

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING )	RESOLUTION NO. 97-2505A
COST-CUTTING AMENDMENTS TO THE )	
SOUTH/NORTH LIGHT RAIL ALTERNA-) Introduced by	
TIVES AND DESIGN OPTIONS TO BE ) Councilor Washington	
STUDIED FURTHER IN THE PROJECT )	
DRAFT ENVIRONMENTAL IMPACT )	
STATEMENT )	

WHEREAS, In April 1993, the Metro Council adopted Resolution No. 93-1784 which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Draft Environmental Impact Statement; and

WHEREAS, In October 1993, the Federal Transit Administration issued notification of intent in the *Federal Register* to publish a South/North Environmental Impact Statement; and

WHEREAS, The current alternatives being studied in the Draft Environmental Impact Statement were approved by the Metro Council in December 1994 with the adoption of Resolution No. 94-1989 and in December 1995 with the adoption of Resolution No. 95-2243; and

WHEREAS, It is the role of the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee, the South/North Steering Committee and the project's participating jurisdictions to recommend alternatives to be studied further in the Draft Environmental Impact Statement; and

WHEREAS, It is the role of the Metro Council to make the final determination of the alternatives to advance into the Draft Environmental Impact Statement for further study; and

WHEREAS, In December 1996, the Metro Council endorsed the South/North Steering Committee's findings that there remains a strong base of regional support for the South/North Light Rail Project, as currently planned or with some changes, and Metro Council endorsed the committee's plan to undertake a process intended to significantly reduce costs for the South/North Transit Corridor Study; and

WHEREAS, In February 1997, the Metro Council adopted Resolution No. 97-2460 which endorsed the South/North Light Rail Project Finance Plan as adopted by the South/North Steering Committee that would require a significant reduction in South/North project costs; and

WHEREAS, In March 1997, The South/North Project Management Group proposed significant cost-cutting measures for the South/North Light Rail Project in the *South/North Briefing Document: Proposed Cost-Cutting Measures* and initiated a 30-day public comment period on those proposed cost-cutting measures; and

WHEREAS, In April 1997, the South/North Expert Review Panel reviewed the methods, assumptions and results of the cost-cutting process and concluded that they were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the Draft Environmental Impact statement; and

WHEREAS, In April 1997, following the conclusion of the public comment period, the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee and the South/North

Steering Committee adopted recommendations for proposed cost-cutting measures for the South/North Light Rail Project; and

WHEREAS, The proposed amendments to the alternatives and design options were developed and evaluated based upon the project's criteria and measures, including estimated costs, ridership, bi-state land use and development goals and significant environmental benefits and impacts; and

WHEREAS, The cost-cutting measures as proposed by the South/North Steering Committee would reduce project costs by approximately one-third, resulting in savings totaling more than \$500 million dollars, consistent with the project's adopted Finance Plan, while allowing the proposed project to meet its goal and objectives; now, therefore,

BE IT RESOLVED:

1. That Exhibit A is hereby adopted as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*.

2. That the following amendments, described in more detail in Exhibit A, are made to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement:

**A. Clackamas Regional Center**

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

**B. Railroad Avenue**

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.

- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

**C. Central Milwaukie**

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

**D. McLoughlin Boulevard**

- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.

**E. South Willamette River Crossing**

- For the Caruthers Crossing Alternative:
  - 1) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);
  - 2) add a 75-foot, fixed-span bridge alternative; and
  - 3) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.
- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.

**F. Downtown Portland**

- Replace the perpendicular turn alignment design from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment design.
- Add a MAX Connector Alternative to the DEIS for further study. This recommendation would:
  - 1) retain the existing full-mall alignment; and
  - 2) add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza

to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

**G. Eliot**

- Add a lower-cost design of the Arena Transit Center.

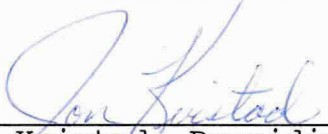
**H. Kaiser to Lombard Street**

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus option at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton and the Expo Center.

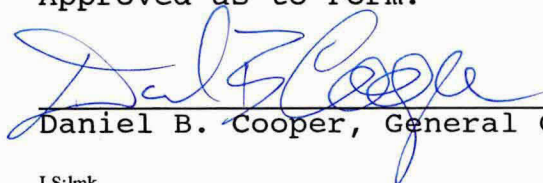
**I. Lombard Street to VA Hospital/Clark College**

- Replace the north MOS terminus option at the Expo Center with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

ADOPTED by the Metro Council on this 22nd day of May, 1997.

  
Jon Kvistad, Presiding Officer

Approved as to Form:

  
Daniel B. Cooper, General Counsel



**draft**

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Exhibit A

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# *Cost-Cutting Measures Final Report*

Metro Council

May 8, 1997

**Metro**



**draft**

## **Cost-Cutting Measures Final Report**

**Metro Council**

May 8, 1997

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## I Introduction

In December 1996, the South/North Steering Committee and Metro Council evaluated the results of Ballot Measure 32, which would have provided State of Oregon funding for the South/North Light Rail Project. Following are their key findings:

- The light rail funding measure passed with a 56 percent “yes” vote within the Metro boundary and it passed in each of the three counties inside the Metro boundary.
- An independent survey of voters found that 70 percent of tri-county voters favor moving forward with South/North light rail as it is currently defined or with some changes.
- The independent survey also found that, while support for light rail is high, there is some concern about cost.

In response to the election results and analysis, the Steering Committee and Metro Council called upon project staff to develop a range of options and design changes to significantly reduce the cost of the project.

The purpose of this *Cost-Cutting Final Report* is to provide a summary of the results of the cost-cutting process. In particular, this report describes the cost-cutting amendments that the Metro Council made to the alternatives and design options to be studied further within the South/North Draft Environmental Impact Statement (DEIS). This document begins with an overview of past narrowing actions, the purpose and need that is being addressed by the study and a discussion of the objectives that have guided the development of cost-cutting measures. The final report concludes with a segment-by-segment description of cost-cutting amendments that have been adopted and why.

### A. Previous Actions

The South/North Transit Corridor Study was initiated in July 1993, following the region’s decision in April 1993 to designate the South/North Corridor as the priority corridor for further study of a high capacity transit (HCT) improvement.

*Scoping Process:* In December 1993, the South/North Steering Committee established the scope or range of alternatives to be considered in the South/North Transit Corridor Study. The number of alternatives to be studied further was first narrowed through a public process that was initiated in September 1993. At that time, the Federal Transit Administration issued its intent to publish a DEIS for the South/North Corridor. The Scoping Process also acknowledged a two-tiered process to be used to narrow the range of alternatives to be studied further within the DEIS.

*Tier I - Narrowing Terminus and Alignment Alternatives:* In December 1994, following the preparation of technical analysis and public comment on the alternatives identified during the Scoping Process, the Metro Council adopted the range of Terminus (end points) and Alignment Alternatives to be studied further within the DEIS.

*Tier I - Design Option Narrowing:* In December 1995, the Steering Committee considered further refinements to the alternatives by narrowing the range of Design Options.

These narrowing actions, taken between 1993 and 1995, have established the range of alternatives and options currently being studied within the corridor. In early 1996, project staff initiated work on analyzing the alternatives and on preparing the DEIS.

### B. The Task at Hand: Reduce Costs While Retaining Value

During the cost-cutting process, project staff developed and evaluated a wide range of options to reduce project costs. The range of cost-cutting measures that were identified include changes to designs throughout the corridor, modifications to standards, reductions in construction schedules and many more. This document summarizes the cost reduction options that were found to be promising and that should be incorporated into the project. The amendments reflect Metro Council intent to balance the project’s goal to reduce costs while retaining as much value in the project as possible.

The adoption process for the cost-cutting measures is illustrated in Appendix A. The process included a 30-day public comment period, which was open between March 14 and April 14, 1997. Public comments were received at two meetings hosted by the South/North Steering Committee on April 8 and 9, 1997. Comments were also received by mail, through the Transportation Hotline and on the project’s Web page. Documentation of all citizen input received during the comment period is provided in the *Public Comments on South/North Cost-Cutting Proposals Report* (Metro: April 1997). The public comment period was followed by the adoption of recommendations from the South/North Project Management Group (PMG), Citizens Advisory Committee (CAC), Downtown Portland Oversight Committee and Steering Committee. Several local jurisdictions also took the opportunity to adopt their own recommendations on preferred cost-cutting measures. The committee and jurisdictional recommendations are summarized in Appendix C.

Before the cost-cutting amendments are described in more detail, it is important to understand the foundation of the South/North Transit Corridor Study. By understanding the purpose of the proposed light rail project and the transportation and the land use needs that it can address, we can better understand the cost-cutting amendments. The project’s goal and objectives, now more than ever, are valuable tools in examining trade-offs between options. They were also used to determine which were the most promising ways to implement reductions in costs while retaining the maximum level of the project’s effectiveness.



## II Purpose and Need

The following two pages are intended to set a context for the South/North Transit Corridor Study: What area does the Study cover? Why are we studying the South/North Corridor? What purpose would the Light Rail Transit (LRT) alternative and the various design options serve? How will we evaluate alternatives being studied?

### A. The South/North Corridor

Figure 1 illustrates the South/North Corridor. The Corridor is the travel shed extending north from the Oregon City area in Clackamas County, through downtown Portland and into Clark County, north of Vancouver. The Corridor is defined in this way because it captures the trips that could benefit from the major transit improvements being evaluated, either on LRT exclusively or federal onto light rail through a system of connecting bus routes and/or park-and-ride lots.

Key activity centers within the Corridor help to define the points that LRT should connect. These key activity centers include Oregon City, the Clackamas Regional Center (CRC) area and the downtowns of Milwaukie, Portland and Vancouver. The Corridor also includes other important centers such as the Oregon Institute of Technology, Clackamas Community College, the Central Eastside Industrial Area, OMSI, the North Macadam Redevelopment Area, Portland State University, the Union Station/North River District, the Rose Quarter, Interstate Avenue, Portland Community College in north Portland, the VA Hospital and Clark College.

In all, the South/North Corridor covers almost half of the metropolitan region. It is characterized by high employment and residential growth (higher than the region as a whole), with the potential for worsening travel and air quality conditions.

### B. Phasing the Development of LRT in the Corridor

One of the most significant outcomes of the analysis to date has been the acknowledgment that the development of light rail in the South/North Corridor will need to take place over several phases, spanning a decade or more. The project's first phase has been defined as the segment between the Clackamas Regional Center in the south, through central Milwaukie and downtown Portland to a northern terminus in Vancouver. The second phase of the project would extend the project south to Oregon City, via either McLoughlin Boulevard or I-205.

Funding and cash-flow limitations will also require that the first phase of the project be built in at least two or three distinct construction segments. Various construction segments and funding options will be studied further in the DEIS and Final Environmental Impact Statement (FEIS).



Figure 1 - The South/North Corridor

## C. Transportation Problems and Opportunities

The problems and opportunities that exist within the South/North Corridor set the context for defining and evaluating the LRT alternatives and design options.

- **Population and Employment Growth.** With the expanding Northwest economy, population within the Portland/Vancouver metropolitan area is projected to grow by 500,000 to 700,000 over the next 20 years. Anticipating and managing that growth is essential in order to ensure that the region's quality of life is not diminished.
- **Traffic Problems.** With this growth, traffic in the South/North Corridor is exceeding the capacity of many of the roads and intersections within the highway system. For example, most of McLoughlin Boulevard is currently highly congested with a level of service of E or F (A is best, F is worst). In the north, traffic across the Columbia River has almost doubled since the opening of the I-205 Bridge with I-5 currently operating at level of service E to F. Projections for continued growth well into the future will cause demand to exceed capacity during the key commute periods.
- **Transit Problems.** As the highway network becomes congested, the bus network, which shares the road with cars and trucks, experiences longer travel times and high levels of unreliability. Deterioration in speed and reliability of buses increases operating costs, lowers ridership and costs transit riders thousands of person hours a day through longer bus trips.
- **Regional Plans.** For over 20 years, the region has shaped its land use and transportation plans based upon the expectation that high capacity transit (HCT) would be provided within the South/North Corridor. Those plans have sized the road network, defined the comprehensive land use plans and implemented a bus network that would enhance and be served by an HCT facility.
- **State Regulations.** Both Oregon and Washington jurisdictions must comply with state regulations affecting transportation and land use planning. Oregon requires that the region plan for a 20 percent reduction in the per capita vehicle miles traveled and a 10 percent reduction in the per capita number of parking spaces. In the State of Washington, Clark County jurisdictions adopted commute trip reduction ordinances that require major employers to reduce single occupancy vehicle trips by 35 percent by 1999.
- **Economic Health.** There is growing concern that reduced accessibility within the South/North Corridor may reduce its ability to attract and retain industrial and commercial development in the Corridor. This trend adds to the concern in Clark County regarding the relative loss of per capita income compared to

the region. Further, concurrency requirements within the State of Washington may limit new development if the transportation system is inadequate to handle new demand.

- **Air Quality.** The region is currently "marginal" for ozone levels and "moderate" for carbon monoxide. Transit expansion is a key element of the region's proposed Air Quality Maintenance Plan and could save new industry \$2 million a year in air quality clean-up costs.

## D. Goal and Objectives

In response to these problems and opportunities, the South/North Steering Committee has adopted the following goal and objectives for the project:

*To implement a major transit expansion program in the South/North Corridor that supports bi-state land use goals, optimizes the transportation system, is environmentally sensitive, reflects community values and is fiscally responsive.*

1. Provide high quality transit service.
2. Ensure effective transit system operations.
3. Maximize the ability of the transit system to accommodate future growth in travel.
4. Minimize traffic congestion and traffic infiltration through neighborhoods.
5. Promote desired land use patterns and development.
6. Provide for a fiscally stable and financially efficient transit system.
7. Maximize the efficiency and environmental sensitivity of the engineering design of the proposed project.

To date, alternatives and design options have been developed to address the problems and opportunities within the Corridor. Once the DEIS is published, the study's goal and objectives will provide a framework for evaluating and selecting the preferred alternative and design option for each segment of the corridor.

The goal and objectives also provided the basis for selection of cost-cutting amendments to be incorporated into the study. The goal of reducing project costs must always be seen in light of the project's transportation and land use objectives to help ensure that the best project, reflecting a balance of cost and effectiveness, is the one that moves into final design and construction.

### III Segments: Alignment Alternatives and Design Options Previously Under Study

The Phase One South/North Project has been divided into several segments, including a range of alternatives and design options within each segment. Following is a summary of those segments and the alternatives and design options that were under study within the DEIS prior to the cost-cutting process. This set of alternatives was the starting point for the cost-cutting process. The amendments described within this report change or delete some of these alternatives and design options or they add new lower-cost alternatives into the DEIS for further study.

These segments, alternatives and design options are illustrated in Figure 2.

#### 1. Clackamas Regional Center

*Alignment:*

- ◆ North of CTC
- ◆ South of CTC
  - South of OIT/CCC
  - North of OIT/CCC

*Terminus Location:*

- ◆ 93rd Avenue
- ◆ 105th Avenue

#### 2. Railroad Avenue

- ◆ Railroad Avenue

#### 3. Central Milwaukie

- ◆ Monroe Street and 21st/McLoughlin
- ◆ Monroe Street and SP Branch Line

#### 4. McLoughlin Boulevard

- ◆ McLoughlin Boulevard

#### 5. South Willamette River Crossing

- ◆ Caruthers/Brooklyn Yard
  - At-Grade Crossings
  - Above Grade Crossings
- ◆ Ross Island Crossing
  - West McLoughlin Boulevard
  - East McLoughlin Boulevard

#### 6. Downtown Portland

- ◆ Harrison Street and Center Lane of Transit Mall
  - Irving Street
  - Glisan Street

#### 7. Eliot

- ◆ Wheeler Avenue Alignment and Russell Street Station
- ◆ East of I-5 Alignment and Kerby Street Station

#### 8. Kaiser to Lombard Street

- ◆ Interstate Avenue Alternative
- ◆ I-5 Alternative

#### 9. Lombard Street to VA Hospital/Clark College

- ◆ West of I-5
- ◆ Lift Span Bridge
- ◆ Two-Way on Washington Street

### Length Alternatives

Because the Phase One Project will need to be built as two or more construction segments, the study also includes several segments that are shorter than the Full-Length Alternative from Clackamas Regional Center to Vancouver.

These shorter Length Alternatives are called Minimum Operable Segments (MOS). Specifically, they are options for the first construction segment. These construction segments will play an important role in developing the project's finance plan. The first construction segment will be selected along with the preferred alignment alternative and design option following the publication of the DEIS.

Following are the Length Alternatives that were being studied within the DEIS prior to the cost-cutting process:

- ◆ **Full-Length.** Clackamas Regional Center to Vancouver
- ◆ **MOS 1.** Milwaukie Market Place to Vancouver
- ◆ **MOS 2.** Clackamas Regional Center to the Rose Quarter Transit Center
- ◆ **MOS 3.** Clackamas Regional Center to the Edgar Kaiser Medical Facility
- ◆ **MOS 4.** Clackamas Regional Center to the Expo Center

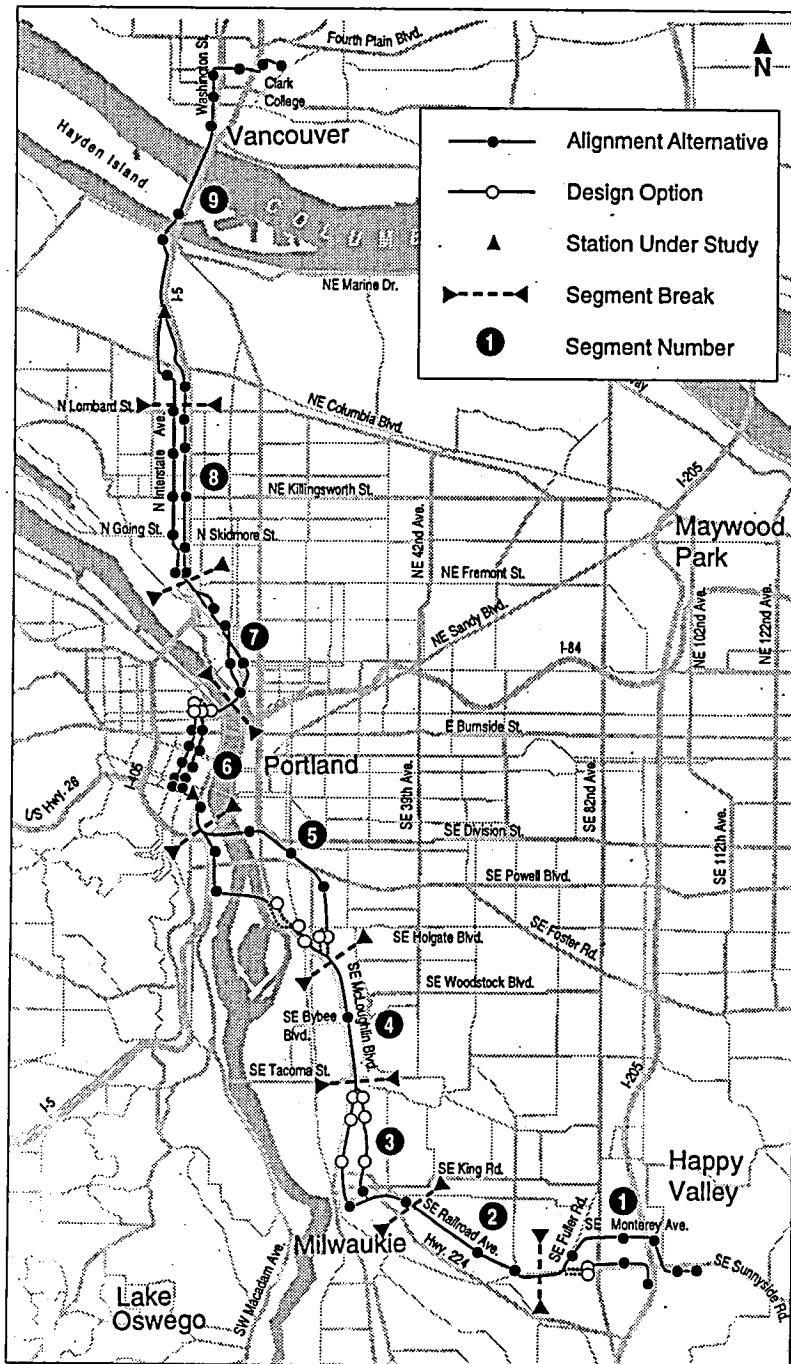


Figure 2 - The South/North Corridor Segments: Alternatives and Design Options Previously Being Studied

## IV Cost-Cutting Process

### A. Cost-Cutting Principle

The following principle has been used to develop the cost-cutting measures outlined in this report:

*To design the most cost-effective rail project that achieves livability and transportation goals within available funding.*

This means:

- The project must be highly competitive with comparable projects elsewhere in the nation based on a variety of criteria, including cost-per-mile and ridership.
- The project must serve Clackamas County, downtown Portland and North Portland to achieve maximum ridership potential and to best serve the corridor.
- The project must allow for a future extension to Oregon City and Clark County.
- If the project is built in segments, the first segment will be the South segment.
- Local jurisdictions and public-private partnerships may provide local enhancements and project elements with financing that they provide.

### B. Cost-Cutting Categories

These principles provided direction leading to the identification, evaluation and selection of cost-cutting measures. Broad categories as well as specific options for reducing costs were identified. Following are the four general areas where efforts to lower costs have been directed:

- *Changes in Project Scope - Permanent Changes and Deferrals*

This category of cost reduction measures represents changes in the design of the project. Some of the changes would be permanent (such as a different alignment), while other changes would be to defer improvements to a later construction segment or phase.

Changes in project scope are identified throughout the corridor, effecting many of the segments and design options that were previously being studied in the DEIS. The changes in scope range from deleting or amending current alternatives and options to adding new, lower-cost options. The amendments that change the scope of the project to be studied further within the DEIS are described and discussed within this report.

- *Changes in Financial Responsibility*

This effort will seek to identify new funds that could be made available to the South/North Project from participating agencies through the donation or a reduction in the cost of right-of-way and/or facilities. Similarly, coordinated design and/or construction of related transportation projects could also reduce South/North costs. Additionally, the cost of relocating public utilities may be able to be reduced by changes in relocation policies, track-bed design and changes in cost-sharing responsibilities. Both the right-of-way donation and cost-reduction options for public utility relocation will be pursued within a special study (see page 25).

- *Changes in Management Approach*

Changes in management approach can reduce the engineering and administration costs needed to design and build the project by over 10 percent. Also, by planning to use the same rail car design as the Westside/Hillsboro Project, Tri-Met can reduce its spare rail car ratio from 20 percent to 15 percent.

- *Changes in Costing Methodology*

Costs of building a light rail project are estimated using a methodology based upon numerous individual factors. Project staff have reviewed each one of those factors. Several factors will be revised where they appeared to be too conservative or where new information is now available. Experience on the Banfield and Westside lines and recent local construction experience was used to revise the costing methods.

An important revision to the cost methodology will be to assign separate contingencies appropriate to various elements of the project. In the past, one or two very broad levels of contingency were used project-wide. The new methodology will allow some contingencies to increase (for example with a bridge) while other contingencies will be reduced. The combined effect is lowered overall contingency due to more accurate costing.

Forecasts of right-of-way costs were also reduced to reflect a higher level of information based on the most recent experience from the Westside light rail project.

Finally, as we all know, inflation leads to higher costs. In the past, the South/North Project has used an inflation factor previously developed by the Federal Transit Administration. Experience over the past several years allows us to incorporate a lower inflation rate.

## **C. Resulting Capital Costs**

When the cost-cutting measures are taken together, project costs are reduced by approximately one-third. For example, a segment that was previously estimated to cost \$1.5 billion would now be estimated to cost approximately \$1 billion.

