STAFF REPORT

CONSIDERATION OF JOINT METRO RESOLUTION NO. 94-1989 AND C-TRAN RESOLUTION NO. 94-010 FOR THE PURPOSE OF DETERMINING THE SOUTH/NORTH LIGHT RAIL TRANSIT ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY

Date: November 17, 1994 Presented by: Andrew Cotugno

PROPOSED ACTION

This resolution adopts the South/North Transit Corridor light rail transit (LRT) terminus and alignment alternatives that will advance into the Tier II Draft Environmental Impact Statement (DEIS) for further study.

TPAC has reviewed this joint C-TRAN/Metro consideration and recommends approval of Resolution No. 94-1989.

FACTUAL BACKGROUND AND ANALYSIS

In April 1993, the Metro Council and C-TRAN Board of Directors adopted Resolutions No. 93-1784 and No. BR-93-004, respectively, that established the South/North Transit Corridor as the region's high-capacity transit (HCT) Priority Corridor to advance into Alternatives Analysis (AA) and the preparation of a DEIS. In June 1993, Metro submitted an application to the Federal Transit Administration (FTA) to advance the South/North Corridor into AA/DEIS and submitted the *South/North Preliminary Work Plan* for approval. FTA approved the application and *Preliminary Work Plan* in October 1993 and issued notification in the *Federal Register* (October 12, 1994) of its intent to publish an Environmental Impact Statement for HCT improvements within the South/North Corridor.

The *Preliminary Work Plan* established a two-tiered structure for the South/North Transit Corridor Study as follows:

- Tier I has focused on evaluating modal alternatives, alignment alternatives, design options and terminus alternatives in order to narrow the number of alternatives to be addressed in the DEIS.

- Tier II will focus on preparing a DEIS on the narrowed set of LRT alternatives and a No-Build alternative. Tier II will conclude with the selection of the *Locally Preferred Alternative.*

Tier I started in mid-1993 with the initiation of the federally-mandated Scoping Process. Based on the analysis of busways, river transit, commuter rail and light rail transit and public input provided during Scoping, the high-capacity transit alternatives were narrowed to light rail transit by the South/North Steering Group on December 17, 1993. Further, through Scoping, the Steering Group (as adopted on December 17, 1993 and as amended by the Steering Group in May 1994) identified:

- Four south (Clackamas County) and five north (Clark County) *Terminus Alternatives* for the LRT.

- Two or more *Alignment Alternatives* for each of five defined segments of the LRT alignment.

- Detailed *Design Options* for several of the LRT alignment alternatives.

On December 17, 1993, the South/North Steering Group also adopted the *Tier I Evaluation Methodology Report* that established the following for the South/North Transit Corridor Study:

- The goal and objectives;

- The organizational structure; and

- The criteria and measures to be used to evaluate the Tier I terminus and alignment alternatives.

After *Scoping*, staff prepared technical analyses of the terminus and alignment alternatives addressing the established criteria and measures. These analyses are documented in the *Tier I Technical Summary Report* and the *Tier I Briefing Document* (Attachment A).

The technical data, methods and assumptions for the Tier I analysis were reviewed by the South/North Expert Review Panel in July 1994. The Panel issued a letter documenting their review and comments on the technical data, methods and assumptions. In summary, the Panel wrote that, "It is the role of the Expert Panel to help assure [oversight agencies] that the assumptions, methodologies and data on which the key project decisions will be based are accurate and form a sound basis for decision-making. We believe this to be the case in this project....The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study. Overall, the project staff continue to provide top-quality, in-depth analysis of the alternatives and associated issues" (August 8, 1994).

In addition, an extensive public involvement process on the data prepared on the terminus and alignment alternatives was conducted. The public process was initiated immediately

following Scoping, with a wide variety of meetings and presentations held with neighborhood organizations, businesses, various interest groups and interested citizens throughout the Corridor. These initial meetings and presentations identified the Tier I study process, the alternatives being considered and the data or measures that would be prepared to compare and evaluate the alternatives. It also provided the public with the opportunity to voice their concerns and preferences.

In July 1994, Metro initiated a 60-day public comment period on the Tier I alternatives and data. The comment period started with four open houses held throughout the Corridor where the Tier I data was presented and the public had the opportunity to discuss the data with staff from Metro, C-TRAN and other participating jurisdictions. *Tech Facts*, a summary of the Tier I data, was distributed at the open houses and was mailed out upon request throughout the public comment period. In early September 1994, the Steering Group held four meetings to receive oral public comment on the Tier I alternatives and data where citizens were encouraged to state their preferences on the alternatives that should be selected to advance into the Tier II DEIS for further study. The public comment period ended on September 13, 1994. All written comments and a summary of the oral comments received at the public meetings are documented within the *Narrowing the Options: A Summary of Tier I Public Meetings and Comments* (September 13, 1994).

As noted above, the *Evaluation Methodology Report* established the South/North Tier I organizational structure illustrated in Appendix C of the attached *Briefing Document*. The Project Management Group (PMG) prepared a draft recommendation for terminus alternatives on August 25, 1994 and adopted its final recommendation for terminus and alignment alternatives on September 14, 1994, following the conclusion of the public comment period. The South/North Citizens Advisory Committee (CAC) adopted its recommendation on September 29, 1994. Both the PMG and CAC recommendations were forwarded to the South/North Steering Group which unanimously adopted its recommendation on October 6, 1994.

The Steering Group recommendation has been forwarded to and considered by the Study's participating jurisdictions and agencies which have each adopted resolutions recommending the terminus and alignment alternatives to advance into the Tier II DEIS for further study. Those jurisdictions and agencies that have passed recommending resolutions are: Oregon City, the City of Gladstone, the City of Milwaukie, Clackamas County, Multnomah County, the City of Portland, the City of Vancouver, Clark County and Tri-Met. Those resolutions are included in Attachment B.

The *Evaluation Methodology Report* establishes Metro Council and the C-TRAN Board of Directors with the role of making the final determination of the terminus and alignment alternatives to advance into the Tier II DEIS for further study. The Metro Council resolution is to be considered by the Transportation Policy Alternatives Committee, the Joint Policy Advisory Committee on Transportation and the Metro Planning Committee prior to

consideration by the Metro Council. The Southwest Washington Regional Transportation Council and the Joint Regional Policy Committee are to consider the resolution prior to its consideration by the C-TRAN Board of Directors.

Consistent with the Steering Group's final recommendation, the resolution would adopt the *Tier I Final Report* (Exhibit A) that identifies in detail the alternatives and study approach to be utilized in Tier II and the preparation of the South/North DEIS. The general approach that the resolution would adopt is as follows:

1. The South/North Corridor will be conducted in two study phases:

    a. Phase I will consider a light rail transit project between the Clackamas Town Center area and the 99th Street area in Clark County.

    b. Phase II will consider an extension of the Phase I light rail transit project south to Oregon City and north to the 134th Street/Washington State University branch campus area.

2. These study phases will proceed as follows:

    a. Preparation of the Draft Environmental Impact Statement and funding plan for the Phase I light rail transit alternative will begin immediately.

    b. If light rail transit is selected as the Locally Preferred Alternative in Phase I, a Draft Environmental Impact Statement and funding strategy for the Phase II LRT extension will be prepared upon completion of the Final Environmental Impact Statement for Phase I.

