METROPOLITAN SERVICE DISTRICT
527 S.W. HALL ST., PORTLAND OR. 97201, 503/221-1646

METRO

AGENDA - REGULAR COUNCIL MEETING

Date: December 4, 1980

Day: Thursday

Time: 7:30 p.m.

Place: Council Chamber

CALL TO ORDER

1. CITIZEN COMMUNICATIONS TO COUNCIL ON NON-AGENDA ITEMS

2. RESOLUTIONS

   2.1 Resolution No. 80-198, For the Purpose of Appointing an Agent of Record for Casualty and Liability Insurance (7:35)

   2.2 Resolution No. 80-203, For the Purpose of Adopting the Metropolitan Area Water Resources Study (7:50)

3. MOTIONS

   3.1 Re-appointment of Marjorie Ille to HPAC (8:10)

4. GENERAL DISCUSSION

   4.1 Bellevue, Washington Drainage Management Presentation (8:20) Hector Cyre, w/ the Gr.

   4.2 Proposed Legislative Program (8:55)

   4.3 NARC 1981 Washington Priorities (9:25)

   4.4 Other Items of Council or Executive Officer Concern (9:40)

ADJOURN

AGENDA MANAGEMENT SUMMARY

TO: Council
FROM: Coordinating Committee
SUBJECT: Appointing an Agent of Record for Casualty and Liability Insurance

I. RECOMMENDATIONS:

A. ACTION REQUESTED: Approve the attached Resolution No. 80-198 appointing the Fred S. James Company as Metro's Agent of Record for casualty and liability insurance for a term beginning January 1, 1981, and expiring June 30, 1984.

B. POLICY IMPACT: Metro's insurance coverage supports all activities and has no direct impact on programs. Insurance coverage is consistent with the programs and loss projection contained in the Five Year Operational Plan.

C. BUDGET IMPACT: Brokerage fees are paid as a commission on premium costs which are covered in the FY 1981 budget.

II. ANALYSIS:

A. BACKGROUND: Oregon state law permits local governments to appoint a single agent of record to act as the broker for all casualty and liability coverage for a three-year period. The selection of an agent must be made after requesting proposals through both local newspapers and in the generally circulated industry publication in the area. These procedures have been followed.

The Fred S. James Company was the agent of record for both the Columbia Region Association of Governments (CRAG) and the prior Metropolitan Service District (MSD), and was carried over to represent Metro. This company's appointment as Agent of Record expired on June 30, 1980. Due to pressures from budget preparation and work on the tax base proposal, the Director of Management Services was unable to begin the selection process for the Agent of Record before the end of the fiscal year. The Fred S. James Company appointment was extended for six months. The two and one-half year appointment would place the term of appointment in sequence with the fiscal year and the anniversary date for policy renewals.

B. ALTERNATIVES CONSIDERED: After advertising in the Daily Journal of Commerce and Insurance Week, proposals were received from two companies, Fred S. James Company and Nasburg and Company of Coos Bay, Oregon. The Fred S. James Company is recommended because of experience of the

company and the agents in the insurance industry in general and public clients in particular and outstanding service from the company in the past. Staff does not think that Nasburg and Company could adequately represent Metro from Coos Bay.

C. CONCLUSION: Appoint the Fred S. James Company Metro's Agent of Record from January 1, 1981, to June 30, 1984.

CS:bb
988B/135

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF APPOINTING AN AGENT OF RECORD FOR CASUALTY AND LIABILITY INSURANCE	))))	RESOLUTION NO. 80-198 Introduced by the Council Coordinating Committee

WHEREAS, The Metro Council deems it appropriate to appoint an Agent of Record for casualty and liability insurance; and

WHEREAS, Proposals were requested for these services and advertised in both a local newspaper and the insurance industry journal; and

WHEREAS, The proposal from the Fred S. James Company best met Metro's insurance needs; now, therefore,

BE IT RESOLVED,

1. That the Fred S. James Company be appointed Metro's Agent of Record for a term beginning January 1, 1981, and ending June 30, 1984.

ADOPTED by the Council of the Metropolitan Service District this 4th day of December, 1980.

_____
Presiding Officer

CS:bb
989B/135

A G E N D A M A N A G E M E N T S U M M A R Y

TO: Metro Council
FROM: Executive Officer
SUBJECT: Adopting the Metropolitan Area Water Resources Study

I. RECOMMENDATIONS:

A. ACTION REQUESTED: Recommend to the Council for adoption Resolution No. 80-203.

B. POLICY IMPACT: By this action, the Council will formally accept the Metropolitan Area Water Resources Study and prescribe the specific uses of the individual study elements:

1. Regional Water Supply Plan
2. Regional Drainage Management Plan
3. Dredging in Portland Harbor
4. Land Application of Sewage Effluents -- Clackamas and Multnomah County
5. Secondary Report Documents.

The recommended role of Metro outlined in the above documents is consistent with the adopted Five Year Operational Plan.

C. BUDGET IMPACT: None

II. ANALYSIS:

A. BACKGROUND: For the past year the Water Resources Policy Alternatives Committee (WRPAC) has been reviewing the U. S. Army Corps of Engineers, Portland/Vancouver Metropolitan Area Water Resources Study. This study was initiated at the request of Congress and Metro's predecessor agency, the Columbia Region Association of Governments (CRAG), as part of the National Urban Studies Program. The basic objectives of this program are as follows:

> "...to provide urban water resource plans that are compatible with comprehensive urban development goals of the region under study. These plans will provide an integrated approach to water resources management." (FR 41:212:III:51148)
>
> "...to develop, in conjunction with the public, plans which not only offer a realistic prospect for solving specific urban water resource problems, but, equally

important, also have the potential to serve as a catalyst for solving other related urban problems." (FR41:212:III:51147)

The "Metro Study" as it has been referred to was completed in 1979, and was accepted by the Metro Council and released for final public review and comment. The review period is now completed and the Corps is compiling the final comments for publication.

The final element of this program is the adoption of the various plans and documents, as appropriate, by the Metro Council.

B. ALTERNATIVES CONSIDERED: The majority of the Metro study elements are primarily resource planning documents rather than specific plans, therefore, their adoption as such by resolution is appropriate.

The option of adopting the Regional Water Supply Plan as a functional plan at this time was considered by Metro staff and the WRPAC and rejected for the following reasons:

1. The plan was not drafted as a Metro functional plan but rather a plan to be implemented, at least at the outset, voluntarily by the water purveyors of the region.

2. The recommended role of Metro was that of a coordinator and facilitator of voluntary plan implementation.

3. This role is consistent with the Metro Five Year Operational Plan which rated Water Supply functional planning as a low-priority.

C. CONCLUSION: The WRPAC has reviewed the individual study documents along with the Metro staff recommended actions and unanimously approved the adoption proposals outlined in Resolution No. 80-203.

JL:bb
812B/135

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING THE METROPOLITAN AREA WATER RESOURCES STUDY	))))	RESOLUTION NO. 80-203 Introduced by the Regional Planning Committee

WHEREAS, The Columbia Region Association of Governments (CRAG) initiated a study of the water resources of the Portland/ Vancouver metropolitan area, to be conducted by the Portland District, U.S. Army Corps of Engineers; and

WHEREAS, The merger of CRAG with the Metropolitan Service District (MSD) was approved by the voters in 1978; and

WHEREAS, The CRAG/Metro staff and the Water Resources Policy Alternatives Committee (WRPAC) has provided technical and policy input to the Corps of Engineers throughout the course of the study; and

WHEREAS, The Metro Council approved the release of the completed Water Resources Study for public review and comment in March, 1980; and

WHEREAS, The period for public review and comment has ended; now, therefore,

BE IT RESOLVED,

1. Regional Water Supply Plan

   a. The Regional Water Supply Plan, dated 1979, is adopted and is to be implemented by local water purveyors;

b. Metro's role shall be as a coordinator and facilitator of voluntary plan implementation;

c. Metro shall maintain detailed data on water supply conditions in the metropolitan region;

d. The recommendations outlined in the plan shall be used as criteria in A-95 Review and plan review processes; and

e. If progress toward voluntary implementation of the Water Supply Plan recommendations does not occur and more specific action is required, Metro shall consider re-adoption by ordinance as a functional plan for the region pursuant to ORS 268.390.

2. Drainage Management

a. The Regional Drainage Report (and appendices), dated 1979, is adopted for use by Metro in developing a regional stormwater management plan pursuant to ORS 268.390.

b. Metro will encourage the use of the Regional Drainage Report in developing local drainage management programs.

c. Addendum A of the Regional Drainage Report, "Suggested Modifications to LCDC Goals Assessment Criteria Used for Review of Local Comprehensive Plans," shall be used by Metro staff as an assessment tool only. An assessment of local plans based on these criteria may be

used by Metro as the basis for the development of a functional plan for drainage management.

3. Dredging in Portland Harbor

   a. Since dredging in Portland Harbor is primarily the responsibility of the Corps of Engineers through its Portland District Office and the Port of Portland, the Dredging in Portland Harbor Report, dated 1979, is adopted as a resource document for use by these agencies.

4. Land Application of Sewage

   a. The Supplemental Report "Land Application of Sewage Effluents - Clackamas and Multnomah Counties" dated 1979, is an expansion of Technical Supplement No. 9 of the "208" Regional Waste Treatment Management Plan and is adopted as a support document to that plan to be used as a standard of comparison by any person or organization proposing any facilities plan or action related to the provision of waste treatment facilities and services.