The following segment-by-segment discussion of the adopted amendments to the DEIS alternatives including estimates of the costs savings associated with the changes. These costs incorporate the design and scope differences between the alternatives or options considered within that segment. Also, the cost differences between the alternatives reflect the other system-wide cost methodology changes previously discussed (e.g. financial responsibility, management and costing methodology). For example, if an alignment change is described as saving \$10 million, the cost savings incorporates factors such as the inflation rate and the revised engineering and administration rate.

More precise cost estimates will be prepared for the DEIS, once the range of cost-cutting amendments are fully integrated into the alternatives under study. The revised cost estimates will be available for the selection of the locally preferred alternative.

The cost estimates included within this report are year of expenditure costs (YOES), that is they are the estimates of what it would cost to build the project five or more years in the future. An inflation rate is used to inflate current dollar costs into the year of expenditure cost estimates.

Capital costs include right-of-way, utility relocation, related roadway reconstruction, LRT grade preparation, structures, trackwork, at-grade crossings, stations and fare collection, park-and-ride lots, special conditions, system costs (e.g. signals system), light rail vehicles and maintenance facilities. The cost estimates also include engineering, administration and a contingency allowance to reflect the level of design detail available. The unit rates used to develop these estimates include historic data and recent Westside LRT data, where available.

## **D. Ridership, Traffic and Environmental Analysis**

Because lowering costs is only one of several objectives of the project, this document provides an assessment of the significant ridership, traffic and environmental impacts associated with the cost-cutting measures. Much of this assessment is founded in the analysis that has been prepared to date for the DEIS. Some portion of the analysis has been developed over the past two to three months to support this cost-cutting exercise. A broader spectrum of ridership, traffic and environmental analysis will be performed, documented and evaluated within the DEIS and will provide the basis for the selection of the preferred length and alignment alternatives.

## **E. Summary of Amendments to the Alternatives and Design Options**

Following is a summary of the cost-cutting amendments to the alternatives and design options as adopted by the Metro Council. A more detailed description of these amendments is provided in the following chapters.

### **1. Clackamas Regional Center**

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

### **2. Railroad Avenue**

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

### **3. Central Milwaukie**

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

### **4. McLoughlin Boulevard**

- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.

### **5. South Willamette River Crossing**

- For the Caruthers Crossing Alternative:
  - a) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);

- b) add a 75-foot, fixed-span bridge alternative; and,
- c) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.

- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.

### **6. Downtown Portland**

- Replace the perpendicular turn from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment.
- Add a Half-Mall/MAX Connector Alternative to the DEIS for further study. This amendment: 1) retains the existing full-mall alignment; and 2) adds a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

### **7. Eliot**

- Add a lower-cost design of the Arena Transit Center.

### **8. Kaiser to Lombard Street**

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.

### **9. Lombard Street to VA Hospital/Clark College**

- Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

## V Clackamas Regional Center

The Clackamas Regional Center segment is centered around the Clackamas Town Center area, which is designated within Metro's 2040 Plan as a *Regional Center*. The Clackamas Regional Center is expected to experience significant growth in the future, reinforcing its existing characteristics of mixed land uses, including retail, office, commercial, education and low to high density housing.

This segment presents two primary issues: 1) Should the alignment run south or north of the Town Center between 82nd Avenue and I-205?; and, 2) Where should the line terminate? Alternatives addressing both of these issues have been developed and analyzed.

It is important to note that the South Terminus options are for the end point of the Phase One South/North Project. A future extension to Oregon City, via I-205 or McLoughlin Boulevard, is proposed and can be accommodated by any of the design options currently under consideration.

The following amendments will be made to the range of alternatives and design options within the Clackamas Regional Center segment (see in Figure 3).

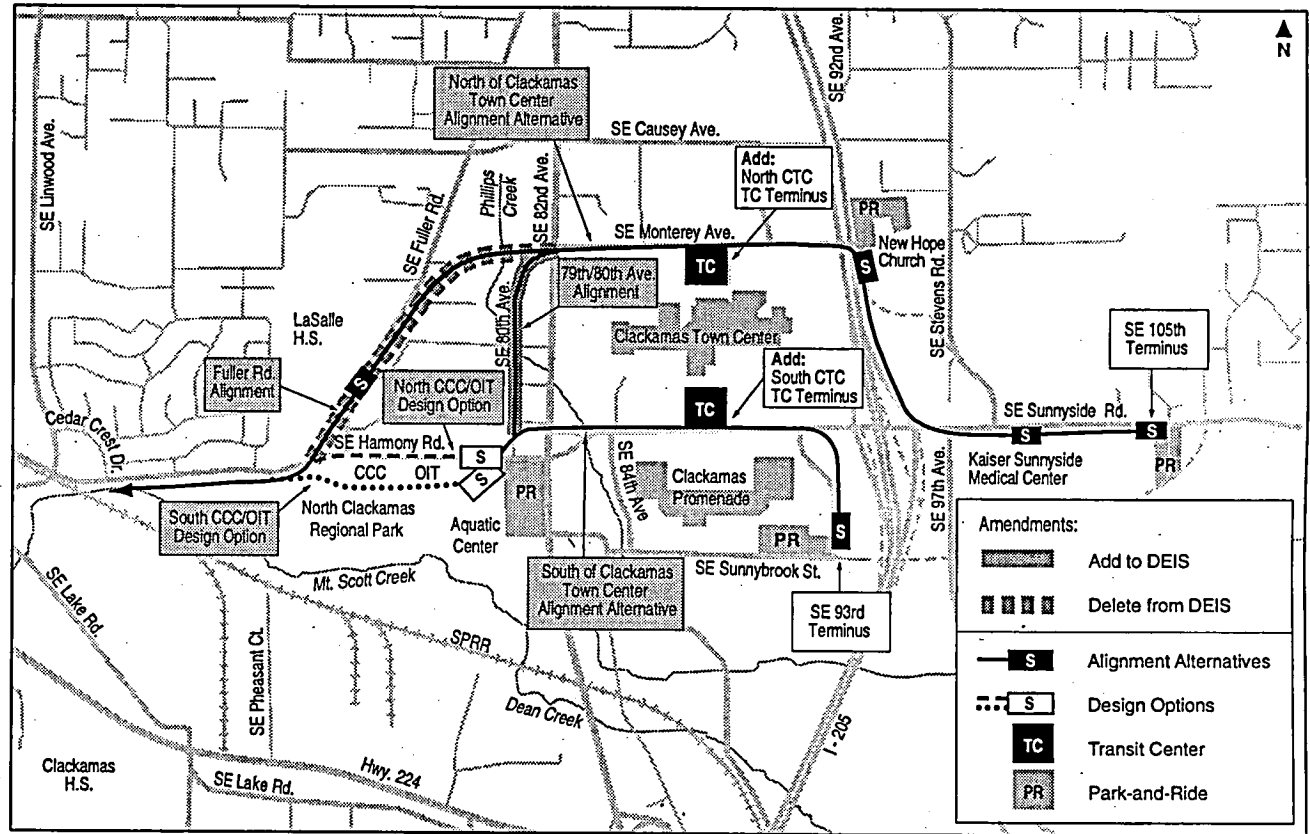


Figure 3 - Clackamas Regional Center Segment

### Amendment 1:

*Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.*

### Rationale:

- **Cost.** A South of CTC Terminus at the Transit Center would cost approximately \$40 million less than the 93rd Terminus (YOES). A North of CTC Terminus at the Transit Center would save approximately \$60 million compared to the 105th Avenue Terminus Option (YOES).
- **Ridership.** Light rail weekday ridership in 2015 would be approximately 1,400 fewer with a terminus at the transit center than with the 93rd or 105th Avenue Terminus Options.

- **Transit Connections.** Because light rail would terminate at the CTC Transit Center, all bus routes serving the Clackamas Regional Center would have transit access to light rail.
- **Park-and-Ride Capacity.** By eliminating park-and-ride lots at the terminus stations (and a joint use facility at the New Hope Church site), a Transit Center Terminus would need to find replacement parking capacity either through larger lots along the remainder of the line or through a future extension to the terminus lots. If replacement parking capacity was not built, ridership using park-and-ride access would be lost.
- **Significant Environmental Impacts.** There are no anticipated additional significant environmental impacts associated with a Transit Center terminus option. Impacts due to the alignment east of the Transit Center Station would be avoided until an extension was implemented.

- *Oregon City Extension.* An extension to Oregon City via I-205 would be feasible with a Transit Center Terminus.

alignment, the additional minute in travel time associated with the SE 79th/80th Avenue alignment would lead to somewhat lower ridership between Oregon City and destinations such as downtown Milwaukie and Portland.

#### **Amendment 2:**

*Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run generally in the vicinity of SE 79th and 80th Avenues. This change would provide the North of CTC Alignment Alternative with a station and park-and-ride lot located at the southwest corner of SE Harmony Road and SE 82nd Avenue. (Both the North of CCC/OIT and South of CCC/OIT Design Options will be included within the North of CTC Alignment Alternative. The Project Management Group will continue to work with the OIT, CCC, the North Clackamas Parks and Recreation District and other interested parties to determine if the CCC/OIT Design Options should be modified to reduce costs and/or improve their characteristics.) The modified alignment would include an at-grade light rail crossing of SE 82nd Avenue at SE Monterey Avenue rather than an elevated crossing of SE 82nd Avenue currently under study in the DEIS.*

#### **Rationale:**

- *Cost.* The proposed amendment to the North of CTC Alignment Alternative with a SE 79th/80th Avenue alignment would save approximately \$12 million to \$24 million (YOES) compared to the SE Fuller Road alignment (depending upon which CCC/OIT Design Option is ultimately selected).
- *Ridership and Park-and-Ride Capacity.* While the stations located on SE Fuller Road and SE Harmony Road would provide access to different residences and activity centers, ridership levels at the two stations would be similar. However, with access to a park-and-ride lot at SE Harmony Road and SE 82nd Avenue, approximately 2,200 additional light rail park-and-ride trips would be taken with the SE 79th/80th Avenue alignment (weekday 2015).
- *Travel Time.* Travel time between the CTC Transit Center Station and other stations west of the Linwood Station would be approximately one minute slower via SE 79th/80th Avenue.
- *Potential Displacements.* The number of potential residential unit displacements would be reduced from approximately 40 with the SE Fuller Road alignment to approximately 6 with the SE 79th/80th Avenue alignment. The number of potential commercial unit displacements would be similar under either alignment.
- *Oregon City Extension.* While a future extension to Oregon City via I-205 would be feasible with either the SE Fuller Road or the SE 79th/80th Avenue



## VI Railroad Avenue/Highway 224

This segment would provide a light rail connection between the Clackamas Regional Center area and central Milwaukie. The segment is generally bounded to the north and south by established residential areas and bisected by industrial, commercial and retail centers parallel to Highway 224.

Previously, a single alignment south of and parallel to SE Railroad Avenue was being studied in the DEIS for this segment. The current alternative would relocate SE Railroad Avenue approximately 30 feet north of its current location and would place light rail between SE Railroad Avenue and the existing freight and intercity passenger rail line to the south.

The following changes will be made to the set of alternatives previously being studied in the DEIS (see figure 4).

### Amendment 1:

*Amend the SE Railroad Avenue Alternative previously being studied in the DEIS to reflect a narrower street design. In general the alternative previously being studied would rebuild SE Railroad Avenue to have one twelve-foot, general purpose automobile lane and one six-foot bike lane in each direction with a six-foot sidewalk on the north side of the street. The revised design would narrow the automobile lanes to ten feet and the adjacent bike lanes to five feet and a sidewalk of six feet to four feet.*

### Rationale:

- **Cost.** By narrowing the cross-section of the reconstructed SE Railroad Avenue, costs would be reduced by approximately \$4 million (YOES).
- **Ridership.** Because light rail travel times would be the same under the revised street design, light rail ridership would remain unchanged from the design previously in the DEIS.
- **Displacements.** Potential residential displacements along SE Railroad Avenue would be reduced by 8, from approximately 73 associated with the previous design to approximately 65 with the revised design.
- **Parklands.** The narrower width of SE Railroad Avenue would reduce the anticipated impact to the Hector Campbell Elementary School ballfield located at the intersection of SE 47th Avenue and SE Railroad Avenue.
- **Local Traffic.** The use of narrow lanes along the length of SE Railroad Avenue is predicated on SE Railroad Avenue being changed from an arterial to a neighborhood collector by the City of Milwaukie.

- **Park-and-Ride Capacity.** Park-and-ride capacity at SE 37th Avenue, just north of the Milwaukie Market Place, would remain unchanged and approximately 100 spaces at the proposed park-and-ride lot located at SE Harmony Road and SE Linwood Avenue would need to be structured.

### Amendment 2:

*Add an alternative that would close sections of SE Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by SE Railroad Avenue. Limited sections of SE Railroad Avenue would be reconstructed to provide access to properties fronting SE Railroad Avenue or to provide access to intersecting streets that only have access via SE Railroad Avenue. Other streets connecting to SE Railroad Avenue would be converted to cul-de-sacs. This alternative is conceptually illustrated in Figure 5.*

### Rationale:

- **Cost.** By closing SE Railroad Avenue to through-travel and using the vacated right-of-way for light rail, the revised design would lower cost by approximately \$23 million when compared to the option previously being studied in the DEIS.
- **Ridership.** Because light rail travel times would be the same under the revised street design, light rail ridership would remain unchanged from the design previously in the DEIS.
- **Displacements.** Closing of SE Railroad Avenue to through-traffic would reduce the number of potential residential unit displacements by 65, from approximately 73 to 8.
- **Parklands.** By avoiding the reconstruction of SE Railroad Avenue between SE 47th and SE 48th Avenues, there would be no impact to the Hector Campbell Elementary School ballfield located at the intersection of SE 47th Avenue and SE Railroad Avenue.
- **Local Traffic.** Closing SE Railroad Avenue to through-traffic would significantly affect local traffic in the immediate vicinity of SE Railroad Avenue. Many through-trips would be diverted south to Highway 224 and through-trips on several north-south neighborhood streets would be reduced. Some through-trips would be diverted north, however, to Monroe Street and some north-south neighborhood streets would experience increased vehicle volumes. Automobile travel times for some residents in the area would be increased if their primary access is via SE Railroad Avenue.
- **Park-and-Ride Capacity.** Park-and-ride capacity at SE 37th, just north of the Milwaukie Market Place would remain unchanged and approximately 100

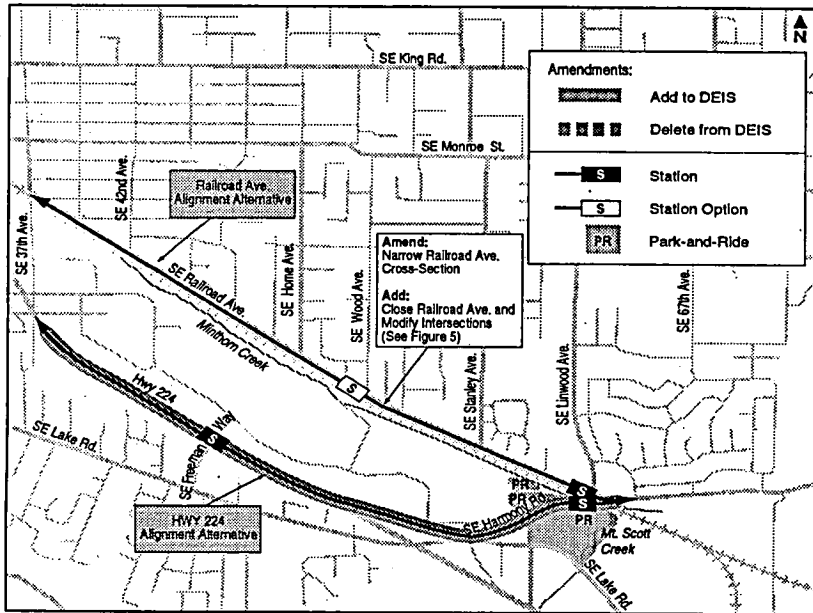


Figure 4 - Railroad Avenue/Highway 224 Segment

spaces would need to be structured at the proposed park-and-ride lot that would be located at SE Harmony Road and SE Linwood Avenue.

**Amendment 3:**

*Add a North of Highway 224 alignment to be studied further in the DEIS. The new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT. Light rail would cross over the existing freight and intercity passenger rail line on a new structure southeast of the intersection of SE Harmony Road and SE Railroad Avenue. The new alignment would cross SE Harmony Road at grade, just north of Highway 224. At-grade crossings of light rail would be provided just north of Highway 224 on SE Oak Street, SE 37th and SE Freeman Way. A structured park-and-ride lot would be located north of Highway 224 Alternative near the Milwaukie Market Place. Approximately 400 spaces at the park-and-ride lot at SE Harmony Road and SE Linwood Avenue would need to be structured with the Highway 224 alignment.*

**Rationale:**

- *Cost.* If park-and-ride lot capacity is replaced with structured lots, the cost of the North of Highway 224 alignment would save approximately \$2 million compared to the previous SE Railroad Avenue Alternative design (YOES).

- *Ridership.* Travel time via Highway 224 would be approximately 40 seconds slower than the SE Railroad Avenue alignment which would lead to slightly lower through-ridership. Walk and bus access ridership on light rail would be similar for both alternatives leading to similar walk and bus access ridership. If replacement park-and-ride capacity could be located within the corridor, ridership using park-and-ride access would be similar for both alternatives. However, if replacement park-and-ride lot spaces are not constructed in other segments of the corridor, light rail trips would be reduced by up to 2,100 (weekday 2015), depending upon the number of park-and-ride spaces eliminated.
- *Displacements.* Potential residential displacements associated with the North of Highway 224 alignment would be 68 units less with than the Railroad Avenue Alternative previously being studied in the DEIS (from 73 to 5).

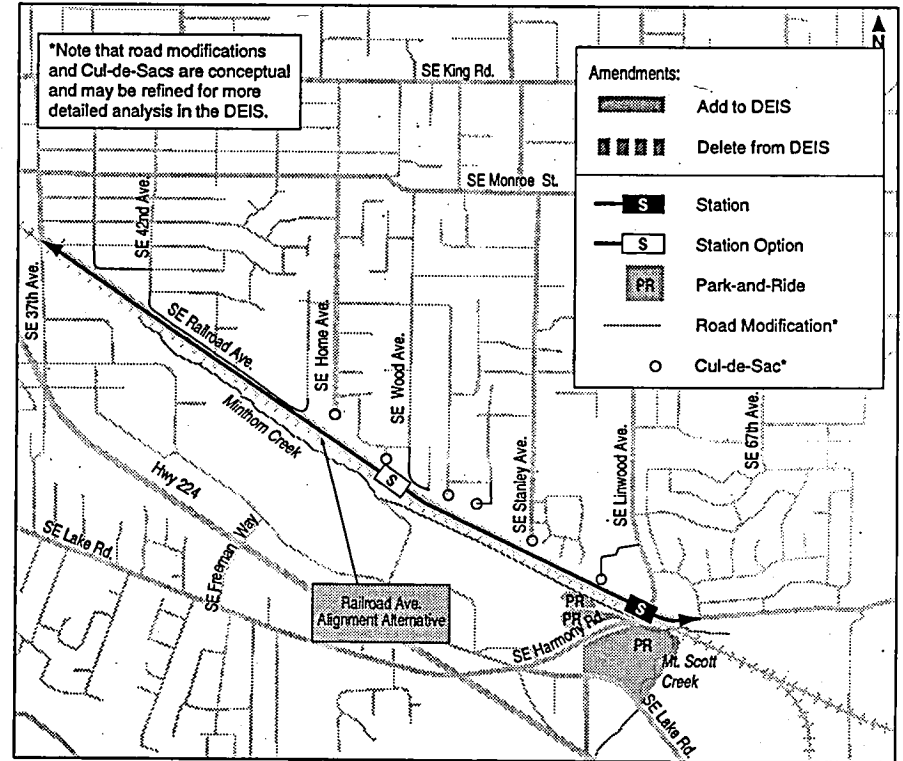


Figure 5 - Detail of Close Portions of SE Railroad Avenue Alternative

- *Parklands.* By avoiding the reconstruction of SE Railroad Avenue between SE 47th and SE 48th Avenues, there would be no impact to the Hector Campbell Elementary School ballfield located at the intersection of SE 47th Avenue and SE Railroad Avenue.
- *Local Traffic.* Impacts to local traffic would generally be associated with the at-grade light rail crossings of SE Harmony Road, SE Freeman Road, SE 37th Avenue and SE Oak Street. Local traffic impacts would also be caused by the proposed closure of westbound access onto Highway 224 from SE 37th Avenue south of Highway 224. Because light rail would use ODOT right-of-way located north and parallel to Highway 224, future expansion of the Highway would be restricted to south of the highway which would cause future impacts to some properties south of Highway 224. This constraint would generally increase the cost of a future expansion of Highway 224.
- *Park-and-Ride Capacity.* Park-and-ride capacity would be similar with the Highway 224 alternative and the two new Railroad Avenue alternatives. However, the park-and-ride lot located near the Milwaukie Market Place would need to be structured and approximately 400 park-and-ride spaces would need to be structured at the lot at the intersection of SE Linwood Avenue and SE Harmony Road

#### **Amendment 4:**

*Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station. The DEIS will include cost, ridership and significant environmental impacts of the Railroad Avenue alternatives with and without a Wood Avenue Station.*

#### **Rationale:**

- *Cost.* Elimination of a Wood Avenue Station would reduce capital costs by approximately \$3 million (YOES).
- *Ridership.* Elimination of a Wood Avenue Station would eliminate 300 trips that are projected to access light rail at that location. Current ridership forecasts estimate that the Wood Avenue Station would have among the lowest ridership of any station on the South/North line. Travel time through this segment would be approximately 45 seconds faster without a Wood Avenue Station, increasing through-ridership.
- *Displacements.* Elimination of a Wood Avenue Station would reduce potential residential displacements by up to five units, depending on the design of the Railroad Avenue Alternative.

## **VII Central Milwaukie**

The Central Milwaukie Segment generally encompasses the Milwaukie Market Place, downtown Milwaukie and North Milwaukie to SE Tacoma Street (see Figure 6). Milwaukie is identified within Metro's Region 2040 Plan as a *Regional Center*, with strong economic ties to the Clackamas Town Center and Oregon City. The central area of Milwaukie is expected to experience significant growth in the future, reinforcing its existing characteristics of mixed land uses, including retail, small office, commercial, government, education and low to high density housing.

Previously, two Alignment Alternatives were being studied within the DEIS: 1) Monroe Street/McLoughlin; and 2) Monroe Street/SP Branch Line. The Monroe/McLoughlin alternative would locate a Milwaukie light rail station and transit center near City Hall on SE 21st Avenue. Light rail would cross under the existing SP Branch line near Monroe Street. The Monroe/SP Branch Line Alternative would place the station and transit center east of the SP Branch Line, just north of Monroe Street.

Both alternatives would generally operate in the center of Monroe Street before crossing over Highway 224 on an elevated structure. The two alternatives would provide access to a 900 space park-and-ride lot in north Milwaukie, either at SE Ochoco Street, at the Springwater Corridor or at the Hanna/Harvester site.

#### **Amendment 1:**

*Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study. The Main Street/SP Alternative would run north of and parallel to Highway 224 from the Milwaukie Market Place Station to Main Street, just north of downtown Milwaukie. It would cross over the SP Tillamook Branch Line on a structure and would cross under the Highway 224 on/off ramps at Main Street. It would then extend south, parallel to and east of McLoughlin Boulevard, turning east just north of SE Scott Street to a station and transit center located in the vicinity of the vacant Safeway store. The alignment would then turn north, parallel to SE 21st Avenue, crossing under Highway 224. It would then generally travel north, parallel to and west of the SP Tillamook Branch Line.*

#### **Rationale:**

- *Cost.* The Main Street/SP Branch Line Alternative is estimated to cost \$10 million and \$31 million (YOES) less than the Monroe Street/SP Branch Line and the Monroe Street/McLoughlin alternatives, respectively.