3. The following alignments are the alternatives for further study within the South/North Draft Environmental Impact Statement:

    a. Between the Portland and Milwaukie central business districts, the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate Streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the draft environmental impact statement. The Caruthers area crossing will be evaluated further in order for the Metro Council and C-TRAN Board of Directors to determine whether it should also be included in the *South/North Detailed Definition of Alternatives Report* and developed further in the Draft Environmental Impact Statement.

    b. Within the Portland central business district, a surface light rail transit alternative on 5th and 6th Avenues shall be developed, based upon several principles, for further study within the Draft Environmental Impact Statement.

If at the time the DEIS is initiated it is concluded that a 5th/6th Avenue Surface Alignment cannot be developed that addresses those principles, other alternatives will be developed for further study within the DEIS.

c. Between the Vancouver central business district and the vicinity of 99th Street, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the Draft Environmental Impact Statement.

4. Because further discussions and analysis should occur, the selection by the Metro Council and the C-TRAN Board of Directors of an alternative for further study within the segment between the Portland and Vancouver central business districts shall wait completion of additional technical work and evaluation.

5. The following alignments will be considered for the Phase II extensions:

   a. Following completion of the *Detailed Definition of Alternatives Report*, an analysis of the I-205 alignment from the CTC terminus and the McLoughlin alignment from the Milwaukie CBD will be made to determine which alignment will advance into the Phase II DEIS. The Portland Traction (PTC) right-of-way will not be considered as a Phase II alignment.

   b. Between the vicinity of 99th Street and the area of 134th Street/WSU Branch Campus, the I-5 East alignment will advance into the Phase II DEIS.

The *South/North Tier I Briefing Document* (Attachment A) summarizes the criteria and measures and compares the advantages and disadvantages of each of the alternatives within each segment. Following is a summary of the Steering Group's rationale in issuing its *Tier I Final Recommendation Report*:

Two-Phased Implementation

- Ultimately, a South/North LRT line which serves Oregon City, Clackamas Town Center and the 134th Street/WSU area in Clark County would maximize the benefits of the LRT alternative.

- The amount of capital funds potentially available at this time are insufficient to construct a light rail line serving Oregon City, Clackamas Town Center, Milwaukie, Portland, Vancouver and 134th Street/WSU area.

- The phased approach maximizes the likelihood of realizing a South/North LRT project which would ultimately serve the proposed termini.

Phase I Termini

A Clackamas Town Center area to 99th Street area LRT Alternative best meets the Tier I evaluation criteria within the financial threshold as described below.

- An LRT line with termini in the vicinity of the Milwaukie CBD and 39th Street in Vancouver would barely penetrate into Clackamas or Clark Counties, providing insufficient coverage to accomplish land use or transportation objectives.

- The Clackamas Town Center area terminus alternative exhibits lower costs, greater cost-effectiveness and greater consistency with existing regional policy than the Oregon City terminus alternatives.

- The 99th Street area north terminus alternative is consistent with Growth Management Plan objectives and exhibits lower costs and greater cost-effectiveness than the 134th Street/WSU area, 179th Street and Vancouver Mall terminus alternatives.

Phase II and Regional Priorities

When the proposed Phase II extensions to Oregon City and the 134th Street/Washington State University (WSU) branch campus area were discussed at the Transportation Policy Alternatives Committee (TPAC) meeting, the issue was raised as to how those Phase II extensions related to other regional transportation priorities. Within the Steering Group's recommendation and the draft *Tier I Final Report*, it is stated that:

2.1.1[b] *Phase II will consider a future extension of the South/North LRT to the potential end-points in Clackamas and Clark Counties, if LRT is selected as the Locally Preferred Alternative in Phase I. The DEIS and funding plan for the Phase II LRT extension will be prepared upon completion of the Final EIS for Phase I.*

2.2.1(1) *Metro will consider the incorporation of policies in the Regional Transportation Plan (RTP) and Regional Framework Plan which call for a Phase II extension of the South/North LRT Alternative to Oregon City.*

As the recommendation and draft *Final Report* are written, the conclusion of the South/North Study is silent on the Phase II extensions' priority relative to other high capacity transit or highway proposals within the region. Adoption of this resolution would not amend the Regional or Metropolitan Transportation Plans, but would recommend to Metro and the Southwest Washington Regional Transportation Council to amend those plans when they are updated in the future to include Phase II extensions. Other LRT corridors could also be considered and included in such amendment at that time. The expectation from this resolution is that the proposed South/North Phase II extensions would advance into the environmental process once the Phase I FEIS is completed (scheduled for late 1997).

Some members of TPAC felt that this resolution should be more explicit in its implications for regional priorities; it should state that adoption of the resolution should not give the proposed South/North Phase II extensions a higher priority than other light rail corridors or extensions. Other committee members felt that because the resolution only pertains to the South/North Study and not regional policy, it should be silent on ranking the Phase II extensions in relationship to other regional transportation priorities. Instead, they felt that the Regional and Metropolitan Transportation Planning processes and future priority corridor studies should be used to set regional priorities, including the South/North Phase II extensions.

Following the discussion, it was concluded by TPAC to recommend the attached resolution, but that the Joint Policy Advisory Committee on Transportation should discuss this issue of regional priorities in detail before taking action on the proposed resolution.

Portland CBD to Milwaukie CBD Segment and the South Willamette River Crossing Alignment Alternative Recommendation

- The Hawthorne Bridge River Crossing alternative would exhibit substantial reliability and operations problems caused by numerous bridge openings and would not allow direct LRT access to Portland State University and South Downtown Portland.

- The Sellwood Bridge alternative would generally exhibit lower ridership, longer trip times, higher operating costs and a higher cost-effectiveness ratio and would not provide direct LRT access to several Southeast Portland neighborhoods and bus routes.

- While the Ross Island Bridge River Crossing alternative generally exhibits the same costs and transportation benefits as the Caruthers Bridge alternative, the Project Management Group's and Steering Group's recommendations to advance the Ross Island Bridge alternative into Tier II were based upon their judgment that a Ross Island crossing exhibits superior land use and development benefits.

- The Citizens Advisory Committee recommended that the Caruthers Bridge alternative be advanced into the DEIS for further study.

- There is a desire to try to serve both the North Macadam area and the Southeast Portland area with LRT, expressed both by the PMG and more strongly by the Citizens Advisory Committee.

- The McLoughlin Boulevard Alignment alternative exhibits less cost, greater ridership, higher cost-effectiveness and less environmental impact than the Portland Traction (PTC) alternative.

Portland CBD Alignment Alternative

- The 5th/6th Avenue Surface Alignment alternative is most consistent with the Downtown Plan.

- The 5th/6th Avenue Surface Alignment alternative exhibits lower capital costs and operating costs than the Subway alternative.

- Despite its lower ridership, the 5th/6th Avenue Surface Alignment alternative is more cost-effective than the Subway alternative.

Portland CBD to Vancouver CBD Alignment Alternative

The Metro Council and C-TRAN Board of Directors have yet to determine the alignment alternative(s) in this segment to advance into the DEIS for further study for the following reasons:

- While the Interstate Avenue Alignment alternative costs more than the I-5 alternative, further analysis is needed to determine if there are land use and development benefits of the Interstate alignment that outweigh its additional cost.

- Further analysis is needed to identify and evaluate modified alternatives which merge the I-5 alignment with portions of the Interstate alignment.

- Further public input is needed to determine community preferences.

Vancouver CBD to 134th/WSU Area Alignment Alternative

- The I-5 East Alignment alternative is consistent with Growth Management Plans, exhibits less cost, greater ridership and higher cost-effectiveness than the Highway 99 alternative.