5. Secondary Report Documents

   a. The remaining support documents, listed below, prepared as part of the Metropolitan Water Resources Study are approved as support documents to be used to clarify the major study

documents adopted herein:

(1) Public Involvement, dated 1979

(2) Background Information, dated 1979

(3) Institutional Analysis, dated 1979

(4) Comments, dated 1979

ADOPTED by the Council of the Metropolitan Service District this 20th day of November, 1980.

Presiding Officer

JL:bb
814B/135

AT THE REQUEST OF COUNCILOR KIRKPATRICK, THE COUNCIL IS ASKED TO EXPRESS THEIR IDEAS AS TO THE SEVEN MOST CRUCIAL WASHINGTON ISSUES NARC SHOULD PURSUE IN 1981.

IMPORTANT

national association of regional councils

MEMORANDUM

TO: Member Regional Council Chairmen, Executive Directors and Governing Bodies

FROM: Charles Salem, President

DATE: October 31, 1980

We suggest that this question be placed on your next regional council board agenda.

WHAT SHOULD BE NARC'S 1981 WASHINGTON PRIORITIES?

The NARC Board of Directors would like you to consider NARC's 1981 Washington priorities. We want you to review the attached list of 1981 Washington issues and tell us what the association's priorities should be.

1981 will be an important and busy year. It marks the beginning of a new Presidential term and a new Congressional session. It will also be a time of uncertainty.

This will be the third year we have asked for your involvement. The priorities that are established will guide the Board and staff in our liaison efforts during the year.

Attached is a memorandum on NARC's 1980 Washington accomplishments (legislative priorities and status).

Please review the following Washington issues for 1981. **SELECT THE SEVEN (7) THAT YOU BELIEVE ARE MOST CRUCIAL TO YOUR REGION AND REGIONAL COUNCIL.** If you believe that a priority issue(s) is not included in this list, please add it to your list.

Based on your council's response, the NARC Board will tabulate all the responses and priorities when it meets during the Annual Federal Briefing in Washington, February 9-11, 1981.

1700 K STREET, N.W., WASHINGTON, D.C. 20006 • (202) 457-0710

YOUR RESPONSE IS IMPORTANT. IT WILL PROVIDE DIRECTION TO THE NARC BOARD, POLICY COMMITTEES AND THE STAFF IN OUR WASHINGTON EFFORTS IN 1981.

WE NEED YOUR BOARD'S RESPONSE BY JANUARY 7, 1981.

/dpw
Attachments:
- 1981 Washington Issues for Regional Councils
- Response Form
- NARC's Washington Accomplishments (legislative priorities and status)

1981 WASHINGTON ISSUES FOR REGIONAL COUNCILS

The following is a list of Washington issues of concern to regional councils. A brief discussion under each issue includes what activities NARC would undertake, and its impact.

These issues include legislative, administrative and appropriation matters that are expected to receive some type of action in 1981. Frequently, there are issues of concern to regional councils which are not slated for reauthorization or overview action in Washington in a given year. Some issues important to you may not be listed for 1981.

In setting NARC's Washington priorities, the Board is establishing general goals for NARC's staff and work priorities. But these priorities may shift during the course of the year due to new situations or opportunities. In addition, other matters of concern to regional councils apart from the top seven priorities will be addressed by NARC staff as time permits.

An asterisk (*) indicates this issue was a top priority in 1980. The attached 1980 priorities and status report may be helpful.

We suggest you consider reproducing this list and include it in the agenda package for your next Board meeting.

Please select the seven (7) issues which your Board believes are most crucial to your region and your council. If priority issues are missing from the list, please add them along with your comments.

Please return the attached response form to NARC by January 7, 1981.

THE ISSUES

Environment and Energy

(1) Integrated Environmental Planning -- This legislation, which was discussed then tabled in the 96th Congress, may resurface. NARC supports the concept if a viable local and regional role is provided.

(2) Clean Air -- The Clean Air Act will be up for reauthorization in 1981. Key issues will be economic vs. environmental concerns, modification of standards and the nature and funding of air quality planning activities.

(3) Water Quality -- Oversight hearings leading to reauthorization of the Clean Water Act will begin in 1981. It is expected that the 208 water quality program will be restructured. NARC is exploring the possibility of restructuring the program along the lines of the transportation metro-

politan planning organization (MPO) concept so that planning will program hardware funds, examine trade-off and become base of Section 402 permits. EPA has been brought into the discussion and is also working up its own recommendations for restructuring 208.

(4) Air and Water Appropriations -- With the Clean Air Act up for reauthorization, it is unclear what will happen on appropriations. However, it is clear that both air quality and water quality planning must identify funding sources that illustrate clear ties to hardware programs and regulatory decisions if they are to continue at adequate funding levels.

(5) Solid Wastes -- Solid waste planning programs have also seen lean funding. Now that local governments and regional councils are eligible for direct grants for solid waste management and planning, NARC may want to make funding for this program a high priority. However, it should be kept in mind that the Environmental Protection Agency envisions phasing out this program within 5 years.

*(6) Energy Conservation -- Efforts to build a strong role for regional councils in energy management and energy impact assistance legislation. Program activities as well as funding are issues. The full Senate has passed and the House Interstate and Foreign Commerce Committee has reported energy management bills in 1980. Both contain provisions for regional involvement.

The bills vary widely in their funding levels and program structure. It is not likely that a final bill can be negotiated in the lame-duck session because of time constraints and conflicting legislative priorities. A new bill will almost certainly be introduced next year if the lame-duck Congress fails to act.

(7) Energy Impact Assistance -- It is uncertain whether legislation expanding the present energy impact assistance program will be enacted. Legislation has passed the Senate authorizing $150 million each year for planning. The House has not acted on this matter and final passage is predicated on inclusion of impact assistance in the Department of Energy (DOE) authorization bill. The DOE authorization bill (S. 2322, H.R. 6627) has passed the Senate but is tied up in the House with attempts to attach nuclear energy waste proposals. Appropriations committees have approved $80 million (Senate) and $42 million (House) for an impact assistance program in FY 81 (present 601 or new bill, S. 1699).

Human Resources

(8) Aging -- Appropriations and actions of the Department of Health and Human Services in implementing the program must be closely monitored.

(9) Emergency Medical Services -- This legislation was formulated as a start-up program. It was to provide start-up funds for localities to establish emergency medical programs. The maintenance of the programs is to be the responsibility of the local jurisdiction. NARC is exploring the potential for continuing a federal funding participation in EMS programs. The purpose would be to provide funding to continue development or improvement of existing programs and to provide for demonstration funds for showing the feasibilities of new techniques.

(10) Human Resource Coordination -- Examine the feasibility of developing legislation affecting various federal social programs to assume regional council eligibility and flexibility to coordinate programs in aging, emergency medical, manpower and Title XX.

Intergovernmental Affairs

*(11) A-95 (OMB Circular) Regional Review and Comment Process -- The Office of Management and Budget (OMB) has developed a concept paper which includes many of the suggestions NARC has made for improving A-95. The need is to get the paper's recommendations adopted and implemented. Funding is a related issue.

(12) Federal Grants Reform -- The Senate passed a grant consolidation and simplification bill. House action is not anticipated this year. It is expected that these bills will be reintroduced and could be enacted next year.

*(13) General Revenue Sharing -- House Government Operations Committee reported out a bill authorizing $4.6 billion for locals and no money for states. The Senate Finance Committee reported out a bill which authorizes $4.6 billion for locals and--starting in FY 82--$2.3 billion for states. Both bills call for a $1 billion countercyclical anti-recession fund starting in FY 81; however, the Senate version terminates in FY 85 while the House version terminates in FY 83. The Carter administration supports $4.6 billion for locals; no money for states. If revenue sharing is reauthorized it will not be an issue in 1981, unless a House amendment requiring annual appropriations is passed.

Community Development (Metropolitan and Non-Metropolitan)

*(14) Rural Development Appropriations -- Increasing funding for Section 111 so that the circuit riding initiative can get underway while rural development planning activities continue will be a key issue in 1981. Implementation of the new legislation and funding will be issues. Under the Rural Development Policy Act (H.R. 3580) which was signed into law this year, the President must convey his rural development strategy to Congress each year. The strategy must then be reflected in his budget proposals sent to the Hill in January.

*(15) Economic Development -- If Congress decides to extend the present Economic Development Act until September 30, 1981, a major effort will have to be made in 1981 for a new Public Works and Economic Development Act (PWEDA) bill.

If Congress decides to pass major PWEDA bill this year, then NARC will have to work closely with EDA and the Department of Commerce on implementation, especially on development financing and Title V Commissions.

Appropriations will be an issue. Should there be an increase in funding for new economic development districts and increase in funding for metropolitan economic development demonstration program in FY 82. The former will depend on how many eligible but unfunded districts there are; and the latter will depend on what position EDA takes on evaluation of presently funded metro councils.

*(16) HUD 701 Comprehensive Planning Program -- While the 701 program has been reauthorized for two years ($40 million each year), funding remains a serious issue. The Senate has approved $40 million for FY 81 and the House $22.5 million ($20 million earmarked for areawides). This issue must be decided in conference. Another difficult fight for appropriations is anticipated in 1981.

(17) Housing -- Efforts were made this year to enact new housing legislation which would provide a subsidy to certain middle-income families to encourage the production of rental housing. The NARC Metropolitan Development Policy Committee is presently considering this and other housing production issues and will develop proposal to address emerging new housing issues.