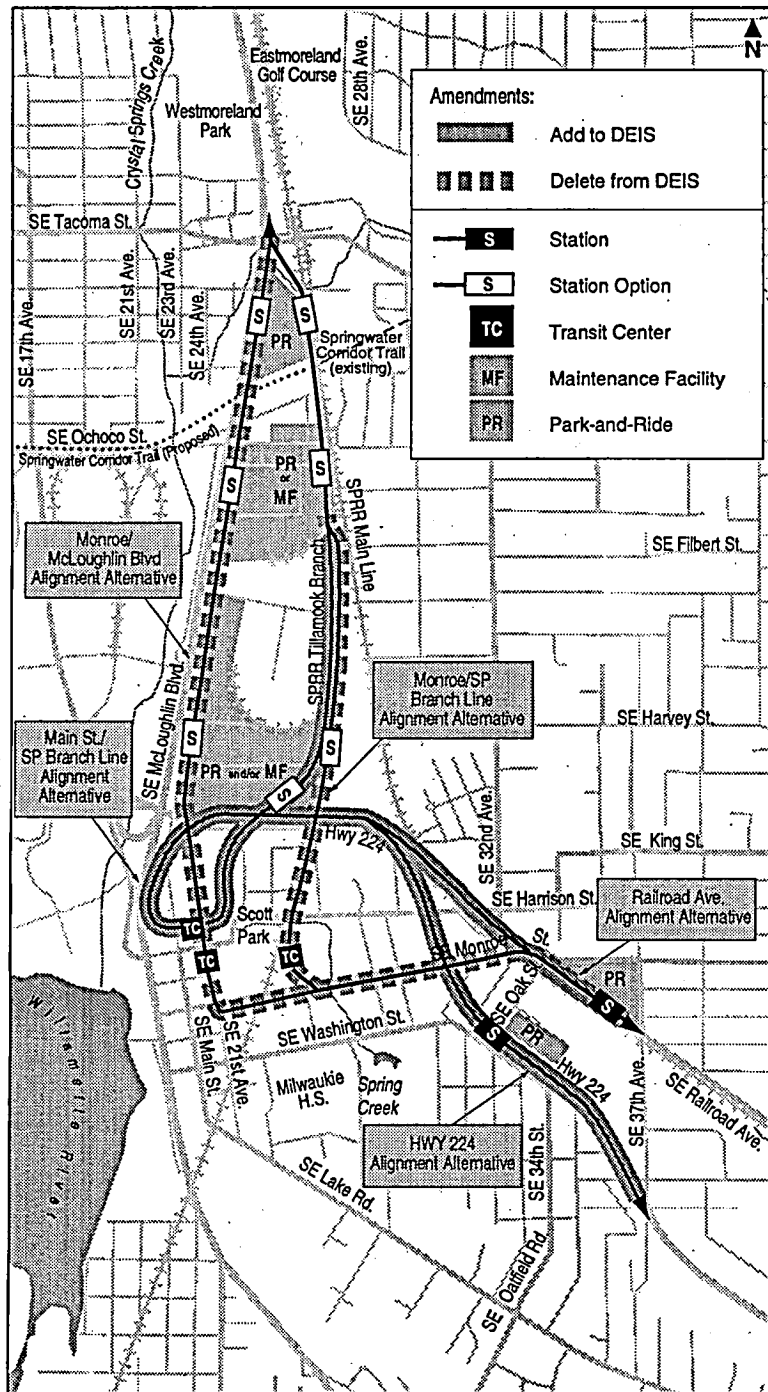


Figure 6 - Central Milwaukie Segment

- Ridership.** Light rail ridership associated with the three alternatives would be similar due to similar light rail travel times and station locations. Bus ridership would be somewhat lower with the Monroe/SP Branch Line Alternative due to increased bus travel times that would be required to access the transit center to be located east of the SP Branch Line.
- Displacement and Relocation.** The Main Street/SP Branch Line Alternative would have no residential displacements compared to over 20 potential residential displacements associated with the two Monroe Street Alternatives. The Main Street Alternative would have a similar number of commercial displacements (10) as the Monroe Street/McLoughlin Boulevard alignment (while the number of displacements would be similar, many of the affected properties would be different).
- Urban Form.** The Main Street/SP Branch Line would be more compatible with the urban environment within central Milwaukie. First, it would create a new 200 foot square block in central Milwaukie, extending the existing street grid north. Second, the alignment would avoid direct impacts to the trees and property just east of City Hall. Third, the alignment would place the light rail station directly within downtown Milwaukie, but would avoid the underpass crossing of the SP Branch Line associated with the Monroe/McLoughlin Alternatives. Fourth, the Main Street/SP Branch Line Alternative would avoid an above-grade crossing of Highway 224.
- Light Rail Operations.** The Main Street/SP Branch Line Alternative would be similar to the Monroe/SP Branch Line by avoiding several at-grade street crossings along McLoughlin north of Highway 224.
- Historic and Parkland Resources.** The Monroe/SP Branch Line Alignment and the Monroe/McLoughlin Alternative would impact Scott Park, which would be addressed through mitigation. The Main Street/SP Branch Line Alternative, similar to the Monroe/SP Branch Line Alignment, would avoid impacts to the resources on the Milwaukie City Hall site. The Main Street/SP Branch Line Alternative would also avoid impacts to potential historic resources on Monroe Street.
- Phase II Oregon City Extension.** The Main Street/SP Branch Line Alternative would provide for a feasible method of extending South/North light rail south to Oregon City via McLoughlin Boulevard through a branch that would occur just west of the Milwaukie Transit Center.

## VIII McLoughlin Boulevard

The McLoughlin Boulevard Segment generally extends from SE Tacoma Boulevard in the south to SE Holgate Boulevard in the north (see Figure 7). It is generally characterized by a variety of mixed uses including residential, commercial, industrial and park and recreation facilities. The segment is traversed by two major transportation facilities, SE McLoughlin Boulevard and an existing freight and intercity passenger rail line.

There is a single alignment alternative within this segment that was previously being studied within the DEIS. The alignment would run parallel to and between McLoughlin Boulevard and the freight rail line. It would include a possible station at SE Bybee Boulevard, integrated into the street overpass of the existing rail line and SE McLoughlin Boulevard. The station would be at the surface level (the same level as SE McLoughlin Boulevard) and access from SE Bybee Boulevard would be via stairs and elevator. The design that was previously being studied within the DEIS would reconstruct the SE Bybee Boulevard overpass to allow for the addition of two bus pull-outs at the station.

### Amendment 1:

*Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass. With the option that would not rebuild the overpass, pedestrian access to the Bybee Station would be provided by a new pedestrian walkway which would be built just north of and parallel to the existing Bybee Boulevard overpass.*

### Rationale:

- **Cost.** The elimination of the reconstruction of the SE Bybee Boulevard overpass would reduce costs within this segment by approximately \$6 million (YOES).
- **Ridership.** Light rail ridership would not be affected by this change.
- **Local Traffic.** Local traffic could be affected by the modifications. The elimination of bus pull-outs from the new alternate design could require buses to stop in the existing traffic lanes in order to drop off and pick up light rail transfers.

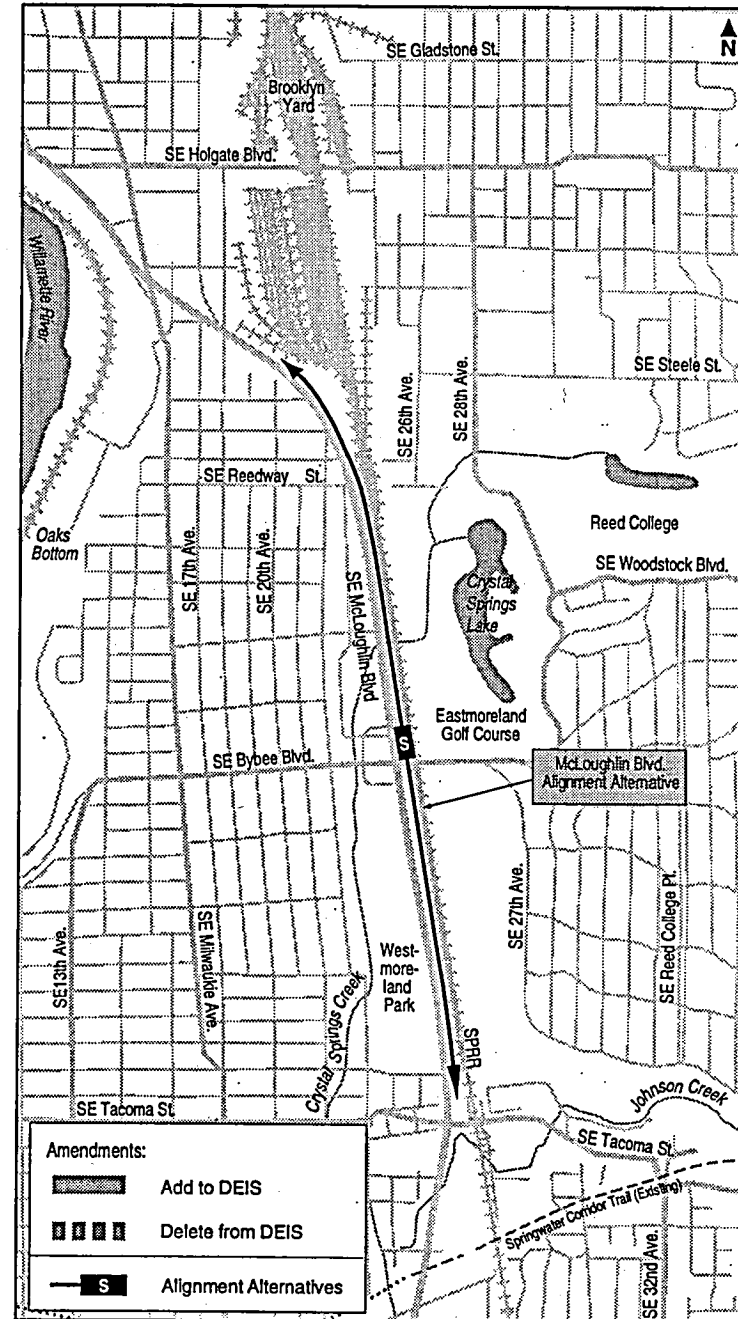


Figure 7 - McLoughlin Boulevard Segment

## IX South Willamette River Crossing

The South Willamette River Crossing Segment generally extends from SE Holgate and McLoughlin Boulevards in southeast Portland to RiverPlace on the southwest edge of downtown Portland. The area contains existing residential communities, both redeveloping and developed commercial centers and valuable natural and community resources.

The DEIS currently includes two alternative alignments within this segment:

**Ross Island Crossing Alternative.** The Ross Island Crossing Alternative would extend north from SE Holgate and McLoughlin Boulevards to an east/west crossing of the Willamette River in the vicinity of Gaines Street. The high-level, fixed span bridge would cross Ross Island and would have a second-story station near SW Moody Avenue and Gaines Street. The alignment would then extend north, parallel to and west of SW Moody Avenue, with proposed stations at Porter Street and near RiverPlace. The Ross Island Crossing Alternative currently contains two design options:

- **East of McLoughlin Design Option.** This design option would provide a light rail station at SE Center Street, near SE McLoughlin Boulevard. The alignment would run parallel to and east of SE McLoughlin Boulevard from SE Holgate to SE Center Street. It would cross under SE McLoughlin Boulevard near SE Center Street. Approximately 1,100 light rail rides a day would be generated by the Center Street Station.
- **West of McLoughlin Design Option.** This design option would not include the Center Street Station. It would cross over SE McLoughlin Boulevard at SE Long Street and would run north, parallel to and west of SE McLoughlin Boulevard before crossing the east channel of the Willamette River at SE Center Street.

**Caruthers/Brooklyn Yard Alternative.** The Caruthers/Brooklyn Yard Alternative would run north from SE Holgate Boulevard, generally between parcels fronting on SE 17th Avenue and the Brooklyn Yard. It would cross SE Powell Boulevard and turn west adjacent to SE Division Street, crossing under or over SE McLoughlin Boulevard to a second or third story station just south of OMSI. The alignment would cross the Willamette on a high-level, fixed span bridge crossing under the west approach ramps to the Marquam Bridge, turning north to a station serving RiverPlace. The Caruthers/Brooklyn Yard Alternative previously had two design options:

- **Above-Grade Design Option.** The Above-Grade Design Option would cross over SE 11th and 12th Avenues, several freight railroad spurs and local cross-streets, McLoughlin Boulevard and the East Portland Traction Company (PTC) freight rail line via an elevated structure.

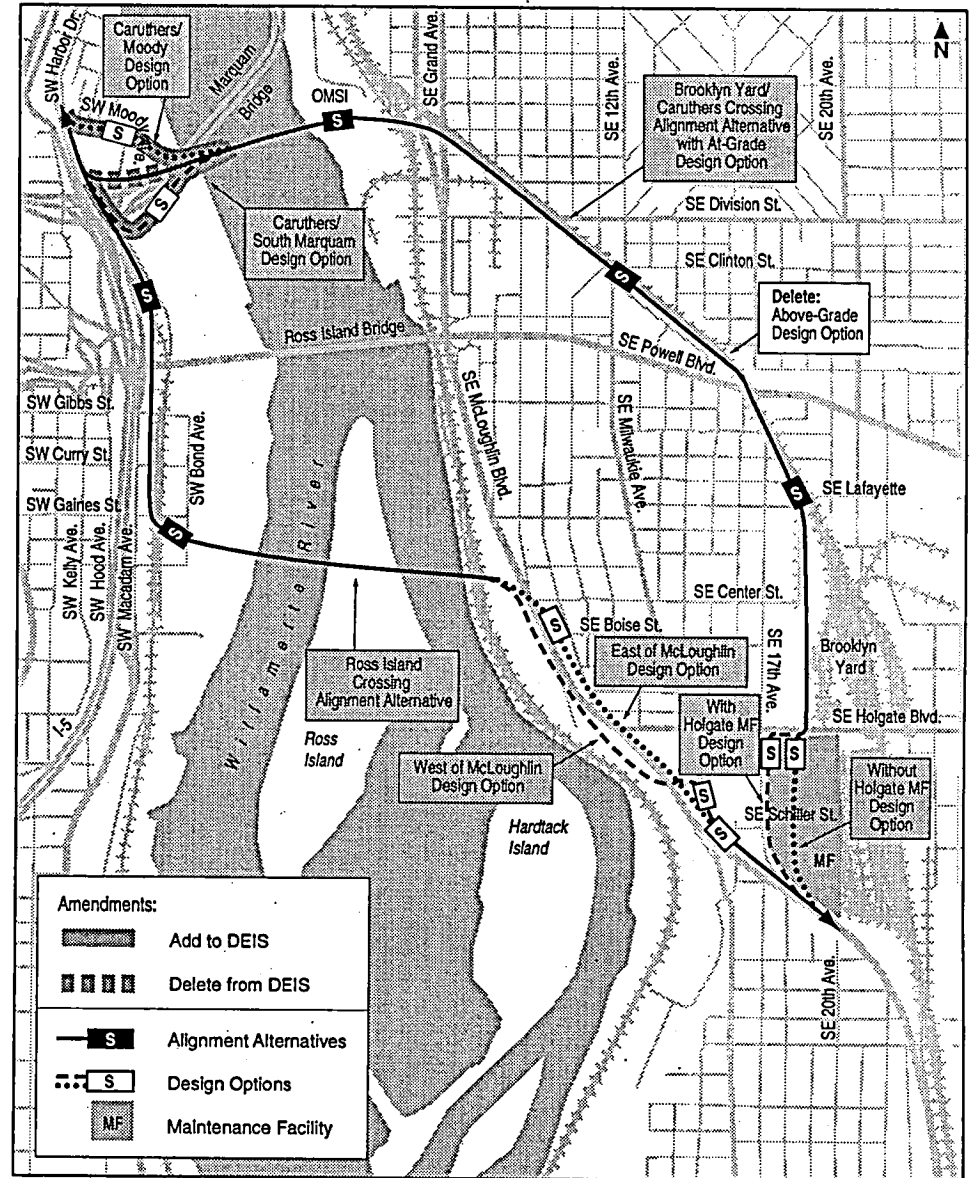


Figure 8 - South Willamette River Crossing Segment

- **At-Grade Design Option.** The At-Grade Design Option would cross SE 11th and 12th Avenues and several local streets at grade. It would cross under McLoughlin Boulevard and over the PTC freight rail line on a new structure and would relocate a freight spur track.

## Amendment 1:

### *For the Caruthers Crossing Alternative:*

- a) *eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);*
- b) *add a 75-foot, fixed-span bridge alternative; and,*
- c) *add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.*

The eastbank touchdown point and station at OMSI would generally remain unchanged. On the westbank, the single DEIS alignment would be replaced with two options:

- *The Caruthers/Moody Design Option* would extend the Caruthers Bridge west, under the west end of the Marquam Bridge. The light rail alignment would extend northwest, at grade, parallel to and north of Moody Avenue. It would then turn north, running east of and parallel to Harbor Drive. An at-grade station could be located at SW Moody Avenue and SW River Drive.
- *The Caruthers/South Marquam Design Option* would extend southwest from the Caruthers Bridge, generally south of and parallel to the Marquam Bridge approach ramps. A second-story light rail station could be integrated into a proposed development just south of the proposed light rail alignment. After crossing SW Moody Avenue at grade, the alignment would turn north, running parallel to Harbor Drive.

Final determination of bridge height will be made through a permit process managed by the US Coast Guard. That process will conclude following the selection of the preferred river crossing. In response to this uncertainty, the study and documentation for the Caruthers Crossing will include a sensitivity analysis of varying bridge heights and their effect on the alternative's costs, station locations and other significant benefits and impacts.

### **Rationale:**

- *Cost.* Based upon preliminary cost estimates, the 75-foot, fixed span option with the Caruthers/Moody and the Caruthers/South Marquam Design Options would respectively cost approximately \$38 million and \$33 million less than the 100-foot, fixed-span option (YOES). (Note that the costs of a river crossing alternative reflect both the cost to construct the new bridge and the alignment and approach spans associated with the river crossing alternative.) There may be some cost associated with the 75-foot, fixed span option as a possible requirement to obtain a permit for the construction of the river crossing.
- *Ridership.* Station access with the 75-foot, fixed span would be more centrally located than with the 100-foot, fixed span, with direct light rail station access to redevelopment areas just south of the Marquam Bridge. Light rail travel times would be quickest with the Caruthers/Moody Design Option, resulting in

somewhat higher ridership. The Caruthers/South Marquam Option would likely have somewhat higher through-ridership than the high-level Caruthers crossing. Further analysis is required to determine the ridership differential between the Caruthers/Moody and the Caruthers/South Marquam Design Options.

- *Impact to Development Parcels.* The 100-foot, fixed span option previously being studied in the DEIS would impact a redevelopment parcel located south of the Marquam Bridge. The alignment for the 100-foot, fixed-span would be in the same location as a proposed seven-story office building. The Caruthers/South Marquam would integrate the light rail alignment and station into the second story of the proposed mixed-use development. The Caruthers/Moody would generally avoid the proposed mixed-use development by crossing under the Marquam Bridge north of the development parcel. It would, however, impact two parcels along SW Moody Avenue, requiring 15 to 25 feet of right-of-way from currently vacant properties.
- *Impacts to Parklands.* Each of the river crossing designs would have some impact to the Willamette River Greenway. The Caruthers/Moody Design Option could have an impact to a proposed park development just north of the Marquam Bridge.
- *Local Traffic.* The 100-foot, fixed span alternative would cross SW Moody Avenue at SW Harbor Drive at grade and would grade separate other local streets. The Caruthers/Moody Design Option would have an at-grade crossing of SW River Drive. The Caruthers/South Marquam Design Option would have an at-grade light rail crossing of SW Moody Avenue in two locations, one under the west approach ramps to the Marquam Bridge and one just east of SW Harbor Drive.

## Amendment 2:

*Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative. This amendment retains the At-Grade Design Option and modifies it to include an at-grade crossing of the PTC freight line and a ground-floor OMSI Station. The eastbank touchdown point and station at OMSI generally remains unchanged.*

### **Rationale:**

- *Cost.* The At-Grade Design Option would cost approximately \$23 million less than the Above-Grade Design Option (YOES).
- *Ridership.* With similar light rail travel times and station locations, light rail ridership would be similar with both design options. The ground-level stations associated with the At-Grade Design Option may attract somewhat higher ridership due to easier and more convenient station access.

- *Urban Form and Visual Impacts.* The Above-Grade Design Option would have greater impacts to urban form and local visual resources than the At-Grade Design Option due to the high structure needed to cross over McLoughlin Boulevard and SE 11th and 12th Avenues.
- *Local Traffic Impacts.* The At-Grade Design Option will have greater impacts to local traffic due to the higher number of LRT at-grade street crossings.
- *Freight Railroad Impacts.* The At-Grade Design Option could impact freight railroad operations on the spur tracks and the PTC line.

**Ross Island Crossing Alternative:**

*There are no amendments to the Ross Island Crossing or the East of and West of McLoughlin Boulevard Design Options.*



## X Downtown Portland

The Downtown Portland Segment is generally bounded by the Willamette River to the East, by I-405 to the south and west and by the Broadway Bridge to the north (see Figure 9). Downtown Portland is characterized by high density office and retail development, with established and increasing levels of residential development in the south, east and north. It has access via a high level of transit service and numerous freeway and arterial connections. Downtown is currently served by the Eastside MAX light rail line, which opened in 1986 and currently carries over 28,000 rides on an average weekday. A light rail extension west to Beaverton and Hillsboro is scheduled to open in 1998.

The Downtown Portland Segment previously had one alignment alternative within the DEIS, via Harrison Street in the south through the core of downtown Portland generally via the center lane of the Transit Mall on 5th and 6th Avenues. In the north end of downtown Portland, two design options are currently under study, one would connect to the Steel Bridge via NW Glisan Street and one via NW Irving Street.

### Amendment 1:

*Replace the perpendicular turn from SW Harrison Street to SW 5th and 6th Avenues with the PSU Diagonal Alignment. The PSU Diagonal Alignment would provide an opportunity for a station to be integrated with a pedestrian plaza and Urban Studies center planned for the blocks bordered by SW Harrison and Mill Streets and SW 4th and 6th Avenues.*

### Rationale:

- **Cost.** The PSU Diagonal Alignment would cost approximately \$4 million less than the alignment previously being studied in the DEIS (YOES).
- **Ridership.** With similar travel times and station locations, the PSU Diagonal Alignment would have similar ridership when compared to the alignment previously under study.
- **Local Traffic Impacts.** The PSU Diagonal Alignment would have fewer local traffic impacts by providing two-way traffic on SW Harrison Street between SW 4th and 6th Avenues.
- **Urban Form.** By allowing the integration of the PSU light rail station with the proposed PSU pedestrian plaza and Urban Studies center, urban form objectives can be more easily met.