- Additional information on the segment between 78th Street and 99th Street is needed to determine the location of stations and park-and-ride lots to be included in the DEIS.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 94-1989.

LS:lmk
94-1989.RES
11-29-94

BEFORE THE METRO COUNCIL
AND THE
C-TRAN BOARD OF DIRECTORS

FOR THE PURPOSE OF DETERMINING THE SOUTH/NORTH LIGHT RAIL TRANSIT ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY	)))))))	METRO RESOLUTION NO. 94-1989 C-TRAN RESOLUTION NO. 94-010 Introduced by The Planning Committee

WHEREAS, In April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high-capacity transit priority for study and combined them into the South/North Transit Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, In October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Environmental Impact Statement; and

WHEREAS, In December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high-capacity transit mode alternatives, by selecting the light rail transit mode and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, The South/North *Evaluation Methodology Report*, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of

the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, The role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, The *Evaluation Methodology Report* further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, The alternatives that were selected at the conclusion of Scoping have been developed and evaluated based on the criteria and measures from the *Evaluation Methodology Report* and documented within various technical memoranda, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document*; and

WHEREAS, The technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that "...the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study;" and

WHEREAS, A comprehensive public involvement program was developed and implemented by the South/North Study that included, but was not limited to, numerous community meetings, a 60-day public comment period on the Tier I alternatives and data,

public meetings for the Steering Group to receive oral comment, and an ongoing Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, In October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, The Steering Group's Final Tier I Recommendation identifies the LRT alternatives, described in Exhibit A, that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report*; and

WHEREAS, Clark, Clackamas and Multnomah Counties; the cities of Portland, Milwaukie, Oregon City, Gladstone and Vancouver; and the Tri-County Metropolitan Transit District have adopted recommendations for the South/North alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; now therefore,

BE IT RESOLVED, That the following general approach be adopted for the continuation of the South/North Transit Corridor Study:

1. The South/North Corridor will be conducted in two study phases:

    a. Phase I will consider a light rail transit project between the Clackamas Town Center area and the 99th Street area in Clark County.

b. Phase II will consider an extension of the Phase I light rail transit project south to Oregon City and north to the 134th Street/Washington State University branch campus area.

2. These study phases will proceed as follows:

a. Preparation of the Draft Environmental Impact Statement and funding plan for the Phase I light rail transit alternative will begin immediately.

b. If light rail transit is selected as the Locally Preferred Alternative in Phase I, a Draft Environmental Impact Statement and funding strategy for the Phase II LRT extension will be prepared upon completion of the Final Environmental Impact Statement for Phase I.

3. The following alignments are the alternatives for further study within the Phase I South/North Draft Environmental Impact Statement:

a. Between the Portland and Milwaukie central business districts, the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the Draft Environmental Impact Statement. The Caruthers area crossing will be evaluated further in order for the Metro Council and the C-TRAN Board of Directors to determine whether it should also be included in the *South/North Detailed Definition of Alternatives Report* and developed further in the Draft Environmental Impact Statement.

b. Within the Portland central business district, a surface light rail transit

alternative on 5th and 6th Avenues shall be developed based upon several principles, for further study within the Draft Environmental Impact Statement. If at the time the Draft Environmental Impact Statement is initiated it is concluded that a 5th/6th Avenue alignment cannot be developed that addresses those principles, other alternatives will be developed for further study in the DEIS.

c. Between the Vancouver central business district and the vicinity of 99th Street, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the Draft Environmental Impact Statement.

4. Because further discussions and analysis should occur, the selection by the Metro Council and the C-TRAN Board of Directors of an alternative for further study within the segment between the Portland and Vancouver central business districts shall wait completion of additional technical work and evaluation.

5. The following alignments will be considered for the Phase II extensions:

a. Following completion of the *Detailed Definition of Alternatives Report*, an analysis of the I-205 alignment from the CTC terminus and the McLoughlin alignment from the Milwaukie CBD will be made to determine which alignment will advance into the Phase II DEIS. The Portland Traction Company (PTC) right-of-way will not be considered as a Phase II alignment.

b. Between the vicinity of 99th Street and the area of 134th Street/WSU Branch Campus, the I-5 East alignment will advance into the Phase II DEIS.

And further,

BE IT RESOLVED, that Exhibit A is adopted as the *South/North Transit Corridor Tier I Final Report* that identifies in more detail the alternatives and study approach to be utilized in Tier II and the preparation of the Draft Environmental Impact Statement for the South/North Transit Corridor.

ADOPTED by the Metro Council on this _____ day of _____, 1994.

_____
Judy Wyers, Presiding Officer
Metro Council

ADOPTED by the C-TRAN Board of Directors on this _____ day of _____, 1994.

_____
Rose Besserman, Chair
C-TRAN Board of Directors

Summary of Measurement Criteria
South Study Terminus Alternatives

Criteria	Measure	Milwaukie	Clackamas TC	OC via McLoughlin	OC via I-205
Transit Service	Peak hour accessibility				
Ease of Access	Households within 45 minutes by transit to:				
	Milwaukie	101,890	103,370	103,720	102,710
	Clackamas Town Center	116,820	105,920	108,520	101,930
	Oregon City	60,370	57,460	56,610	54,380
	Employment within 45 minutes by transit to:				
	Milwaukie	381,350	384,780	380,290	383,250
	Clackamas Town Center	260,300	321,640	199,410	310,920
	Oregon City	85,710	80,770	166,270	96,630
Transferability	Mode of Access (south of Portland CBD)				
	Walk on	30%	34%	40%	35%
	Transfer	24%	25%	21%	26%
	Park-and-ride	46%	41%	39%	39%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)				
	Transit from Portland CBD to Milwaukie (auto = 27)	26	26	26	26
	Transit from Portland CBD to Clackamas TC (auto = 37)	43	36	45	36
	Transit from Portland CBD to Oregon City (auto = 47)	64	64	45	53
Reliability	Miles of Reserved or Separate ROW; W of Hawthorne Bridge	5.3	10.7	12.6	17.5
	% of Corridor Passenger-miles on Reserved ROW	28.8%	32.1%	35.0%	35.0%
Ridership	Weekday Corridor Transit Trips	129,200	129,800	131,750	131,350
	Weekday S/N LRT Trips	56,900	59,400	61,900	62,750
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:				
Highway Use	Milwaukie, S of Monroe (Hwy 224, Lake, McL.)	1.24	1.14	1.10	1.14
	S of Sunnyside (I-205, 82nd)	0.91	0.91	0.92	0.92
	N of Roethe (McL., Oatfield, River)	0.84	0.79	0.83	0.80
	S of Arlington (I-205, McL.)	1.12	1.09	1.09	1.09
	At Boundary (Corbett, Macadam)	1.01	1.01	1.02	1.04
Traffic Issues		P&R volumes in Milwaukie	At grade crossings	At grade crossings Left turn restrictions	At grade crossings

Criteria	Measure	Milwaukie	Clackamas TC	OC via McLoughlin	OC via I-205
Fiscal Efficiency	Capital Cost (1994 $); Pioneer Square south	$424.0	$711.5	$800.1	$1,062.0
Cost	Capital Cost (YOE $); Pioneer Square south	$674.2	$1,131.2	$1,272.1	$1,688.6
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$12.87	$15.60	$16.59	$18.20
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.00	$2.66	$3.24	$2.62
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.69	$0.66	$0.66	$0.76
	Cost Effectiveness Ratio	6.72	7.48	7.50	8.40
Promote Desired Land Use	Major Activity Centers Served	Milwaukie CBD	Milwaukie CBD, Clackamas TC	Milwaukie CBD, Oregon City CBD	Milwaukie CBD, Clackamas TC, Oregon City CBD
Support Major Activity Centers					
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes	yes	yes

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Additional Park-and-Ride capacity may be required to accomodate anticipated demand at a cost of up to the following amounts for the corresponding terminus alternative: Milwaukie CBD $28.3 million; Clackamas TC $13 million; OC via McLoughlin $20.3 million; OC via I-205 $6 million.