(18) Agricultural Land Protection -- Legislation to provide protection for the nation's diminishing supply of farmland saw little movement in the 96th Congress. It is very likely that this legislation will surface again, especially since the Agricultural Lands Study commissioned by President Carter will be completed in early 1981.

Transportation

(19) Highway Trust Fund -- Major legislation will be introduced on the future of the highway trust fund which expires in 1984. Issues are an added tax to support the trust fund, completion of the interstate, authorization levels, facilities eligible and modifications in highway programs. Recommendations are being finalized by NARC's Transportation Policy Committee on the planning program, the federal aid urban system (FAUS) and other issues.

*(20) Transportation Appropriations -- The Department of Transportation will recommend to the Office of Management and Budget (OMB) an increase

in Urban Mass Transit Authority planning funds of $11 million in FY 82 to compensate for new census areas and for increases in funding metropolitan planning organizations (MPOs).

(21) Railroads -- There is growing concern about the nation's railroads. Several legislative proposals will be at issue in 1981.

Please return by January 7, 1981

RESPONSE FORM - NARC 1981 Washington Priorities

Our council has selected the following seven (7) priorities. Circle each of the seven.

(1) Integrated Environmental Planning

(2) Clean Air

(3) Water Quality

(4) Air and Water Appropriations

(5) Solid Wastes

(6) Energy Conservation

(7) Energy Impact Assistance

(8) Aging

(9) Emergency Medical Services

(10) Human Resource Coordination

(11) A-95 (OMB Circular) Regional Review and Comment Process

(12) Federal Grants Reform

(13) General Revenue Sharing

(14) Rural Development Appropriations

(15) Economic Development

(16) HUD 701 Comprehensive Planning Program

(17) Housing

(18) Agricultural Land Protection

(19) Highway Trust Fund

(20) Transportation Appropriations

(21) Railroad

COMMENTS:

OTHER PRIORITIES: (not included)

COUNCIL: _____

Address: _____

City: _____ State: _____ Zip: _____

Please return to: National Association of Regional Councils
1981 WASHINGTON PRIORITIES
1700 K Street, N.W., Suite 1306
Washington, D.C. 20006

MSD COUNCIL
ROLL CALL ROSTER

AGENDA ITEM: Roll Call

MEETING DATE: 12-4-80

	AYE	NAY
DISTRICT 1 ~~Donna Stuhr~~ OLESON	✓	
DISTRICT 2 Charles Williamson	✓	
DISTRICT 3 Craig Berkman	✓	
DISTRICT 4 Corky Kirkpatrick	✓	
DISTRICT 5 Jack Deines	✓	
DISTRICT 6 Jane Rhodes	✓	
DISTRICT 7 Betty Schedeen	✓	
DISTRICT 8 Ernie Bonner		✓
DISTRICT 9 Cindy Banzer	✓	
DISTRICT 10 Gene Peterson	✓	
DISTRICT 12 Mike Burton	✓	
DISTRICT 11 Marge Kafoury	✓	
TOTAL		

Planning Report

DRAFT
SUMMARY

PORTLAND – VANCOUVER CORRIDOR STUDY

November 12, 1980

Public Transportation and Planning Division

Washington State
Department of Transportation

DRAFT SUMMARY

PORTLAND – VANCOUVER CORRIDOR STUDY

November 12, 1980

Public Transportation and Planning Division
Washington State Department of Transportation

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PORTLAND-VANCOUVER CORRIDOR STUDY
(Third Bridge Study)

1. Conclusions

The Portland-Vancouver Corridor Study was commissioned by the Washington State Legislature at the 1980 Session. The purpose of the study was to analyze the facilities and improvements necessary to ensure adequate mobility and accessibility in this Corridor, with particular emphasis on the feasibility of a third bridge across the Columbia River between Clark County, Washington and Oregon. Study findings are to be reported to the 1981 Legislative Session.

The Study analyzed four alternatives:

A. Maintain Existing and Complete Committed Projects in Oregon and Washington.

B. Alternative A plus additional transportation systems management (TSM) type activites.

C. Alternative A plus a new highway bridge and roadway connections.

D. Alternative A plus a new light rail transit crossing and connecting transit services.

Detailed analysis suggests that Alternative B may best meet the short- and mid-term transportation requirements of the corridor. There are several reasons for this.

Aggressive TSM type activities, over Alternative A, will develop more efficient traffic movements. These TSM type activities include by-pass lanes for high-occupancy vehicles on the southbound ramps of I-5 in Washington, ramp meters (traffic signals) to enhance merging of traffic onto I-5, changeable message signing prior to the junction of (I-5) with I-205 to warn of congestion on I-5 and encourage use of I-205 by through traffic, and pre-emption of traffic signals by transit vehicles on Interstate Avenue to obtain higher transit travel speeds. These measures encourage use of transit and multi-occupancy vehicles, thereby reducing the number of single-occupant vehicles, or shift travel to a less congested route. The additional costs of these TSM activities, over Alternative A, is approximately $10 million. This compares to additional costs of $138 million to $168 million for Alternative C and additional costs of $122 million to $130 million for Alternative D.

This draft summary report was prepared for submission to the Legislative Transportation Committee; the State Transportation Commission and the Bi-State Task Force. The full report will be produced in December, 1980 and will incorporate comments from the organizations mentioned above.

It is stressed that Alternative B appears to satisfy most travel needs of the corridor through the year 2005. Beyond that time increasing congestion and strong travel demand will require additional transportation facilities. In fact, the continued growth and development of Hayden Island could increase traffic flows to the point where ameliorating action may be necessary in the shorter term. Continuous review of the regional development patterns and associated traffic generation will be mandatory if excessive congestion and economic penalties are to be avoided. The future of light rail or bus transit in the corridor requires further study and detailed analysis of appropriate alternatives. This will be particulary significant in the mid- and long-term periods.

2. Study Background and Objectives.

2.1 Study Purpose: Rapid growth in the Portland-Vancouver area, with associated traffic increases, suggests that current transportation facilities may, in the near future, become overloaded and create severe congestion problems. The basic purpose of this study is to analyze the increases in traffic that will occur and determine how they can be met. This will require the evaluation of appropriate transportation alternatives in the corridor.

The legislation authorizing the study directed the Legislative Transportation Committee and the Transportation Commission to determine. . .

> ". . . the feasibility of potential corridors which include preliminary engineering, social, economic, and environmental analysis of a third bridge across the Columbia River between Clark County, Washington, and Oregon. Such a study shall be based on, and be a continuation of, the January 1979 Third Bridge Study which developed and evaluated travel demands on potential crossings of the lower Columbia river between the vicinities of Camas and Woodland. . ."[1]

The findings and recommendations of such a study are to be reported to the 1981 legislative session.

2.2 Significant Prior Studies: The current study is the latest in a long line of studies directed to the problems of crossing the Columbia River in this Corridor. The major studies are summarized below.

- Interstate Bridge Study 1941: A joint effort by Oregon and Washington led to a study of existing and proposed crossings of the Columbia River. Detailed traffic surveys including origin and destination surveys, economic analysis, and engineering evaluations were completed for bridges between Astoria and Wallula, and reviewed the traffic flows on the existing bridge.

- Feasibility Study 1951: The purpose of this joint investigation, by the highway departments of Oregon and Washington, was to analyze traffic congestion on the existing interstate bridge and provide alternatives for present and future traffic. The study recommended that another bridge should be built across the Columbia, parallel and adjacent to the existing bridge, and that adequate connections be provided on both sides of the river.

- Completion of Key Facilities: During the 1950s, two developments had substantial impact on the traffic situation in the corridor, viz.:

  - in early 1955, the state of Washington's first freeway was opened in Vancouver. Plans were also underway for an additional Columbia River Bridge which, when completed, would with the existing bridge, tie into the new freeway.

[1] 1979 Washington 1st ex. s.c. 192 § 2 and title 44 RCW (1979 ED.) p. 33.

- in 1958 the second of the twin bridges on the I-5 Columbia River crossing was completed and opened to traffic.

- Rivergate Highway Study 1971: The Washington State Highway Commission was directed by the legislature to confer with the Oregon State Highway Commission to determine the appropriateness of a full scale feasibility study for the construction of the Washington portion of a Rivergate Highway. The proposed highway extended from I-5 north of Vancouver southerly to a crossing of the Columbia River in the vicinity of the West Vancouver industrial area, and then southerly to a connection with Oregon State Highway No. 26. After evaluation of study costs and related consideration, this study was discontinued.

- Washington Legislative Study 1979: In 1977, the Washington State Legislature mandated that a study be carried out by the Washington Highway Commission on potential crossings of the lower Columbia River. The report was published in January 1979. Based upon traffic estimates, the study suggested that to provide significant relief for the congested I-5 corridor would require an additional bridge parallel to I-5 or a new crossing in either of two westerly corridors.

- FHWA Feasibility Study 1979: This study included interviews with officials of both state agencies and local jurisdictions; review of estimated travel demand and capacity; an economic analysis of a proposed crossing; and a review of funding possibilities for a third bridge. The study found that a third bridge was not economically feasible and could have adverse impacts on nearby neighborhoods.

In addition to the foregoing, another study underway, which is intended to build on the work of this legislative study, is the Bi-State Task Force Study. It is described at a later point in this report.