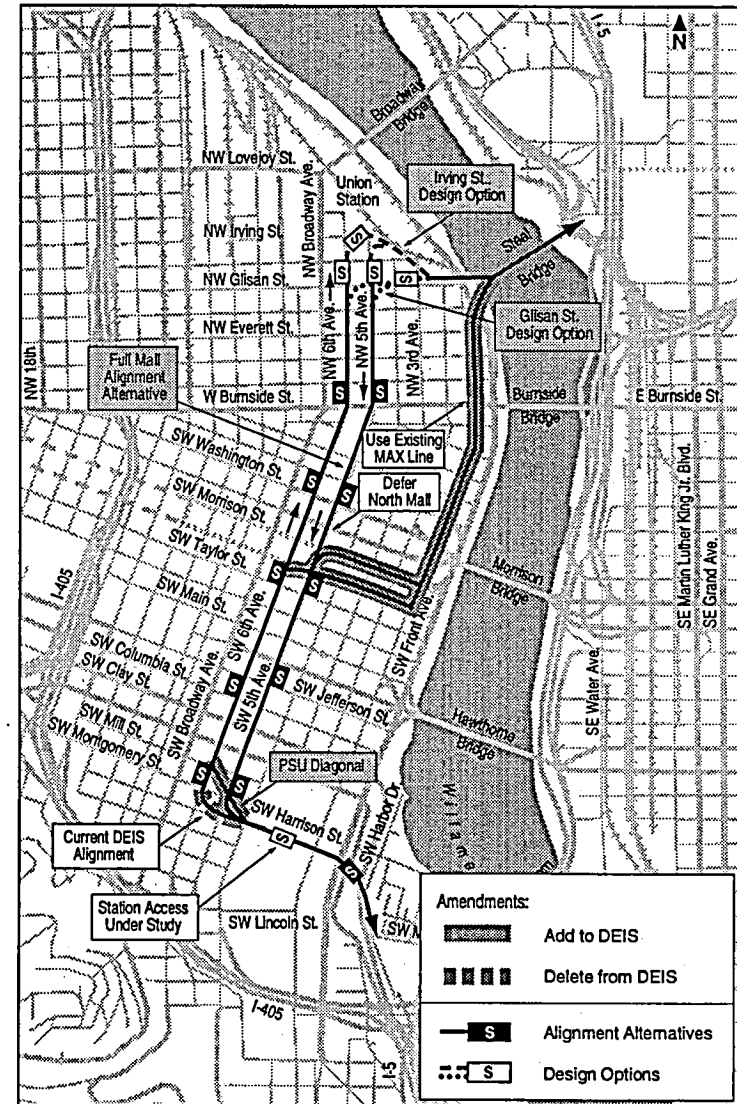


Figure 9 - Downtown Portland Segment

### Amendment 2:

*Add a MAX Connector Alternative to the DEIS for further study. This amendment: 1) retains the existing full-mall alignment alternative; and 2) adds a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza to Morrison and Yamhill, where the South/North and the East/West tracks would be connected. The South/North mall*

improvements north of SW Yamhill and Morrison Streets would be deferred to a later phase of project development. Using the MAX Connector, South/North trains would share the existing Eastside MAX tracks between the Pioneer Courthouse and the Steel Bridge.

#### Rationale:

- *Cost.* The MAX Connector would save approximately \$108 to \$123 million (YOES) in costs for the first construction segment depending on whether the Glisan Street or Irving Street Design Option would be selected as the preferred alignment.
- *Ridership.* The MAX Connector would have approximately 300-800 fewer light rail riders than the full-mall alignment. The relatively low level of ridership loss is due primarily to the high level of bus service that would be present on the mall. There are relatively fewer trips destined to the north portions of the mall and those trips would have convenient transfers to frequent bus service to complete their trip.
- *Land Use and Development.* The MAX Connector would not serve the existing and future development in the River District, including Union Station, which would be served by high speed inter-city passenger rail service planned by the states of Oregon and Washington.
- *Access to Employment.* The MAX Connector would provide access to within two blocks to over 50 percent of downtown employment compared to the full-mall alignment that would provide access to 58 percent of current employment.
- *Local Traffic.* The most promising design of the MAX Connector would retain automobile access on SW Morrison and Yamhill Streets. Existing auto access would be retained on the mall under both alternatives.
- *Transit Operations.* Capacity of the MAX Connector is estimated to be reached by about 2015 as increased ridership levels would increase frequency on the combined East/West and South/North lines to exceed a design capacity of approximately 20 trains per hour in one direction. Bus operations and/or capacity may be affected by the light rail turning movement from SW Morrison Street to SW 5th Avenue.
- *Pedestrian Operations and Urban Form.* The MAX Connector would encroach on sidewalk areas currently occupied by Tri-Met bus shelters. Active sidewalk areas would remain about fifteen feet with the MAX Connector.
- *Noise.* Wheel squeal may result from the tight-radius turns associated with the MAX Connector.

#### Other Options Considered:

- *Eastside Connector.* An Eastside Connector, linking the south corridor with the north corridor via an eastside alignment (rather than going into downtown Portland) was first removed from further study in the DEIS during the Scoping Process. At that time, the Steering Committee determined that planning and engineering work on the light rail alternatives to be studied further in the DEIS should allow for a future Eastside transit connection.

An Eastside Connector was reassessed during the cost-cutting process to determine if it was a promising option for reducing project costs that should be studied further within the DEIS. It was found that, while an Eastside Connector would cost significantly less than a full downtown Portland alignment, its proportional loss in ridership compared to a downtown alignment would be much higher, making it less cost-effective. An Eastside Connector's high loss in ridership would be due to the significant increases in travel time that would be incurred by passengers bound for downtown Portland (over half of South/North riders). Those ridership losses would not be offset by ridership gains to the eastside and north Portland. Therefore, an Eastside Connector will not be studied further in the DEIS. Additionally, the project's existing policy, that planning and engineering work on the light rail alternatives to be studied further in the DEIS should allow for a future Eastside transit connection, should be reaffirmed.

- *Hawthorne Bridge.* The Hawthorne Bridge could be used as a south Willamette River crossing for South/North light rail. It would connect on the eastside with a Brooklyn Yard or SE McLoughlin Boulevard alignment and with either a SW Front or First Avenue or transit mall alignment on the westside. A Hawthorne Bridge alignment alternative was first removed from further study at the conclusion of the Tier I Alternative Alignment Narrowing Process. It was found that, while a Hawthorne Bridge alignment would have lower capital costs than the a Ross Island or Caruthers crossing, overall it would be less cost effective.

A Hawthorne Bridge crossing was reassessed as a possible cost-cutting measure. It was found that, while a Hawthorne Bridge crossing with a SW First Avenue alignment would significantly reduce capital costs compared to a full-mall alignment, anticipated ridership losses would be proportionately much higher due to the significant increase in travel time for passengers bound for central downtown Portland and transit mall bus connections, as well as important destinations such as PSU, RiverPlace and the South Auditorium area. In addition, frequent bridge openings would lead to higher light rail operating costs and a deterioration in light rail speed and reliability. Therefore a Hawthorne Bridge crossing will not be studied further in the DEIS.

## XI Eliot

The Eliot Segment extends from the Steel Bridge in the south to the Edgar Kaiser Medical Center between Interstate Avenue and I-5 in the north and it includes the Eliot Neighborhood (see Figure 10). The segment is characterized by a wide mix of uses including an industrial sanctuary, the Rose Quarter, commercial, retail, medical and a mix of low to high density residential development.

Two alignment alternatives are currently under study in this segment:

- **The East I-5/Kerby Alternative** would extend light rail north from the Rose Quarter Transit Center parallel to and east of I-5, with a potential station at NE Broadway Street and one on N Kerby Avenue at Emanuel Hospital serving the Eliot Neighborhood. There are two design options associated with this alternative, the Broadway/Weidler At-Grade Design Option and the Broadway/Weidler Above-Grade Design Option. The alignment would then extend north, parallel to and east of I-5 to a crossing of I-5 just west of the Edgar Kaiser Medical Facility.
- **The Wheeler/Russell Alternative** would extend light rail north from the Rose Quarter Transit Center parallel to and west of N Wheeler Avenue, adjacent to the Rose Garden Arena. Following an at-grade station and crossing of N Broadway and Weidler Streets, the alignment would extend north over I-5 on a new structure, generally in the vicinity of N Flint Avenue. A potential station would be located on N Russell Street, east of N Flint Avenue, serving the Eliot neighborhood and Emanuel Hospital. The alignment would then extend north parallel to and east of I-5 to a crossing of I-5 just west of the Edgar Kaiser Medical Facility.

All alternatives and design options within this segment have been developed to accommodate future improvements to I-5 between Greeley Avenue in the north and the Banfield ramps to I-5 in the south.

One north terminus option is located in this segment, at the Rose Quarter Transit Center. Termed MOS 2, the south terminus would be at the Clackamas Regional Center with the north terminus at the Rose Quarter Transit Center.

### Amendment:

*Add a lower-cost design of the Rose Quarter Transit Center. A current design of the Arena Transit Center would implement a three-level complex separating automobile, transit and pedestrian activities to different levels. With a terminus at this location (MOS 2), this amendment to the design of the transit center would replace the three-level transit center with one that would provide for minimal improvements to the existing Rose Quarter Transit Center and a new light rail side*

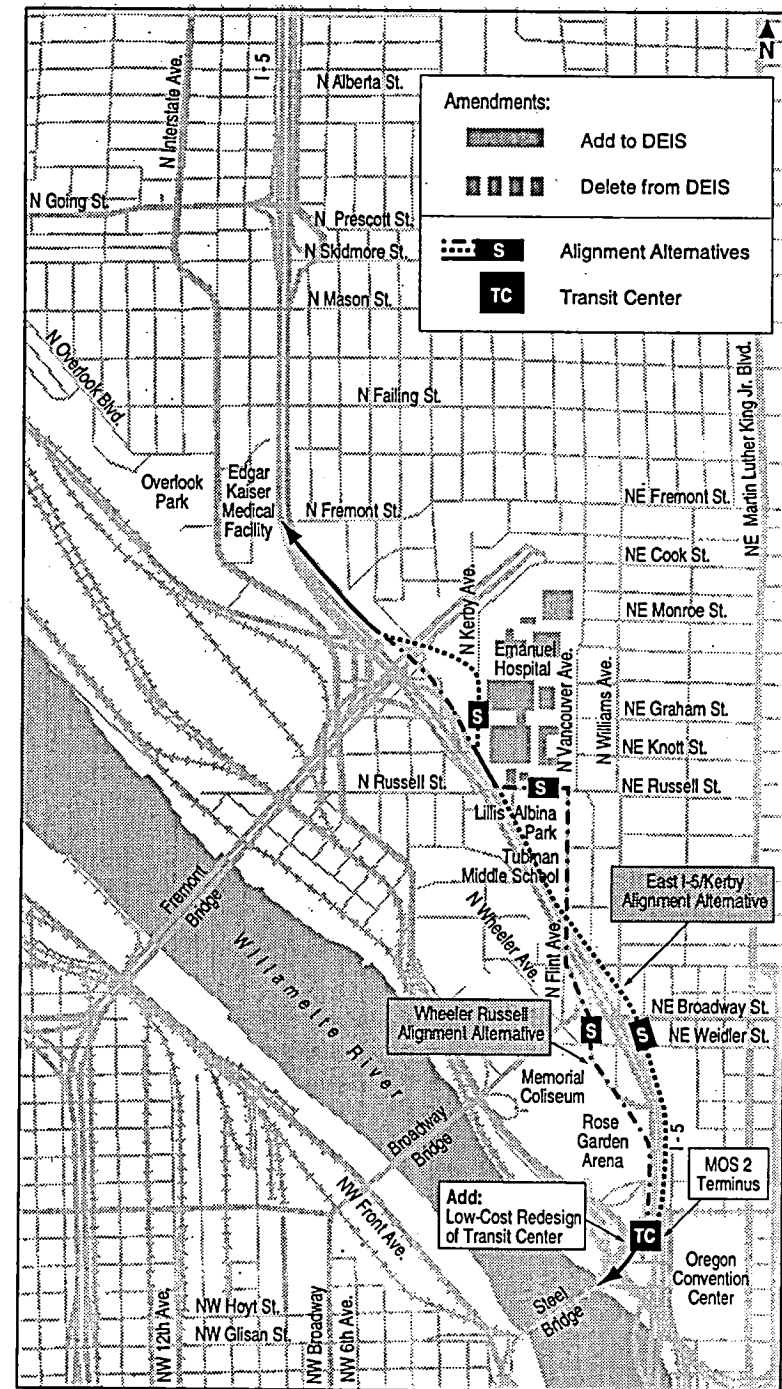


Figure 10- Eliot Segment

*track. Without a terminus at this location (for example with the Full-Length Alternative or MOS 5), both a low-cost transit center and the three-level transit center would be studied in the DEIS. The low-cost design option would accommodate automobile, transit and pedestrian activities at the current street level. The PMG will work with adjacent property owners, the Lloyd District Transportation Management Association and other interested parties to determine the conceptual design of the Low-Cost Transit Center Design Option to be studied further in the DEIS.*

**Rationale:**

- *Cost.* With an MOS 2 terminus, the lower-cost design option for the Rose Quarter Transit Center would save approximately \$48 million in costs compared to the multi-level Transit Center design (YOES). With any of the other length alternatives, the lower-cost Transit Center would be approximately \$15 million less than the multi-level design (YOES).
- *Ridership.* With similar light rail travel times and station locations, the design change would not significantly effect ridership.
- *Transit Operations.* Transit operations could be adversely affected with the lower-cost Transit Center. Reliability, especially during Rose Quarter events, could be impacted.
- *Local Traffic.* With an at-grade light rail crossing of Interstate Avenue, local traffic could be adversely impacted with the lower-cost Transit Center.

## XII Kaiser to Lombard Street

The Kaiser to Lombard Street segment extends from the Edgar Kaiser Medical Facility in the south to the Lombard Street in the north (see Figure 11). It is characterized by established residential, commercial, retail and educational centers on both sides of I-5. The area between I-5 and Interstate Avenue has been designated within the City of Portland's Comprehensive Plan, through the Albina Plan Update, as a higher density and mixed use area when light rail is extended into north Portland.

The segment encompasses two alignment alternatives: one adjacent to and west of I-5 (generally up at the neighborhood level in the vicinity of Minnesota Street) and one generally within the median of Interstate Avenue. Both alternatives would provide station opportunities at the same cross streets: the Edgar Kaiser Medical Facility, N Skidmore Street, N Killingsworth Street, N Portland Boulevard and N Lombard Street.

Two north terminus options were previously located in this segment, one at the Edgar Kaiser Medical Facility and one at the Expo Center.

At the conclusion of the Tier I Design Option Narrowing Process, it was determined that a crossover option should be studied further in the DEIS. These additional options were termed "crossovers" because they would cross over from the I-5 alignment to the Interstate Avenue Alignment.

### Amendment 1:

*Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound on to I-5 would be via the N Going Street on-ramp — see Figure 12). This amendment retains the design that was previously being studied in the DEIS and would add the Alberta ramp reconfiguration as a design option. By reconfiguring the Alberta Street southbound ramps to and from I-5, light rail could be located within the vacated right-of-way, reducing displacements and costs.*

### Rationale:

- **Cost.** The closed Alberta Street ramps option would save approximately \$10 million compared to the option that would retain the ramps (YOES).
- **Ridership.** Due to similar light rail travel times and station locations, ridership would not change under the new design option.
- **Displacements.** Potential residential displacements would be significantly reduced with the closed Alberta Street ramps option. The option that would retain the existing ramp configuration could displace 47 buildings consisting of

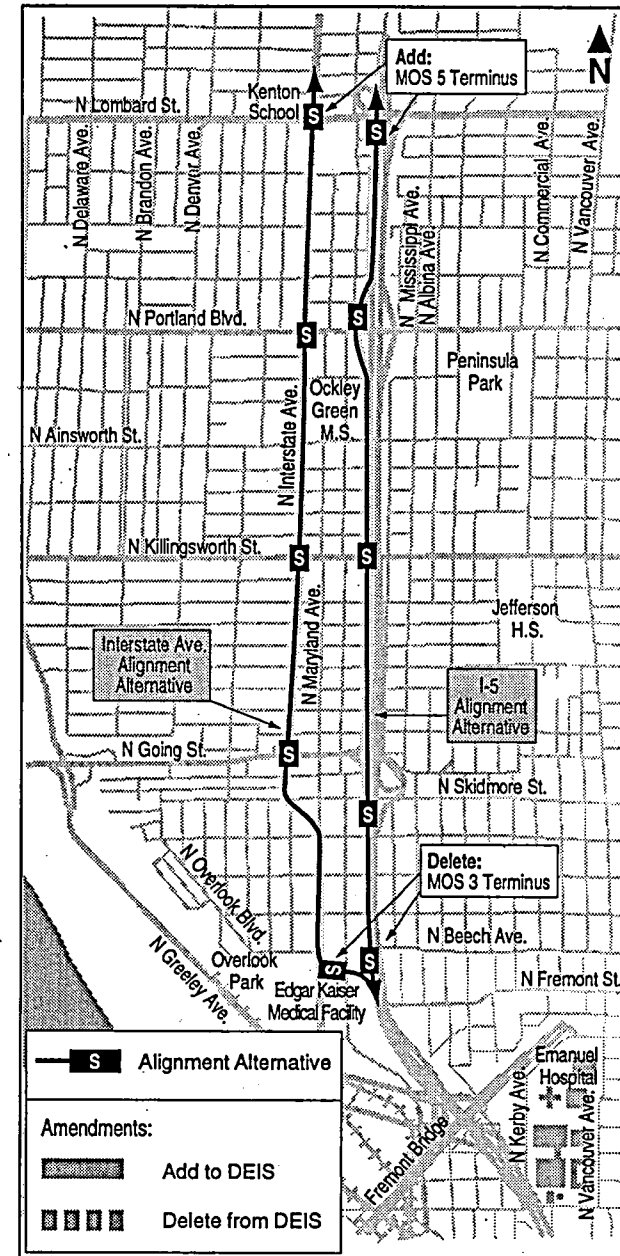


Figure 11 - Kaiser to Lombard Street Segment

a total of 85 residential units. By closing the Alberta Street ramps, the number of residential buildings displaced would be reduced to 8, consisting of 11 residential units.

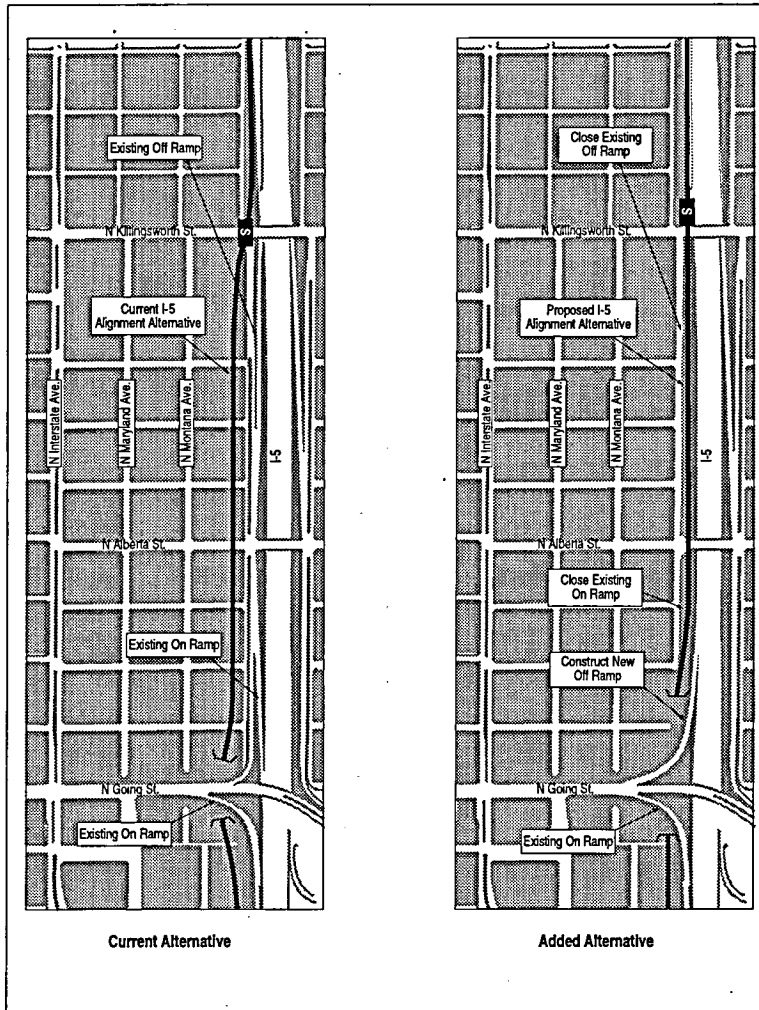


Figure 12 - I-5 Southbound Alberta Ramps

- **Local Traffic.** Local access from business and residential areas east and west of I-5 in the vicinity of N Going Street and N Killingsworth Street would experience increased travel times for automobile trips accessing I-5 South.

**Amendment 2:**

*Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives. This amendment changes the design standard under study for Interstate Avenue to a modified paved track design similar to the current design for central Hillsboro on Washington Street.*

**Rationale:**

- **Cost.** The modified track design would reduce costs on Interstate Avenue by \$7 to \$8 million (YOES) depending upon the terminus option selected (Lombard Street or Vancouver respectively).
- **Ridership.** Due to similar light rail travel times and station locations, ridership would not change under the new design change.
- **Urban Form.** The similar finish achieved with the modified track design would allow similar urban form objectives to be met at a lower cost.

**Amendment 3:**

*Eliminate the north terminus option at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.*

*Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton and the Expo Center.*

**Rationale:**

- The Edgar Kaiser Medical Facility Terminus (coupled with the Clackamas Regional Center Terminus in the south) was intended to help determine the benefits, costs and impacts associated with a terminus in north Portland. Cost and ridership analysis to date has shown that an extension north from the Rose Quarter Transit Center to the Edgar Kaiser Medical Facility would not be cost-effective. That is, the proportional cost of adding the extension would be greater than the proportional increase in ridership resulting from the extension.
- A terminus at N Lombard Street would provide light rail access to a majority of the proposed stations and, by connecting to bus routes on N Lombard Street, would provide most north Portland residents, businesses and community facilities with either walk or bus access to the South/North light rail line.

**Amendment 4:**

*The South/North DEIS will acknowledge that a crossover option between the Overlook Neighborhood and the Kenton Neighborhood may be the outcome of detailed technical studies. The examination of specific crossover options would be best explored during the FEIS phase of the Project.*

**Rationale:**

- Specific alignment options could be better defined upon completion of the technical studies prepared for the DEIS (i.e., traffic, capital costs, right-of-way displacement, etc.) and the South/North Economic Development Study by the Portland Development Commission. The Locally Preferred Strategy would include further consideration of a crossover.

### XIII Lombard Street to Vancouver

The Lombard Street to Vancouver Segment is characterized by a wide variety of uses and is traversed by several major transportation facilities (see Figure 13). This segment includes portions of north Portland residential and commercial centers (Kenton), commercial uses, community facilities, the Jantzen Beach retail center, downtown Vancouver and the terminus for the Full-Length Alternative and MOS-1 at the Veterans Administration Hospital and Clark College. This segment previously included a terminus at the Expo Center (MOS 4).

#### Amendment 1:

**Eliminate** ~~Replace~~ the north MOS terminus option at the Expo Center and **replace it** with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center. Under this amendment, a terminus location at the Veterans Administration Hospital and Clark College would continue to be studied within the DEIS as a north terminus for the Full-Length Alternative and for MOS-1.

As noted in Amendment #3 for the Kaiser to Lombard Street Segment, include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton and the Expo Center.

#### Rationale:

- The Expo Center Terminus (coupled with the Clackamas Regional Center Terminus in the south) was intended to help determine the benefits, costs, and impacts associated with a terminus in north Portland. Cost and ridership analysis to date has shown that an extension north from Lombard Street to the Expo Center would not be cost-effective. That is, the proportional cost of adding the extension (approximately \$115 million YOES) would be much greater than the proportional increase in ridership that would result from the extension (approximately 300-500 weekday rides). Also, traffic analysis to date for the I-5 Interstate Bridge indicates that the I-5 freeway would not have adequate capacity to accommodate park-and-ride travel from Clark County to access a park-and-ride lot at the Expo Center.
- A terminus at N Lombard Street would provide light rail access to a majority of the proposed stations and, by connecting to bus routes on N Lombard Street, would provide most north Portland residents, businesses and community facilities with either walk or bus access to the South/North light rail line.