Summary of Measurement Criteria
North Study Terminus Alternatives

Criteria	Measure	39th St.	88th St.	134th St.	179th St.	Van Mall
Transit Service	Peak Hour Accessibility					
Ease of Access	Households within 45 minutes by transit to:					
	Vancouver CBD	138,440	137,840	138,100	137,020	142,040
	134th St.	57,280	56,180	87,200	87,110	89,210
	Vancouver Mall	97,210	96,670	99,390	99,390	108,000
	Employment within 45 minutes by transit to:					
	Vancouver CBD	307,690	307,020	306,970	295,800	308,220
	134th St.	68,400	66,280	121,900	119,190	108,430
	Vancouver Mall	120,080	120,280	119,500	119,500	139,910
Transferability	Mode of Access (North of Coliseum TC)					
	Walk on	27%	31%	31%	33%	32%
	Transfer	49%	43%	46%	45%	45%
	Park-and-ride	24%	22%	23%	22%	23%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)					
	Transit from Portland CBD to Vancouver CBD (auto = 40)	38	38	38	38	38
	Transit from Portland CBD to 88th St. (auto = 45)	53	46	46	46	55
	Transit from Portland CBD to 134th St. (auto = 48)	59	59	51	51	54
	Transit from Portland CBD to 179th St. (auto = 52)	74	75	63	55	68
	Transit from Portland CBD to Van Mall (auto = 44)	60	60	60	60	52
Reliability	Miles of Reserved or Separate ROW; north of Coliseum TC	9.1	11.9	14.2	16.3	15.1
	% of Corridor Passenger-miles on Reserved ROW	35.1%	37.7%	37.6%	38.0%	37.7%
Ridership	Weekday Corridor Transit Trips	130,000	131,150	131,300	131,350	130,700
	Weekday S/N LRT Trips	60,050	61,600	62,200	62,800	62,450
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:					
Highway Use	N of Mill Plain (I-5, Main, Broadway, Ft. Van.)	0.54	0.54	0.54	0.54	0.54
	N of 39th (15th, Main, I-5)	0.84	0.78	0.78	0.79	0.84
	S of 78th (Hwy 99, Hazel Dell Ave., I-205)	0.69	0.62	0.63	0.63	0.67
	W of Andreson (18th, 40th, 4th Plain, SR 500)	0.74	0.73	0.73	0.67	0.72
	I-5 Bridge	1.31	1.30	1.30	1.31	1.30
	W of I-205 (4th Plain, 63rd, Burton, SR 500)	0.89	0.89	0.88	0.88	0.87
	I-205 Bridge	0.94	0.94	0.94	0.94	0.94
Traffic Issues		P&R volumes in Vancouver	Main St.	Main St.	Main St.	At grade Xings P&R volumes

Criteria	Measure	39th St.	88th St.	134th St.	179th St.	Van Mall
Fiscal Efficiency	Capital Cost (1994 $); Pioneer Square north	$753.9	$895.2	$982.9	$1,065.1	$1,044.0
Cost	Capital Cost (YOE $) Pioneer Square north	$1,198.7	$1,423.4	$1,562.8	$1,693.6	$1,659.9
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$15.27	$16.21	$17.33	$18.20	$17.96
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.00	$0.41	$0.86	$0.65	$0.36
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.78	$0.78	$0.81	$0.85	$0.86
	Cost Effectiveness Ratio	7.65	7.98	8.23	8.48	8.47
Promote Desired Land Use	Major Activity Centers Served	Vancouver CBD	Vancouver CBD	Vancouver CBD, Salmon Creek/ WSU	Vancouver CBD, Salmon Creek/ WSU	Vancouver CBD, Vancouver Mall
Support Major Activity Centers						
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes	yes	May encourage expansion	yes

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Additional Park-and-Ride capacity may be required to meet anticipated demand at a cost of up to the following amounts for the corresponding terminus alternative: Vancouver CBD/39th Street $44.9 million; 88th Street $29.6 million; 134th Street $23.3 million; 179th Street $4 million; Van Mall/Orchards $5.4 million.

Summary of Measurement Criteria
Portland CBD to Milwaukie CBD South River Crossing Alternatives

Criteria	Measure	Hawthorne	Caruthers	Ross Island	Sellwood
Transit Service	Peak Hour Accessibility				
Ease of Access	Households within 45 minutes by transit to:				
	OMSI	160,400	167,950	169,300	168,200
	John's Landing	97,700	97,920	99,330	124,950
	Milwaukie	102,710	106,760	102,440	82,410
	Employment within 45 minutes by transit to:				
	OMSI	538,450	534,100	495,540	487,550
	John's Landing	353,570	350,990	350,070	449,110
	Milwaukie	385,150	393,090	389,130	348,490
Transferability	Mode of Access				
	Walk on	36.4%	35.8%	35.2%	34.1%
	Transfer	28.8%	28.1%	28.7%	32.2%
	Park-and-ride	34.8%	36.2%	36.1%	33.8%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)				
	Transit from Portland CBD to Milwaukie (auto = 27)	27	27	27	32
	Transit from Portland CBD to Clackamas TC (auto = 37)	36	36	36	41
	Transit from Portland CBD to Oregon City (auto = 46)	53	53	53	58
Reliability	Miles of Reserved or Separated ROW	34.8	34.5	34.7	35.3
	% of Corridor Passenger-miles on Reserved ROW	36.7%	35.1%	32.0%	32.1%
Ridership	Weekday Corridor Transit Trips	131,350	132,200	131,400	130,750
	Weekday S/N LRT Trips	61,800	62,800	62,300	61,400
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:				
Highway Use	River Crossings (Fremont - Ross Island)	1.07	1.07	1.06	1.07
	River Crossings (Sellwood Bridge)	1.23	1.23	1.23	1.23
	N of Prescott (Denver, I-5, Interstate, MLK, Vancouver)	0.76	0.76	0.76	0.76
	At Boundary (Macadam, Corbett)	1.04	1.03	1.02	1.03
Traffic Issues		Bridge lanes Main/Madison Sts.	Harrison St. Moody St.	Harrison St. Moody St.	Moody St. At grade Xings

Criteria	Measure	Hawthorne	Caruthers	Ross Island	Sellwood
Fiscal Efficiency	Capital Cost (1994 $) Pioneer Square to Milwaukie	$424	$465	$461	$465
Cost	Capital Cost (YOE $) Pioneer Square to Milwaukie	$674	$739	$733	$739
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$18.70	$18.17	$18.19	$19.12
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.27	$0.24	$0.26	$0.0
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.87	$0.87	$0.88	$0.95
	Cost Effectiveness Ratio	8.72	8.64	8.70	8.90
Promote Desired Land Use *Support Major Activity Centers*	Major Activity Centers Served	CEIC, OMSI SE Neighborhoods, Milwaukie CBD	PSU, Riverplace, OMSI, SE Portland Neighborhoods, Milwaukie CBD	PSU, Riverplace N Macadam, SE Neighborhoods, Milwaukie CBD	PSU, Riverplace N Macadam, John's Landing Milwaukie CBD
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes	yes	yes
Environmental Sensitivity	Possible Displacements	47, commercial and residential	41, commercial and residential	64, mostly commercial/industrial	27, mostly commercial/industrial
	Noise Impact Areas				Moody St., John's Landing, Sellwood
	Ecosystem Impacts	Willamette Xing	Willamette Xing	Willamette Xing	Willamette Xing
	Historical and Cultural Impacts	Existing bridge, Brooklyn Nh.	Brooklyn Nh.	Existing bridge, Brooklyn Nh.	Existing bridge, Sellwood Nh.