In addition to the studies already described, all of which deal with requirements involving both Oregon and Washington, a large number of local and regional plans have been developed by area jurisdictions. The significance of these plans is discussed below.

2.3 Compatibility with Other Efforts: Throughout the study attempts have been made to maintain compatibility with regional goals and objectives and with local and regional plans.

The major transportation goals and objectives of the involved agencies are:

Regional Planning Council of Clark County (RPCCC) - Consider all types and modes of transportation in all planning and reflect federal, regional, and state as well as local, transportation needs. Minimize adverse social, economic, and environmental impacts and costs, conserve energy, lessen reliance on any one type of transportation, meet the needs of those who cannot or choose not to drive a private automobile, and facilitate the flow of goods and services so as to strengthen the local and regional economics.

Multnomah County - Support a safe, efficient, and convenient public transportation system. Locate population concentrations, commercial centers, employment centers, and public facilities in areas which can be served by public transportation. Ensure that public services and support facilities are provided in a timely, safe, and efficient manner as an integral part of the development process.

City of Portland - Promote an efficient and balanced urban transportation system, consistent with the Arterial Streets Classification Policy, to encourage energy conservation, reduce air pollution, lessen the impact of vehicular traffic in residential neighborhoods, and improve access to major employment and commercial centers.

Metropolitan Service District (Metro)

Encourage development of a multimodal transportation system emphasizing the use of transit and reduction of the usage of the single-occupant auto. Consider light-rail transit in major travel corridors. Place emphasis upon improving mobility and accessibility, land use compatibility, the environment, and the financing/decision making process. Promote energy efficiency, flexible working hours, reduction of energy consumption, air quality improvement, reduction of noise levels and infiltration of traffic through neighborhoods. Consider transportation system management option prior to large capital investment proposals.

City of Vancouver

The transportation goals of the City of Vancouver's Comprehensive Plan are in the process of being formulated.

Clark County

The RPCCC goals and objectives have been accepted by Clark County for the unincorporated areas of Clark County.

The major local and regional plans that are relevant to the current transportation study include the following:

- Multnomah County Comprehensive Plan 1977
- ODOT Reconstruction and Widening Project (I-5 north) 1979
- Portland International Airport Master Plan 1979
- Westside Industrial Truck Route Plan - Vancouver 1979
- Rivergate Policy and Development Plans 1976 and 1979
- Clark County Comprehensive Plan 1979
- ODOT I-5 North Freeway Improvement and Management Plan 1979

- Vancouver Transportation Center Analysis 1980
- Hayden Island Development Plans 1976 - 1979 - 1980
- Regional Transportation Plan Draft Two (Metro) 1980
- City of Portland - Recommended Comprehensive Plan 1980

The key features of each plan are presented in the full report. These features were carefully considered during the progress of the current study.

2.4 Sources of Information: Most of the information used in the WSDOT Vancouver - Portland Corridor Study was provided by local agencies, especially the Metropolitan Service District (Metro) in Oregon and the Regional Planning Council of Clark County (RPCCC) in Washington.

Metro's Regional Transportation Plan Draft Two (RTP 2) provided the main source for primary data and forecasts for the region. Major elements of the RTP 2 included population, employment, travel patterns, expected economic growth, and land use developments, as well as the existing highway and transit networks. In addition to utilizing detailed data from the RTP 2, the WSDOT study team also obtained forecasts of major elements from the Metro organization.

In addition, population forecasts for Clark County were obtained from the RPCCC. These forecasts showed close relationships with those produced by Metro but were well below the year 2000 forecasts produced by the Washington State Office of Financial Management in January 1980. These latter forecasts were not used in the study.

The most important land use factor affecting the WSDOT study is the relative growth of population and employment. The major assumption suggests that employment will grow relatively faster than population. This is true for all of the current suburban areas in the region, indicating a greater share of employment for jurisdictions other than the City of Portland. This major assumption leads to forecasts of lower travel across the Columbia River than if existing employment patterns were maintained.

2.5 Relationship with Bi-State Task Force Study: The Governors of the States of Oregon and Washington established, in 1979, a Bi-State Task Force to address metropolitan transportation issues affecting the two states. The Bi-State Task Force served as the policy body for this technical study of the Portland -Vancouver Corridor recently completed by Washington State Department of Transportation.

In addition, the Bi-State Task Force is the policy body responsible for the development of another study in the Vancouver - Portland Corridor. The primary purpose of this study is to provide objective and analytically sound information which, when combined with information generated by the State of Washington's Corridor Study, can be used as a basis for policy recommendations of the Task Force. This combined information base will be used by the Task Force to answer a number of questions concerning the Portland - Vancouver Corridor including, but not limited to:

1. Will currently committed transportation improvements adequately meet interstate corridor transportation needs over the next two decades?

2. What types of public policies and additional improvements appear to be appropriate to address the underlying causes of outstanding corridor transportation problems?

3. What are the long-range implications of these possible policies and actions on mobility, air quality, energy consumption, economic development and other important factors affecting the liveability of the overall region?

4. Which of the policies and actions should be implemented?

5. Is there a need to further analyze any policies, actions, or proposed improvements?

6. What type of decision-making mechanisms should be pursued and responsibilities assigned to ensure implementation of the recommended policies and actions?

7. How are the necessary funds to be raised and distributed?

Is is anticipated that the results of the legislative study completed by WSDOT will be of considerable assistance to the Bi-State Task Force in its comprehensive study.

3. Key Assumptions and Forecasts

3.1 Population and Employment - In 1977, population of the area was 1.1 million and by 2000 this figure is expected to reach 1.6 million - an increase of 45 percent. During the same time period, the employment in the area is expected to increase from 539,000 to 826,000 - a growth of 53 percent.

Figures 3.1 and 3.2 show estimated changes in population and employment, respectively, for the various subregional areas of the Transportation Study Area (TSA). These figures highlight the fact that high rates of change for both employment and population are expected in Clark County, especially in the vicinity of I-205. Clark County appears to be the most potentially dynamic subregion in the whole area. The Metro forecasts, which were used in this study, give a 62 percent growth in population and a 100 percent growth in employment between 1977 and 2000 for Clark County compared to an increase of 45 percent and 53 percent respectively for the region as a whole, as noted above.

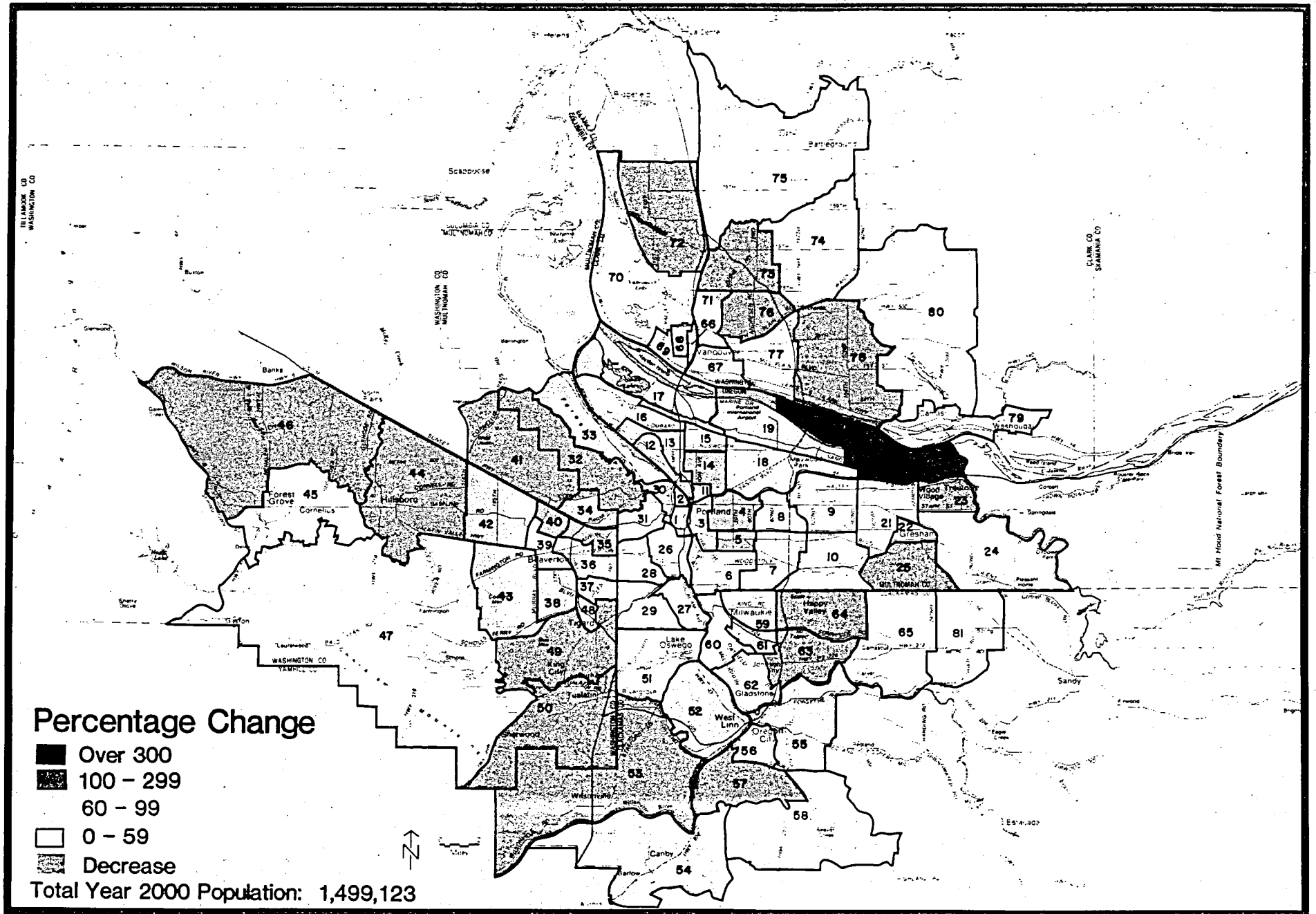
As noted elsewhere, these relative changes mean more jobs will become available in Clark County. As these jobs are filled by residents of the County, the amount of work induced travel across the Columbia River will decline.