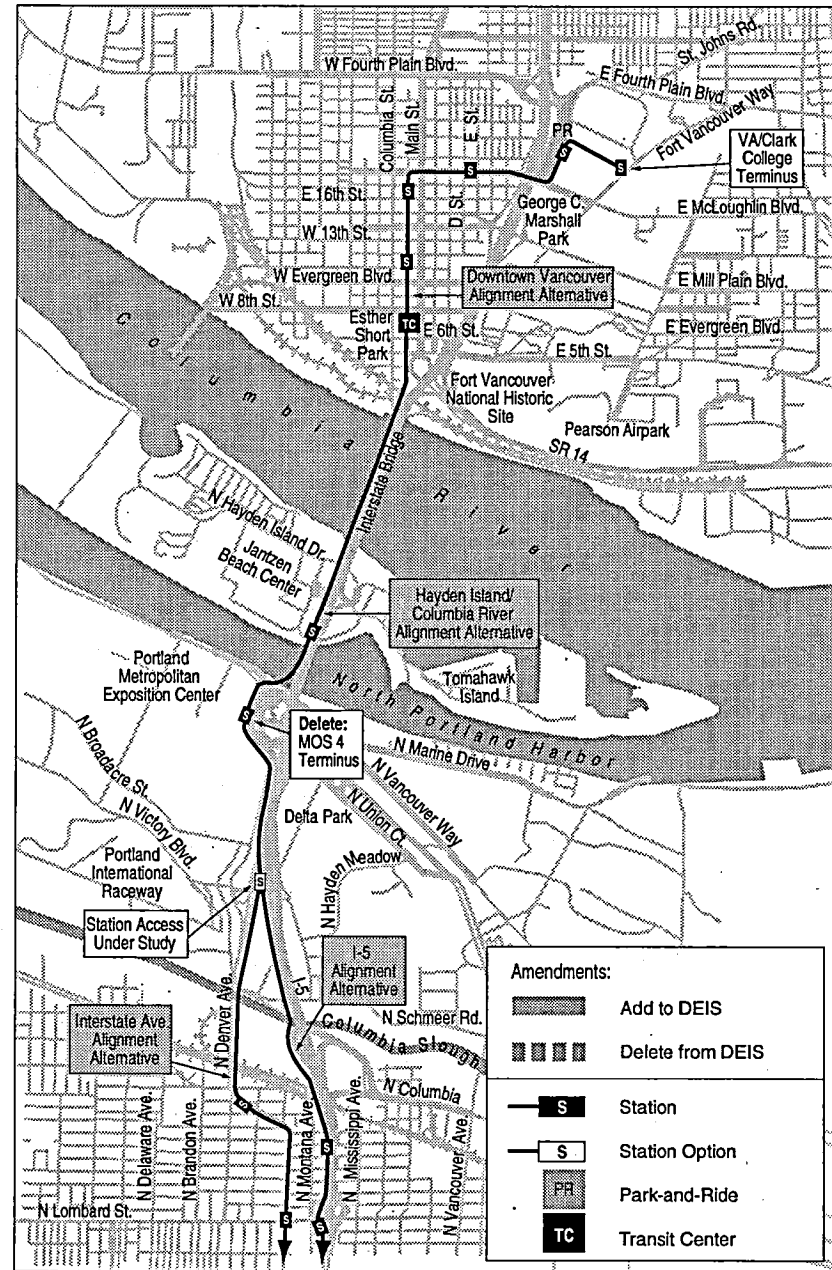


Figure 13 - Lombard Street to Vancouver Segment

## XIV Special Studies

### A. Current Special Studies

- *North Milwaukie Park-and-Ride Lot.* Three potential park-and-ride lots are currently under study in North Milwaukie, in the area bounded by Highway 224, McLoughlin Boulevard and the SP Branch Line. The park-and-ride study is being coordinated with the Operations and Maintenance Facility Study because two of the sites being considered for a park-and-ride lot are also potential operations and maintenance facility sites.
- *Operations and Maintenance Facility.* Two potential operations and maintenance facility sites are currently under study in North Milwaukie and one is under study in SE Portland. The Operations and Maintenance (O&M) Facility Study is being coordinated with the North Milwaukie Park-and-Ride Study because two of the sites being considered for a park-and-ride lot are also potential operations and maintenance facility sites.

The O&M Facility Study will also evaluate the costs and other trade-offs associated with a variety of scenarios that would provide all or some of the O&M functions at the existing Ruby Junction and Elmonica facilities and/or at a new South/North facility. The study will account for the sizing of the facility, trackage and land acquisition needed to accommodate the vehicle requirements of the length alternatives under study in the DEIS. The study will also evaluate the costs and benefits of the early purchase of right-of-way for an O&M facility if an O&M facility is not included as an element of the project's first construction segment.

- *Downtown Portland Station Access Study.* Two areas within downtown Portland are being studied to determine which combination of stations should advance into the FEIS for further study. The two areas of study are: a) RiverPlace, South Auditorium area and PSU; and b) directly north and south of Burnside Street.
- *North Portland Economic Study.* The City of Portland, Metro and Tri-Met are conducting a study to determine the role that South/North light rail would play in the economic development of North Portland. The study will also help to determine whether the I-5 and the Interstate Avenue alignments would affect that economic development differently.

### B. New Special Studies

Following are five special studies that will seek to further reduce project costs. Each of the special studies will be conducted concurrently with the DEIS and will conclude prior to the initiation of the FEIS. The purpose of these special studies is to effect the Preliminary Engineering cost methods and results.

- *Revise utility protection/relocation policy and track bed/isolation design to minimize utility relocation and to share costs of relocation with public utilities.* This study of utility relocation will focused on reducing project costs by: 1) modifying the utility protection and relocation policies of Tri-Met and/or local jurisdictions; 2) developing design refinements for the light rail track bed and/or for electrical isolation of the trackway, which could reduce the number or scope of utility relocations required; and 3) determining whether participating local jurisdictions could share some of the cost of relocating public utilities located within public right-of-way.
- *Pre-packaged systems buildings.* This study will determine whether the use of pre-packaged systems buildings, used for the operation of the light rail line, should be used for the South/North Light Rail Project. The study will include an assessment of the visual and aesthetic implications of a pre-packaged systems building.
- *Standardize LRT station shelters.* This study will determine whether the use of standardized light rail shelters should be used within the South/North Light Rail Project as a way of reducing costs. The study will include an assessment of the visual and aesthetic implications of standardized shelters and whether alternate shelter designs could be financed by local jurisdictions and/or adjacent property owners.
- *Right-of-way/facility donation and Residual Right-of-Way Plan.* This study will evaluate all potential public right-of-way that would be used by South/North light rail to determine if any parcels could be donated to the light rail project. This study will also evaluate the potential for and value of residual right-of-way following construction of the light rail facility and would develop a conceptual plan for managing residual right-of-way through the project development, construction and post-construction phases of the project.
- *Central City Bus Concept Plan.* Tri-Met and the City of Portland will be working together to develop a plan for bus routes serving the Central City. This plan will be developed in coordination with plans for the River District, the Central City Streetcar, South/North Light Rail and other Central City District transportation and development plans.

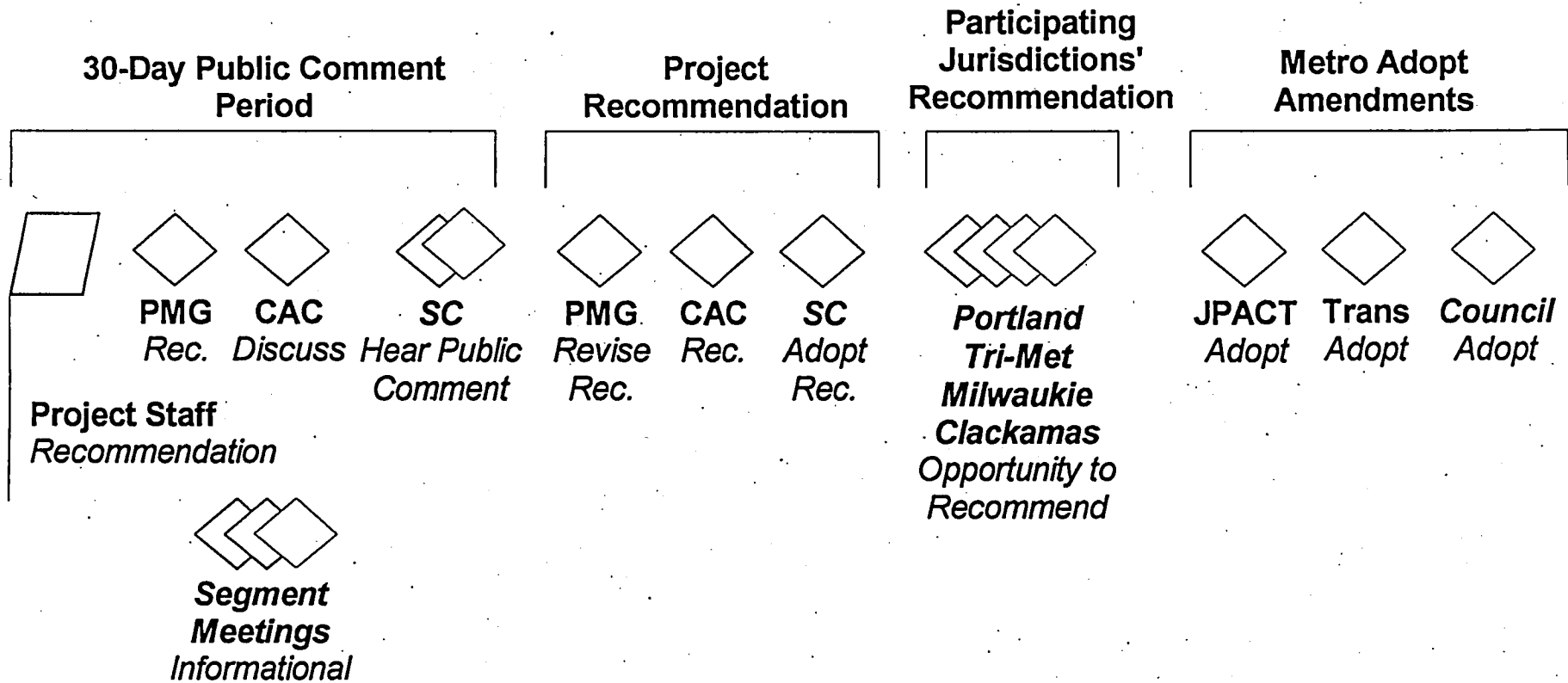


## Appendix A

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### *Cost-Cutting Approval Process*

# Schedule for Amending DEIS Alternatives to Reflect Cost-Cutting Measures



PMG = Project Management Group  
 CAC = Citizens Advisory Committee  
 SC = Steering Committee  
 JPACT = Joint Policy Advisory Committee on Transportation  
 Rec. = Recommendation  
 Trans = Transportation Committee of the Metro Council

3/13/97

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## Appendix B

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### ***South/North Segment Maps: Amended Length and Alignment Alternatives and Design Options***



