lieu thereof "a program authorized by this chapter".

(B) Subsection (b)(6) is repealed.

(C) Subsections (c) and (d) are repealed.

(3) Section 105 is amended as follows:

(A) Subsections (a) is amended by (i) striking "for the Federal-aid systems" and (ii) by striking ", but he shall not approve any project in a proposed program which is not located upon an approved Federal-aid system".

(B) Subsections (b), (c) and (d) are repealed.

(C) Subsection (f) is amended by striking "on the

Federal-aid systems".

(4) Section 106 is amended as follows:

(A) Subsection (a) is amended by striking "117" and inserting instead "133".

(B) Subsection (b) is repealed.

(C) Subsection (d) is amended by striking "on any Federal-aid System".

(5) Section 108 is amended as follows:

(A) Subsection (a) is amended by striking "on any of the Federal-aid highway systems, including the Interstate System," in two places.

(B) Paragraph (c)(2) is amended by striking "on any Federal-aid system".

(C) Paragraph (c)(3) is amended by striking "on the Federal-aid system of which such project is to be a part".

(6) Section 109 is amended as follows:

(A) Subsection (a) is amended by striking "on any Federal-aid system".

(B) Subsection (c) is repealed.

(C) Subsection (i) is amended by striking "on a Federal-aid system" in two places; and by striking "the Federal-aid system on which such project will be located".

(D) Paragraph (*l*)(1) is amended by striking "on any Federal-aid system".

(7) Section 112 is amended by striking subsection (f).

(8) Section 113 is amended--

(A) by striking "on the Federal-aid systems, the primary and secondary, as well as their extensions in urban areas, and the Interstate System,";

(B) by striking "upon the Federal-aid systems,"; and

(C) by striking "on any of the Federal-aid systems".

(9) Section 114 is amended as follows:

(A) Subsection (a) is amended by (1) striking "located on a Federal-aid system" and inserting instead "constructed under this chapter" and (2) striking "117" and inserting "133".

(B) Paragraph (b)(3) is amended by striking "located on a Federal-aid system" and inserting instead "under this chapter".

(10) Section 115 is amended as follows:

(A) The title of subsection (a) is amended by striking "Urban, Secondary," and inserting instead "Surface Transportation Program".

(B) Subparagraph (a)(1)(A)(i) is amended by striking "section 104(b)(2), section 104(b)(6)" and inserting instead "section 104(b)(1)".

(C) The title of subsection (b) is amended by striking "And Primary".

(D) Paragraph (b)(1) is amended (i) by striking "the

Federal-aid primary system or"; (ii) by striking "104(b)(1) or"; and (iii) by striking ", as the case may be,".

(11) Section 116 is amended as follows:

(A) Subsection (a) is amended by striking "The State's obligation to the United States to maintain any such project shall cease when it no longer constitutes a part of a Federal-aid system."

(B) Subsection (b) is amended by striking "on the Federal-aid secondary system, or within a municipality," and inserting instead "within a county or municipality".

(12) Section 120 is amended as follows:

(A) Subsection (c) is amended by striking the last sentence.

(B) Subsection (f) is amended by striking "project on a Federal-aid highway system, including the Interstate System, shall not exceed the Federal share payable on a project on such system as provided in subsections (a) and (c) of this section" and inserting instead "project on the Interstate System shall not exceed the Federal share payable on a project on that system as provided in subsection (c) of this section and any project off the Interstate System shall not exceed the Federal share payable as provided in subsection (a) of this section".

(C) Subsection (k) is amended by striking "for any Federal-aid system" and inserting instead "under section

104"; by striking ", and 155 of this title and for those priority primary routes under section 147"; and by striking "and for funds allocated under the provisions of section 155".

(D) Subsection (m) is repealed.

(13) Section 121(c) is amended by inserting "For projects obligated under section 106" in two places before the word "No"; and by striking "located on a Federal-aid system".

(14) Section 123 is amended by striking "on any Federal-aid system".

(15) Section 125 is amended as follows:

(A) Subsection (a) is amended (i) by striking "highways on the Federal-aid highway systems, including the Interstate System" and inserting instead "public roads except roads functionally classified as local or rural minor collector" and (ii) by striking "authorized on the Federal-aid highway systems, including the Interstate System" and inserting instead "authorized on public roads except roads functionally classified as local or as rural minor collector".

(B) Subsection (c) is amended by striking ", whether or not such highways, roads, or trails are on any of the Federal-aid highway systems".

(16) Section 139 is amended as follows:

(A) Subsection (a) is amended (i) by striking "on the Federal-aid primary system"; (ii) by striking

"sections 104(b)(1) and" and inserting instead "section"; and (iii) by striking "rehabilitating and reconstructing" and inserting instead "and rehabilitating".

(B) Subsection (b) is amended (i) by striking "on the Federal-aid primary system"; (ii) by striking "sections 104(b)(1) and" and inserting instead "section"; (iii) by striking "rehabilitating and reconstructing" and inserting instead "and rehabilitating"; and (iv) by striking "section" in the last sentence and inserting instead "subsection".

(C) Subsection (c) is amended (i) by striking "on the Federal-aid primary system"; (ii) by striking "sections 104(b)(1) and" and inserting instead "section"; and (iii) by striking "restoration, and reconstruction" and inserting instead "and restoration".

(17) Section 140 is amended as follows:

(A) Subsection (a) is amended by striking "on any of the Federal-aid systems,".

(B) Subsection (c) is amended by striking "104(a)" and inserting instead "104(b)".

(18) Section 141(b) is amended striking "on the Federal-aid primary system, the Federal-aid urban system, and the Federal-aid secondary system" and inserting instead "on public roads except roads functionally classified as local or rural minor collector".

(19) Section 157 is amended as follows:

(A) Subsection (b) is amended (i) by striking "primary, secondary, Interstate, urban" and inserting instead "Interstate, Surface Transportation Program" and (ii) by striking the period at the end of the last sentence and inserting instead "and section 105(c) of the Federal-Aid Highway Act of 1991.".

(B) Subsection (d) is amended by striking "154(f) or".

(20) Paragraph (a)(2) of section 158 is amended by striking "104(b)(2), 104(b)(5), and 104(b)(6)" and inserting instead "and 104(b)(5)".

(21) Section 215 is amended as follows:

(A) Clause (2) of subsection (c) is amended by inserting at the beginning "except as provided in section 129".

(B) Subsection (e) is repealed.

(C) Subsection (f) is amended by (1) striking "federal-aid primary highway" and inserting instead "Surface Transportation Program" and by (2) striking "and provisions limiting the expenditure of such funds to the Federal-aid systems".

(22) Section 217 is amended as follows:

(A) Subsection (a) is amended by striking ", (2) and (6)".

(B) Subsection (b) is amended by striking ", (2) and (6)".

(23) Section 302(b) is amended by striking ", for the construction of projects on the Federal-aid secondary system, financed with secondary funds, and for the maintenance thereof".

(24) Section 304 is amended by striking "the Federal-aid highway systems, including the Interstate System" and inserting instead "Federal-aid highways".

(25) Section 315 is amended by striking "sections 204(d), 205(a), 206(b), 207(b), and 208(c)" and inserting instead "section 205(a)".

(26) Section 317(d) is amended by striking "on a Federal-aid system" and inserting instead "with Federal aid".

(27) Subsection (d) of section 402 is amended (A) by striking "Federal-aid primary highway" and inserting instead "Surface Transportation Program" and (B) by striking "and provisions limiting the expenditure of such funds to the Federal-aid system".

(28) Subsection (g) of section 408 is amended (A) by striking "Federal-aid primary highway" and inserting instead "Surface Transportation Program" and (B) by striking "and provisions limiting the expenditure of such funds to Federal-aid systems".

(b) AMENDMENTS TO THE HIGHWAY SAFETY ACT OF 1978.--Subsection (i) of section 209 of the Highway Safety Act of 1978 is amended by (1) striking "Federal-aid primary highway" and inserting instead "Surface Transportation Program" and by (2) striking "and

provisions limiting the expenditure of such funds to the Federal-aid systems".

(c) AMENDMENTS TO THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982.--(1) Section 411 of the Surface Transportation Assistance Act of 1982 is amended as follows:

(A) Subsection (a) is amended by striking "Federal-aid Primary System highways" and inserting instead "highways which were designated as Federal-aid primary system highways before the enactment of the Federal-aid Highway Act of 1991".

(B) Subsection (c) is amended by striking "Federal-aid Primary System highways" and inserting instead "highways which were designated as Federal-aid Primary System highways before the enactment of the Federal-aid Highway Act of 1991".

(C) Subsection (e) is amended by striking "Federal-aid Primary System highways" and "Primary System highways" and inserting instead in two places "highways which were designated as Federal-aid Primary System highways before the enactment of the Federal-aid Highway Act of 1991".

(2) Section 412(a) of the Surface Transportation Assistance Act of 1982 is amended by striking "Federal-aid Primary System highways" and inserting instead "highways which were designated as Federal-aid Primary System highways before the enactment of the Federal-aid Highway Act of 1991".

(3) Section 416 of the Surface Transportation Assistance Act of 1982 is amended as follows:

(A) Subsection (a) is amended by striking Federal-aid highway" in two places and inserting instead "highway which was on a Federal-aid system on the date of the enactment of the Federal-aid Highway Act of 1991"; and by striking "Federal-aid Primary System highway" and inserting instead "highway which was on the Federal-aid Primary System on the date of enactment of the Federal-aid Highway Act of 1991".

(B) Subsection (d) is amended by striking "Federal-aid highway" and inserting instead "highway which was on a Federal-aid system on the date of the enactment of the Federal-aid Highway Act of 1991".

(d) AMENDMENTS TO TITLE 42 UNITED STATES CODE.--Section 5122(8)(B) of title 42, United States Code, is amended by striking "any non-Federal-aid street, road or highway" and inserting instead "any street, road or highway not eligible for emergency relief under title 23, United States Code."

(e) OPERATION LIFESAVER.--Whenever apportionments are made under section 104(a) of title 23 United States Code, the Secretary shall deduct such sums as he deems necessary, not to be less than $250,000 per fiscal year, for carrying out Operation Lifesaver.

Sec. 127. Recodification.

The Secretary shall, by October 1, 1993, prepare a recodification of title 23, United States Code, related Acts and

statutes and submit the recodification to the Congress for consideration.

TITLE II -- NATIONAL RECREATIONAL TRAILS TRUST FUND ACT

Sec. 201. Short Title.