3.2 Land Use - The comments made above about population and employment indicate some fairly significant changes in land use. Distributions of future population and employment were derived from an analysis of land available, for development; accessibility to jobs and population; accessibility to road, rail and water facilities; and a review of proposed commercial expansions in key areas. It should be noted that industrial land, in particular, is in abundant oversupply in the region and thus all subregional expectations will not be met.

A possible exception to this statement is Hayden Island. The assumption has been made that Hayden Island will show continual strong growth should a new bridge (highway or transit) be constructed and provide improved access. The RTP 2 shows an estimated increase of dwelling units from 760 in 1977 to 1,080 in 2000, with non-retail employment rising from 590 to 1,080. If a bridge is constructed the 2000 figures would be 1,870 and 2,680, respectively.

3.3 Travel Generation - The travel forecast models used, and the assumptions underlying these models, were the same as those used in the development of the Regional Transportation Plan Draft Two.

These travel forecasts assumed that gasoline costs would increase to $3.15 a gallon between 1977 and 2000, expressed in 1980 dollars; with a change in fleet fuel consumption from 13 mpg to 21 mpg in the same period. This results in an increase in automobile out-of-pocket operating costs from 9 cents to 18 cents during the period, expressed in 1977 dollars.

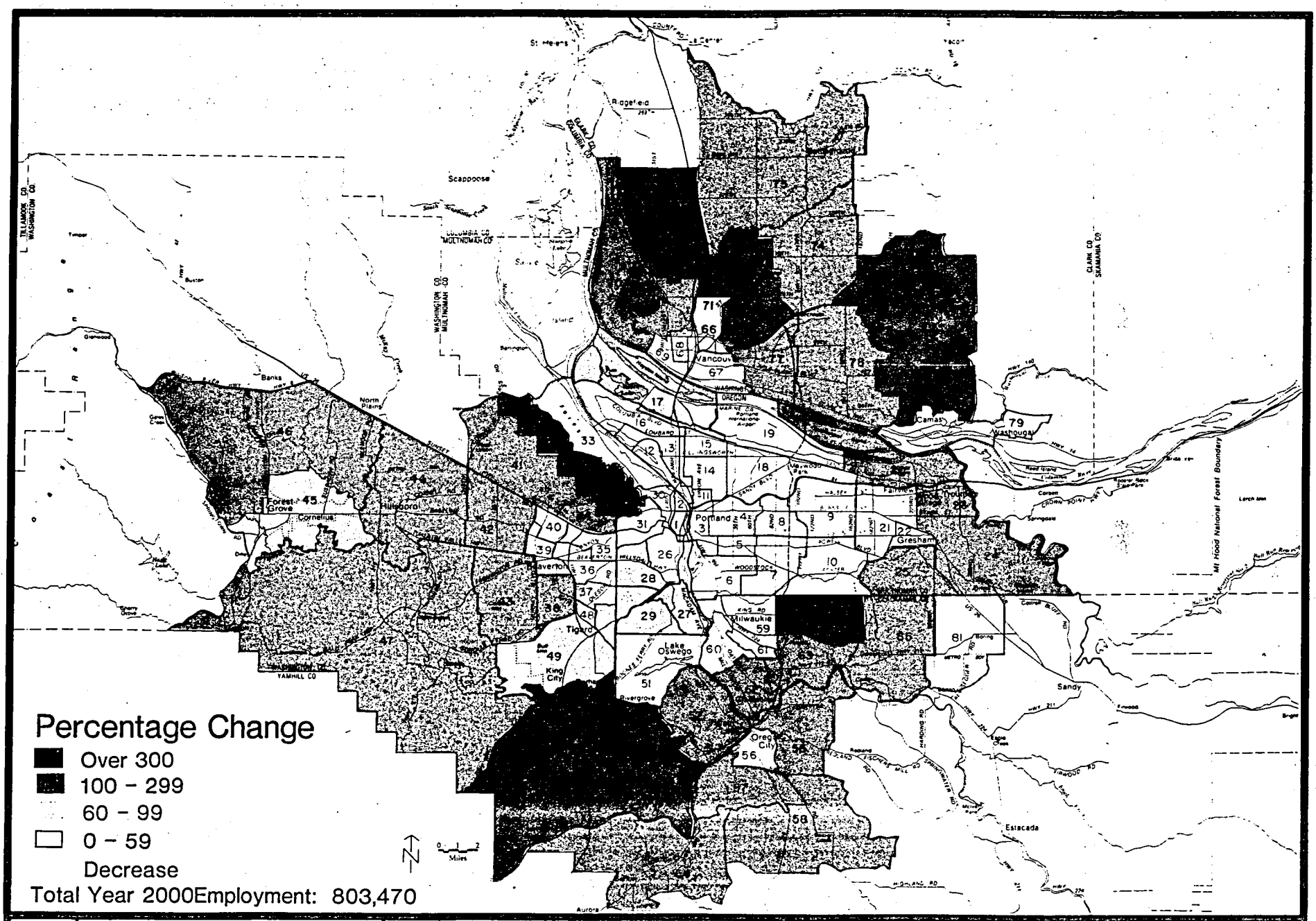


METRO

Draft Regional Transportation Plan • August 1980

CHANGE IN POPULATION
1977 TO YEAR 2000

Figure 3–1



METRO

Draft Regional Transportation Plan • August 1980

CHANGE IN EMPLOYMENT

1977 TO YEAR 2000

Figure 3-2

In terms of travel speeds the following assumption were made:

- the proposed new highway bridge would have four lanes, with a speed of 50 mph;
- the light rail system would achieve acceleration of 3 mph/second to a top speed of 55 mph between stations; and
- buses on their own right-of-way would operate at posted speeds if in a bus lane or at 55 mph if on a busway.

Using these assumptions, plus population and employment forecasts, travel volumes were calculated.

The crossing volumes for the various opportunities are summarized below:

COLUMBIA DAILY CROSSING VOLUMES

Alternative	Vehicles	Increase over Alt. A	Transit Riders	Increase over Alt. A	Mode Split
1977 (Base)	98,000	--	1,700	--	2.0%
A: RTP (2 Bridges)	181,000	--	14,800	--	10.7%
B: A & TSM	Traffic basically the same as Alternative A				
C: 3rd Hwy. Bridge	187,000	6,000	15,500	700	10.3%
D: 3rd Bridge (Light Rail)	183,000	2,000	17,800	3,000	12.6%

The traffic volumes by mode, and facility, are summarized below:

BRIDGE DAILY CROSSING SUMMARY

	Highway Volumes (vehicles)			Transit Volumes (AWD) (persons)		
Alternative	3rd Highway Bridge	I-5	I-205	3rd Transit Bridge	I-5	I-205
1977 (Base)	--	98,000	--	--	1,700	--
A: RTP (2 Bridges)	--	117,000	64,000	--	4,700	10,100
B: A & TSM	Traffic basically the same as Alternative A					
C: 3rd Hwy Brdg	30,000	94,000	63,000	--	5,400	10,100
D: 3rd Transit Brdg	--	117,000	66,000	11,900	--	5,900

4. Definition of Alternatives

The four alternatives evaluated in this study are defined in this section. They are:

A. Maintain Existing and Completed Committed Projects;

B. Combination of Alternative A and Additional TSM Activites;
C. New Highway Bridge and Roadway Connections; and

D. New Light Rail Transit Bridge and Connecting Transit Service.

Significant criteria relating to the alternatives included:

- consideration of multimodal alternatives for resolving the corridor problems;
- sensitivity to sub-regional goals and objectives;
- meeting the need for viable connections on both sides of the Columbia River;
- minimizing the costs of solutions;
- developing alternatives that are simple, flexible and adaptable to the urban fabric;
- respect for environmental and socially sensitive areas;
- consideration of alternatives that are energy efficient and also minimize air and noise pollution;
- development of alternatives that do not create any further restrictions on air and water navigation and that minimize conflicts with other surface transportation facilities;
- development of technologically viable alternatives that are capable of quick implementation; and
- capability to handle increased travel volumes throughout the area.

The definition of alternatives was a detailed process that covered current conditions and estimated future needs. During the development process the evaluation criteria were kept well to the forefront, so that each alternative could be evaluated in the same manner.

Alternative A: Maintain Existing and Complete Committed Projects

This alternative relates to the implementation of those programs and projects defined in the second draft (August 1980) of the Regional Transportation Plan Draft Two (RTP 2) for the Portland Metropolitan Area, and also those contained in the Washington State Transportation Plan and the Regional Plan for Clark County. (Figure 4.1)

The RTP places emphasis on policies which ". . . would lessen the dependency of travelers on the single-occupant automobile" and thus reduce the growth in automobile travel. These policies include:

- expanded transit service and promotion of carpools and vanpools;
- revised transit service to attract riders with more varied trip purposes, destinations and travel time;
- encouragement of growth patterns that are compatible with transit service;
- promotion of a better geographic balance between jobs, housing and shopping locations to reduce the length of trips; and
- improvements to make bicycling and walking safer and more convenient.