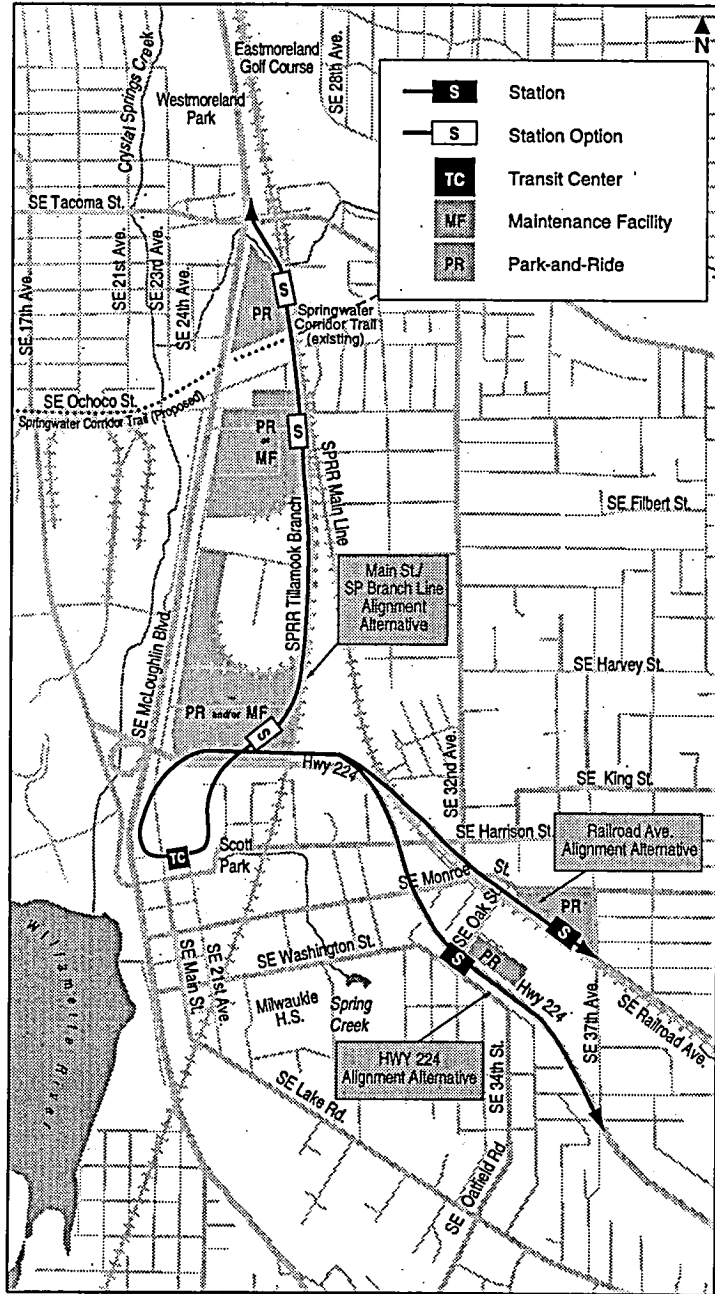


Figure B-3 - Central Milwaukie Segment

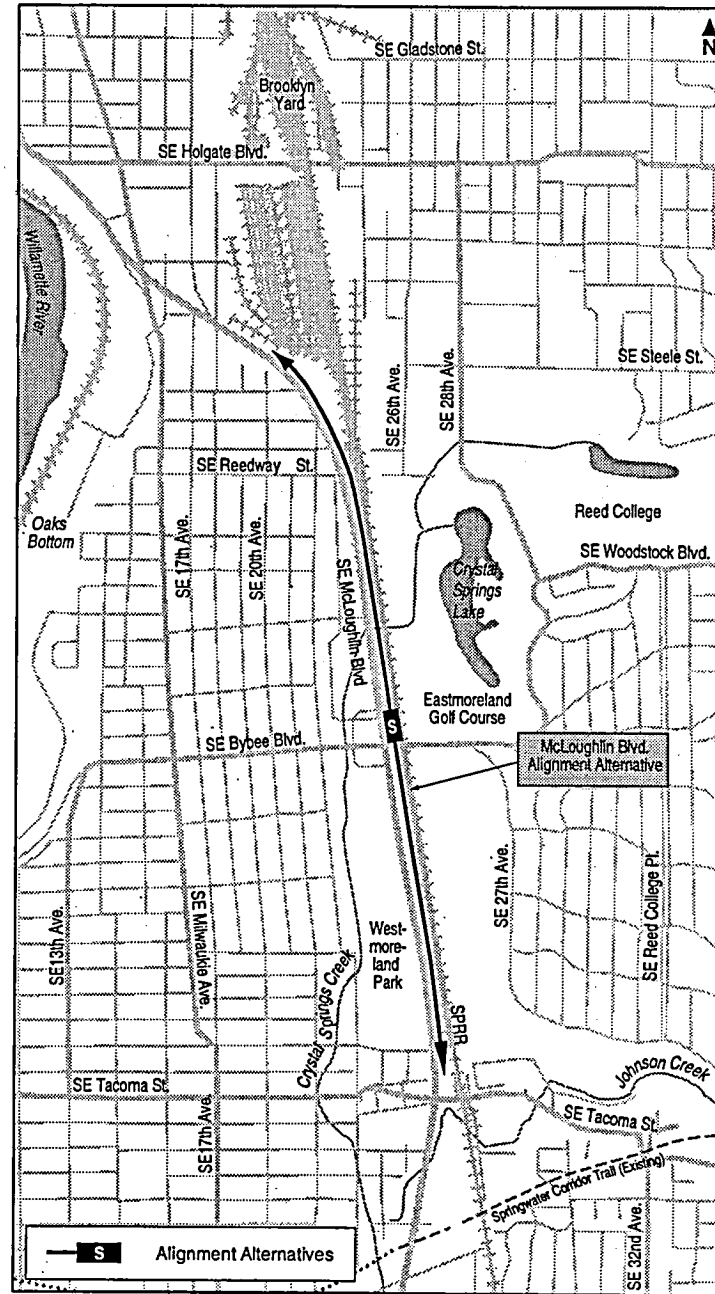


Figure B-4 - McLoughlin Boulevard Segment

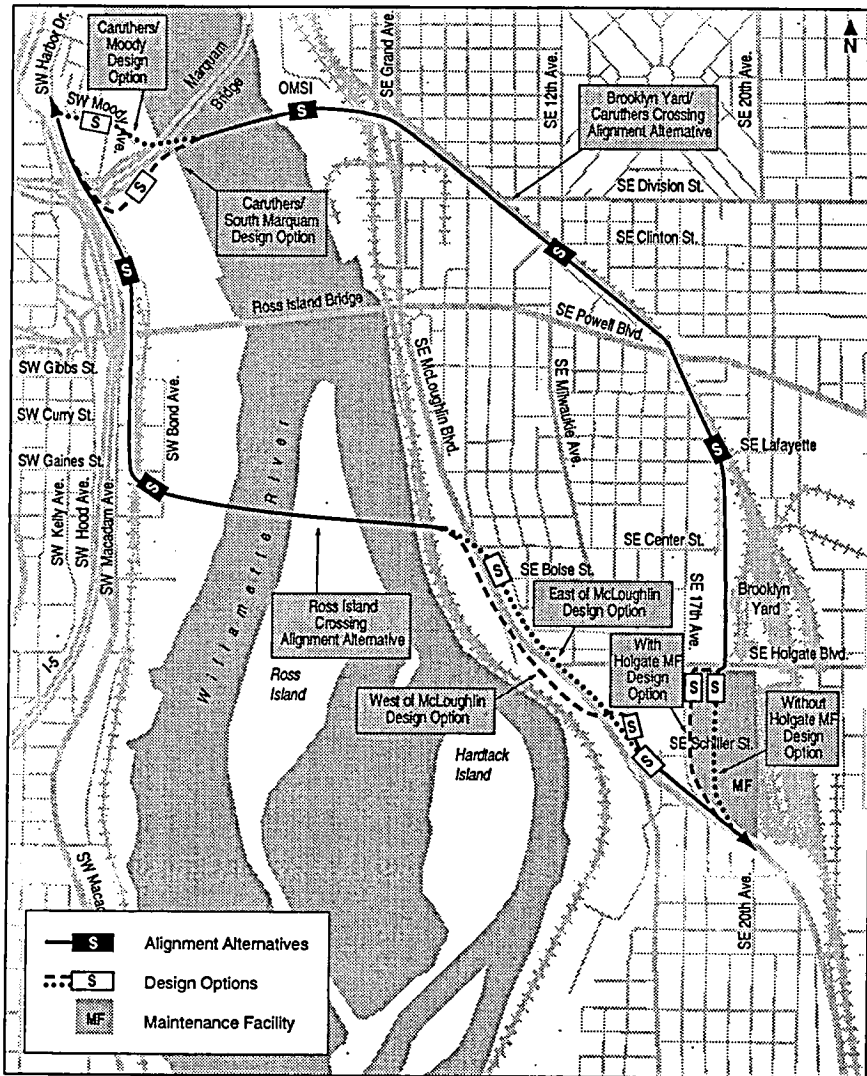


Figure B-5 - South Willamette River Crossing Segment

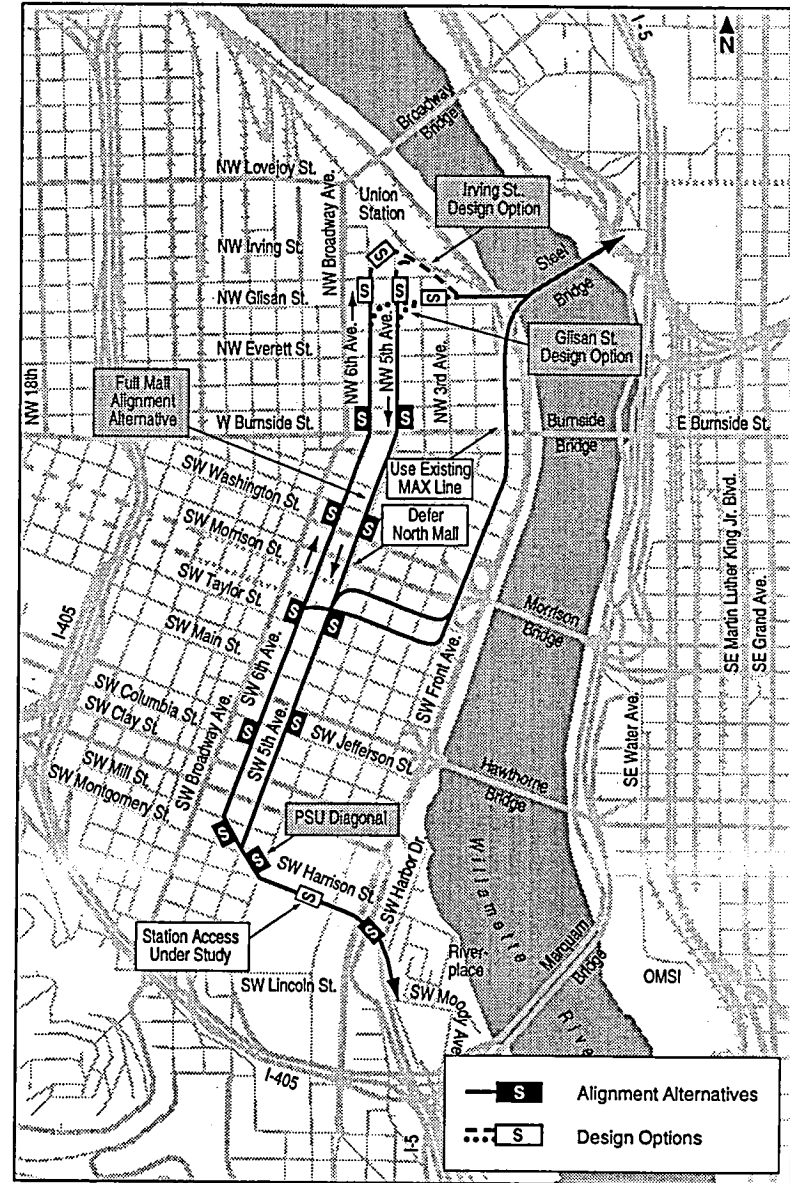


Figure B-6 - Downtown Portland Segment

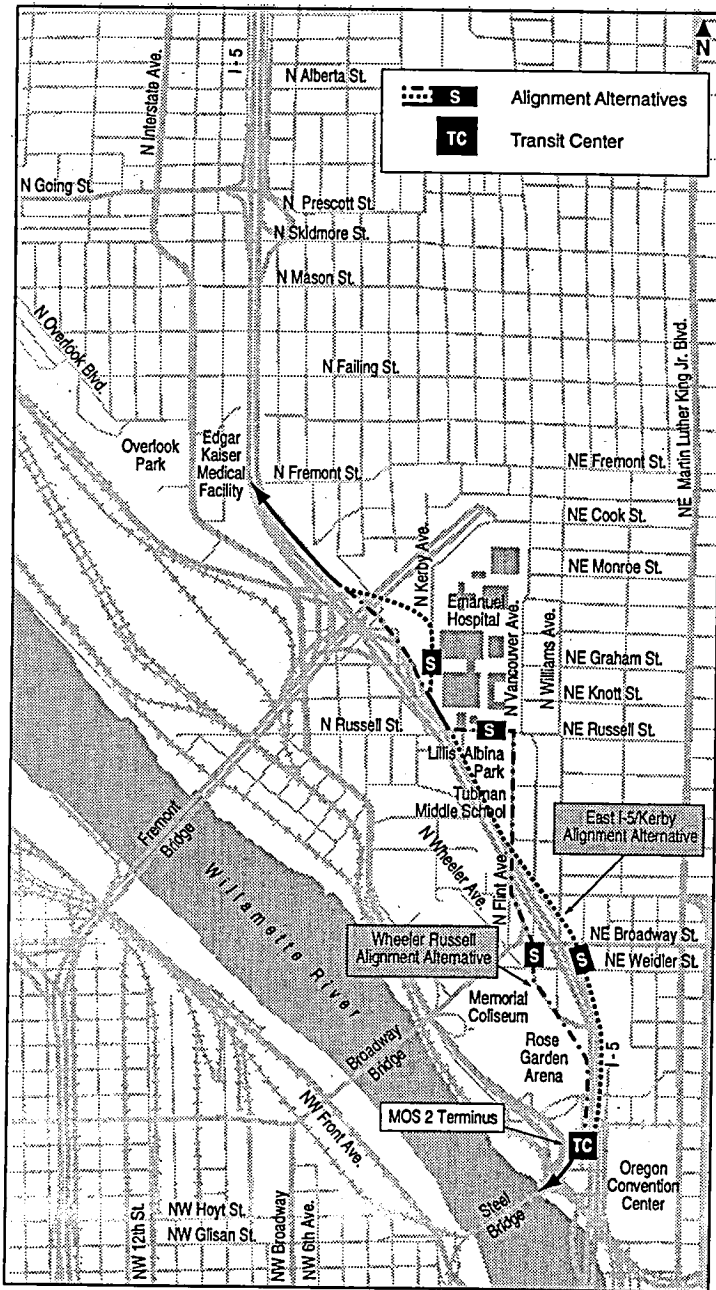


Figure B-7 - Eliot Segment

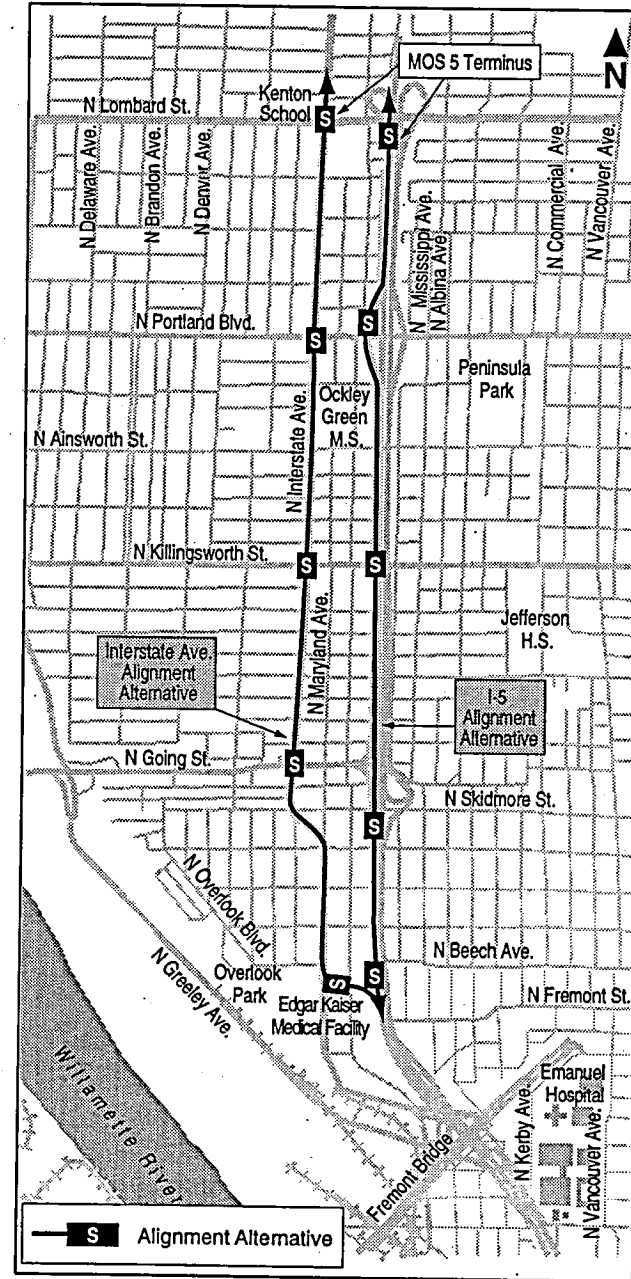


Figure B-8 - Kaiser to Lombard Segment

## South/North Length Alternatives:

- Full-Length Alternative from the Clackamas Regional Center to the VA Hospital/Clark College
- MOS 1 from the Milwaukie Market Place to the VA Hospital/Clark College
- MOS 2 from the Clackamas Regional Center to the Arena Transit Center
- MOS 5 from the Clackamas Regional Center to N Lombard Street

Note: MOS = Minimum Operable Segment.

The DEIS will include a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.

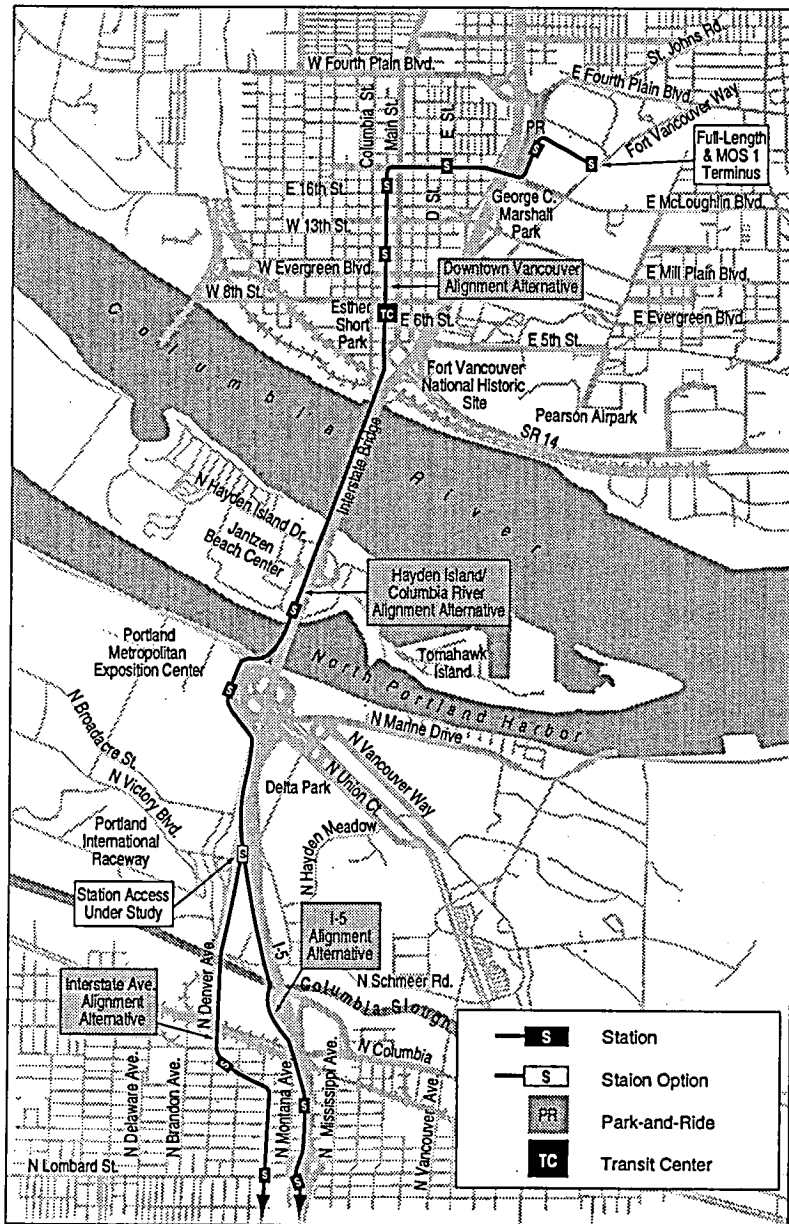


Figure B-9 - Lombard Street to Vancouver Segment



## Appendix C

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### *Summary of Recommendations*

## **E. Summary of Recommended Amendments to the Alternatives and Design Options**

Following is a summary of the recommended changes to the alternatives and design options to reflect the most promising cost-cutting measures. A more detailed description of these recommended amendments to the South/North DEIS alternatives and design options is provided in the following chapters, including a summary of the technical information that led to these recommendations. The maps included within the segment-by-segment discussions highlight the proposed changes (i.e., additions, deletions or amendments). Appendix B includes copies of segment maps reflecting the recommended changes.

### **1. Clackamas Regional Center**

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run generally in the vicinity of SE 79th and 80th Avenues.

### **2. Railroad Avenue**

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Consider the elimination of a Wood Avenue Station.

### **3. Central Milwaukie**

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

### **4. McLoughlin Boulevard**

- Modify the segment design to eliminate the reconstruction of the SE Bybee Boulevard overpass.

### **5. South Willamette River Crossing**

- For the Caruthers Crossing Alternative: a) eliminate the high-level, fixed span bridge; b) add a low-level, fixed-span bridge; and, c) add two design options on the westbank, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.
- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.
- There are no recommended changes to the Ross Island Crossing or the East of and West of McLoughlin Boulevard Design Options.

### **6. Downtown Portland**

- Replace the perpendicular turn from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment.
- Add a MAX Connector Alternative to the DEIS for further study. This recommendation would: 1) retain the existing full-mall alignment; and 2) would add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

### **7. Eliot**

- Add a lower-cost design of the Arena Transit Center.

### **8. Kaiser to Lombard Street**

- Add a design option to the I-5 Alignment that would close the Alberta Street southbound I-5 on and off ramps.
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

### **9. Lombard Street to VA Hospital/Clark College**

- Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.



South/North  
Citizen Advisory Committee

Rich Williams  
Chair

Marc Venere  
Vice-Chair

Bob Elliott

Brad Halverson

Frank Howell

Champ Husted

Stanley Lewis

Gary Madison

Gina Maloney

Michael Mulroy

Irene Park

Larry Quillian

Sara Rogers

Barbara Yanson

Staff  
Gina Whitehill-Baziuk  
Metro  
503/797-1746

April 18, 1997

Councilor Ed Washington  
Chair, South/North Steering Committee  
Metro  
600 NE Grand Avenue  
Portland OR 97232

Dear Councilor Washington;

The purpose of this letter is to provide you and the South/North Steering Committee with the South/North Citizens Advisory Committee's (CAC's) recommendations for cost-cutting measures to be incorporated into the Draft Environmental Impact Statement (DEIS). The CAC met on April 16, 1997 to consider the Project Management Group's recommended cost-cutting measures and then adopted the following recommendations for cost-cutting changes to the project's alternatives and design options.

Before describing the CAC's recommendations, I would like to point out that the CAC received several briefings on the proposed cost-cutting measures from project staff. We received public comment on the recommendations at meetings in March and April of 1997, and we had the opportunity to review and consider the letters and oral comments made during the 30-day public comment period. Finally, we spent more than three hours discussing and debating recommendations within each of the Corridor's segments, struggling, as I am sure Steering Committee will, with how to reduce project costs while ensuring that the project's goals and objectives are met.

1. Clackamas Regional Center

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

Councilor Washington  
June 22, 1994  
Page 2

South/North  
Citizen Advisory Committee

Rich Williams  
Chair

The CAC unanimously recommended these two cost-cutting measures for the Clackamas Regional Center (CRC) as proposed by the PMG. The committee's support was based on the objective to reduce cost and on the reduction of potential residential displacements by replacing the SE Fuller Road alignment with the SE 79th/80th Avenue alignment.

The approval of this recommendation was preceded by a thorough discussion by Committee members of the merits of extending light rail to the Clackamas Town Center. While several members were not necessarily in favor of a Clackamas Regional Center Terminus, the committee came to the conclusion that the appropriate time to conclude that issue will be following the completion of the DEIS.

2. Railroad Avenue

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by SE Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

The CAC unanimously recommends the three new alternatives for the segment that connects the Clackamas and Milwaukie Regional Centers. While committee members voiced concern over possible traffic impacts with the alternative that would close sections of SE Railroad Avenue, we agreed that the potential costs savings and reduction in the number of potential residential unit displacements merited a closer study of this option in the DEIS.

While the CAC agreed with the PMG's recommendation concerning the Wood Avenue Station, we felt that it should be reworded to communicate more clearly that the Railroad Avenue Alternatives would be studied in the DEIS with and without a Wood Avenue Station, and that only following publication of the DEIS would the project decide whether or not to include the Wood Avenue Station. The wording above reflects our proposed change.

**South/North**  
*Citizen Advisory Committee*

*Rich Williams*  
*Chair*

**3. Central Milwaukie**

- *Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.*

The CAC unanimously agreed with the PMG that, given the very promising characteristics of the Main Street/SP Branch Line Alternative, the two Monroe Street Alternatives should be removed from further study. The new alternative is an innovative solution to meeting regional objectives while lowering costs and minimizing localized impacts.

**4. McLoughlin Boulevard**

- *Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.*

The CAC unanimously agreed that the DEIS should study the McLoughlin Boulevard segment with the option to avoid reconstruction of the existing SE Bybee Boulevard overpass as a possible way to reduce project costs. However, we also felt that given the possibility of local traffic impacts, the original option which called for the reconstruction of the overpass should continue to be studied and documented in the DEIS. Then, when the DEIS is published the region will be in a better position to make an informed decision on the status of the overpass.

**5. South Willamette River Crossing**

- *For the Caruthers Crossing Alternative:*
  - a) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);*
  - b) add a 75-foot, fixed-span bridge alternative; and,*
  - c) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.*
- *Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.*
- *There are no recommended changes to the Ross Island Crossing or the East of and West of McLoughlin Boulevard Design Options.*

The CAC unanimously concurred with the PMG's recommendations to lower the design height of the Caruthers Crossing bridge (from approximately 100 feet to approximately 75 feet) which would lead to lower

**South/North**  
*Citizen Advisory Committee*

*Rich Williams*  
*Chair*

costs and better station configurations. The CAC did, however, suggest that wording of this recommendation should be changed and reformatted (as reflected in our recommendation above) to more clearly describe the changes being proposed for the Caruthers Crossing Alternative.

The CAC also agreed that the appropriate time to select between the Caruthers Crossing and the Ross Island Crossing alternatives is following the publication of the DEIS.

**6. Downtown Portland**

- *Replace the perpendicular turn from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment.*
- *Add a MAX Connector Alternative to the DEIS for further study. This recommendation would:*
  - a) Retain the existing full-mall alignment; and*
  - b) Add a second alternative in downtown Portland that would be composed of the mall alignment from the PSU Plaza to SW Morrison and Yamhill Streets, where the South/North and the East/West tracks would be connected.*
- *While an Eastside Connector is not recommended to be studied further in the DEIS, the project's existing policy (i.e., that planning and engineering work on the light rail alternatives to be studied further in the DEIS should allow for a future Eastside transit connection) should be reaffirmed.*

The CAC endorsed the PMG's recommendations for downtown Portland cost-cutting measures, with a vote of seven in favor and two opposed. The vote on this recommendation reflects the discussion that the committee had concerning the Eastside Transit Connector. While some members suggested that an Eastside Connector should be added into the DEIS, other members agreed with the current policy reflected in the PMG's recommendation that a future Eastside transit connection should be provided for as the alternatives within the DEIS are planned and designed. While there was disagreement between Committee members as to the timing of the Eastside Connector, we all agreed that transit, pedestrian and automobile access in the Lloyd District and the Central Eastside must be addressed by the City of Portland, Tri-Met and Metro if we are to achieve our mutual goals of continuing development on the Eastside with increasing transit use.

**7. Elliot**

- *Add a lower-cost design of the Rose Quarter Transit Center.*

**South/North**  
*Citizen Advisory Committee*

*Rich Williams*  
Chair

The CAC unanimously agreed with the PMG by recommending that project staff should be directed to develop a low-cost Rose Quarter Transit Center design for further study in the DEIS. This low-cost design would then be compared to the current design, which has a higher cost but may have benefits that justify the added expenditure.

**8. Kaiser to Lombard Street**

- *Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).*
- *Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.*

The CAC unanimously approved the recommendation to study a design that would modify the southbound I-5 ramps at N Alberta Street in order to reduce costs and potential residential displacements. However, the committee felt this recommendation should be reworded to more accurately describe the proposed modifications to the ramp configuration between N Alberta and Going Streets, as reflected in our recommendation above.

**9. Lombard Street to VA Hospital/Clark College**

The CAC has no recommendations to change alignments or design options within the segment from N Lombard Street in North Portland to the Clark County terminus at the Veterans Administration (VA) Hospital and Clark College.

**10. Length Alternatives (Minimum Operable Segments (MOS))**

- *Keep the Full-Length Alternative from the CRC to the VA Hospital/Clark College*
- *Keep MOS 1 from the Milwaukie Market Place to the VA Hospital/Clark College*
- *Keep MOS 2 from the CRC to the Arena Transit Center*
- *Delete MOS 3 from the CRC to the Edgar Kaiser Medical Facility*
- *Delete MOS 4 from the CRC to the Expo Center*
- *Add MOS 5 from the CRC to N Lombard Street*
- *Add MOS 6 from the Milwaukie Market Place to N Lombard Street*

The CAC first decided to modify the structure of the PMG's recommendations concerning length alternatives, removing the discussion of MOSs

**South/North**  
*Citizen Advisory Committee*

*Rich Williams*  
Chair

from the segment discussions and consolidating our recommendations into this single set of recommendations concerning length alternatives.

We had a detailed discussion about the PMG's proposed MOSs. The CAC concluded, with a six to three vote, to endorse the length alternatives proposed by the PMG with the addition of one more MOS: MOS 6 from the Milwaukie Market Place to N Lombard Street. The majority of the committee felt that the DEIS should evaluate an MOS that would extend south to Milwaukie and north to N Lombard Street. By including this MOS in the DEIS, the region would then be provided with comparative data on the performance of this MOS in relationship to the other MOSs. While the committee is aware of past regional commitments that the next light rail line would extend south into Clackamas County, a majority of us felt that the DEIS should provide us with the technical information necessary to determine whether that priority for light rail improvements should remain or should change.

During the discussion on MOSs, several committee members voiced the position that the N Lombard Street Terminus should be extended north to the Kenton Central Business District (CBD). However, the committee concluded that the N Lombard Street Terminus should be studied further in the DEIS. The committee noted that with the Full-Length Alternative and MOS 1, the DEIS would include data on the costs and benefits of a Kenton CBD Station. This would allow the project to modify the northern terminus if our current funding assumptions change prior to selection of the locally preferred alternative.

**11. Commuter Rail**

- *Commuter Rail should not be added to the South/North DEIS for further study.*
- *A sub-committee of Metro's Joint Policy Advisory Committee on Transportation should conduct a series of workshops to determine whether commuter rail should be considered for inclusion in the Regional Transportation Plan.*

The CAC voted unanimously in favor of the PMG's recommendation concerning commuter rail. First, the committee agreed that commuter rail is not a promising alternative to light rail within the South/North Corridor and should therefore not be studied further in the South/North DEIS. Discussion on this topic included the position that commuter rail should not compete with the South/North Project for either planning or construction funds. Second, the committee agreed that commuter rail is an attractive mode of transportation and that it could be a cost-effective alternative in other travel markets in the region. Therefore, the region should commit the time and resources necessary to determine whether commuter rail should be a component of the Regional Transportation Plan.

Councilor Washington  
April 18, 1997  
Page 7

South/North  
Citizen Advisory Committee

Rick Williams  
Chair

#### Conclusion

In conclusion, these recommended cost-cutting measures, while somewhat different from the PMG's recommendations, still achieve the same cost-cutting targets while retaining as much value as possible within the project. We are encouraged by the prospects of light rail in the South/North Corridor and are heartened by the project's ability to so quickly respond to the loss of State of Oregon funding. The leadership that the Steering Committee has provided throughout this process is to be commended. In particular, the CAC especially appreciated the opportunity to participate in the joint cost-cutting work session with the Steering Committee in January 1997.

I look forward to discussing these recommendations with you at your meeting on April 23, 1997. If you have any questions concerning our recommendations that you would like to discuss prior to that meeting, please contact me at 503/236-6441.

Sincerely,



Rick Williams, Chair  
South/North Citizens Advisory Committee

cc: South/North Steering Committee  
South/North Citizens Advisory Committee  
South/North Project Management Group

## E. Summary of Recommendations

Following is a summary of the Steering Committee's recommended changes to the alternatives and design options to reflect the most promising cost-cutting measures. A more detailed description of these recommended amendments to the alternatives and design options to be studied further is provided in the following chapters.

### 1. Clackamas Regional Center

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

### 2. Railroad Avenue

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

### 3. Central Milwaukie

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

### 4. McLoughlin Boulevard

- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.

### 5. South Willamette River Crossing

- For the Caruthers Crossing Alternative:

- a) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);
- b) add a 75-foot, fixed-span bridge alternative; and,
- c) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.

- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.

### 6. Downtown Portland

- Replace the perpendicular turn from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment.
- Add a MAX Connector Alternative to the DEIS for further study. This recommendation would: 1) retain the existing full-mall alignment; and 2) would add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

### 7. Eliot

- Add a lower-cost design of the Arena Transit Center.

### 8. Kaiser to Lombard Street

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.

### 9. Lombard Street to VA Hospital/Clark College

- Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.



May 7, 1997

Jon Kvistad, Presiding Officer  
Metro  
600 NE Grand Ave.  
Portland, OR 97232-2736

Dear Jon:

The Milwaukie City Council considered the South/North Steering Committee recommendation at a Public Hearing on May 6, 1997. The Council reviewed the Public Comment received by the project and heard comments from thirteen persons. The Council authorized me to send this letter identifying our recommendations for the project.

It is clear to the Council that our Hector Campbell Neighborhood Association is concerned about the Railroad Ave. alignment. They have also expressed concern about the impacts of light rail on Milwaukie and Railroad Avenue including: density, traffic, and sewers. They have taken their concerns to five of our neighborhood associations and received support for their position.

We ask that the South/North DEIS pay particular attention to identifying the traffic, air quality, energy, noise and vibration, parks and wetlands, wildlife displacements, land-use, soils, natural environment, visual quality, neighborhood changes, historic and cultural resources and other impacts of alternative alignments from the Clackamas Town Center Terminus through Milwaukie to the Portland Terminus at Lombard.

It is only through a thorough and detailed review of the impacts that we can make an informed regional choice. The City does not have funding to independently conduct a major study of these impacts. We are relying on a fair and impartial study paid for by federal funds and participating jurisdictions to provide answers to the questions being raised by our neighborhood associations.

We support the Cost-Cutting DEIS Changes in Milwaukie. These are:

*Railroad Avenue*

- Change the current Railroad Avenue alternative to a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through traffic.
- Add a North of Highway 224 alignment.
- Consider eliminating the Wood Avenue station.

*Central Milwaukie*

- Eliminate the two Monroe Street alternatives and add a Main Street/SP Branch Line alternative route.

MILWAUKIE CITY HALL  
10722 SE MAIN STREET  
MILWAUKIE, OREGON 97222  
PHONE: (503) 786-7555 • FAX: (503) 652-4433

Letter: Cost-Cutting DEIS  
Page 2

The North of Highway 224 alignment addition will help address the Campbell Neighborhood concerns that an alternate alignment to Railroad Avenue be studied. A narrower street design or closing sections of Railroad Avenue will help reduce the impacts on Hector Campbell Elementary School and reduce the impacts on residential property. The Highway 224 Alternative provides an option that could completely eliminate impacts on Railroad and place a park and ride lot closer to Highway 224.

Elimination of the two Monroe Street alternatives and adding a Main Street/SP Branch Line alternative route removes the impact to several historic homes and residential properties. It is responsive to some of the concerns expressed by our Historic Milwaukie Neighborhood Association.

We support the ongoing effort to study the project impacts and identify mitigating measures to address impacts through the Final Environmental Impact Study. We recognize that a no-build alternative is still an option. We do not believe that stopping the project at this time would be a wise use of the local and federal funds spent to date. We understand that there will not be a state share of the project and recognize that the cost-cutting measures are necessary for the project to fit the available local match.

We believe the project is necessary to preserve the unique livability that is Milwaukie. We want to work with Metro and Tri-Met to ensure a high quality project that improves our Transit Center, improves our neighborhoods, and helps the region address planned growth management.