This title may be cited as the National Recreational Trails Fund Act of 1991.

Sec. 202. Creation of National Recreational Trails Trust Fund.

(a) IN GENERAL.--Subchapter A of chapter 98 of the Internal Revenue Code of 1986 (relating to trust fund code) is amended by adding at the end thereof the following new section:

"Sec. 9511. NATIONAL RECREATIONAL TRAILS TRUST FUND.

(a) CREATION OF TRUST FUND.--There is established in the Treasury of the United States a trust fund to be known as the 'National Recreational Trails Trust Fund', consisting of such amounts as may be appropriated, credited, or paid to it as provided in this section, section 9503(c)(6), or section 9602(b).

"(a) EXPENDITURES FROM TRUST FUND.--Amounts in the National Recreational Trails Trust Fund shall be available for making expenditures to carry out the purposes of the National Recreational Trails Fund Act of 1991."

(b) DEPOSIT OF UNREFUNDED HIGHWAY TRUST FUND MONEYS.--Section 9503(c) of the Internal Revenue Code of 1986 (relating to Highway Trust Fund) is amended--

(1) by adding at the end thereof the following new paragraph:

"(6) TRANSFERS FROM THE TRUST FUND FOR NONHIGHWAY

RECREATIONAL FUEL TAXES.--

"(A) TRANSFER TO NATIONAL RECREATIONAL TRAILS TRUST FUND.--The Secretary shall annually pay from the Highway Trust Fund into the National Recreational Trails Trust Fund amounts (as determined by the Secretary) equivalent to 0.3% of total Highway Trust Fund receipts, as adjusted by the Secretary pursuant to subparagraph (B).

"(B) ADJUSTMENT OF PERCENTAGE.--

"(i) FIRST YEAR.--Within one year after the date of enactment of this Act, the Secretary shall, based on studies of nonhighway recreational fuel usage in the various States, adjust the percentage of receipts paid into the National Recreational Trails Trust Fund to correspond to the revenue received from nonhighway recreational fuel taxes.

"(ii) SUBSEQUENT YEARS.--Not more frequently than once every 3 years, the Secretary may increase or decrease the percentage established under clause (i) to reflect, in the Secretary's estimation, changes in the amount of revenues received from nonhighway recreational fuel taxes.

"(iii) AMOUNT OF ADJUSTMENT.--The amount of an adjustment in the percentage stated in clause (ii) shall be not more than 10 percent of that percentage in effect at the time the adjustment is made.

"(iv) USE OF DATA.--The Secretary shall make use of data on off-highway recreational vehicle registrations and use in making adjustments under clauses (i) and (ii).

"(C) DEFINITIONS.--For the purposes of this paragraph--

"(i) NONHIGHWAY RECREATIONAL FUEL TAXES.--The term 'nonhighway recreational fuel taxes' means the taxes under sections 4041, 4081, and 4091 (to the extent attributable to the Highway Trust Fund financing rate) with respect to fuel used as nonhighway recreational fuel.

"(ii) NONHIGHWAY RECREATIONAL FUEL.--The term 'nonhighway recreational fuel' means--

"(I) fuel used in vehicles and equipment on recreational trails or back country terrain, including use in vehicles registered for highway use when used on recreational trails or back country terrain; and

"(II) fuel used in campstoves and other outdoor recreational equipment."; and

(2) by striking paragraph (2)(C) and inserting the following:

"(C) EXCEPTION FOR USE IN AIRCRAFT AND MOTORBOATS, AND AS NONHIGHWAY RECREATIONAL FUEL.--This paragraph shall not apply to amounts estimated by the Secretary as

attributable to--

"(i) use of gasoline and special fuels in motorboats or in aircraft, and

"(ii) use of gasoline as nonhighway recreational fuel as defined in paragraph (6)(C)(ii).".

(c) CONFORMING AMENDMENT.--Section 6421(e)(2) of the Internal Revenue Code of 1986 (defining off-highway business use) is amended by adding at the end thereof the following new subparagraph:

"(C) EXCEPTION FOR USE AS NONHIGHWAY RECREATIONAL FUEL.--The term 'off-highway business use' does not include any use as nonhighway recreational fuel as defined in section 9503(c)(6)(C)(ii).".

(d) CLERICAL AMENDMENT.--The table of sections for subchapter A of chapter 98 of the Internal Revenue Code of 1986 is amended by adding at the end thereof the following new item:

"Sec. 9511. National Recreational Trails Trust Fund.".

Sec. 203. National recreational Trails Program.

(a) IN GENERAL.--The Secretary, using amounts available in the Fund, shall administer a program allocating moneys to the States for the purposes of providing for and maintaining recreational trails.

(b) STATE ELIGIBILITY.--

(1) TRANSITIONAL PROVISION.--Until the date that is 3 years after the date of enactment of this Act, a State shall be eligible to receive moneys under this Act only if such

State's application proposes to use the moneys as provided in subsection (d).

(2) PERMANENT PROVISION.--On and after the date that is 3 years after the date of enactment of this Act, a State shall be eligible to receive moneys under this Act only if--

(A) the State has established a State Recreational Trails Advisory Board on which both motorized and non-motorized recreational trail users are represented;

(B) in the case of a State that imposes a tax on nonhighway recreational fuel, the State by law reserves a reasonable estimation of the revenues from that tax for use in providing for and maintaining recreational trails; and

(C) the Governor of the State has designated the State official who will be responsible for administering moneys received under this Act; and

(D) the State's application proposes to use moneys received under this Act as provided in subsection (d).

(c) ALLOCATION OF MONEYS IN THE FUND.--

(1) ADMINISTRATIVE COSTS.--No more than 3 percent of the expenditures made annually from the Fund may be used to pay the cost to the Secretary for--

(A) approving applications of States for moneys under this Act;

(B) paying expenses of the National Recreational Trails Advisory Committee; and

(C) conducting national surveys of nonhighway recreational fuel consumption by State, for use in making determinations and estimations pursuant to this Act.

(2) ALLOCATION TO STATES.--

(A) AMOUNT.--Amounts in the Fund remaining after payment of the administrative costs described in paragraph (1), shall be allocated and paid to the States annually in the following proportions:

(i) EQUAL AMOUNTS.--50 percent of such amounts shall be allocated equally among eligible States.

(ii) AMOUNTS PROPORTIONATE TO NONHIGHWAY RECREATIONAL FUEL USE.--50 percent of such amounts shall be allocated among eligible States in proportion to the amount of nonhighway recreational fuel use during the preceding year in each such State, respectively.

(B) USE OF DATA.--In determining amounts of nonhighway recreational fuel use for the purpose of subparagraph (A)(ii), the Secretary may consider data on off-highway vehicle registrations in each State.

(d) USE OF ALLOCATED MONEYS.--

(1) PERMISSIBLE USES.--A State may use moneys received under this Act for--

(A) in an amount not exceeding 7 percent of the amount of moneys received by the State, administrative costs of the State;.

(B) in an amount not exceeding 5 percent of the amount of moneys received by the State, operation of environmental protection and safety education programs relating to the use of recreational trails;

(C) development of urban trail linkages near homes and workplaces;

(D) maintenance of existing recreational trails, including the grooming and maintenance of trails across snow;

(E) restoration of areas damaged by usage of recreational trails and back country terrain;

(F) development of trail-side and trail-head facilities that meet goals identified by the National Recreational Trails Advisory Committee;

(G) acquisition of easements;

(H) acquisition of fee simple title to property from a willing seller, when the objective of the acquisition cannot be accomplished by acquisition of an easement or by other means;

(I) construction of new trails on State, county, municipal, or private lands, where a recreational need for such construction is shown; and

(J) construction of new trails on federal lands, where such construction is approved by the administering agency of the State, a majority of the State's Recreational Trail Advisory Board, and the federal agency

or agencies charged with management of all impacted lands, such approval to be contingent upon compliance by the federal agency with all other applicable laws, including the National Environmental Policy Act (42 U.S.C. 4321 et seq.), the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, (16 U.S.C. 1600, et seq.), and the Federal Land Policy and Management Act (43 U.S.C. 1701, et seq.).

(2) USE NOT PERMITTED.--A State may not use moneys received under this Act for--

(A) condemnation of any kind of interest in property, or

(B) construction of any recreational trail for motorized use on or through lands which have been recommended by any agency of the federal government for inclusion in the National Wilderness Preservation System.

(3) GRANTS.--

(A) IN GENERAL.--A State may provide moneys received under this Act as grants to private individuals, organizations, city and county governments, and other government entities as approved by the State's Recreational Trail Advisory Board, for uses consistent with this section.

(B) COMPLIANCE.--A State that issues such grants under subparagraph (A) shall establish measures to verify that recipients comply with the specified conditions for

the use of grant moneys.

(4) BALANCE OF MOTORIZED AND NON-MOTORIZED BENEFITS.--Not less than 30 percent of the moneys received annually by a State under this Act shall be expended for benefits directed to motorized recreation, and not less than 30 percent of those moneys shall be expended for benefits directed to non-motorized recreation.

(5) DIVERSIFIED TRAIL USE.--

(A) REQUIREMENT.--To the extent practicable and consistent with other requirements of this section, a State shall expend not less than 40 percent of moneys received under this Act in a manner that gives preference to project proposals which--

(i) provide for the greatest number of recreational purposes including, but not limited to, those described under the definition of "recreational trail" in subsection (f)(5); and

(ii) provide for innovative recreational trail corridor sharing to accommodate motorized and non-motorized recreational trail use.

(B) COMPLIANCE.--The determination as to whether a project or grant meets the requirements of subparagraph (A) shall be made by the State Recreational Trail Advisory Board.

(6) SMALL STATE EXCLUSION.--Any State with a total land area of less than 3,500,000 acres, and in which nonhighway

recreational fuel use accounts for less than one percent of all such fuel use in the United States, shall be exempted from the requirements of paragraphs (4) and (5)(A)(ii) of this subsection upon application to the Secretary by the State demonstrating that it meets the conditions of this paragraph.

(7) RETURN OF MONEYS NOT EXPENDED.--Moneys paid to a State that are not expended or dedicated to a specific project within 2 years after receipt for the purposes stated in this subsection shall be returned to the Fund and shall thereafter be reallocated under the formula stated in subsection (c).