The RTP contains a detailed listing of the projects that will be implemented. The Washington State Transportation Plan is intended to provide guidance in the development, maintenance, and operation of a comprehensive and multimodal transportation system that:

- meets the needs of the state for safe, convenient and efficient movement of persons and goods;
- is socially, economically, and environmentally acceptable; and
- is integrated with the transportation system of local government and private carriers.

To achieve this objective, the Washington State Transportation Plan addresses all of the major forms of transportation, policy issues of importance to transportation, and specific improvements in facilities and services needed between 1981 and 1993.

The Regional Plan of Clark County addresses all types of transportation and seeks to develop a balanced system. In addition to making provisions for improvements to public transit, rail, highways, air, water, highway, bicycle, equestrian and pedestrian movement, the studies also address energy conservation and the minimization of adverse social, economic and environmental impacts and costs.

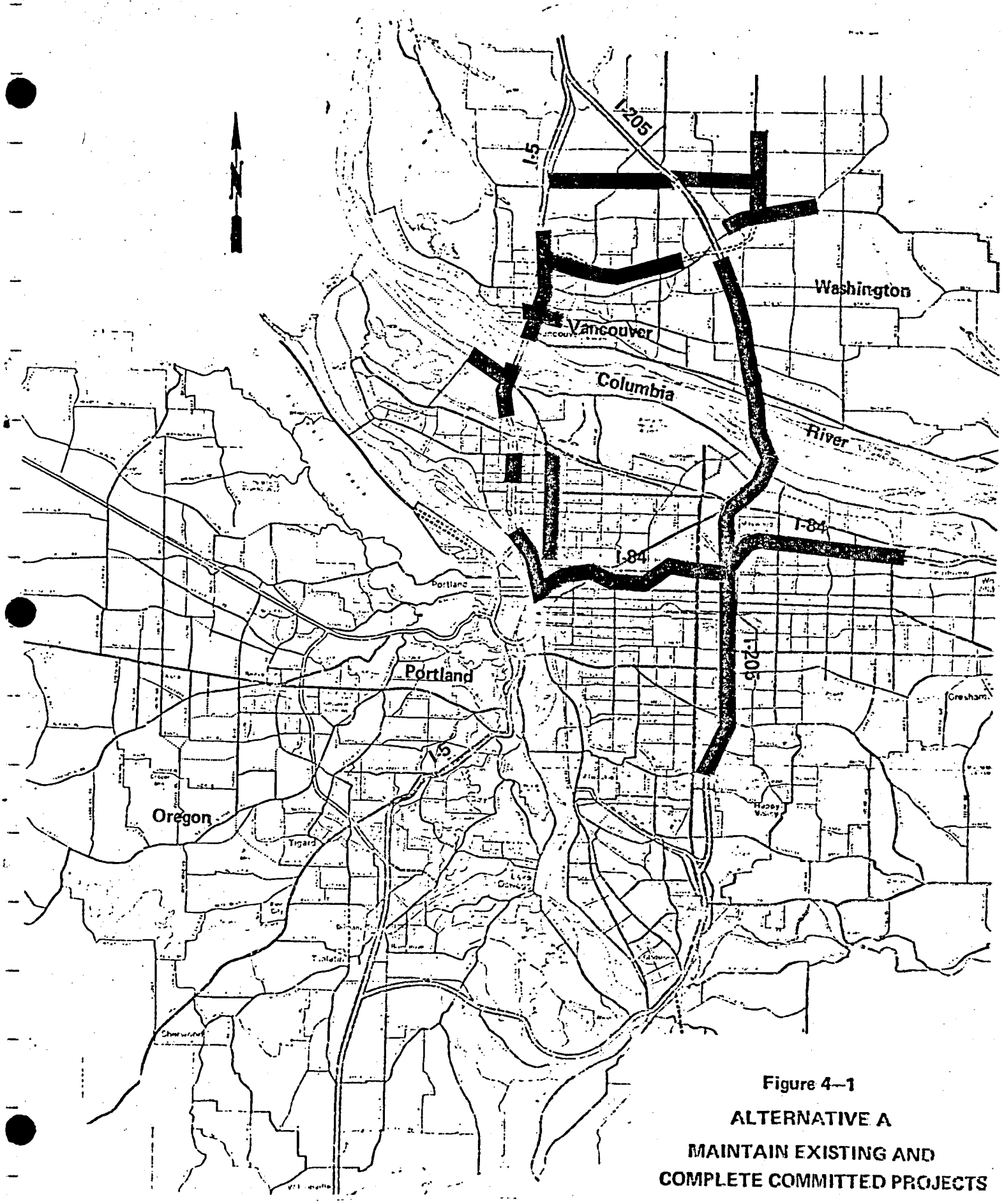


Figure 4–1

ALTERNATIVE A

MAINTAIN EXISTING AND

COMPLETE COMMITTED PROJECTS

Alternative B: Combination of Alternative A and Additional TSM Activities

This alternative includes the proposals contained in Alternative A plus the additional use of Transportation Systems Management (TSM) corridor specific actions beyond those for Alternative A. This alternative would involve additions to the projects listed or, in some cases, completion of projects at an earlier date than previously proposed. (Figure 4.2)

Examples of TSM tactics would include the use of bus pre-emptors on Interstate Avenue, the use of ramp metering for southbound traffic on ramps in Washington with provision of high occupancy by-pass lanes on these ramps; and the use of variable message signs prior to the junctions of I-5 and I-205 to advise through traffic to use I-205 when I-5 is congested.

The Washington State Transportation Plan proposes park-and-ride lots on I-5 at SR 500 at 4th Plain, and carpool lots on I-5 at the junction of SR 501. Additional park-and-ride and carpool lots will be developed under Alternative B.

Detailed evaluation was made of the need for additional paratransit developments in this corridor segment. The projects that have been defined are designed to reduce congestion and increase traffic flow by increasing the use of multiple-occupancy vehicles. The shift of persons from single-occupant autos is one of the effective results of a consistent policy of developing HOV lanes, park-and-ride lots and flyer stops. Improved paratransit service will reduce travel time, increase overall efficiency and conserve energy.

In addition to the above, and the projects contained in Alternative A, other improvements in the corridor will include resurfacing, minor widening, bridge repair, intersection improvements, and other actions to enhance safety and accessibility on a number of state highway locations.