Sincerely,

Craig Lomnicki  
Mayor

CC: Mike Burton, Metro Executive  
Richard Brandaman, PMG Chair  
file - ml039



RESOLUTION No.

Adopt cost cutting amendments to the South/North Light Rail alternatives and design options to be studied further in the project draft Environmental Impact Statement and recommending to JPACT and the Metro Council that completing light rail on the Transit Mall should be the region's first priority after in Phase I of the South/North Project.

WHEREAS, in March 1993, the Portland City Council adopted Resolution No. 35116 and in April 1993, the Metro Council adopted Resolution No. 93-1784 which selected the Milwaukie and North Corridors as the region's high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Draft Environmental Impact Statement; and

WHEREAS, the current alternatives being studied in the Draft Environmental Impact Statement were approved by the Portland City Council in November 1994 with the adoption of Resolution No. 35339 and the Metro Council in December 1994 with the adoption of Resolution No. 94-1989, and in December 1995 with the Portland City Council adoption of Resolution No. 35473 and the Metro Council adoption of Resolution No. 95-2243; and

WHEREAS, it is the role of the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee, the South/North Steering Committee and the project's participating jurisdictions to recommend alternatives to be studied further in the Draft Environmental Impact Statement; and

WHEREAS, it is the role of the Metro Council to make the final determination of the alternatives to advance into the Draft Environmental Impact Statement for further study; and

WHEREAS, in November 1996, Ballot Measure 32, which would have authorized \$375 million in Oregon State Lottery funds to provide the State of Oregon's proposed share of South/North funds, failed statewide but passed with a 56% yes vote within Metro's boundary; and

WHEREAS, in December 1996, Metro Council endorsed the South/North Steering Committee's findings that there remains a strong base of public support for the South/North Light Rail Project, and endorsed the committee's plan to undertake a process intended to significantly reduce costs for the South/North Transit Corridor Study; and

WHEREAS, in February 1997, Metro Council adopted Resolution No. 97-2460 which endorsed the South/North Light Rail Project Finance Plan as adopted by the South/North Steering Committee that would require a significant reduction in South/North project costs; and

WHEREAS, in March 1997, the South North Project Management Group proposed significant cost-cutting measures for the South/North Light Rail Project in the *South/North Briefing Document: Proposed Cost-Cutting Measures* and initiated a 30-day public comment period on those proposed cost-cutting measures; and

WHEREAS, in April 1997, following the conclusions of the public comment period, the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee and the South/North Steering Committee adopted recommendations for proposed cost-cutting measures for the South/North Light Rail Project; and

WHEREAS, the proposed amendments to the alternatives and design options were developed and evaluated based upon the project's criteria and measures, including estimated costs,

ridership, bi-state land use and development goals and significant environmental benefits and impacts; and

WHEREAS, the cost-cutting measures as proposed by the South/North Steering Committee would reduce project costs by approximately one-third resulting in a year-of-expenditure savings of over \$500 million dollars, consistent with the project's adopted Finance Plan, while allowing the proposed project to meet its goal and objectives; and

WHEREAS, public comments on the MAX Connector alternative in downtown Portland expressed concerns that this cost-cutting measure could reduce transit's presence between Pioneer Place and Union Station and impact the vitality and economic development potential in this area, and limit MAX's downtown operating capacity; and

WHEREAS, public comments on the cost-cutting measures indicated community desires to examine the potential for extending light rail to the Kenton Business District in order to meet the Albina Community Plan and Kenton Neighborhood Plan goals to promote economic development and to revitalize the business district; and

NOW, THEREFORE BE IT RESOLVED by the Council of the City of Portland, adopts the cost-cutting amendments to alternatives and design options to be further studied in the South/North Draft Environmental Impact Statement and are described in the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options* (Exhibit A ), which are generally as follows:

1. Clackamas Regional Center

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives;
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

2. Railroad Avenue

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.
- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

3. Central Milwaukie

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

4. McLoughlin Boulevard

- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.

5. South Willamette River Crossing

- For the Caruthers Crossing Alternative:
  - 1) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);
  - 2) add a 75-foot, fixed-span bridge alternative; and
  - 3) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.
- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.

6. Downtown Portland

- Replace the perpendicular turn alignment design from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment design.
- Add a MAX Connector Alternative to the DEIS for further study. This recommendation would:
  - 1) retain the existing full-mall alignment; and
  - 2) add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

7. Eliot

- Add a lower-cost design of the Arena Transit Center.

8. Kaiser to Lombard Street

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N. Alberta Street to just north of N. Going Street and would close the existing southbound on-ramp to I-5 from N. Alberta Street (access southbound would be via the N. Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.

9. Lombard Street to VA Hospital/Clark College

- Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

BE IT RESOLVED that the Council request that JPACT and the Metro Council identify the MAX Connector as an interim solution requiring subsequent investment to complete the Full Mall and that the region's first priority for light rail funding after Phase I of the South/North Project would be the completion of the Full Mall for light rail from SW Morrison Street to Union Station and the Rose Quarter,

BE IT RESOLVED that the Council supports efforts in the South/North Project's Draft Environmental Impact Statement to examine the costs, ridership and other benefits and impacts associated with a potential terminus location in the Kenton Business District.

Adopted by the Council,  
Commissioner Charlie Hales  
Stephen Iwata:db  
April 30, 1997

BARBARA CLARK  
Auditor of the City of Portland  
By

Deputy

## STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2505A FOR THE  
PURPOSE OF ADOPTING COST-CUTTING AMENDMENTS TO THE  
SOUTH/NORTH LIGHT RAIL ALTERNATIVES AND DESIGN OPTIONS  
TO BE STUDIED FURTHER IN THE PROJECT DRAFT  
ENVIRONMENTAL IMPACT STATEMENT

Date: April 25, 1997

Presented by: Richard Brandman

### PROPOSED ACTION

This resolution adopts Exhibit A as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*. The resolution also adopts amendments, described in more detail in Exhibit A, to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement.

### FACTUAL BACKGROUND AND ANALYSIS

#### 1. Background

The South/North Transit Corridor Study was initiated in April 1993 when the Metro Council adopted Resolution No. 93-1784, which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority to be studied further within a Federal Draft Environmental Impact Statement (DEIS). In October 1993, the Federal Transit Administration (FTA) issued its intent in the *Federal Register* to publish an EIS for the South/North Corridor.

The project then implemented a process to determine the alternatives and design options to be studied further within the DEIS. The first step in that process led to adoption of the *Tier I Final Report* by Metro Council in December 1994, which determined the scope of the Phase One project and the length and alignment alternatives to be studied further in the DEIS. At that time, it was determined that the South/North project would be developed over phases. Phase One, currently under study, would be from the Clackamas Regional Center, through downtown Portland and into Vancouver, Washington. Phase Two would extend light rail south to Oregon City and north into Clark County. The second step concluded in November 1995 when the South/North Steering Committee adopted the *Design Option Narrowing Report* which determined the design options to be studied further in the DEIS and, in December 1995, when the Metro Council adopted Resolution No. 95-2243 which endorsed those design options and which determined the alignment alternatives in downtown Portland to be studied further in the DEIS.

#### 2. Ballot Measure 32 Results

In February 1996 in a special session, the Oregon Legislature approved a bill that would have provided \$375 million in Oregon

State Lottery funds for the state's share of South/North Light Rail's capital budget for the first construction segment. That bill was placed on the November 1997 statewide ballot by petition. In November 1997, Ballot Measure 32 was defeated statewide.

After the November election, the South/North Steering Committee directed staff to evaluate the election results and to propose next steps for the South/North Transit Corridor Study. Following are the Steering Committee's findings from that effort:

- The light rail funding measure passed with a 56 percent "yes" vote within the Metro boundary and it passed in each of the three counties inside the Metro boundary.
- An independent survey of voters found that 70 percent of tri-county voters favor moving forward with South/North light rail as it is currently defined or with some changes.
- The independent survey also found that, while support for light rail is high, there is some concern about cost.

In response to the election results and analysis, the Steering Committee and Metro Council called upon project staff to develop a range of options and design changes to significantly reduce the cost of the project.

### **3. Cost-Cutting Process: Public Involvement Activities and Committee Recommendations**

The Steering Committee held a joint work session with the South/North Citizens Advisory Committee (CAC) in January 1997 to review and comment on preliminary cost-cutting measures that had been identified by project staff. At that time, the two committees also heard ongoing results of a major public involvement effort by the project to provide presentations on South/North Light Rail at over 200 community, business and neighborhood meetings throughout the region. That public involvement effort included the distribution of brochures to over 100,000 households with a mail-back survey that, while not scientific, showed that over 80 percent of respondent approved of moving ahead with the South/North Light Rail Project.

In February 1997, the Metro Council adopted the *South/North Finance Plan* which formed the basis of the region's request for South/North Light Rail Project funding to be included within the reauthorization of the federal Intermodal Surface Transportation Efficiency Act and which anticipated a reduction in project costs of over \$500 million resulting from the ongoing cost-cutting process.

In March 1997, the South/North Project Management Group (PMG) released its recommendations for cost-cutting amendments to the project's alternatives and design options within the *Briefing Document: Proposed Cost-Cutting Measures*. The PMG also initiated a 30-day public comment period on those proposed amendments.

The 30-day comment period included six project open houses throughout the corridor to provide the general public with the opportunity to receive material describing the proposed cost-cutting measures and to talk directly with project planners and engineers. The CAC and the Steering Committee each held a work session to review the proposed cost-cutting measures and amendments to the project's alternatives and design options. An edition of the *South/North News*, the project newsletter which described the proposed amendments, was distributed to over 10,000 households and businesses. The comment period also included two public comment meetings hosted by the Steering Committee, held on April 8 and 9, 1997. Public comment was also received via the mail, the Transportation Hotline and the project's Web site. All comments received during the public comment period have been documented in the *Public Comments on South/North Cost-Cutting Proposals Report* (Metro: April 1997). The comment period, open houses and public comment meetings were announced through advertisements in local newspapers and publications, in news releases, at neighborhood meetings, on the Transportation Hotline and through the *South/North News*.

On April 14, 1997, the South/North Expert Review Panel (ERP) met to review and discuss the methods, assumptions and results of the cost-cutting process. The panel, which has met at major project milestones since the initiation of the project in 1992, concluded that the methods, assumptions and results of the process were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the DEIS. The panel also provided specific suggestions for changes that could be incorporated by the project as the proposed cost-cutting measures are analyzed in the DEIS. Carl Hosticka, the Chair of the ERP, presented the findings of the panel to the Steering Committee at its meeting on April 23, 1997.

On April 15, 1997, following the conclusion of the public comment period, the South/North PMG met and adopted amendments to the cost-cutting measures that addressed comments received by the project. Those recommendations are included in the *Briefing Document: PMG's Proposed Cost-Cutting Measures* (Metro: April 1997).

On April 16, 1997, the CAC received further public comment and discussed the PMG's revised recommendations. They concluded by

adopting their own recommendations to the Steering Committee for amendments to the alternatives and design options to be studied further within the DEIS. Those recommendations were summarized in a letter dated April 18, 1997 from Rick Williams, Chair of the CAC, to Councilor Ed Washington, Chair of the South/North Steering Committee. While their recommendations were substantially similar to those of the PMG, they did propose the addition of a length alternative from the Milwaukie Market Place to N Lombard Street.

On April 22, 1997, the South/North Downtown Portland Oversight Committee met to review the PMG's proposed cost-cutting measures for downtown Portland. The Oversight Committee concluded by endorsing the PMG's recommendations and identified a variety of issues and concerns that should be addressed by the project as those cost-cutting measures are studied further in the DEIS. Charles Armstrong, Chair of the Oversight Committee, presented the committee's conclusions to the Steering Committee at its meeting on April 23, 1997.

On April 23, 1997, the Steering Committee met to review and discuss the public comment, the technical analysis and the recommendations adopted by the PMG, the CAC and the Downtown Portland Oversight Committee. The committee also discussed the findings and conclusions made by the ERP. The Steering Committee concluded by adopting its own recommendations in the *Briefing Document: Steering Committee's Recommended Cost-Cutting Measures*. The Steering Committee's recommendations were then forwarded to the local jurisdictions for their opportunity to review and comment on the proposed amendments to the project's alternatives and design options.

#### 4. Amendments to the DEIS Alternatives and Design Options

When the identified cost-cutting measures are taken together, project costs would be reduced by approximately one-third, which represents a savings of over \$500 million for a project serving both Clackamas County, downtown Portland and North Portland. Additionally, the project's cost per mile would be reduced to a level equivalent to the current Westside Project. The end result of the cost-cutting process has been to enable the project to have higher ridership with less cost, which will enable it to compete more effectively for federal funding.

The amendments are summarized in the attached resolution and are described in greater detail in Exhibit A, *South/North Cost-Cutting Final Report: Amendments to Alternatives and Design Options*.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING )	RESOLUTION NO. 97-2505A
COST-CUTTING AMENDMENTS TO THE )	
SOUTH/NORTH LIGHT RAIL ALTERNA-) Introduced by	
TIVES AND DESIGN OPTIONS TO BE ) Councilor Washington	
STUDIED FURTHER IN THE PROJECT )	
DRAFT ENVIRONMENTAL IMPACT )	
STATEMENT )	

WHEREAS, In April 1993, the Metro Council adopted Resolution No. 93-1784 which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Draft Environmental Impact Statement; and

WHEREAS, In October 1993, the Federal Transit Administration issued notification of intent in the *Federal Register* to publish a South/North Environmental Impact Statement; and

WHEREAS, The current alternatives being studied in the Draft Environmental Impact Statement were approved by the Metro Council in December 1994 with the adoption of Resolution No. 94-1989 and in December 1995 with the adoption of Resolution No. 95-2243; and

WHEREAS, It is the role of the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee, the South/North Steering Committee and the project's participating jurisdictions to recommend alternatives to be studied further in the Draft Environmental Impact Statement; and

WHEREAS, It is the role of the Metro Council to make the final determination of the alternatives to advance into the Draft Environmental Impact Statement for further study; and

WHEREAS, In December 1996, the Metro Council endorsed the South/North Steering Committee's findings that there remains a strong base of regional support for the South/North Light Rail Project, as currently planned or with some changes, and Metro Council endorsed the committee's plan to undertake a process intended to significantly reduce costs for the South/North Transit Corridor Study; and

WHEREAS, In February 1997, the Metro Council adopted Resolution No. 97-2460 which endorsed the South/North Light Rail Project Finance Plan as adopted by the South/North Steering Committee that would require a significant reduction in South/North project costs; and

WHEREAS, In March 1997, The South/North Project Management Group proposed significant cost-cutting measures for the South/North Light Rail Project in the *South/North Briefing Document: Proposed Cost-Cutting Measures* and initiated a 30-day public comment period on those proposed cost-cutting measures; and

WHEREAS, In April 1997, the South/North Expert Review Panel reviewed the methods, assumptions and results of the cost-cutting process and concluded that they were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the Draft Environmental Impact statement; and

WHEREAS, In April 1997, following the conclusion of the public comment period, the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee and the South/North



Steering Committee adopted recommendations for proposed cost-cutting measures for the South/North Light Rail Project; and

WHEREAS, The proposed amendments to the alternatives and design options were developed and evaluated based upon the project's criteria and measures, including estimated costs, ridership, bi-state land use and development goals and significant environmental benefits and impacts; and

WHEREAS, The cost-cutting measures as proposed by the South/North Steering Committee would reduce project costs by approximately one-third, resulting in savings totaling more than \$500 million dollars, consistent with the project's adopted Finance Plan, while allowing the proposed project to meet its goal and objectives; now, therefore,

BE IT RESOLVED:

1. That Exhibit A is hereby adopted as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*.

2. That the following amendments, described in more detail in Exhibit A, are made to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement:

**A. Clackamas Regional Center**

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

**B. Railroad Avenue**

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.

- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
- Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
- Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.

**C. Central Milwaukie**

- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.

**D. McLoughlin Boulevard**

- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.

**E. South Willamette River Crossing**

- For the Caruthers Crossing Alternative:
  - 1) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);
  - 2) add a 75-foot, fixed-span bridge alternative; and
  - 3) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.
- Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.

**F. Downtown Portland**

- Replace the perpendicular turn alignment design from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment design.
- Add a MAX Connector Alternative to the DEIS for further study. This recommendation would:
  - 1) retain the existing full-mall alignment; and
  - 2) add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza

to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

**G. Eliot**

- Add a lower-cost design of the Arena Transit Center.

**H. Kaiser to Lombard Street**

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton and the Expo Center.

**I. Lombard Street to VA Hospital/Clark College**

- ~~Eliminate~~ Replace the north MOS terminus option at the Expo Center ~~and replace it~~ with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

ADOPTED by the Metro Council on this \_\_\_\_\_ day of \_\_\_\_\_, 1997.

\_\_\_\_\_  
Jon Kvistad, Presiding Officer

Approved as to Form:

\_\_\_\_\_  
Daniel B. Cooper, General Counsel

## STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2505A FOR THE  
PURPOSE OF ADOPTING COST-CUTTING AMENDMENTS TO THE  
SOUTH/NORTH LIGHT RAIL ALTERNATIVES AND DESIGN OPTIONS  
TO BE STUDIED FURTHER IN THE PROJECT DRAFT  
ENVIRONMENTAL IMPACT STATEMENT

Date: April 25, 1997

Presented by: Richard Brandman

### PROPOSED ACTION

This resolution adopts Exhibit A as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*. The resolution also adopts amendments, described in more detail in Exhibit A, to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement.

### FACTUAL BACKGROUND AND ANALYSIS

#### 1. Background

The South/North Transit Corridor Study was initiated in April 1993 when the Metro Council adopted Resolution No. 93-1784, which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority to be studied further within a Federal Draft Environmental Impact Statement (DEIS). In October 1993, the Federal Transit Administration (FTA) issued its intent in the *Federal Register* to publish an EIS for the South/North Corridor.

The project then implemented a process to determine the alternatives and design options to be studied further within the DEIS. The first step in that process led to adoption of the *Tier I Final Report* by Metro Council in December 1994, which determined the scope of the Phase One project and the length and alignment alternatives to be studied further in the DEIS. At that time, it was determined that the South/North project would be developed over phases. Phase One, currently under study, would be from the Clackamas Regional Center, through downtown Portland and into Vancouver, Washington. Phase Two would extend light rail south to Oregon City and north into Clark County. The second step concluded in November 1995 when the South/North Steering Committee adopted the *Design Option Narrowing Report* which determined the design options to be studied further in the DEIS and, in December 1995, when the Metro Council adopted Resolution No. 95-2243 which endorsed those design options and which determined the alignment alternatives in downtown Portland to be studied further in the DEIS.

#### 2. Ballot Measure 32 Results

In February 1996 in a special session, the Oregon Legislature approved a bill that would have provided \$375 million in Oregon

State Lottery funds for the state's share of South/North Light Rail's capital budget for the first construction segment. That bill was placed on the November 1997 statewide ballot by petition. In November 1997, Ballot Measure 32 was defeated statewide.

After the November election, the South/North Steering Committee directed staff to evaluate the election results and to propose next steps for the South/North Transit Corridor Study. Following are the Steering Committee's findings from that effort:

- The light rail funding measure passed with a 56 percent "yes" vote within the Metro boundary and it passed in each of the three counties inside the Metro boundary.
- An independent survey of voters found that 70 percent of tri-county voters favor moving forward with South/North light rail as it is currently defined or with some changes.
- The independent survey also found that, while support for light rail is high, there is some concern about cost.

In response to the election results and analysis, the Steering Committee and Metro Council called upon project staff to develop a range of options and design changes to significantly reduce the cost of the project.

### **3. Cost-Cutting Process: Public Involvement Activities and Committee Recommendations**

The Steering Committee held a joint work session with the South/North Citizens Advisory Committee (CAC) in January 1997 to review and comment on preliminary cost-cutting measures that had been identified by project staff. At that time, the two committees also heard ongoing results of a major public involvement effort by the project to provide presentations on South/North Light Rail at over 200 community, business and neighborhood meetings throughout the region. That public involvement effort included the distribution of brochures to over 100,000 households with a mail-back survey that, while not scientific, showed that over 80 percent of respondent approved of moving ahead with the South/North Light Rail Project.

In February 1997, the Metro Council adopted the *South/North Finance Plan* which formed the basis of the region's request for South/North Light Rail Project funding to be included within the reauthorization of the federal Intermodal Surface Transportation Efficiency Act and which anticipated a reduction in project costs of over \$500 million resulting from the ongoing cost-cutting process.

In March 1997, the South/North Project Management Group (PMG) released its recommendations for cost-cutting amendments to the project's alternatives and design options within the *Briefing Document: Proposed Cost-Cutting Measures*. The PMG also initiated a 30-day public comment period on those proposed amendments.

The 30-day comment period included six project open houses throughout the corridor to provide the general public with the opportunity to receive material describing the proposed cost-cutting measures and to talk directly with project planners and engineers. The CAC and the Steering Committee each held a work session to review the proposed cost-cutting measures and amendments to the project's alternatives and design options. An edition of the *South/North News*, the project newsletter which described the proposed amendments, was distributed to over 10,000 households and businesses. The comment period also included two public comment meetings hosted by the Steering Committee, held on April 8 and 9, 1997. Public comment was also received via the mail, the Transportation Hotline and the project's Web site. All comments received during the public comment period have been documented in the *Public Comments on South/North Cost-Cutting Proposals Report* (Metro: April 1997). The comment period, open houses and public comment meetings were announced through advertisements in local newspapers and publications, in news releases, at neighborhood meetings, on the Transportation Hotline and through the *South/North News*.

On April 14, 1997, the South/North Expert Review Panel (ERP) met to review and discuss the methods, assumptions and results of the cost-cutting process. The panel, which has met at major project milestones since the initiation of the project in 1992, concluded that the methods, assumptions and results of the process were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the DEIS. The panel also provided specific suggestions for changes that could be incorporated by the project as the proposed cost-cutting measures are analyzed in the DEIS. Carl Hosticka, the Chair of the ERP, presented the findings of the panel to the Steering Committee at its meeting on April 23, 1997.

On April 15, 1997, following the conclusion of the public comment period, the South/North PMG met and adopted amendments to the cost-cutting measures that addressed comments received by the project. Those recommendations are included in the *Briefing Document: PMG's Proposed Cost-Cutting Measures* (Metro: April 1997).

On April 16, 1997, the CAC received further public comment and discussed the PMG's revised recommendations. They concluded by

adopting their own recommendations to the Steering Committee for amendments to the alternatives and design options to be studied further within the DEIS. Those recommendations were summarized in a letter dated April 18, 1997 from Rick Williams, Chair of the CAC, to Councilor Ed Washington, Chair of the South/North Steering Committee. While their recommendations were substantially similar to those of the PMG, they did propose the addition of a length alternative from the Milwaukie Market Place to N Lombard Street.

On April 22, 1997, the South/North Downtown Portland Oversight Committee met to review the PMG's proposed cost-cutting measures for downtown Portland. The Oversight Committee concluded by endorsing the PMG's recommendations and identified a variety of issues and concerns that should be addressed by the project as those cost-cutting measures are studied further in the DEIS. Charles Armstrong, Chair of the Oversight Committee, presented the committee's conclusions to the Steering Committee at its meeting on April 23, 1997.

On April 23, 1997, the Steering Committee met to review and discuss the public comment, the technical analysis and the recommendations adopted by the PMG, the CAC and the Downtown Portland Oversight Committee. The committee also discussed the findings and conclusions made by the ERP. The Steering Committee concluded by adopting its own recommendations in the *Briefing Document: Steering Committee's Recommended Cost-Cutting Measures*. The Steering Committee's recommendations were then forwarded to the local jurisdictions for their opportunity to review and comment on the proposed amendments to the project's alternatives and design options.

#### **4. Amendments to the DEIS Alternatives and Design Options**

When the identified cost-cutting measures are taken together, project costs would be reduced by approximately one-third, which represents a savings of over \$500 million for a project serving both Clackamas County, downtown Portland and North Portland. Additionally, the project's cost per mile would be reduced to a level equivalent to the current Westside Project. The end result of the cost-cutting process has been to enable the project to have higher ridership with less cost, which will enable it to compete more effectively for federal funding.