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Displacement data based on preliminary design without specific efforts to mitigate possible impacts.

Summary of Measurement Criteria
Portland CBD to Milwaukie CBD Eastbank Alignment Alternatives

Criteria	Measure	PTC	McLoughlin
Transit Service	Peak Hour Accessibility		
Ease of Access	Households within 45 minutes by transit to:		
	OMSI	153,290	159,700
	Milwaukie	88,420	102,710
	Clackamas Town Center	92,760	101,930
	Oregon City CBD	52,020	54,380
	Employment within 45 minutes by transit to:		
	OMSI	531,860	538,450
	Milwaukie	368,720	383,250
	Clackamas Town Center	292,500	310,920
	Oregon City CBD	90,810	96,630
Transferability	Mode of Access; Milwaukie to OMSI		
	Walk on	36%	42%
	Transfer	27%	26%
	Park-and-ride	38%	32%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)		
	Transit from Portland CBD to Milwaukie (auto = 27)	28	27
	Transit from Portland CBD to Clackamas TC (auto = 37)	38	36
	Transit from Portland CBD to Oregon City (auto = 46)	55	53
Reliability	Miles of Reserved or Separate ROW	7.1	6.2
	% of Corridor Passenger-miles on Reserved ROW	28.9%	35.0%
Ridership	Weekday Corridor Transit Trips	131,050	131,350
	Weekday S/N LRT Trips	58,250	62,750
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:		
Highway Use	River Crossings (Fremont - Ross Island)	1.07	1.07
	River Crossings (Sellwood Bridge)	1.24	1.23
	Milwaukie, S of Monroe (Hwy 224, Lake, McL)	1.14	1.14
	N of Roethe (McL., Oatfield, River)	0.79	0.80
Traffic Issues		New freight spur across McLoughlin	Signal coordination on McLoughlin, close some local access to McLoughlin

ATTACHMENT A

South North
Transit Corridor Study

Briefing Document
Tier I Technical Summary Report

August 15, 1994

Metro

South North Transit Corridor Study

Briefing Document

Tier I Technical Summary Report

August 15, 1994

Table of Contents

I. Introduction

Metro and C-TRAN, in cooperation with twelve state and local jurisdictions and agencies, are studying the South/North Transit Corridor to determine whether proposed light rail transit (LRT) improvements within the Corridor should be designed and constructed.

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 region's priority corridor within which to conduct the next Alternatives Analysis following the Westside Corridor to Hillsboro.

Because of the size of the South/North Corridor and the complexity of the issues involved, the South/North Alternatives Analysis was divided into two phases, or "tiers."

Tier I

The purpose of Tier I is to define the high capacity transit (HCT) alternative to be studied further within Tier II. Tier I will be used to: 1) select a preferred HCT mode; 2) to determine how far south and how far north within the Corridor to study further; and, 3) to reduce the number of HCT alignment alternatives throughout the corridor to one or two.

At the beginning of Tier I, the Region conducted a "Scoping" process where a wide range of alternative HCT modes (LRT, busway, river transit and commuter rail) were evaluated. Through the analysis prepared within Scoping, the Region determined that only LRT warranted further study within Tier I, in effect determining that the HCT mode that would advance into Tier II would be LRT. Therefore, within Tier I, the only alignment alternatives that have been developed and analyzed are LRT alternatives.

Tier II

The purpose of Tier II will be to evaluate the LRT alternative selected within Tier I and to compare it to a No-Build Alternative and an expansion of the bus system termed the Transportation Systems Management (TSM) Alternative. The performance, costs and impacts of these three alternatives will be documented within a draft environmental impact statement (DEIS) which will be used by the Region in selecting a locally preferred alternative. If the selected alternative is the LRT Alternative then the Corridor would advance toward final design and construction.

Narrowing LRT Alternatives: The Choice at Hand

The South/North Study is currently concluding Tier I. The purpose of this document is to summarize the data and information that have been prepared on the various LRT alternatives being studied within Tier I in order to allow the community and decision-makers to come to an informed determination on which alternatives should advance to Tier II for further study

The Tier I alternatives and this document have been structured to facilitate the understanding of the trade-offs (the benefits and the costs, the advantages and disadvantages) of the various LRT alternatives being considered. Again, because of the size and complexity of the Corridor, the choices have been divided into several groups (described in Section III of this report) where the differences between the alternatives can be isolated and better understood. By selecting the best LRT alternative within each group the region will define the optimum LRT alternative to advance into Tier II.

Other choices concerning the LRT alternatives also face the region but are not addressed within this document nor by the process at this time. They are at a finer level of detail and are called "design options," such as the placement of LRT tracks in the center or on the left or right side of a street. Design options exist for each of the alternatives being evaluated. Many design options have been evaluated within Scoping and Tier I. Throughout Tier I, design options have been screened out or have been developed to solve problems or to take advantage of opportunities. Design options associated with the alternatives selected to advance into Tier II will be further refined and screened before work is initiated on the DEIS. This screening will be conducted by the Steering Group and Project Management Group in consultation with the public and the Citizens Advisory Committee

Following is a description of the transportation problems within the Corridor and the goal and objectives of the South/North Study that were used to help define and evaluate the LRT Alternatives being considered.