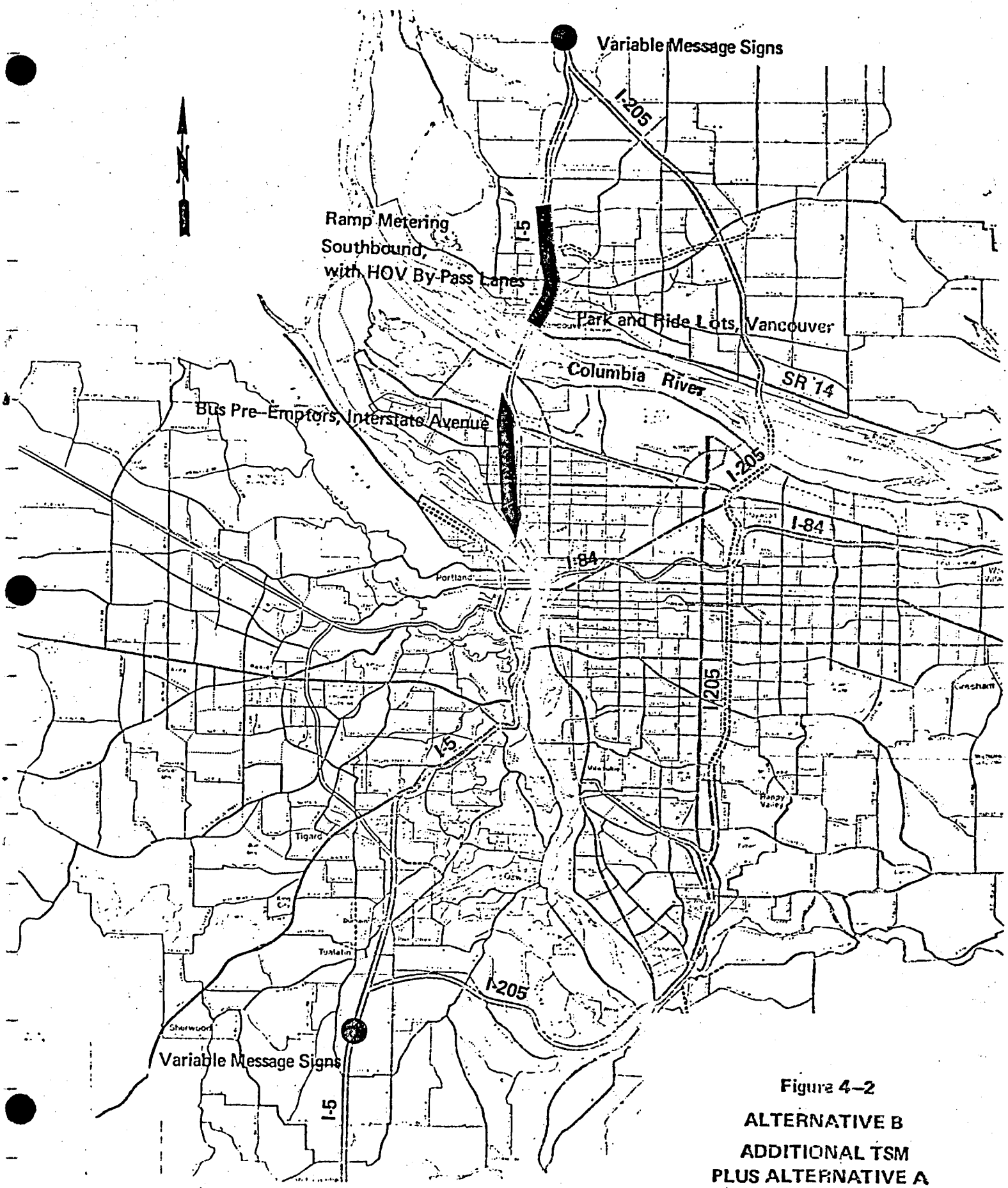


Figure 4–2

ALTERNATIVE B

ADDITIONAL TSM

PLUS ALTERNATIVE A

Alternative C: New Highway Bridge and Roadway Connections

This alternative consists of a new four lane highway bridge across the Columbia River, its connecting roadways and a new spur two-lane highway to serve N. Portland Road. The facility begins on Denver Avenue at Columbia Boulevard, swings north of the West Delta Park area and parallel to the existing mainline tracks of the Burlington Northern Railroad across Hayden Island and the Columbia River, before linking up with existing Lincoln Street in Vancouver. (Figure 4.3)

Because of the need to consider the railroad situation, three highway bridge possibilities, in relation to the railroad bridge, were included in the analysis:

C 1. Leaving the railroad structure alone and having the new highway bridge meet all horizontal and vertical clearances that currently exist including provision of a lift span on the new highway bridge.

C 2. Modifying the railroad structure to include an opening (lift span or swing span) towards the middle of the River and providing matching facilities on the new highway bridge.

C 3. Creating a new combined highway - railroad structure.

This breakdown led to an evaluation of three sub-alternatives under this major alternative.

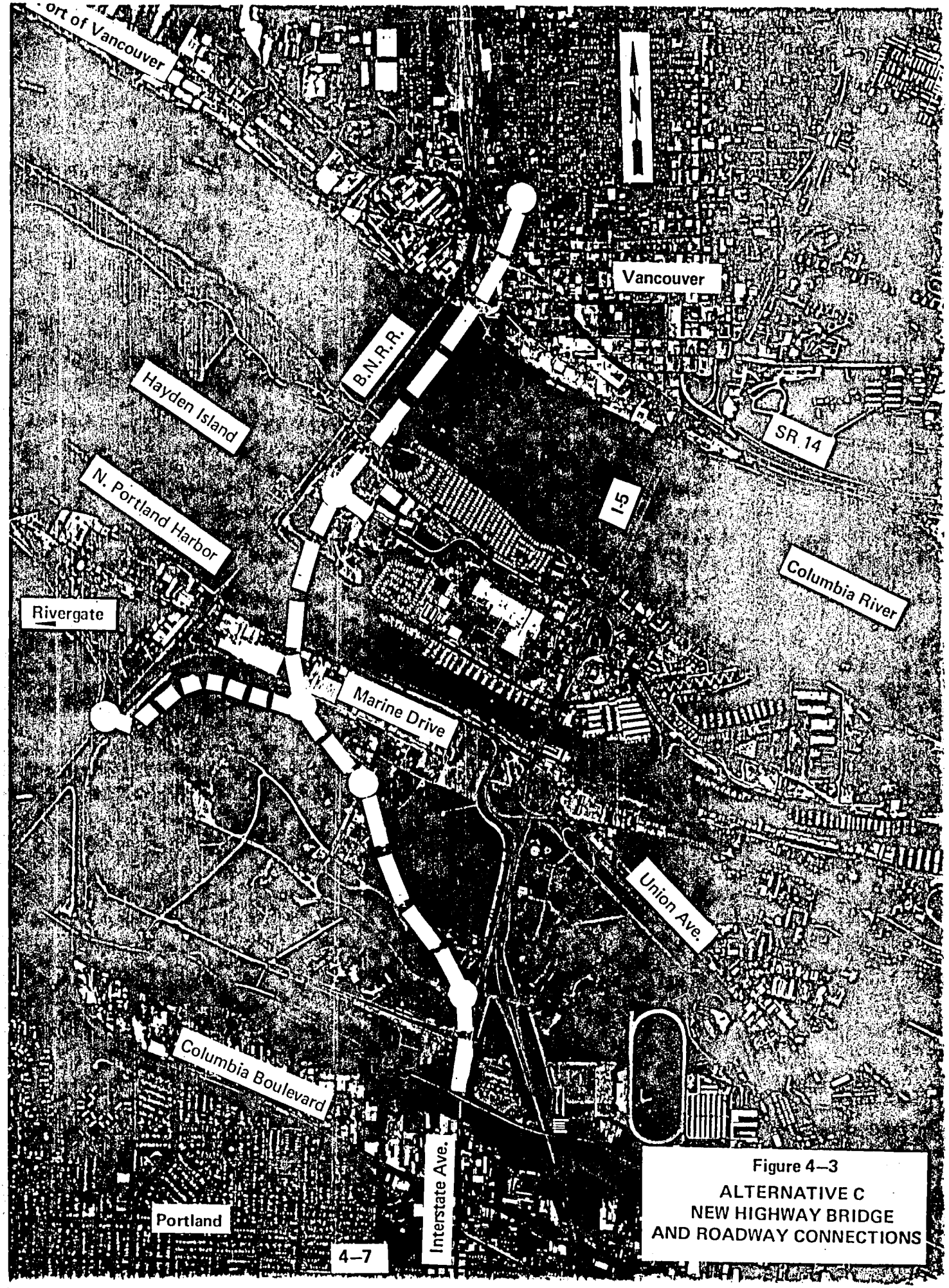


Figure 4–3
ALTERNATIVE C
NEW HIGHWAY BRIDGE
AND ROADWAY CONNECTIONS

Alternative D: New Light Rail Transit (LRT) Bridge and Connecting Transit Services

The light rail transit alternative was developed to provide an alternative mode facility to the automobile, and analyses of travel patterns suggested it should be located as close to the I-5 freeway as possible. Beginning on Denver Avenue at the Oregon Slough, the alignment generally runs parallel to the existing I-5 Freeway, skirting around the proposed Union-Swift Interchange improvements and across N. Portland Harbor and Hayden Island adjacent to, and parallel to, the I-5 Columbia River Bridge, then on to the proposed Vancouver Transportation Center. The LRT system would be served by feeder bus service with stations at Vancouver, Hayden Island, Marine Drive, Columbia Boulevard and other stations along Interstate Avenue to a transfer station near the Banfield LRT line. (Figure 4.4)