(e) COORDINATION OF ACTIVITIES.--

(1) COOPERATION BY FEDERAL AGENCIES.--Each agency of the United States Government that manages land on which a State proposes to construct or maintain a recreational trail pursuant to this Act is encouraged to cooperate with the State and the Secretary in planning and carrying out the activities described in subsection (d). Nothing in this Act diminishes or in any way alters the land management responsibilities, plans and policies established by such agencies pursuant to other applicable laws.

(2) COOPERATION BY PRIVATE PERSONS.--

(A) WRITTEN ASSURANCES.--As a condition to making available moneys for work on recreational trails that would affect privately owned land, a State shall obtain written assurances that the owner of the property will cooperate with the State and participate as necessary in

the activities to be conducted.

(B) PUBLIC ACCESS.--Any use of a State's allocated moneys on private lands must be accompanied by an easement or other legally binding agreement that ensures public access to the recreational trail improvements funded by those moneys.

(f) DEFINITIONS.--For the purposes of this section--

(1) ELIGIBLE STATE.--The term "eligible State" means a State that meets the requirements stated in subsection (b).

(2) FUND.--The term "Fund" means the National Recreational Trails Fund established by section 9511 of the Internal Revenue Code of 1986.

(3) NONHIGHWAY RECREATIONAL FUEL.--The term "nonhighway recreational fuel" has the meaning stated in section 9503(c)(6)(C)(ii) of the Internal Revenue Code of 1986.

(4) SECRETARY.--The term "Secretary" means the Secretary of the Interior.

(5) RECREATIONAL TRAIL.--The term "recreational trail" means a thoroughfare or track across land or snow, used for recreational purposes such as bicycling, cross-country skiing, day hiking, equestrian activities, jogging or similar fitness activities, trail biking, overnight and long-distance backpacking, snowmobiling, and vehicular travel by motorcycle, four-wheel drive or all-terrain off-road vehicles, without regard to whether it is a "National Recreation Trail" designated under section 4 of the National Trails System Act

(16 U.S.C. 1243).

SEC. 204. National Recreational Trails Advisory Committee.

(a) ESTABLISHMENT.--There is established the National Recreational Trails Advisory Committee.

(b) MEMBERS.--There shall be 10 members of the advisory committee, consisting of--

(1) 8 members appointed by the Secretary from nominations submitted by recreational trail user organizations, one each representing the following recreational trail uses:

(A) Hiking,

(B) Cross country skiing,

(C) Off-highway motorcycling,

(D) Snowmobiling,

(E) Horseback riding,

(F) All terrain vehicle riding,

(G) Bicycling,

(H) Four-wheel driving;

(2) an appropriate government official, including any official of State or local government, designated by the Secretary; and

(3) 1 member appointed by the Secretary from nominations submitted by water trail user organizations.

(c) CHAIR.--The Chair of the advisory committee shall be the government official referenced in subsection (b)(2), who shall serve as a non-voting member.

(d) SUPPORT FOR COMMITTEE ACTION.--Any action, recommendation,

or policy of the advisory committee must be supported by at least 5 of the members appointed under subsection (b)(1).

(d) TERMS.--Members of the advisory committee appointed by the Secretary shall be appointed for terms of 3 years, except that the members filling five of the ten positions shall be initially appointed for terms of 2 years, with subsequent appointments to those positions extending for terms of 3 years.

(e) DUTIES.--The advisory committee shall meet at least twice annually to--

(1) review utilization of allocated moneys by States;

(2) establish and review criteria for trail-side and trail-head facilities that qualify for funding under this Act; and

(3) make recommendations to the Secretary for changes in Federal policy to advance the purposes of this Act.

(f) ANNUAL REPORT.--The advisory committee shall present to the Secretary an annual report on its activities.

(g) REIMBURSEMENT FOR EXPENSES.--Non-governmental members of the advisory committee shall serve without pay, but, to the extent funds are available pursuant to section 203(c)(1)(B), shall be entitled to reimbursement for travel, subsistence, and other necessary expenses incurred in the performance of their duties.

(h) REPORT TO CONGRESS.--Not later than 4 years after the date of enactment of this Act, the Secretary shall prepare and submit to the Committee on Environment and Public Works of the Senate, and the Committee on Public Works and Transportation of the House of

Representatives, a study which summarizes the annual reports of the National Recreational Trails Advisory Committee, describes the allocation and utilization of moneys under this Act, and contains recommendations for changes in federal policy to advance the purposes of this Act.

Technical Assistance
for Senator Moynihan

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

SUMMARY OF APPORTIONMENTS FOR FISCAL YEAR 1992

STATES	SURFACE TRANSPORTATION, BRIDGE & INT. MAINT.	CONGESTION/ AIR QUALITY	INTERSTATE CONSTR/SUB	SUBTOTAL	PERCENT	MINIMUM ALLOCATION	TOTAL	PERCENT
ALABAMA	234,462,202	6,271,373	17,795,000	258,528,575	1.73%	0	258,528,575	1.67%
ALASKA	193,483,284	1,861,814	0	195,345,098	1.31%	0	195,345,098	1.26%
ARIZONA	163,745,347	11,660,834	0	175,406,181	1.17%	23,718,142	199,124,323	1.29%
ARKANSAS	137,654,671	0	0	137,654,671	0.92%	47,289,222	184,943,893	1.20%
CALIFORNIA	987,401,502	189,317,068	255,956,000	1,432,674,570	9.58%	0	1,432,674,570	9.26%
COLORADO	192,683,976	14,992,501	18,295,000	225,971,477	1.51%	0	225,971,477	1.46%
CONNECTICUT	208,056,202	16,364,364	70,254,000	294,674,566	1.97%	0	294,674,566	1.90%
DELAWARE	62,633,366	587,941	0	63,221,307	0.42%	0	63,221,307	0.41%
DIST. OF COL.	65,110,791	5,879,412	39,602,000	110,592,203	0.74%	0	110,592,203	0.71%
FLORIDA	460,493,294	30,768,923	25,293,000	516,555,217	3.46%	93,645,812	610,201,029	3.94%
GEORGIA	328,200,626	15,678,432	52,653,000	396,532,058	2.65%	72,728,487	469,260,545	3.03%
HAWAII	64,111,065	0	55,559,000	119,670,065	0.80%	0	119,670,065	0.77%
IDAHO	95,423,545	0	0	95,423,545	0.64%	0	95,423,545	0.62%
ILLINOIS	475,039,369	53,208,679	0	528,248,048	3.53%	0	528,248,048	3.41%
INDIANA	252,904,788	14,306,569	2,018,000	269,229,357	1.80%	54,703,462	323,932,819	2.09%
IOWA	191,682,216	0	0	191,682,216	1.28%	0	191,682,216	1.24%
KANSAS	175,196,798	2,645,735	0	177,842,533	1.19%	0	177,842,533	1.15%
KENTUCKY	202,286,516	10,778,922	17,120,000	230,185,438	1.54%	0	230,185,438	1.49%
LOUISIANA	200,500,717	4,899,510	13,571,000	218,971,227	1.46%	16,474,186	235,445,413	1.52%
MAINE	77,647,269	3,919,608	0	81,566,877	0.55%	0	81,566,877	0.53%
MARYLAND	191,301,357	28,515,148	110,299,000	330,115,505	2.21%	0	330,115,505	2.13%
MASSACHUSETTS	232,654,084	43,213,679	103,243,000	379,110,763	2.54%	0	379,110,763	2.45%
MICHIGAN	343,613,000	27,633,237	25,643,000	396,889,237	2.65%	14,697,263	411,586,500	2.66%
MINNESOTA	213,285,084	15,874,413	23,418,000	252,577,497	1.69%	0	252,577,497	1.63%
MISSISSIPPI	152,713,657	0	0	152,713,657	1.02%	18,949,027	171,662,684	1.11%
MISSOURI	299,172,392	16,952,305	0	316,124,697	2.11%	11,450,144	327,574,841	2.12%
MONTANA	135,107,081	489,951	0	135,597,032	0.91%	0	135,597,032	0.88%
NEBRASKA	131,065,141	0	0	131,065,141	0.88%	0	131,065,141	0.85%
NEVADA	93,626,923	4,899,510	0	98,526,433	0.66%	0	98,526,433	0.64%
NEW HAMPSHIRE	75,209,163	2,547,745	0	77,756,908	0.52%	0	77,756,908	0.50%
NEW JERSEY	310,307,922	58,010,199	158,513,000	526,831,121	3.52%	0	526,831,121	3.41%
NEW MEXICO	130,688,657	2,939,706	0	133,628,363	0.89%	0	133,628,363	0.86%
NEW YORK	668,909,146	111,708,829	90,750,000	871,367,975	5.83%	0	871,367,975	5.63%
NORTH CAROLINA	297,800,224	18,324,168	36,814,000	352,938,392	2.36%	42,463,017	395,401,409	2.56%
NORTH DAKOTA	91,148,420	0	0	91,148,420	0.61%	0	91,148,420	0.59%
OHIO	424,075,735	44,683,532	28,419,000	497,178,267	3.33%	22,469,625	519,647,892	3.36%
OKLAHOMA	182,997,064	0	0	182,997,064	1.22%	33,960,332	216,957,396	1.40%
OREGON	150,896,607	9,113,089	31,770,000	191,779,696	1.28%	0	191,779,696	1.24%
PENNSYLVANIA	502,810,206	71,826,817	297,195,000	871,892,023	5.83%	0	871,892,023	5.64%
RHODE ISLAND	63,227,178	6,173,383	30,520,000	99,920,561	0.67%	0	99,920,561	0.65%
SOUTH CAROLINA	180,491,528	3,429,657	15,970,000	199,891,185	1.34%	0	199,891,185	1.29%
SOUTH DAKOTA	101,105,794	0	0	101,105,794	0.68%	0	101,105,794	0.65%
TENNESSEE	269,558,773	17,246,275	15,460,000	302,265,048	2.02%	0	302,265,048	1.95%
TEXAS	770,113,013	51,738,826	52,935,000	874,786,839	5.85%	66,050,454	940,837,293	6.08%
UTAH	115,899,413	7,447,255	0	123,346,668	0.83%	0	123,346,668	0.80%
VERMONT	67,577,533	0	0	67,577,533	0.45%	0	67,577,533	0.44%
VIRGINIA	255,396,023	19,108,089	117,916,000	392,420,112	2.62%	0	392,420,112	2.54%
WASHINGTON	215,603,927	17,638,286	152,306,000	385,547,263	2.58%	0	385,547,263	2.49%
WEST VIRGINIA	150,167,793	4,899,510	0	155,067,303	1.04%	0	155,067,303	1.00%
WISCONSIN	202,455,874	12,444,756	126,014,000	340,914,630	2.28%	0	340,914,630	2.20%
WYOMING	101,753,415	0	0	101,753,415	0.68%	0	101,753,415	0.66%
AMERICAN SAMOA	528,834	0	0	528,834	0.00%	0	528,834	0.00%
GUAM	528,834	0	0	528,834	0.00%	0	528,834	0.00%
PUERTO RICO	79,383,239	0	0	79,383,239	0.53%	0	79,383,239	0.51%
N. MARIANAS	528,834	0	0	528,834	0.00%	0	528,834	0.00%
VIRGIN ISLANDS	528,834	0	0	528,834	0.00%	0	528,834	0.00%
TERRITORIES	14,392,554	0	0	14,392,554	0.10%	0	14,392,554	0.09%
TOTAL	11,985,400,000	980,000,000	1,985,301,000	14,950,701,000	100.00%	518,599,173	15,469,300,173	100.00%