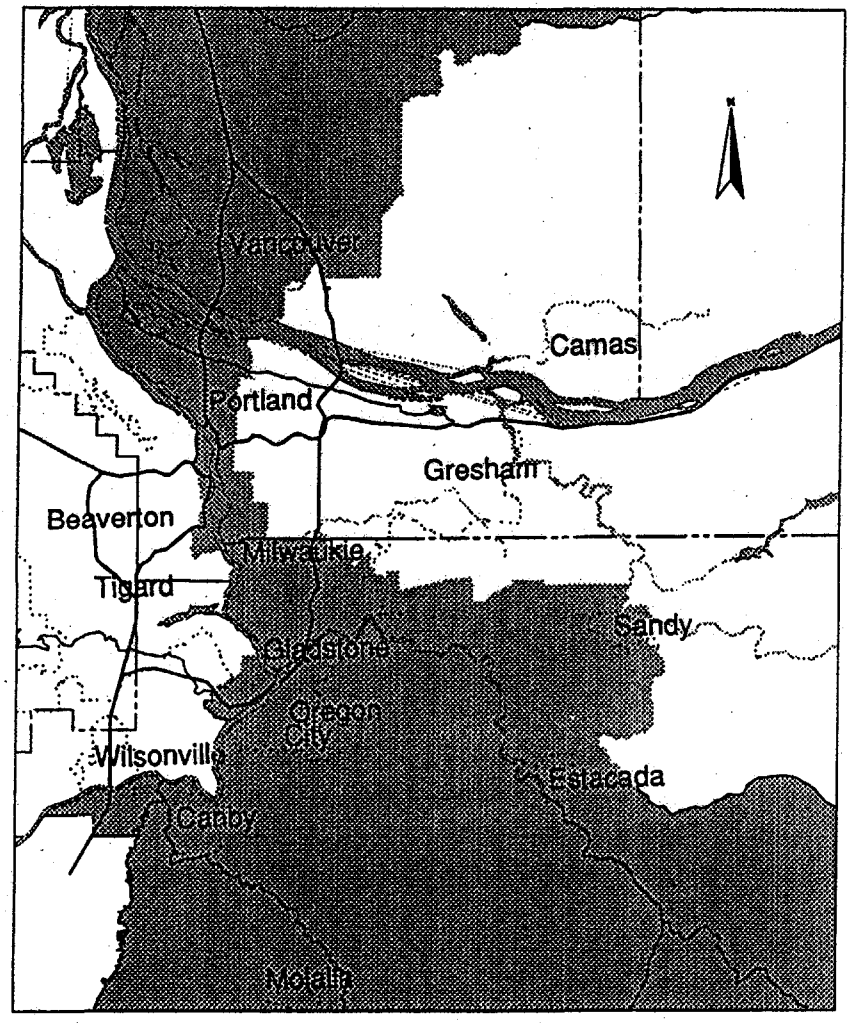


Figure 1 South/North Corridor

II. Purpose and Need

The purpose of the following two pages is 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 will the alternatives being studied serve? How will we evaluate the alternatives?

The South/North Corridor

Figure 1 illustrates the South/North Corridor. It is the travel shed extending north from the Oregon City area in Clackamas County, through downtown Portland and into Clark County beyond 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 fed through a system of connecting bus routes or park-and-ride lots.

Key activity centers within the Corridor help to define the points that LRT alternatives should connect to. The first three in the table below are common in all of the alternatives being studied, but the remaining centers present choices and trade-offs between the alternatives in the South and the North.

Major Activity Centers Within the Corridor

Common	South	North
Downtown Portland Downtown Milwaukie Downtown Vancouver Jantzen Beach	Clackamas Town Center Oregon City	I-5 & 134th Vancouver Mall

The Corridor also includes other important centers such as the Central Eastside Industrial Area, OMSI, Portland State University, Johns Landing, Interstate Avenue and Portland Community College. The proposed LRT improvements could serve over twenty Portland neighborhoods, depending upon the alternatives selected.

In all, the South/North Corridor covers almost half of the metropolitan region. It is characterized by high employment and residential growth with the potential for worsening travel conditions. Population and employment growth in Clark and Clackamas Counties is projected be 32% to 48% over the next twenty years, exceeding the overall Regional growth rates.

Transportation Problems and Opportunities

The problems and opportunities that exist within the South/North Corridor set a context for defining and evaluating the transit alternatives.

- **Traffic Problems.** Traffic in the South/North Corridor is exceeding the capacity of many of the roads and intersections within 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 projections for continued growth well into the future, causing 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, deters ridership and costs transit riders thousands of person hours a day through longer bus trips.

- **Regional Plans.** For almost twenty 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 be served by and enhance an HCT facility.

- **New State Regulations.** Both Oregon and Washington jurisdictions face tougher state regulations affecting transportation and land use planning. Oregon now requires that the Region plan for a 20% reduction in the per capita vehicle miles traveled and a 10% reduction in the per capita number of parking spaces. In Washington, the Clark County area is required to adopt a commute trip reduction ordinance that would result in a 35% drop in trips to major employers 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 Washington may limit new developments if the transportation system is inadequate to handle new demand.

- **Air Quality.** The Region is currently "marginal" for ozone 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.

Goal and Objectives

To implement a major transit expansion program in the South/North Corridor which 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 demand.
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.

Alternatives were developed that address the problems and opportunities within the Corridor and they are described in the following section of this report. The study's objectives provide a framework for evaluating the alternatives. Each alternative's ability to meet the study objectives was measured. Their performance is described in Sections V-X and summarized in a table format in Appendix A.

Tier I LRT Alternatives

The Tier I LRT Alternatives have been divided into six groups in order to isolate and better understand the choices to be made.

A. Study Terminus Alternatives

Study Terminus Alternatives will be used to define how far South and North to study within Tier II. Because of the time and costs associated with the Tier II analysis, it is important that the Region only study improvements that could potentially be funded and that provide adequate benefits in relationship to their costs. A set of Study Terminus Alternatives have been defined for the South and the North. They have been analyzed and are evaluated in sections V and VI separately so that decisions regarding the ultimate termini can be made independently of each other.

While selecting Study Termini short of the furthest points would not remove the furthest points from the Regional Transportation Plan's HCT Corridors, it could remove them from the list of Ten-Year Priorities.

Also, it is important to note that the determination of a Study Terminus in Tier I is different than the minimum operable segment analysis and selection of a locally preferred alternative that will occur in Tier II. The Study Terminus choice will be just that, how far North and South to *study* in Tier II. The Region may choose to, or the Federal Transit Administration may require us to, evaluate even shorter segments before the selection of the locally preferred alternative following the completion of the draft environmental impact statement. This analysis could also include the possible phasing of improvements with an opening of one segment followed a year or two later by the opening of another segment.

Finally, selection of a Study Terminus will not necessarily define the precise street or location of the terminus. Instead, it is intended to define the general vicinity of the terminus for study in Tier II. Design considerations such as station and park-and-ride lot locations, costs and traffic and environmental impacts may require that a terminus studied in Tier II to be several blocks from its designation as the Study Terminus at the conclusion of Tier I.