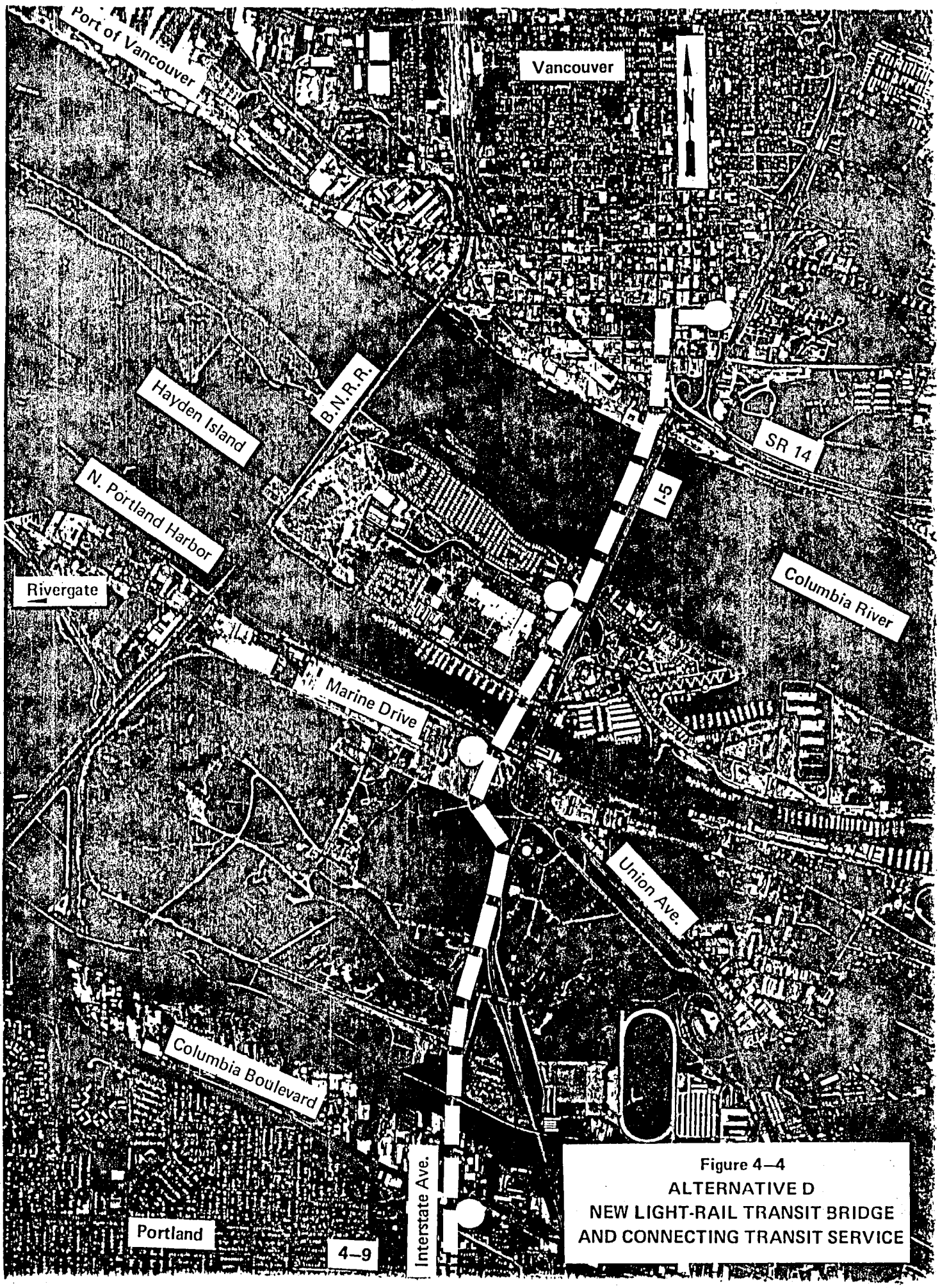


Figure 4–4
ALTERNATIVE D
NEW LIGHT-RAIL TRANSIT BRIDGE
AND CONNECTING TRANSIT SERVICE

ESTIMATED IMPACTS OF ALTERNATIVES

Item	Alt. A (Existing + Committed)	Alt. B (Alt. A + TSM)	Alt. C (Alt. A + New Highway Bridge Crossing)	Alt. D (Alt. A + New Light Rail Transit Crossing)
General Statistics				
Length	--	--	Columbia Blvd. to Lincoln Ave. 3.15 miles with connector to N. Portland Rd. 0.68 miles	Banfield Freeway to Vancouver 7.7 miles
Width	--	--	Principal route and bridge - 4 lanes and connector 2 lanes	Double track
Transportation Service				
Yr. 2000 Daily Traffic (see page 3-4)	117,500 vehicles	Slight reduction from Alt. A	94,000 vehicles on I-5 Bridge 30,000 vehicles on new bridge	117,000 vehicles on I-5 Bridge 12,000 persons on LRT
Traffic Disruption During Construction	High on I-5	Same as Alt. A	Potential major disruption of railroad facilities.	Moderate especially on Vancouver Streets.
Corridor Level of Service Peak Periods*			Total level of service for the sum of I-5 and the new highway bridge:	
1995-2001 2001-2008 2008-2045	Begin D/E, End E F F	Slight improvement over Alt. A	Begin C-D, End D-E Begin D-E, End E F	I-5 (same as Alt. A) Transit - high level of service throughout time period (1995-2045).
Viable Connections to new river crossing	--	--	Yes - Interstate Ave. and Lincoln Ave. - & connector to N. Portland Road	Yes - Vancouver Transportation Center, Interstate Ave. to Banfield Light Rail Station and Local Feeder Bus Connection.
Impact on Other Transportation Facilities				
. Water Navigation	--	--	Clearance equals or exceeds existing conditions. Tugboat Association has expressed concern. Modified Alternative is possibile (C-2 or C-3)	No impact.
. Air Transportation	--	--	No intrusion into airspace. No effect on access to the airports.	No effect on access or air rights.

* Levels of service are defined in the 1965 Highway Capacity Manual produced by Transportation Research Board. . .

Item	Alt. A (Existing + Committed)	Alt. B (Alt. A + TSM)	Alt. C (Alt. A + New Highway Bridge Crossing)	Alt. D (Alt. A + New Light Rail Transit Crossing)
. Other Surface Transportation Facilities	Committed projects will improve traffic flows	Improved traffic flow and faster travel speeds	Short term improvement in traffic flow on I-5. Provides an alternate north-south interstate connector. Feeder streets will have increased traffic in Vancouver. Interstate Avenue will have approximately 20% increase. Requires additional street and railroad work to maximize use of new bridge.	With development of Hayden Island and new LRT bridge, there will be no change in vehicular traffic on I-5 bridge as compared to Alt. A. Will require additional street improvements to maximize use of new bridge.
Economics		Additional Cost of Alts. B, C & D over Alt. A		
Cost	--			
Capital Costs (1980 Dollars)	S 1 Billion +	$10 Million	C-1 $138 Million C-2 $168 Million See C-3 $162 Million p. 4-6	$122 - 130 Million (Banfield to Vancouver)
Operating/Maintenance/yr.	--	$0.26 Million	$0.25 Million	$2.57 Million
Present Value of Benefits	--	$29 million at 5% discount rate $16 million at 10% discount rate	$22 million at 5% discount rate $9 million at 10% discount rate	$14 Million at 5% discount rate $7 Million at 10% discount rate
Economic Viability	Viable	Viable	Not viable in short- and mid-term	Apparently not viable in short- and mid-term because of high capital cost.
Compatibility with Regional and Community Plans and Goals	Compatible	Compatible	City of Vancouver - No Multnomah County - Partly Portland - No Metro - Maximization of the existing highway efficiency is emphasized vs. new roads and/or bridges	City of Vancouver - Yes Multnomah County - Probably Portland - Probably Metro - Probably.
Employment, Income and/or Business Activity	Increase	Same as Alt. A	Potential increases Hayden Island, Rivergate and S.W. Vancouver	Potential increases Downtown Vancouver, Hayden Island, Rivergate and City of Vancouver.
Residential Activity	Increase	Same as Alt. A	Potential increases Hayden Island, Fruit Valley Road, and Northwest Vancouver.	Potential increases in multi-family units in downtown Vancouver.
Displacement of Business	Minimal	Same as Alt. A	Moderate	Moderate

Item	Alt. A (Existing + Committed)	Alt. B (Alt. A + TSM)	Alt. C (Alt. A + New Highway Bridge Crossing)	Alt. D (Alt. A + New Light Rail Transit Crossing)
Fiscal Effects				
. General	Significant	No estimated change from Base (Alt. A)	Potential increase tax revenues in Vancouver area due to increased property evaluations. Potential decrease of sales tax revenues in Washington because of increased shopping in Oregon. Partial contribution to potential increase in income taxes and property taxes on Hayden Island.	Supports Vancouver downtown plans and estimated increased tax base. Similar for Hayden Island and other potential areas in Oregon. Potential negative effects possible because of increased shopping by Washingtonians in Oregon.
. Local	Significant	Generally same as Alt. A	Potentially requires larger amount of local match monies. Facility not on Federal or State Systems, but this may change.	Federal Funds eligibility for construction and operation Still needs a moderate amount of local funds.
Social				
Displacement of People	Minimal	Same as Alt. A	Moderate	Minimal.
Community Cohesion	Positive	Same as Alt. A	Potential increase neighborhood definition in Vancouver. Slight increase in role of Interstate Avenue as a divider.	Positive impact on downtown Vancouver. Creates divider on Oregon side of river.
Infiltration of through traffic in neighborhood	Small Amount	Same as Alt. A	Potential for slight increase.	Generally no effect if park and ride lots are located properly in respect to terminals.
Environmental & Energy				
Potential 4 (f) Lands	--	--	Yes - Delta Park Area	None
Energy Usage (Increase Over Alt. A)			Columbia Blvd. to Lincoln Ave. and Connection to N. Portland Rd.	Banfield Terminal - Vancouver
. Construction (Total)	--	Minimal	Significant	Significant
. Maintenance (Yearly)	--	Minimal	Moderate	Moderate
. Manufacture (Yearly)	--	Minimal	Minimal	Slight
. Operation (Yearly)	--	Minimal	Moderate	Moderate
Air Quality (compared to A)	--	Improved	Improved	Improved
Noise (compared to A)	--	Slight increase	Slight increase.	Potential increase in noise levels but a "silent" LRT could be developed by proper design.

Item	Alt. A (Existing + Committed)	Alt. B (Alt. A + TSM)	Alt. C (Alt. A + New Highway Bridge Crossing)	Alt. D (Alt. A + New Light Rail Transit Crossing)
Historical and Archaelogical Sites	--	--	None foreseen.	None foreseen.
Visual Impact	--	--	With proper design, no detrimental effects.	With proper design, no detrimental effects.
Preliminary. Overall Viability and Feasibility of Alternatives	Feasible under anticipated growth patterns in short to medium term with congestion problems developing on I-5 after 2000.	Better situation than Alternative A and represents strongest alternative in short to medium term... Effectiveness, however, will depend on completion of projects scheduled under Alternative A. Congestion problems will develop after 2003, so agressive TSM policies should be followed.	Based on traffic estimates and cost analysis, this alternative is not cost effective, nor is it economically or financially viable. However, as conditions under Alt. A & B deteriorate Alt. C may become operationally and economically viable	Based on traffic estimates mode split, competitive transportation and cost and revenue analyses this alternative is not economically or financially viable in short- and mid-term. Additional analysis necessary to assess operational and economic viability in the long term.

Note: Additional inputs and analyses are being completed for all four alternatives. When such information has been evaluated, final conclusions about the effectiveness of the four alternatives can be drawn. Until such time as that work has been completed the statements made in this summary report must be regarded as preliminary.