Technical Assistance
For Senator Moynihan

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

SUMMARY OF APPORTIONMENTS FOR FISCAL YEAR 1993

STATES	SURFACE TRANSPORTATION, BRIDGE & INT. MAINT.	CONGESTION/ AIR QUALITY	INTERSTATE CONSTR/SUB	SUBTOTAL	PERCENT	MINIMUM ALLOCATION	TOTAL	PERCENT
ALABAMA	245,006,291	6,271,373	10,249,000	261,526,664	1.69%	0	261,526,664	1.62%
ALASKA	202,184,495	1,861,814	0	204,046,309	1.32%	0	204,046,309	1.27%
ARIZONA	171,109,202	11,660,834	0	182,770,036	1.18%	23,533,122	206,303,158	1.28%
ARKANSAS	143,845,192	0	0	143,845,192	0.93%	47,766,302	191,611,494	1.19%
CALIFORNIA	1,031,806,312	189,317,068	151,095,000	1,372,218,380	8.86%	12,261,368	1,384,479,748	8.59%
COLORADO	201,349,240	14,992,501	10,537,000	226,878,741	1.46%	0	226,878,741	1.41%
CONNECTICUT	217,412,777	16,364,364	63,820,000	297,597,141	1.92%	0	297,597,141	1.85%
DELAWARE	65,450,075	587,941	0	66,038,016	0.43%	0	66,038,016	0.41%
DIST. OF COL.	68,038,914	5,879,412	23,058,000	96,976,326	0.63%	0	96,976,326	0.60%
FLORIDA	481,202,313	30,768,923	14,567,000	526,538,236	3.40%	105,661,774	632,200,010	3.92%
GEORGIA	342,960,261	15,678,432	32,389,000	391,027,693	2.52%	95,150,644	486,178,337	3.01%
HAWAII	66,994,229	0	31,999,000	98,993,229	0.64%	0	98,993,229	0.61%
IDAHO	99,714,873	0	0	99,714,873	0.64%	0	99,714,873	0.62%
ILLINOIS	496,402,546	53,208,679	0	549,611,225	3.55%	0	549,611,225	3.41%
INDIANA	264,278,266	14,306,569	2,018,000	280,602,835	1.81%	55,008,418	335,611,253	2.08%
IOWA	200,302,430	0	0	200,302,430	1.29%	0	200,302,430	1.24%
KANSAS	183,075,640	2,645,735	0	185,721,375	1.20%	0	185,721,375	1.15%
KENTUCKY	211,383,620	10,778,922	9,860,000	232,022,542	1.50%	3,502,556	235,525,098	1.46%
LOUISIANA	209,517,511	4,899,510	7,816,000	222,233,021	1.43%	21,700,675	243,933,696	1.51%
MAINE	81,139,174	3,919,608	0	85,058,782	0.55%	0	85,058,782	0.53%
MARYLAND	199,904,443	28,515,148	65,849,000	294,268,591	1.90%	0	294,268,591	1.82%
MASSACHUSETTS	243,116,860	43,213,679	803,243,000	1,089,573,539	7.03%	0	1,089,573,539	6.76%
MICHIGAN	359,065,752	27,633,237	14,769,000	401,467,989	2.59%	24,957,036	426,425,025	2.64%
MINNESOTA	222,876,809	15,874,413	13,487,000	252,238,222	1.63%	0	252,238,222	1.56%
MISSISSIPPI	159,581,401	0	0	159,581,401	1.03%	18,270,069	177,851,470	1.10%
MISSOURI	312,626,588	16,952,305	0	329,578,893	2.13%	9,805,683	339,384,576	2.10%
MONTANA	141,183,033	489,951	0	141,672,984	0.91%	0	141,672,984	0.88%
NEBRASKA	136,959,321	0	0	136,959,321	0.88%	0	136,959,321	0.85%
NEVADA	97,837,455	4,899,510	0	102,736,965	0.66%	0	102,736,965	0.64%
NEW HAMPSHIRE	78,591,423	2,547,745	0	81,139,168	0.52%	0	81,139,168	0.50%
NEW JERSEY	324,262,898	58,010,199	98,134,000	480,407,097	3.10%	0	480,407,097	2.98%
NEW MEXICO	136,565,907	2,939,706	0	139,505,613	0.90%	0	139,505,613	0.87%
NEW YORK	698,990,915	111,708,829	90,750,000	901,449,744	5.82%	0	901,449,744	5.59%
NORTH CAROLINA	311,192,712	18,324,168	21,203,000	350,719,880	2.26%	58,936,549	409,656,429	2.54%
NORTH DAKOTA	95,247,490	0	0	95,247,490	0.61%	0	95,247,490	0.59%
OHIO	443,147,006	44,683,532	18,022,000	505,852,538	3.27%	32,529,711	538,382,249	3.34%
OKLAHOMA	191,226,694	0	0	191,226,694	1.23%	33,552,454	224,779,148	1.39%
OREGON	157,682,536	9,113,089	18,978,000	185,773,725	1.20%	0	185,773,725	1.15%
PENNSYLVANIA	525,484,974	71,826,817	171,179,000	768,490,791	4.96%	0	768,490,791	4.77%
RHODE ISLAND	66,070,591	6,173,383	30,520,000	102,763,974	0.66%	0	102,763,974	0.64%
SOUTH CAROLINA	188,608,481	3,429,657	9,198,000	201,236,138	1.30%	0	201,236,138	1.25%
SOUTH DAKOTA	105,652,661	0	0	105,652,661	0.68%	0	105,652,661	0.66%
TENNESSEE	281,681,204	17,246,275	13,870,000	312,797,479	2.02%	0	312,797,479	1.94%
TEXAS	804,746,059	51,738,826	30,487,000	886,971,885	5.73%	87,784,494	974,756,379	6.04%
UTAH	121,111,570	7,447,255	0	128,558,825	0.83%	0	128,558,825	0.80%
VERMONT	70,616,588	0	0	70,616,588	0.46%	0	70,616,588	0.44%
VIRGINIA	266,881,535	19,108,089	67,912,000	353,901,624	2.28%	5,564,554	359,466,178	2.23%
WASHINGTON	225,298,993	17,638,236	87,719,000	330,656,229	2.13%	0	330,656,229	2.05%
WEST VIRGINIA	156,921,046	4,899,510	0	161,820,556	1.04%	0	161,820,556	1.00%
WISCONSIN	211,560,594	12,444,756	72,576,000	296,581,350	1.91%	0	296,581,350	1.84%
WYOMING	106,329,407	0	0	106,329,407	0.69%	0	106,329,407	0.66%
AMERICAN SAMOA	552,617	0	0	552,617	0.00%	0	552,617	0.00%
GUAM	552,616	0	0	552,616	0.00%	0	552,616	0.00%
PUERTO RICO	82,953,213	0	0	82,953,213	0.54%	0	82,953,213	0.51%
N. MARIANAS	552,616	0	0	552,616	0.00%	0	552,616	0.00%
VIRGIN ISLANDS	552,616	0	0	552,616	0.00%	0	552,616	0.00%
TERRITORIES	15,039,915	0	0	15,039,915	0.10%	0	15,039,915	0.09%
TOTAL	12,524,400,000	980,000,000	1,985,304,000	15,489,704,000	100.00%	635,985,409	16,125,689,409	100.00%