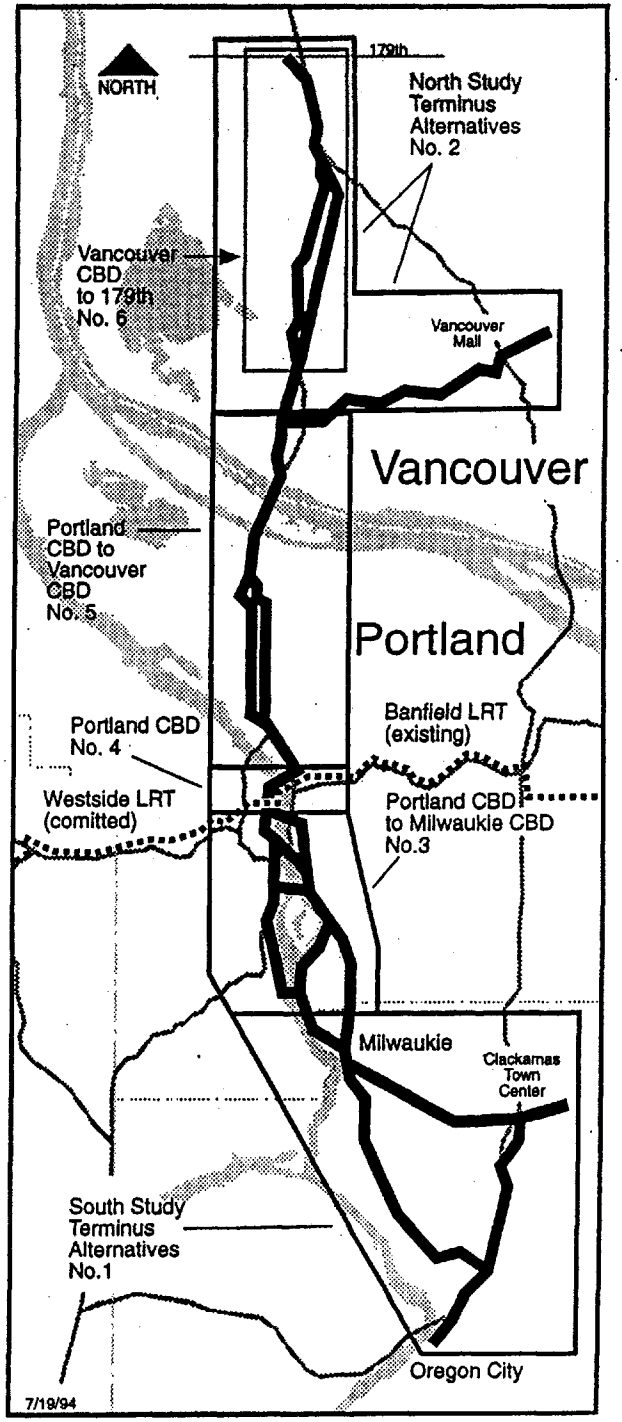


Figure 2 Tier I Groups of Alternatives

uth Study Terminus Alternatives

- **Milwaukie CBD.** This alternative would extend LRT from downtown Portland, across the Willamette River to south or east of the Milwaukie CBD.
- **Clackamas Town Center.** This alternative would extend LRT from downtown Milwaukie to the Clackamas Town Center and possibly across I-205 to a park-and-ride in the vicinity of Sunnyside Road.
- **Oregon City via McLoughlin Boulevard.** This alternative would extend LRT south from Milwaukie along McLoughlin Boulevard, through Gladstone and into the old town area of Oregon City.
- **Oregon City via I-205 and Clackamas Town Center.** This alternative would extend LRT through the Clackamas Town Center, along I-205, through Gladstone and into the old town area of Oregon City.

2. **North Study Terminus Alternatives**

- **Vancouver CBD.** This alternative would extend LRT from downtown Portland, across the Steel Bridge and across the Columbia River, through downtown Vancouver to 39th Street.
- **88th Street.** This alternative would extend LRT from 39th Street, parallel to I-5, to 88th Street.
- **134th Street.** This alternative would extend LRT from 88th Street, parallel to I-5, to 134th Street near the future WSU branch campus.
- **179th Street.** This alternative would extend LRT from 134th Street, parallel to I-5, to 179th Street near the Clark County Fairgrounds.
- **Vancouver Mall.** This alternative would extend LRT east from the Vancouver CBD, parallel to SR-500, to the Vancouver Mall and possibly across I-205 to a park-and-ride lot in Orchards.

B. LRT Alignment Alternatives

Alignment alternatives are the major choices of where LRT improvements should be studied further within Tier II. As opposed to design options described in Section I, alignment alternatives are separated by several blocks or miles. Generally, the differences in alignments are great enough to cause significant differences in costs and ridership. There are four geographic areas within the Corridor that have Alignment Alternatives being evaluated:

3. **Portland CBD to Milwaukie CBD**

a. **Willamette River Crossings:**

- **Hawthorne Bridge.** This alternative could use the existing Hawthorne Bridge which would be retrofitted for LRT.
- **Caruthers Bridge.** This alternative would use a new span under the Marquam Bridge from South Waterfront District to south of OMSI.
- **Ross Island Bridge.** This alternative would use a new span just south of the existing Ross Island Bridge.
- **Sellwood Bridge.** This alternative would provide service to Johns Landing and would use a new span north of the Sellwood Bridge.

b. **Eastbank Alignments**

- **McLoughlin Blvd.** This alternative would use McLoughlin Blvd. between the three northern river crossings and Sellwood.
- **PTC Alignment.** This alternative would use the Portland Traction Company alignment next to the Willamette River between the three northern river crossings and Sellwood.

4. **Portland Central Business District**

- **Surface.** This alternative would be on the surface streets of 5th and 6th Avenues on the Transit Mall between the Steel Bridge and connections to the South Willamette River crossings.
- **Subway.** This alternative would be below ground from Union Station to connections to the South Willamette River crossings. A subway could be under 4th, 5th, 6th or Broadway Avenues but could not be connected to a Hawthorne Bridge crossing.

5. **Portland CBD to Vancouver CBD**

- **Interstate Avenue.** This alternative would be within the Interstate Avenue right-of-way between the Kaiser medical facility and Kenton.
- **I-5.** This alternative would be on the ridge above and parallel to I-5, generally within or adjacent to the Minnesota Avenue right-of-way between Kaiser medical facility and the Kenton neighborhood.

6. **Vancouver CBD to 179th Street**

- **Highway 99.** This alternative would be in the median of Highway 99 between the Main Street/I-5 interchange and 179th Street.
- **I-5.** This alternative would be directly adjacent to I-5 between Main Street/I-5 interchange and 179th Street.

A Few Notes About the Numbers

Following is a description of how many of the measures within this report were developed:

- **Comparing the Alternatives.** Most important in using the comparative measures within this report is understanding the alternatives and how they have been developed for the purpose of this analysis. Within the grouping of alternatives (e.g. South Study Terminus Alternatives, Portland CBD to Vancouver CBD Alignment Alternatives, etc.) the alternatives have been held constant outside the segment in question. For example, when developing, modeling and comparing South Study Terminus Alternatives, changes were only made within the segment from Milwaukie to Oregon City. Each of the South Study Terminus Alternatives are the same north of Milwaukie: McLoughlin Boulevard, across the Hawthorne Bridge, through downtown Portland using the surface alignment on the Transit Mall, north on Interstate Avenue, through the Vancouver CBD and along I-5 to 179th Street. When evaluating the North Study Terminus Alternatives, the alignments south of Vancouver are similarly held constant terminating in the south in Oregon City via I-205.

  This method of analysis was employed to ensure consistency among the alternatives within a given segment or group. It also guarantees that the changes in the data can be attributed to the changes made to the alternatives within the segment in question. Finally, it allowed the number of alternatives developed and analyzed to be kept to a minimum, saving time and money.

  There are three important implications that lead from this way of analyzing the alternatives:

  1) The differences between the alternatives in ridership and costs are real and are tied directly to the variations in the alternatives;

  2) Much of the data from one set of alternatives should not be compared with an alternative from another set; and

  3) There are numerous combinations of projects that can be created by mixing and matching the alternatives within each of the segments. All of those combinations have not been presented or ed within this report. However, a matrix of the possible southern and northern terminus combinations is provided in Appendix B. By using add-ons or deductions for each of the alignment alternatives, one can develop a cost estimate for any of the possible combinations.

- **Ridership.** The light rail ridership forecasts are based upon changes in the LRT and bus networks within the Corridor. The forecasts are for the year 2015 and are based on existing land use plans and allocations developed by Metro and local jurisdictions.

- **1994 Capital Costs.** Capital cost estimates for the alternatives have been developed in 1994 dollars by calculating the quantities in sixteen cost categories from conceptual plans for each segment of alignment. Costs include right-of-way , related roadway reconstruction, structures, various trackway treatments, 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.