The amendments are summarized in the attached resolution and are described in greater detail in Exhibit A, *South/North Cost-Cutting Final Report: Amendments to Alternatives and Design Options*.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING )	RESOLUTION NO. 97-2505
COST-CUTTING AMENDMENTS TO THE )	
SOUTH/NORTH LIGHT RAIL ALTERNA-) Introduced by	
TIVES AND DESIGN OPTIONS TO BE ) Councilor Washington	
STUDIED FURTHER IN THE PROJECT )	
DRAFT ENVIRONMENTAL IMPACT )	
STATEMENT )	

WHEREAS, In April 1993, the Metro Council adopted Resolution No. 93-1784 which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Draft Environmental Impact Statement; and

WHEREAS, In October 1993, the Federal Transit Administration issued notification of intent in the *Federal Register* to publish a South/North Environmental Impact Statement; and

WHEREAS, The current alternatives being studied in the Draft Environmental Impact Statement were approved by the Metro Council in December 1994 with the adoption of Resolution No. 94-1989 and in December 1995 with the adoption of Resolution No. 95-2243; and

WHEREAS, It is the role of the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee, the South/North Steering Committee and the project's participating jurisdictions to recommend alternatives to be studied further in the Draft Environmental Impact Statement; and

WHEREAS, It is the role of the Metro Council to make the final determination of the alternatives to advance into the Draft Environmental Impact Statement for further study; and



WHEREAS, In December 1996, the Metro Council endorsed the South/North Steering Committee's findings that there remains a strong base of regional support for the South/North Light Rail Project, as currently planned or with some changes, and Metro Council endorsed the committee's plan to undertake a process intended to significantly reduce costs for the South/North Transit Corridor Study; and

WHEREAS, In February 1997, the Metro Council adopted Resolution No. 97-2460 which endorsed the South/North Light Rail Project Finance Plan as adopted by the South/North Steering Committee that would require a significant reduction in South/North project costs; and

WHEREAS, In March 1997, The South/North Project Management Group proposed significant cost-cutting measures for the South/North Light Rail Project in the *South/North Briefing Document: Proposed Cost-Cutting Measures* and initiated a 30-day public comment period on those proposed cost-cutting measures; and

WHEREAS, In April 1997, the South/North Expert Review Panel reviewed the methods, assumptions and results of the cost-cutting process and concluded that they were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the Draft Environmental Impact statement; and

WHEREAS, In April 1997, following the conclusion of the public comment period, the South/North Project Management Group, the South/North Citizens Advisory Committee, the South/North Downtown Portland Oversight Committee and the South/North

Steering Committee adopted recommendations for proposed cost-cutting measures for the South/North Light Rail Project; and

WHEREAS, The proposed amendments to the alternatives and design options were developed and evaluated based upon the project's criteria and measures, including estimated costs, ridership, bi-state land use and development goals and significant environmental benefits and impacts; and

WHEREAS, The cost-cutting measures as proposed by the South/North Steering Committee would reduce project costs by approximately one-third, resulting in savings totaling more than \$500 million dollars, consistent with the project's adopted Finance Plan, while allowing the proposed project to meet its goal and objectives; now, therefore,

BE IT RESOLVED:

1. That Exhibit A is hereby adopted as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*.

2. That the following amendments, described in more detail in Exhibit A, are made to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement:

**A. Clackamas Regional Center**

- Add a terminus option at the Clackamas Town Center Transit Center Station for both the North and South of CTC Alignment Alternatives.
- Amend the North of Clackamas Town Center Alignment Alternative by deleting the proposed alignment generally adjacent to SE Fuller Road and linking the alignment between SE Monterey Avenue and SE Harmony Road with an alignment that would run in the vicinity of SE 79th and 80th Avenues.

**B. Railroad Avenue**

- Amend the current Railroad Avenue Alternative being studied in the DEIS to reflect a narrower street design.

- Add an alternative that would close sections of Railroad Avenue to through-traffic and would generally locate light rail within the right-of-way currently occupied by Railroad Avenue.
  - Add a North of Highway 224 alignment to be studied further in the DEIS. The proposed new alignment alternative would run north of and parallel to Highway 224, generally within right-of-way currently owned by ODOT.
  - Evaluate the Railroad Avenue Alignment alternatives with and without a Wood Avenue Station.
- C. Central Milwaukie**
- Eliminate the two Monroe Street Alternatives and add a Main Street/SP Branch Line Alternative to the DEIS for further study.
- D. McLoughlin Boulevard**
- Study the McLoughlin Boulevard segment with two options, one that would include the reconstruction of the SE Bybee Boulevard overpass and one that would not include reconstruction of the overpass.
- E. South Willamette River Crossing**
- For the Caruthers Crossing Alternative:
    - 1) eliminate the Caruthers Modified Alignment Alternative (including the 100-foot, fixed-span bridge);
    - 2) add a 75-foot, fixed-span bridge alternative; and
    - 3) add two westbank design options for the 75-foot bridge alternative, a Caruthers/Moody alignment and a Caruthers/South Marquam alignment.
  - Eliminate the Above-Grade Design Option of the Caruthers/Brooklyn Yard Alignment Alternative.
- F. Downtown Portland**
- Replace the perpendicular turn alignment design from SW Harrison Street to SW 5th and 6th Avenues with the PSU diagonal alignment design.
  - Add a MAX Connector Alternative to the DEIS for further study. This recommendation would:
    - 1) retain the existing full-mall alignment; and
    - 2) add a second alternative in downtown Portland that would be composed of the full-mall alignment from the PSU Plaza

to Morrison and Yamhill, where the South/North and the East/West tracks would be connected.

**G. Eliot**

- Add a lower-cost design of the Arena Transit Center.

**H. Kaiser to Lombard Street**

- Add a design option to the I-5 Alignment that would move the existing southbound I-5 off-ramp at N Alberta Street to just north of N Going Street and would close the existing southbound on-ramp to I-5 from N Alberta Street (access southbound would be via the N Going Street on-ramp).
- Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives.
- Eliminate the north terminus options at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.
- Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.

**I. Lombard Street to VA Hospital/Clark College**

- Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.

ADOPTED by the Metro Council on this \_\_\_\_\_ day of \_\_\_\_\_, 1997.

Jon Kvistad, Presiding Officer

Approved as to Form:

Daniel B. Cooper, General Counsel

## STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2505 FOR THE PURPOSE OF ADOPTING COST-CUTTING AMENDMENTS TO THE SOUTH/NORTH LIGHT RAIL ALTERNATIVES AND DESIGN OPTIONS TO BE STUDIED FURTHER IN THE PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

Date: April 25, 1997

Presented by: Richard Brandman

### PROPOSED ACTION

This resolution adopts Exhibit A as the *South/North Cost-Cutting Measures Final Report: Amendments to Alternatives and Design Options*. The resolution also adopts amendments, described in more detail in Exhibit A, to the alternatives and design options to be studied further in the South/North Draft Environmental Impact Statement.

### FACTUAL BACKGROUND AND ANALYSIS

#### 1. Background

The South/North Transit Corridor Study was initiated in April 1993 when the Metro Council adopted Resolution No. 93-1784, which selected the Milwaukie and I-5 North Corridors as the region's high-capacity transit priority to be studied further within a Federal Draft Environmental Impact Statement (DEIS). In October 1993, the Federal Transit Administration (FTA) issued its intent in the *Federal Register* to publish an EIS for the South/North Corridor.

The project then implemented a process to determine the alternatives and design options to be studied further within the DEIS. The first step in that process led to adoption of the *Tier I Final Report* by Metro Council in December 1994, which determined the scope of the Phase One project and the length and alignment alternatives to be studied further in the DEIS. At that time, it was determined that the South/North project would be developed over phases. Phase One, currently under study, would be from the Clackamas Regional Center, through downtown Portland and into Vancouver, Washington. Phase Two would extend light rail south to Oregon City and north into Clark County. The second step concluded in November 1995 when the South/North Steering Committee adopted the *Design Option Narrowing Report* which determined the design options to be studied further in the DEIS and, in December 1995, when the Metro Council adopted Resolution No. 95-2243 which endorsed those design options and which determined the alignment alternatives in downtown Portland to be studied further in the DEIS.

#### 2. Ballot Measure 32 Results

In February 1996 in a special session, the Oregon Legislature approved a bill that would have provided \$375 million in Oregon

State Lottery funds for the state's share of South/North Light Rail's capital budget for the first construction segment. That bill was placed on the November 1997 statewide ballot by petition. In November 1997, Ballot Measure 32 was defeated statewide.

After the November election, the South/North Steering Committee directed staff to evaluate the election results and to propose next steps for the South/North Transit Corridor Study. Following are the Steering Committee's findings from that effort:

- The light rail funding measure passed with a 56 percent "yes" vote within the Metro boundary and it passed in each of the three counties inside the Metro boundary.
- An independent survey of voters found that 70 percent of tri-county voters favor moving forward with South/North light rail as it is currently defined or with some changes.
- The independent survey also found that, while support for light rail is high, there is some concern about cost.

In response to the election results and analysis, the Steering Committee and Metro Council called upon project staff to develop a range of options and design changes to significantly reduce the cost of the project.

### **3. Cost-Cutting Process: Public Involvement Activities and Committee Recommendations**

The Steering Committee held a joint work session with the South/North Citizens Advisory Committee (CAC) in January 1997 to review and comment on preliminary cost-cutting measures that had been identified by project staff. At that time, the two committees also heard ongoing results of a major public involvement effort by the project to provide presentations on South/North Light Rail at over 200 community, business and neighborhood meetings throughout the region. That public involvement effort included the distribution of brochures to over 100,000 households with a mail-back survey that, while not scientific, showed that over 80 percent of respondent approved of moving ahead with the South/North Light Rail Project.

In February 1997, the Metro Council adopted the *South/North Finance Plan* which formed the basis of the region's request for South/North Light Rail Project funding to be included within the reauthorization of the federal Intermodal Surface Transportation Efficiency Act and which anticipated a reduction in project costs of over \$500 million resulting from the ongoing cost-cutting process.

In March 1997, the South/North Project Management Group (PMG) released its recommendations for cost-cutting amendments to the project's alternatives and design options within the *Briefing Document: Proposed Cost-Cutting Measures*. The PMG also initiated a 30-day public comment period on those proposed amendments.

The 30-day comment period included six project open houses throughout the corridor to provide the general public with the opportunity to receive material describing the proposed cost-cutting measures and to talk directly with project planners and engineers. The CAC and the Steering Committee each held a work session to review the proposed cost-cutting measures and amendments to the project's alternatives and design options. An edition of the *South/North News*, the project newsletter which described the proposed amendments, was distributed to over 10,000 households and businesses. The comment period also included two public comment meetings hosted by the Steering Committee, held on April 8 and 9, 1997. Public comment was also received via the mail, the Transportation Hotline and the project's Web site. All comments received during the public comment period have been documented in the *Public Comments on South/North Cost-Cutting Proposals Report* (Metro: April 1997). The comment period, open houses and public comment meetings were announced through advertisements in local newspapers and publications, in news releases, at neighborhood meetings, on the Transportation Hotline and through the *South/North News*.

On April 14, 1997, the South/North Expert Review Panel (ERP) met to review and discuss the methods, assumptions and results of the cost-cutting process. The panel, which has met at major project milestones since the initiation of the project in 1992, concluded that the methods, assumptions and results of the process were appropriate and adequate for the public and project officials to determine amendments to the alternatives and design options to be studied further in the DEIS. The panel also provided specific suggestions for changes that could be incorporated by the project as the proposed cost-cutting measures are analyzed in the DEIS. Carl Hosticka, the Chair of the ERP, presented the findings of the panel to the Steering Committee at its meeting on April 23, 1997.

On April 15, 1997, following the conclusion of the public comment period, the South/North PMG met and adopted amendments to the cost-cutting measures that addressed comments received by the project. Those recommendations are included in the *Briefing Document: PMG's Proposed Cost-Cutting Measures* (Metro: April 1997).

On April 16, 1997, the CAC received further public comment and discussed the PMG's revised recommendations. They concluded by

adopting their own recommendations to the Steering Committee for amendments to the alternatives and design options to be studied further within the DEIS. Those recommendations were summarized in a letter dated April 18, 1997 from Rick Williams, Chair of the CAC, to Councilor Ed Washington, Chair of the South/North Steering Committee. While their recommendations were substantially similar to those of the PMG, they did propose the addition of a length alternative from the Milwaukie Market Place to N Lombard Street.

On April 22, 1997, the South/North Downtown Portland Oversight Committee met to review the PMG's proposed cost-cutting measures for downtown Portland. The Oversight Committee concluded by endorsing the PMG's recommendations and identified a variety of issues and concerns that should be addressed by the project as those cost-cutting measures are studied further in the DEIS. Charles Armstrong, Chair of the Oversight Committee, presented the committee's conclusions to the Steering Committee at its meeting on April 23, 1997.

On April 23, 1997, the Steering Committee met to review and discuss the public comment, the technical analysis and the recommendations adopted by the PMG, the CAC and the Downtown Portland Oversight Committee. The committee also discussed the findings and conclusions made by the ERP. The Steering Committee concluded by adopting its own recommendations in the *Briefing Document: Steering Committee's Recommended Cost-Cutting Measures*. The Steering Committee's recommendations were then forwarded to the local jurisdictions for their opportunity to review and comment on the proposed amendments to the project's alternatives and design options.

#### 4. Amendments to the DEIS Alternatives and Design Options

When the identified cost-cutting measures are taken together, project costs would be reduced by approximately one-third, which represents a savings of over \$500 million for a project serving both Clackamas County, downtown Portland and North Portland. Additionally, the project's cost per mile would be reduced to a level equivalent to the current Westside Project. The end result of the cost-cutting process has been to enable the project to have higher ridership with less cost, which will enable it to compete more effectively for federal funding.

The amendments are summarized in the attached resolution and are described in greater detail in Exhibit A, *South/North Cost-Cutting Final Report: Amendments to Alternatives and Design Options*.



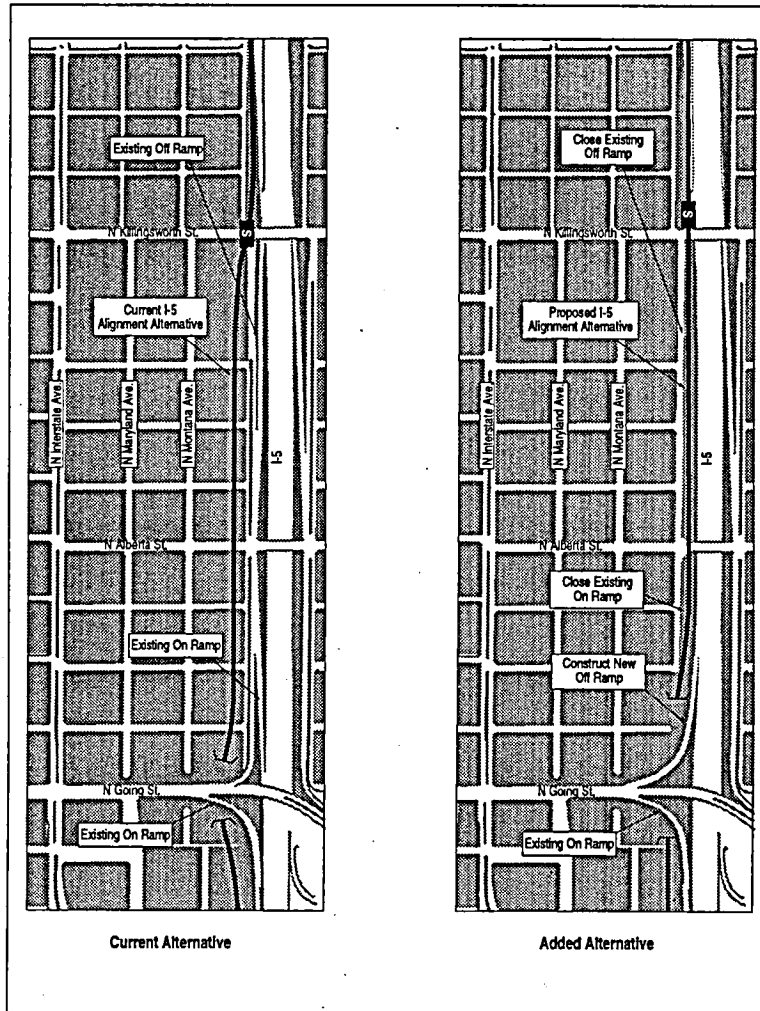


Figure 12 - I-5 Southbound Alberta Ramps

- **Local Traffic.** Local access from business and residential areas east and west of I-5 in the vicinity of N Going Street and N Killingsworth Street would experience increased travel times for automobile trips accessing I-5 South.

**Amendment 2:**

*Modify the track treatment planned for Interstate Avenue to reduce costs while retaining urban design objectives. This amendment changes the design standard under study for Interstate Avenue to a modified paved track design similar to the current design for central Hillsboro on Washington Street.*

**Rationale:**

- **Cost.** The modified track design would reduce costs on Interstate Avenue by \$7 to \$8 million (YOES) depending upon the terminus option selected (Lombard Street or Vancouver respectively).
- **Ridership.** Due to similar light rail travel times and station locations, ridership would not change under the new design change.
- **Urban Form.** The similar finish achieved with the modified track design would allow similar urban form objectives to be met at a lower cost.

**Amendment 3:**

*Eliminate the north terminus option at the Edgar Kaiser Medical Facility and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center.*

*Include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.*

**Rationale:**

- The Edgar Kaiser Medical Facility Terminus (coupled with the Clackamas Regional Center Terminus in the south) was intended to help determine the benefits, costs and impacts associated with a terminus in north Portland. Cost and ridership analysis to date has shown that an extension north from the Rose Quarter Transit Center to the Edgar Kaiser Medical Facility would not be cost-effective. That is, the proportional cost of adding the extension would be greater than the proportional increase in ridership resulting from the extension.
- A terminus at N Lombard Street would provide light rail access to a majority of the proposed stations and, by connecting to bus routes on N Lombard Street, would provide most north Portland residents, businesses and community facilities with either walk or bus access to the South/North light rail line.

**Amendment 4:**

*The South/North DEIS will acknowledge that a crossover option between the Overlook Neighborhood and the Kenton Neighborhood may be the outcome of detailed technical studies. The examination of specific crossover options would be best explored during the FEIS phase of the Project.*

**Rationale:**

- Specific alignment options could be better defined upon completion of the technical studies prepared for the DEIS (i.e., traffic, capital costs, right-of-way displacement, etc.) and the South/North Economic Development Study by the Portland Development Commission. The Locally Preferred Strategy would include further consideration of a crossover.

### XIII Lombard Street to Vancouver

The Lombard Street to Vancouver Segment is characterized by a wide variety of uses and is traversed by several major transportation facilities (see Figure 13). This segment includes portions of north Portland residential and commercial centers (Kenton), commercial uses, community facilities, the Jantzen Beach retail center, downtown Vancouver and the terminus for the Full-Length Alternative and MOS-1 at the Veterans Administration Hospital and Clark College. This segment previously included a terminus at the Expo Center (MOS 4).

#### Amendment 1:

*Eliminate the north MOS terminus option at the Expo Center and replace it with a terminus option at Lombard Street to be coupled with a south terminus at the Clackamas Regional Center. Under this amendment, a terminus location at the Veterans Administration Hospital and Clark College would continue to be studied within the DEIS as a north terminus for the Full-Length Alternative and for MOS-1.*

*As noted in Amendment #3 for the Kaiser to Lombard Street Segment, include in the DEIS a summary of the costs, ridership and other significant benefits and impacts associated with an alternate terminus location in Kenton.*

#### Rationale:

- The Expo Center Terminus (coupled with the Clackamas Regional Center Terminus in the south) was intended to help determine the benefits, costs, and impacts associated with a terminus in north Portland. Cost and ridership analysis to date has shown that an extension north from Lombard Street to the Expo Center would not be cost-effective. That is, the proportional cost of adding the extension (approximately \$115 million YOES) would be much greater than the proportional increase in ridership that would result from the extension (approximately 300-500 weekday rides). Also, traffic analysis to date for the I-5 Interstate Bridge indicates that the I-5 freeway would not have adequate capacity to accommodate park-and-ride travel from Clark County to access a park-and-ride lot at the Expo Center.
- A terminus at N Lombard Street would provide light rail access to a majority of the proposed stations and, by connecting to bus routes on N Lombard Street, would provide most north Portland residents, businesses and community facilities with either walk or bus access to the South/North light rail line.

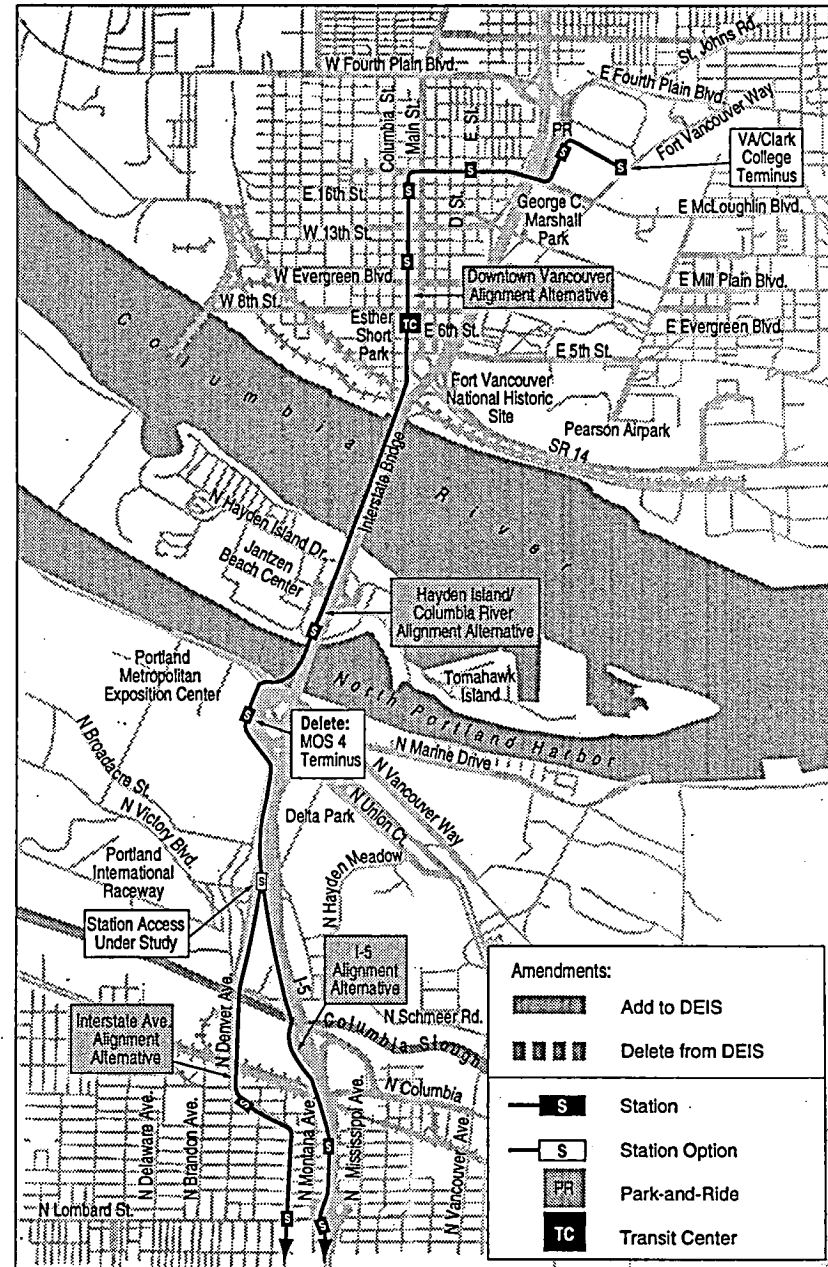


Figure 13 - Lombard Street to Vancouver Segment