Technical Assistance
for Senator Moynihan

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

SUMMARY OF APPORTIONMENTS FOR FISCAL YEAR 1994

STATES	SURFACE TRANSPORTATION, BRIDGE & INT. MAINT.	CONGESTION/ AIR QUALITY	INTERSTATE CONSTR/SUB	SUBTOTAL	PERCENT	MINIMUM ALLOCATION	TOTAL	PERCENT
ALABAMA	261,301,701	6,271,373	10,249,000	277,822,074	1.70%	0	277,822,074	1.64%
ALASKA	215,631,820	1,861,814	0	217,493,634	1.33%	0	217,493,634	1.28%
ARIZONA	182,489,704	11,660,834	0	194,150,538	1.19%	23,247,120	217,397,658	1.28%
ARKANSAS	153,412,361	0	0	153,412,361	0.94%	48,503,551	201,915,912	1.19%
CALIFORNIA	1,100,431,927	189,317,068	151,095,000	1,440,843,995	8.83%	18,089,831	1,458,933,826	8.60%
COLORADO	214,741,013	14,992,501	10,537,000	240,270,514	1.47%	0	240,270 514	1.42%
CONNECTICUT	231,872,939	16,364,364	63,820,000	312,057,303	1.91%	0	312,057,303	1.84%
DELAWARE	69,803,171	587,941	0	70,391,112	0.43%	0	70,391,112	0.41%
DIST. OF COL.	72,564,194	5,879,412	23,058,000	101,501,606	0.62%	0	101,501,606	0.60%
FLORIDA	513,207,162	30,768,923	14,567,000	558,543,085	3.42%	107,655,160	666,198,245	3.93%
GEORGIA	365,770,607	15,678,432	32,389,000	413,838,039	2.54%	98,485,830	512,323,869	3.02%
HAWAII	71,450,026	0	31,999,000	103,449,026	0.63%	0	103,449,026	0.61%
IDAHO	106,346,927	0	0	106,346,927	0.65%	0	106,346,927	0.63%
ILLINOIS	529,418,364	53,208,679	0	582,627,043	3.57%	0	582,627,043	3.43%
INDIANA	281,855,459	14,306,569	2,018,000	298,180,028	1.83%	55,479,512	353,659,540	2.08%
IOWA	213,624,579	0	0	213,624,579	1.31%	0	213,624,579	1.26%
KANSAS	195,252,032	2,645,735	0	197,897,767	1.21%	0	197,897,767	1.17%
KENTUCKY	225,442,781	10,778,922	9,860,000	246,081,703	1.51%	2,109,383	248,191,086	1.46%
LOUISIANA	223,452,557	4,899,510	7,816,000	236,168,067	1.45%	20,883,312	257,051,379	1.52%
MAINE	86,535,754	3,919,608	0	90,455,362	0.55%	0	90,455,362	0.53%
MARYLAND	213,200,122	28,515,148	65,849,000	307,564,270	1.88%	0	307,564,270	1.81%
MASSACHUSETTS	259,286,604	43,213,679	803,243,000	1,105,743,283	6.77%	0	1,105,743,283	6.52%
MICHIGAN	382,947,277	27,533,237	14,769,000	425,349,514	2.61%	24,007,650	449,357,164	2.65%
MINNESOTA	237,700,383	15,874,413	13,487,000	267,061,796	1.64%	0	267,061,796	1.57%
MISSISSIPPI	170,195,188	0	0	170,195,188	1.04%	17,220,718	187,415,906	1.10%
MISSOURI	333,419,436	16,952,305	0	350,371,741	2.15%	7,264,143	357,635,884	2.11%
MONTANA	150,573,141	489,951	0	151,063,092	0.93%	0	151,063,092	0.89%
NEBRASKA	146,068,509	0	0	146,068,509	0.89%	0	146,068,509	0.86%
NEVADA	104,344,641	4,899,510	0	109,244,151	0.67%	0	109,244,151	0.64%
NEW HAMPSHIRE	83,818,552	2,547,745	0	86,366,297	0.53%	0	86,366,297	0.51%
NEW JERSEY	345,829,679	58,010,199	98,134,000	501,973,878	3.08%	0	501,973,878	2.96%
NEW MEXICO	145,648,929	2,939,706	0	148,588,635	0.91%	0	148,588,635	0.88%
NEW YORK	745,480,921	111,708,829	90,750,000	947,939,750	5.81%	0	947,939,750	5.59%
NORTH CAROLINA	331,890,193	18,324,168	21,203,000	371,417,361	2.28%	60,269,431	431,686,792	2.54%
NORTH DAKOTA	101,582,417	0	0	101,582,417	0.62%	0	101,582,417	0.60%
OHIO	472,620,790	44,683,532	18,022,000	535,326,322	3.28%	32,008,864	567,335,186	3.34%
OKLAHOMA	203,945,215	0	0	203,945,215	1.25%	32,922,030	236,867,245	1.40%
OREGON	168,170,135	9,113,089	18,378,000	196,261,224	1.20%	0	195,261,224	1.16%
PENNSYLVANIA	560,435,070	71,826,817	171,179,000	803,440,387	4.92%	0	803,440,387	4.74%
RHODE ISLAND	70,464,958	6,173,383	30,520,000	107,158,341	0.66%	0	107,158,341	0.63%
SOUTH CAROLINA	201,152,864	3,429,557	9,198,000	213,780,521	1.31%	0	213,780,521	1.26%
SOUTH DAKOTA	112,679,637	0	0	112,679,637	0.69%	0	112,679,637	0.66%
TENNESSEE	300,415,869	17,246,275	13,870,000	331,532,144	2.03%	0	331,532,144	1.95%
TEXAS	858,269,858	51,738,826	30,487,000	940,495,684	5.76%	86,580,810	1,027,176,494	6.05%
UTAH	129,166,721	7,447,255	0	136,613,976	0.84%	0	136,613,976	0.81%
VERMONT	75,313,309	0	0	75,313,309	0.46%	0	75,313,309	0.44%
VIRGINIA	284,631,271	19,108,089	67,912,000	371,651,960	2.28%	7,145,468	378,797,428	2.23%
WASHINGTON	240,283,668	17,638,236	87,719,000	345,640,904	2.12%	0	345,640,904	2.04%
WEST VIRGINIA	167,357,892	4,899,510	0	172,257,402	1.06%	0	172,257,402	1.02%
WISCONSIN	225,631,526	12,444,756	72,576,000	310,652,282	1.90%	0	310,652,282	1.83%
WYOMING	113,401,394	0	0	113,401,394	0.69%	0	113,401,394	0.67%
AMERICAN SAMOA	589,371	0	0	589,371	0.00%	0	589,371	0.00%
GUAM	589,371	0	0	589,371	0.00%	0	589,371	0.00%
PUERTO RICO	88,470,445	0	0	88,470,445	0.54%	0	88,470,445	0.52%
N. MARIANAS	589,371	0	0	589,371	0.00%	0	589,371	0.00%
VIRGIN ISLANDS	589,371	0	0	589,371	0.00%	0	589,371	0.00%
TERRITORIES	16,040,224	0	0	16,040,224	0.10%	0	16,040,224	0.09%
TOTAL	13,357,100,000	980,000,000	1,985,304,000	16,322,704,000	100.00%	641,973,413	16,964,677,413	100.00%

Technical Assistance
for Senator Moynihan

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

SUMMARY OF APPORTIONMENTS FOR FISCAL YEAR 1995

STATES	SURFACE TRANSPORTATION, BRIDGE & INT. MAINT.	CONGESTION/ AIR QUALITY	INTERSTATE CONSTR/SUB	SUBTOTAL	PERCENT	MINIMUM ALLOCATION	TOTAL	PERCENT
ALABAMA	289,674,887	6,271,373	9,710,000	305,656,260	1.72%	0	305,656,260	1.66%
ALASKA	239,045,987	1,861,814	0	240,907,801	1.36%	0	240,907,801	1.31%
ARIZONA	202,305,167	11,660,834	0	213,966,001	1.20%	22,749,154	236,715,155	1.28%
ARKANSAS	170,070,489	0	0	170,070,489	0.96%	49,787,244	219,857,733	1.19%
CALIFORNIA	1,219,321,234	189,317,068	143,604,000	1,552,842,302	8.74%	35,729,302	1,588,571,604	8.61%
COLORADO	238,058,452	14,992,501	9,983,000	263,033,953	1.48%	0	263,033,953	1.43%
CONNECTICUT	257,050,631	16,364,364	63,361,000	336,775,995	1.89%	0	336,775,995	1.83%
DELAWARE	77,382,679	587,941	0	77,970,620	0.44%	0	77,970,620	0.42%
DIST. OF COL.	80,443,504	5,879,412	21,876,000	108,198,916	0.61%	0	108,198,916	0.59%
FLORIDA	568,933,251	30,768,923	13,801,000	613,503,174	3.45%	111,892,040	725,395,214	3.93%
GEORGIA	405,187,445	15,678,432	30,942,000	452,107,877	2.54%	105,740,009	557,847,886	3.02%
HAWAII	79,208,356	0	30,316,000	109,524,356	0.62%	0	109,524,356	0.59%
IDAHO	117,894,502	0	0	117,894,502	0.66%	0	117,894,502	0.64%
ILLINOIS	586,904,731	53,208,679	0	640,113,410	3.60%	0	640,113,410	3.47%
INDIANA	312,460,454	14,306,569	2,018,000	328,785,023	1.85%	56,300,065	385,085,088	2.09%
IOWA	236,820,792	0	0	236,820,792	1.33%	0	236,320,792	1.28%
KANSAS	216,453,280	2,645,735	0	219,099,015	1.23%	0	219,099,015	1.19%
KENTUCKY	249,922,261	10,778,922	9,342,000	270,043,183	1.52%	201,639	270,244,822	1.47%
LOUISIANA	247,715,930	4,899,510	7,405,000	260,020,440	1.46%	19,372,525	279,392,966	1.52%
MAINE	95,932,153	3,919,608	0	99,851,761	0.56%	0	99,851,761	0.54%
MARYLAND	236,350,246	28,515,148	62,574,000	327,539,394	1.84%	0	327,539,394	1.78%
MASSACHUSETTS	287,440,982	43,213,679	853,243,000	1,183,897,661	6.66%	0	1,183,897,661	6.42%
MICHIGAN	424,529,226	27,633,237	13,992,000	466,154,463	2.62%	23,131,630	489,286,093	2.65%
MINNESOTA	263,510,843	15,874,413	12,778,000	292,163,256	1.64%	0	292,163,256	1.58%
MISSISSIPPI	188,675,663	0	0	188,675,663	1.06%	15,393,624	204,069,287	1.11%
MISSOURI	369,623,455	16,952,305	0	386,575,760	2.18%	2,838,893	389,414,653	2.11%
MONTANA	166,922,976	489,951	0	167,412,927	0.94%	0	167,412,927	0.91%
NEBRASKA	161,929,213	0	0	161,929,213	0.91%	0	161,929,213	0.88%
NEVADA	115,674,800	4,899,510	0	120,574,310	0.68%	0	120,574,310	0.65%
NEW HAMPSHIRE	92,919,906	2,547,745	0	95,467,651	0.54%	0	95,467,651	0.52%
NEW JERSEY	383,381,251	58,010,199	93,821,000	535,212,450	3.01%	0	535,212,450	2.90%
NEW MEXICO	161,464,073	2,939,706	0	164,403,779	0.93%	0	164,403,779	0.89%
NEW YORK	826,428,226	111,708,829	90,750,000	1,028,887,055	5.79%	0	1,028,887,055	5.58%
NORTH CAROLINA	367,928,159	18,324,168	20,088,000	406,340,327	2.29%	63,705,242	470,045,569	2.55%
NORTH DAKOTA	112,612,643	0	0	112,612,643	0.63%	0	112,612,643	0.61%
OHIO	523,939,849	44,683,532	17,279,000	585,902,381	3.30%	31,845,011	617,747,392	3.35%
OKLAHOMA	226,090,403	0	0	226,090,403	1.27%	31,824,365	257,914,768	1.40%
OREGON	186,430,722	9,113,089	18,064,000	213,607,811	1.20%	0	213,607,811	1.16%
PENNSYLVANIA	621,289,355	71,826,817	162,177,000	855,293,172	4.81%	0	855,293,172	4.64%
RHODE ISLAND	78,116,325	6,173,383	30,520,000	114,809,708	0.65%	0	114,809,708	0.62%
SOUTH CAROLINA	222,994,848	3,429,657	8,714,000	235,138,505	1.32%	0	235,138,505	1.27%
SOUTH DAKOTA	124,914,844	0	0	124,914,844	0.70%	0	124,914,844	0.68%
TENNESSEE	333,036,228	17,246,275	13,757,000	364,039,503	2.05%	0	364,039,503	1.97%
TEXAS	951,464,238	51,738,826	28,884,000	1,032,087,064	5.81%	86,362,164	1,118,449,228	6.06%
UTAH	143,192,161	7,447,255	0	150,639,416	0.85%	0	150,639,416	0.82%
VERMONT	83,491,130	0	0	83,491,130	0.47%	0	83,491,130	0.45%
VIRGINIA	315,538,[illegible]40	19,108,088	64,341,000	398,987,429	2.24%	13,469,138	412,456,567	2.24%
WASHINGTON	266,374,631	17,638,236	83,106,000	367,118,867	2.07%	0	367,118,867	1.99%
WEST VIRGINIA	185,530,282	4,899,510	0	190,429,792	1.07%	0	190,429,792	1.03%
WISCONSIN	250,131,501	12,444,756	68,759,000	331,335,257	1.86%	0	331,335,257	1.80%
WYOMING	125,714,972	0	0	125,714,972	0.71%	0	125,714,372	0.68%
AMERICAN SAMOA	653,368	0	0	653,368	0.00%	0	653,368	0.00%
GUAM	653,367	0	0	653,367	0.00%	0	653,367	0.00%
PUERTO RICO	98,076,921	0	0	98,076,921	0.55%	0	98,076,921	0.53%
N. MARIANAS	653,367	0	0	653,367	0.00%	0	653,367	0.00%
VIRGIN ISLANDS	653,367	0	0	653,367	0.00%	0	653,367	0.00%
TERRITORIES	17,781,934	0	0	17,781,934	0.10%	0	17,781,934	0.10%
TOTAL	14,807,800,000	980,000,000	1,985,305,000	17,773,105,000	100.00%	670,342,346	18,443,347,346	100.00%

Technical Assistance
for Senator Moynihan

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

SUMMARY OF APPORTIONMENTS FOR FISCAL YEAR 1996

STATES	SURFACE TRANSPORTATION, BRIDGE & INT. MAINT.	CONGESTION/ AIR QUALITY	INTERSTATE CONSTR/SUB	SUBTOTAL	PERCENT	MINIMUM ALLOCATION	TOTAL	PERCENT
ALABAMA	359,368,207	6,271,373	0	365,639,580	1.91%	0	365,639,580	1.88%
ALASKA	291,521,448	1,861,814	0	293,383,262	1.53%	0	293,383,262	1.51%
ARIZONA	242,285,823	11,660,834	0	253,946,657	1.32%	0	253,946,657	1.30%
ARKANSAS	202,398,037	0	0	202,398,037	1.06%	28,220,890	230,618,927	1.18%
CALIFORNIA	1,542,099,603	189,317,068	0	1,731,416,671	9.03%	25,542,159	1,756,958,830	9.03%
COLORADO	290,198,073	14,992,501	0	305,190,574	1.59%	0	305,190,574	1.57%
CONNECTICUT	315,649,105	16,364,364	0	332,013,469	1.73%	0	332,013,469	1.71%
DELAWARE	74,879,738	587,941	0	75,467,679	0.39%	0	75,467,679	0.39%
DIST. OF COL.	78,981,487	5,879,412	0	84,860,899	0.44%	0	84,860,899	0.44%
FLORIDA	690,353,480	30,768,923	0	721,122,403	3.76%	52,755,194	773,877,597	3.98%
GEORGIA	518,428,163	15,678,432	0	534,106,595	2.79%	87,905,789	622,012,384	3.20%
HAWAII	77,326,291	0	0	77,326,291	0.40%	0	77,326,291	0.40%
IDAHO	129,168,807	0	0	129,168,807	0.67%	0	129,168,807	0.66%
ILLINOIS	757,679,875	53,208,679	0	810,888,554	4.23%	0	810,888,554	4.17%
INDIANA	388,410,091	14,306,569	0	402,716,660	2.10%	17,215,490	419,932,150	2.16%
IOWA	288,539,509	0	0	288,539,509	1.51%	0	288,539,509	1.48%
KANSAS	261,245,421	2,645,735	0	263,891,156	1.38%	0	263,891,156	1.36%
KENTUCKY	306,096,521	10,778,922	0	316,875,443	1.65%	0	316,875,443	1.63%
LOUISIANA	303,139,863	4,899,510	0	308,039,373	1.61%	0	308,039,373	1.58%
MAINE	99,737,510	3,919,608	0	103,657,118	0.54%	0	103,657,118	0.53%
MARYLAND	282,491,469	28,515,148	0	311,006,617	1.62%	0	311,006,617	1.60%
MASSACHUSETTS	356,374,596	43,213,679	0	399,588,275	2.08%	0	399,588,275	2.05%
MICHIGAN	537,509,313	27,633,237	0	565,142,550	2.95%	0	565,142,550	2.90%
MINNESOTA	324,306,304	15,874,413	0	340,180,717	1.77%	0	340,180,717	1.75%
MISSISSIPPI	224,021,201	0	0	224,021,201	1.17%	0	224,021,201	1.15%
MISSOURI	466,505,656	16,952,305	0	483,457,961	2.52%	0	483,457,961	2.48%
MONTANA	194,870,868	489,951	0	195,360,819	1.02%	0	195,360,819	1.00%
NEBRASKA	188,178,828	0	0	188,178,828	0.98%	0	188,178,828	0.97%
NEVADA	126,194,230	4,899,510	0	131,093,740	0.68%	0	131,093,740	0.67%
NEW HAMPSHIRE	95,700,860	2,547,745	0	98,248,605	0.51%	0	98,248,605	0.50%
NEW JERSEY	464,299,441	58,010,199	0	522,309,640	2.72%	0	522,309,640	2.68%
NEW MEXICO	187,555,503	2,939,706	0	190,495,209	0.99%	0	190,495,209	0.98%
NEW YORK	1,078,660,437	111,708,829	0	1,190,369,266	6.21%	0	1,190,369,266	6.12%
NORTH CAROLINA	449,117,587	18,324,168	0	467,441,755	2.44%	36,697,785	504,139,540	2.59%
NORTH DAKOTA	122,090,695	0	0	122,090,695	0.64%	0	122,090,695	0.63%
OHIO	667,873,354	44,683,532	0	712,556,886	3.72%	0	712,556,886	3.66%
OKLAHOMA	275,535,684	0	0	275,535,684	1.44%	455,790	275,991,474	1.42%
OREGON	221,012,802	9,113,089	0	230,125,891	1.20%	0	230,125,891	1.18%
PENNSYLVANIA	803,758,010	71,826,817	0	875,584,827	4.57%	0	875,584,827	4.50%
RHODE ISLAND	75,862,882	6,173,383	0	82,036,265	0.43%	0	82,036,265	0.42%
SOUTH CAROLINA	270,011,643	3,429,657	0	273,441,300	1.43%	0	273,441,300	1.40%
SOUTH DAKOTA	138,576,625	0	0	138,576,625	0.72%	0	138,576,625	0.71%
TENNESSEE	417,475,858	17,246,275	0	434,722,133	2.27%	0	434,722,133	2.23%
TEXAS	1,209,578,431	51,738,826	0	1,261,317,257	6.58%	0	1,261,317,257	6.48%
UTAH	163,069,686	7,447,255	0	170,516,941	0.89%	0	170,516,941	0.88%
VERMONT	83,065,549	0	0	83,065,549	0.43%	0	83,065,549	0.43%
VIRGINIA	394,139,872	19,108,089	0	413,247,961	2.16%	38,154,242	451,402,203	2.32%
WASHINGTON	328,144,008	17,638,236	0	345,782,244	1.80%	0	345,782,244	1.78%
WEST VIRGINIA	219,806,141	4,899,510	0	224,705,651	1.17%	0	224,705,651	1.15%
WISCONSIN	307,094,206	12,444,756	0	319,538,962	1.67%	7,464,018	327,002,980	1.68%
WYOMING	139,648,860	0	0	139,648,360	0.73%	0	139,648,360	0.72%
AMERICAN SAMOA	875,565	0	0	875,565	0.00%	0	875,565	0.00%
GUAM	875,564	0	0	875,564	0.00%	0	875,564	0.00%
PUERTO RICO	131,430,326	0	0	131,430,886	0.69%	0	131,430,886	0.68%
N. MARIANAS	875,564	0	0	875,564	0.00%	0	875,564	0.00%
VIRGIN ISLANDS	875,564	0	0	875,564	0.00%	0	875,564	0.00%
TERRITORIES	23,829,206	0	0	23,329,206	0.12%	0	23,929,206	0.12%
TOTAL	18,188,300,000	980,000,000	0	19,168,300,000	100.00%	294,111,357	19,463,211,357	100.00%

TABLE 4

TECHNICAL ASSISTANCE
FOR SENATOR MOYNIHAN

TOTAL APPORTIONMENTS AND ALLOCATIONS
SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

STATE	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	5-YEAR TOTAL	PERCENT
ALABAMA	258,528,575	261,526,664	277,822,074	305,656,260	365,639,580	1,469,173,153	1.70%
ALASKA	195,345,098	204,046,309	217,493,634	240,907,801	293,383,262	1,151,176,104	1.33%
ARIZONA	199,124,323	206,303,158	217,397,658	236,715,155	253,946,657	1,113,486,951	1.29%
ARKANSAS	184,943,893	191,611,494	201,915,912	219,857,733	230,618,927	1,028,947,959	1.19%
CALIFORNIA	1,432,674,570	1,384,479,748	1,458,933,826	1,588,571,604	1,756,958,830	7,621,618,578	8.81%
COLORADO	225,971,477	226,878,741	240,270,514	263,033,953	305,190,574	1,261,345,259	1.46%
CONNECTICUT	294,674,566	297,597,141	312,057,303	336,775,995	332,013,469	1,573,118,474	1.82%
DELAWARE	63,221,307	66,038,016	70,391,112	77,970,620	75,467,679	353,088,734	0.41%
DIST. OF COL.	110,592,203	96,976,326	101,501,606	108,198,916	84,860,899	502,129,950	0.58%
FLORIDA	610,201,029	632,200,010	666,198,245	725,395,214	773,877,597	3,407,872,095	3.94%
GEORGIA	469,260,545	486,178,337	512,323,869	557,847,886	622,012,384	2,647,623,021	3.06%
HAWAII	119,670,065	98,993,229	103,449,026	109,524,356	77,326,291	508,962,967	0.59%
IDAHO	95,423,545	99,714,873	106,346,927	117,894,502	129,168,807	548,548,654	0.63%
ILLINOIS	528,248,048	549,611,225	582,627,043	640,113,410	810,888,554	3,111,488,280	3.60%
INDIANA	323,932,819	335,611,253	353,659,640	385,085,088	419,932,150	1,818,220,950	2.10%
IOWA	191,682,216	200,302,430	213,624,579	236,820,792	288,539,509	1,130,969,526	1.31%
KANSAS	177,842,533	185,721,375	197,897,767	219,099,015	263,891,156	1,044,451,846	1.21%
KENTUCKY	230,185,438	235,525,098	218,191,086	270,244,822	316,875,443	1,301,021,887	1.50%
LOUISIANA	235,445,413	243,933,696	257,051,879	279,892,966	308,039,373	1,324,363,327	1.53%
MAINE	81,566,877	85,058,782	90,455,362	99,851,761	103,657,118	460,589,900	0.53%
MARYLAND	330,115,505	294,268,591	307,564,270	327,539,394	311,006,617	1,570,494,377	1.82%
MASSACHUSETTS	379,110,763	1,089,573,539	1,105,743,283	1,183,897,661	399,588,275	4,157,913,521	4.81%
MICHIGAN	411,586,500	426,425,025	449,357,164	489,286,093	565,142,550	2,341,797,332	2.71%
MINNESOTA	252,577,497	252,238,222	267,061,796	292,163,256	340,180,717	1,404,221,488	1.62%
MISSISSIPPI	171,662,684	177,851,470	187,415,906	204,069,287	224,021,201	965,020,548	1.12%
MISSOURI	327,574,841	339,384,576	357,635,884	389,414,653	483,457,961	1,897,467,915	2.19%
MONTANA	135,597,032	141,672,984	151,063,092	167,412,927	195,360,819	791,106,854	0.91%
NEBRASKA	131,065,141	136,959,321	146,068,509	161,929,213	188,178,828	764,201,012	0.88%
NEVADA	98,526,433	102,736,965	109,244,151	120,574,310	131,093,740	562,175,599	0.65%
NEW HAMPSHIRE	77,756,908	81,139,168	86,366,297	95,467,651	98,248,605	438,978,629	0.51%
NEW JERSEY	526,831,121	480,407,097	501,973,878	535,212,450	522,309,640	2,566,734,186	2.97%
NEW MEXICO	133,628,363	139,505,613	148,588,635	164,403,779	190,495,209	776,621,599	0.90%
NEW YORK	871,367,975	901,449,744	947,939,750	1,028,887,055	1,190,369,266	4,940,013,790	5.71%
NORTH CAROLINA	395,401,409	409,656,429	431,686,792	470,045,569	504,139,540	2,210,929,739	2.56%
NORTH DAKOTA	91,148,420	95,247,490	101,582,417	112,612,643	122,090,695	522,681,665	0.60%
OHIO	519,647,892	538,382,249	567,335,186	617,747,392	712,556,886	2,955,669,605	3.42%
OKLAHOMA	216,957,396	224,779,148	236,867,245	257,914,768	275,991,474	1,212,510,031	1.40%
OREGON	191,779,696	185,773,725	196,261,224	213,607,811	230,125,891	1,017,548,347	1.18%
PENNSYLVANIA	871,892,023	768,490,791	803,440,887	855,293,172	875,584,827	4,174,701,700	4.83%
RHODE ISLAND	99,920,561	102,763,974	107,158,341	114,809,708	82,036,265	506,688,849	0.59%
SOUTH CAROLINA	199,891,185	201,236,138	213,780,521	235,138,505	273,441,300	1,123,487,649	1.30%
SOUTH DAKOTA	101,105,794	105,652,661	112,679,637	124,914,844	138,576,625	582,929,561	0.67%
TENNESSEE	302,265,048	312,797,479	331,532,144	364,039,503	434,722,133	1,745,356,307	2.02%
TEXAS	940,837,293	974,756,379	1,027,176,494	1,118,449,228	1,261,317,257	5,322,536,651	6.16%
UTAH	123,346,668	128,558,825	136,613,976	150,639,416	170,516,941	709,675,826	0.82%
VERMONT	67,577,533	70,616,588	75,313,309	83,491,130	83,065,549	380,064,109	0.44%
VIRGINIA	392,420,112	359,466,178	378,797,428	412,456,567	451,402,203	1,994,542,488	2.31%
WASHINGTON	385,547,263	330,656,229	345,640,904	367,118,867	345,782,244	1,774,745,507	2.05%
WEST VIRGINIA	155,067,303	161,820,556	172,257,402	190,429,792	224,705,651	904,280,704	1.05%
WISCONSIN	340,914,630	296,581,350	310,652,282	331,335,257	327,002,980	1,606,486,499	1.86%
WYOMING	101,753,415	106,329,407	113,401,394	125,714,972	139,648,860	586,848,048	0.68%
AMERICAN SAMOA	528,834	552,617	589,371	653,368	875,565	3,199,755	0.00%
GUAM	528,834	552,616	589,371	653,367	875,564	3,199,752	0.00%
PUERTO RICO	79,383,239	82,953,213	88,470,445	98,076,921	131,430,886	480,314,704	0.56%
N. MARIANAS	528,834	552,616	589,371	653,367	875,564	3,199,752	0.00%
VIRGIN ISLANDS	528,834	552,616	589,371	653,367	875,564	3,199,752	0.00%
TERRITORIES	14,392,654	15,039,915	16,040,224	17,781,934	23,829,206	87,083,933	0.10%
TOTAL	15,169,300,173	16,125,689,409	16,964,677,113	18,443,917,046	19,463,211,357	86,166,825,398	100.00%

NOTE: Numbers DO NOT include $1.5 billion for Federal Lands/Park Roads
or $150 million for Indian Reservation Roads

TABLE 5

TECHNICAL ASSISTANCE
FOR SENATOR MOYNIHAN

SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991

STATE	AVERAGE % USED TO CALCULATE THE TOTAL OF SURFACE TRANSPORTATION, BRIDGE AND I4R PROGRAMS UNDER THE STEA OF 1991		APPORTIONMENT FACTORS FOR THE AIR QUALITY PROGRAM
	FISCAL YEARS 1992-1995	FISCAL YEAR 1996	
ALABAMA	1.96%	1.98%	0.64
ALASKA	1.61%	1.60%	0.19
ARIZONA	1.37%	1.33%	1.19
ARKANSAS	1.15%	1.11%	0.00
CALIFORNIA	8.24%	8.48%	19.32
COLORADO	1.61%	1.60%	1.53
CONNECTICUT	1.74%	1.74%	1.67
DELAWARE	0.52%	0.41%	0.06
DIST. OF COL.	0.54%	0.43%	0.60
FLORIDA	3.84%	3.80%	3.14
GEORGIA	2.74%	2.85%	1.60
HAWAII	0.53%	0.43%	0.00
IDAHO	0.80%	0.71%	0.00
ILLINOIS	3.96%	4.17%	5.43
INDIANA	2.11%	2.14%	1.46
IOWA	1.60%	1.59%	0.00
KANSAS	1.46%	1.44%	0.27
KENTUCKY	1.69%	1.68%	1.10
LOUISIANA	1.67%	1.67%	0.50
MAINE	0.65%	0.55%	0.40
MARYLAND	1.60%	1.55%	2.91
MASSACHUSETTS	1.94%	1.96%	4.41
MICHIGAN	2.87%	2.96%	2.82
MINNESOTA	1.78%	1.78%	1.62
MISSISSIPPI	1.27%	1.23%	0.00
MISSOURI	2.50%	2.56%	1.73
MONTANA	1.13%	1.07%	0.05
NEBRASKA	1.09%	1.03%	0.00
NEVADA	0.78%	0.69%	0.50
NEW HAMPSHIRE	0.63%	0.53%	0.26
NEW JERSEY	2.59%	2.55%	5.92
NEW MEXICO	1.09%	1.05%	0.30
NEW YORK	5.58%	5.93%	11.40
NORTH CAROLINA	2.48%	2.47%	1.87
NORTH DAKOTA	0.76%	0.67%	0.00
OHIO	3.54%	3.67%	4.56
OKLAHOMA	1.53%	1.51%	0.00
OREGON	1.26%	1.22%	0.93
PENNSYLVANIA	4.20%	4.42%	7.38
RHODE ISLAND	0.53%	0.42%	0.66
SOUTH CAROLINA	1.51%	1.48%	0.35
SOUTH DAKOTA	0.84%	0.76%	0.00
TENNESSEE	2.25%	2.30%	1.76
TEXAS	6.43%	6.65%	5.28
UTAH	0.97%	0.90%	0.76
VERMONT	0.56%	0.46%	0.00
VIRGINIA	2.13%	2.17%	1.95
WASHINGTON	1.80%	1.80%	1.80
WEST VIRGINIA	1.25%	1.21%	0.50
WISCONSIN	1.69%	1.69%	1.27
WYOMING	0.85%	0.77%	0.00
AMERICAN SAMOA	0.00%	0.00%	0.00
GUAM	0.00%	0.00%	0.00
PUERTO RICO	0.66%	0.72%	0.00
N. MARIANAS	0.00%	0.00%	0.00
VIRGIN ISLANDS	0.00%	0.00%	0.00
TERRITORIES	0.12%	0.13%	0.00
TOTAL	100.00%	100.00%	100.00

TABLE 1
TOTAL APPORTIONMENTS AND ALLOCATIONS FY 1987-91 TECHNICAL ASSISTANC
(DOLLARS IN THOUSANDS) FOR SENATOR MOYNIH

STATE	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	TOTAL	% OF TOTAL
Alabama	288,607	409,317	260,740	237,278	244,436	1,440,378	2.09
Alaska	157,518	159,193	155,993	155,190	154,914	782,808	1.14
Arizona	205,363	213,472	130,651	167,815	169,719	887,020	1.29
Arkansas	136,130	137,549	145,819	152,983	151,811	724,292	1.05
California	1,071,253	1,334,169	1,053,398	1,190,019	1,104,839	5,753,678	8.35
Colorado	214,919	200,520	308,297	239,608	206,749	1,170,093	1.70
Connecticut	373,809	459,706	320,610	351,437	447,376	1,952,938	2.83
Delaware	48,647	50,730	51,337	51,410	50,942	253,066	0.37
Dist. of Col.	79,447	88,164	109,148	93,031	112,706	482,496	0.70
Florida	455,435	459,430	690,292	363,792	502,439	2,471,388	3.59
Georgia	335,838	347,795	394,855	393,262	392,223	1,863,973	2.71
Hawaii	134,832	144,791	234,118	234,544	153,489	901,774	1.31
Idaho	87,534	156,599	152,894	70,810	78,027	545,864	0.79
Illinois	476,153	493,082	493,469	511,871	434,330	2,408,905	3.50
Indiana	272,693	271,605	310,240	262,822	272,600	1,389,960	2.02
Iowa	175,648	226,902	210,312	199,225	163,364	975,451	1.42
Kansas	166,583	144,593	142,536	142,596	138,508	734,816	1.07
Kentucky	172,591	168,712	183,617	183,752	171,387	880,059	1.28
Louisiana	268,086	270,652	272,182	212,739	245,216	1,268,875	1.84
Maine	66,462	66,650	74,519	66,742	64,660	339,033	0.49
Maryland	321,551	404,503	304,951	432,105	288,856	1,751,966	2.54
Massachusetts	531,230	557,477	348,271	893,915	948,024	3,278,917	4.76
Michigan	375,378	367,170	399,559	315,293	344,157	1,801,557	2.61
Minnesota	273,943	306,762	326,766	191,573	193,262	1,292,306	1.88
Mississippi	130,227	126,479	148,288	145,361	143,550	693,905	1.01
Missouri	271,459	258,851	300,995	285,652	276,204	1,393,161	2.02
Montana	111,716	107,783	107,620	108,854	109,894	545,867	0.79
Nebraska	105,688	126,828	97,414	109,704	95,127	534,761	0.78
Nevada	77,631	90,839	78,502	79,097	75,454	401,523	0.58
New Hampshire	59,468	74,080	59,439	58,019	54,751	305,757	0.44
New Jersey	362,561	516,231	358,334	432,494	428,380	2,098,000	3.04
New Mexico	109,270	109,722	117,673	107,722	109,825	554,212	0.80
New York	651,276	743,407	757,124	722,712	773,271	3,647,790	5.29
North Carolina	323,983	304,391	452,798	240,341	334,746	1,656,259	2.40
North Dakota	78,419	77,996	79,301	75,621	75,863	387,200	0.56
Ohio	433,321	453,401	463,396	497,887	432,967	2,280,972	3.31
Oklahoma	191,119	200,891	200,784	190,637	183,630	967,061	1.40
Oregon	176,590	140,955	147,483	129,560	151,304	745,892	1.08
Pennsylvania	721,998	820,016	551,594	531,107	545,183	3,169,898	4.60
Rhode Island	104,435	104,313	108,368	116,320	115,264	548,700	0.80
South Carolina	207,997	208,819	134,176	165,707	210,082	926,781	1.35
South Dakota	86,971	86,731	82,762	82,894	80,465	419,823	0.61
Tennessee	262,377	246,010	301,262	275,273	223,290	1,308,212	1.90
Texas	857,040	895,558	943,681	851,667	782,813	4,330,759	6.29
Utah	151,420	194,461	109,666	95,443	96,919	647,909	0.94
Vermont	60,203	53,732	57,949	62,368	78,976	313,228	0.45
Virginia	265,315	377,797	254,962	281,412	270,339	1,449,825	2.10
Washington	273,846	353,411	579,823	283,810	286,256	1,777,146	2.58
West Virginia	178,330	115,421	115,432	132,949	116,289	658,421	0.96
Wisconsin	199,754	199,346	224,198	214,648	212,027	1,049,973	1.52
Wyoming	82,469	86,827	81,950	83,580	82,264	417,090	0.61
Puerto Rico	67,327	66,133	64,238	58,143	63,977	319,818	0.46
TOTAL	13,291,860	14,579,972	14,053,786	13,532,794	13,443,144	68,901,556	100.00

TABLE 2

ESTIMATED APPORTIONMENTS FY 1992-96
UNDER ADMINISTRATION'S PROPOSED BILL (S.610)
(DOLLARS IN THOUSANDS)

TECHNICAL ASSISTAN
FOR SENATOR MOYNIH

STATE	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	TOTAL	% OF TOT
Alabama	256,449	252,750	261,477	286,369	353,773	1,410,818	1.76
Alaska	240,551	243,942	251,293	273,606	343,229	1,352,621	1.69
Arizona	185,033	188,033	194,819	214,557	275,181	1,057,623	1.32
Arkansas	171,942	174,712	181,004	199,322	254,822	981,802	1.22
California	1,359,028	1,271,935	1,312,525	1,422,312	1,635,105	7,000,905	8.73
Colorado	201,666	196,874	203,531	222,569	272,167	1,096,807	1.37
Connecticut	214,895	210,776	216,051	230,969	213,454	1,086,145	1.35
Delaware	58,106	59,044	61,177	67,482	86,391	332,200	0.41
Dist. of Col.	111,781	96,396	99,015	105,643	106,836	519,671	0.65
Florida	546,454	544,118	563,259	617,925	772,149	3,043,905	3.79
Georgia	418,580	404,205	417,705	455,151	542,412	2,238,053	2.79
Hawaii	127,274	104,866	107,469	113,547	106,162	559,318	0.70
Idaho	110,932	112,745	116,746	128,782	164,338	633,543	0.79
Illinois	445,113	452,299	468,594	516,011	660,331	2,542,348	3.17
Indiana	272,069	276,422	286,356	315,090	400,507	1,550,444	1.93
Iowa	187,294	190,319	197,117	217,123	277,736	1,069,589	1.33
Kansas	205,817	209,141	216,590	238,588	305,078	1,175,214	1.46
Kentucky	216,014	211,962	219,263	239,925	295,016	1,182,180	1.47
Louisiana	244,772	242,729	251,157	275,360	341,793	1,355,811	1.69
Maine	75,554	76,771	79,528	87,579	111,909	431,341	0.54
Maryland	304,455	263,122	270,249	287,704	287,167	1,412,697	1.76
Massachusetts	343,027	1,046,867	1,055,610	1,131,102	353,895	3,930,501	4.90
Michigan	389,538	384,538	397,896	435,868	540,037	2,147,877	2.68
Minnesota	245,469	239,135	247,247	270,244	330,028	1,332,123	1.66
Mississippi	165,849	168,519	174,574	192,246	245,631	946,819	1.18
Missouri	316,837	321,940	333,513	367,271	469,373	1,808,934	2.25
Montana	140,788	142,518	146,336	157,815	193,018	780,475	0.97
Nebraska	151,991	154,468	159,944	176,254	224,881	867,538	1.08
Nevada	122,742	124,756	129,182	142,380	176,206	695,266	0.87
New Hampshire	62,745	63,756	66,049	72,851	93,131	358,532	0.45
New Jersey	490,001	434,929	447,057	477,952	489,310	2,339,249	2.92
New Mexico	153,753	156,269	161,008	173,818	213,387	858,235	1.07
New York	690,962	700,576	722,387	786,231	885,518	3,785,674	4.72
North Carolina	370,694	360,456	372,724	407,128	494,649	2,005,651	2.50
North Dakota	109,743	111,538	115,497	127,406	159,711	623,895	0.78
Ohio	487,801	484,801	501,646	549,783	680,554	2,704,585	3.37
Oklahoma	207,088	210,433	218,009	240,088	307,313	1,182,931	1.47
Oregon	215,047	205,221	211,905	230,558	272,193	1,134,924	1.41
Pennsylvania	810,863	693,081	711,876	757,472	758,897	3,732,189	4.65
Rhode Island	88,652	89,590	91,724	98,032	86,424	454,422	0.57
South Carolina	198,186	194,351	201,003	219,942	270,030	1,083,512	1.35
South Dakota	113,219	115,069	119,147	131,429	164,665	643,529	0.80
Tennessee	271,352	273,886	283,289	310,413	379,517	1,518,457	1.89
Texas	958,728	950,886	983,992	1,078,917	1,342,799	5,315,322	6.63
Utah	117,883	119,806	124,089	136,718	175,774	674,269	0.84
Vermont	59,962	60,929	63,126	69,630	89,087	342,734	0.43
Virginia	401,095	355,650	366,073	392,614	419,710	1,935,142	2.41
Washington	385,263	324,436	332,947	353,170	345,527	1,741,343	2.17
West Virginia	112,700	114,509	118,605	130,609	166,482	642,905	0.80
Wisconsin	354,532	304,782	313,164	333,689	339,082	1,645,249	2.05
Wyoming	107,851	109,616	113,507	125,212	154,555	610,739	0.76
Puerto Rico	61,816	62,814	65,074	71,774	91,794	353,272	0.44
TOTAL	14,659,955	14,863,284	15,323,124	16,664,229	18,718,734	80,229,327	100.00

COMMITTEE MEETING TITLE JPACT

DATE 5/9/91

NAME	AFFILIATION
Roy Rogers	Washington County
Pauline Anderson	Multnomah County
Dave Sturdevant	Clark County
Mike Thorne	Port of Portland
Bob Bothman	ODOT
Gary Demich	WSDOT
Clifford Clark	Cities of Washington County
Richard Devlin	METRO
Ronald Hales	City of Vancouver
Jim Cowen	TRI/MET
Bob Liddell	Cities of Clackamas
George Van Bergen	Metro
David Knowles	WSDOT
Michael West	ODOT
Dick Root	Lake Oswego
Robert Greening	STOP
Meeky Blizzard	STOP
Dave Stewart	STOP
Steve Dotterrer	City of Portland
Eleanor Roosevelt	Central City
GB Arrington	" "
Lisa Lahsene	Mult Co
Les White	C-Tran

COMMITTEE MEETING TITLE _____

DATE _____

NAME	AFFILIATION
Bruce Walker	Wash. Co.
Eric Hurst	Daily J. of Commerce
Bebe Rucker	Port of Portland
Ted Leinca	ODOT
Karen Shackleton	Metro
Carter MacNichol	Port of Portland
Keith Ahola	WSDOT
G. Mallery	Intergovernmental Resource Cntr
Don Sandoz	Clackamas Co
Tom Vanderzanden	Clackamas Co.
Leon Skiles	Metro
Bill Cox	ODOT
Howard Harris	DEQ
Bob Brannan	PBQ&D