- **Year of Expenditure (YOE) Costs.** Because costs generally inflate over time and it would take approximately ten years to finish the planning, engineering and construction of the LRT alternatives, the projected inflated costs of the alternatives have been provided. First, the YOE costs depend upon the assumed inflation rate (6.2%) and the construction schedule (developed consistent with the Westside Project with construction completed by 2003 to 2005 depending upon the alternative). In general, the 1994 costs increase by about 60% to develop the year of expenditure costs. Second, additional items beyond design and construction costs have been added to the factored 1994 capital costs to provide a more accurate prediction of the actual funds that will be needed to complete the alternate projects. Those additional items include a reserve for yet-to-be determined design options, bonding issuance costs, interim borrowing costs and funds for a capital reserve account (CAPRA).

- **Operating and Maintenance (O&M) Costs.** O&M costs within this report are the costs of operating the LRT alternative. The difference in bus O&M costs between the alternative with the highest bus operating costs and the other alternatives is subtracted from the LRT operating costs. The result is the *effective* LRT operating costs used in calculating the cost effectiveness

timate for the alternatives.

- **Cost Effectiveness.** Cost effectiveness analysis provides a means of comparing the benefits of each alternative with its costs. The Tier I cost effectiveness analysis focuses on two different costs: 1) Effective Operating Costs; and 2) Total Annualized Costs. Effective Operating Costs are the year 2015 operations and maintenance costs of the LRT minus the bus O&M costs saved by the subject LRT alternative from the highest bus O&M costs among the comparable alternatives. Total Annualized Costs includes annualized LRT capital costs plus the year 2015 Effective Operating Costs (in 1994 dollars). Annualized capital costs are based on the estimated LRT capital costs in 1994 dollars and assume a seven-percent discount rate and a 40-year economic life. The higher the cost effectiveness ratio, the less cost effective the alternative.

- **Environmental Analysis.** The estimates of environmental impacts (e.g. noise and vibrations, displacements, etc.) are based upon sketch-level analysis. While the data is accurate in comparing the alternatives, the actual environmental impacts may change as designs are refined, as more detailed analyses are done and as mitigation measures are developed and incorporated into the design. Tier II, with the preparation of the Draft Environmental Impact Statement, will provide a very high level of detail on a much wider array of potential impacts.

Technical Summary Report

The *Briefing Document* is in essence an executive summary of the *South/North Tier I Technical Summary Report,* which can be referred to for more detailed information.

Appendix A

At the end of this report in Appendix A are tables for each of the six sets of alternatives that present all of the criteria and measures for each of the alternatives. The tables within the body of the report summarize the ridership, cost and cost effectiveness for the alternatives included within the larger tables. Within the text of this report measures are referred to that are either within the summary table adjacent to the text or within the full tables included within Appendix A.

Glossary of Terms

Terminus: A terminus is the furthest north or south light rail station.

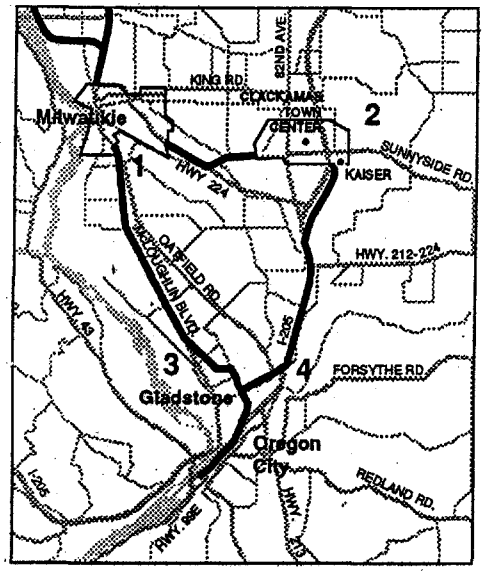
LRT Ridership: Light rail ridership includes any transit trip that would use light rail for a portion of that trip within the South/North Corridor

Total Transit Ridership: Total transit ridership is the total number of bus, light rail and combined bus and light rail trips taken within the corridor. They are one-way trips and a trip that involves a transfer is counted as one trip.

Total Transit Travel Time. Total Transit Travel Time is the combined time it would take to walk to a bus stop or station, wait for the bus or light rail vehicle, travel within the vehicle, and walk to the destination. Travel times used within this report are for the peak rush hour in the peak direction (traveling away from downtown in the evening).

Cutline. A cutline is an imaginary line drawn across one or more highways where the total number of cars or passengers crossing that line are added together. By comparing the highway or transit capacity across that line to the cars or passengers that would cross that line under any given alternative, a volume to capacity ratio can be calculated giving an indication of congestion at that location.

South Study Terminus Alternatives



The above map illustrates the four terminus alternatives for the South that could be selected to advance into Tier II. The selection of a Study Terminus will define the southern limits of the Tier II analysis. Within those limits, shorter segments may be studied for either phasing opportunities or as required by the federal government to determine the minimum operable segment.

1. Milwaukie Terminus

Advantages:

- The least costly of the four alternative southern termini, with a capital cost savings in $YOE of $457 to $1,015 million compared with a terminus at Clackamas Town Center (CTC) or Oregon City.
- The least costly of the alternatives to operate, with annual savings in $1994 of approximately $70,000 (CTC) to $2.7 million (Oregon City via I-205).
- The most cost effective southern terminus alternative.
- Total transit travel time between Milwaukie and Portland CBDs would be less than auto travel times during the peak hour.

Disadvantages:

- Lowest LRT and total transit (LRT + bus) ridership, with 2,500 to 5,850 fewer LRT trips and 600 to 2,150 fewer total transit trips.
- Would provide only limited LRT service into Clackamas County and to major activity centers within the County.
- Limited park-and-ride lot opportunities with the highest park-and-ride demand would result in higher capital costs and/or lower ridership estimates with greater traffic impacts than are currently estimated.

Portland CBD to:	Milwaukie CBD	CTC/Sunnyside	Oregon City via McLoughlin	Oregon City via I-205
Year of Expenditure Cost (millions)	$674	$1,131	$1,272	$1,689
LRT Weekday Ridership from 179th to:	56,900	59,400	61,900	62,750
Total Corridor Transit Weekday Ridership	129,200	129,800	131,750	131,350
Effective LRT Annual Operating Cost (millions) from 179th to:	$12.87	$12.94	$13.35	$15.58
Cost Effectiveness Ratio	6.72	7.48	7.50	8.40
Additional park-and-ride capacity may be required to accommodate forecast demand at the estimated cost (YOE millions) of:	$28	$13	$20	$6

- Would leave many of the transportation problems within the segment unaddressed, with slower total transit travel times for Oregon City and Clackamas Town Center to the Portland CBD than for the same trip using an automobile. In addition, volume to capacity ratios (congestion) at several cutlines would be highest among all the alternatives.

- Limited ability to respond to or shape development within the most rapidly growing areas of the segment.

- Would not provide LRT service to CTC or Oregon City.

2. Clackamas Town Center Terminus

Advantages:

- The lowest cost (both capital and O&M) and the most cost effective of the alternatives that extend into the urban area of Clackamas County.

- Would provide LRT access to Clackamas Town Center area, a high growth rate area and high intensity use area in Clackamas County.

- Total transit travel times between Clackamas Town Center and the Portland CBD would be one minute faster than the automobile travel times.

- The lowest (same as Oregon City via McLoughlin Boulevard) operating cost per trip of the alternatives.

Disadvantages:

- Higher cost (both capital and O&M) than the Milwaukie Terminus.

- Lower LRT and total transit ridership than either extension to Oregon City.

- McLoughlin park-and-ride demand must be accommodated with a lot near or north of the Milwaukie CBD which may result in more local traffic impacts within the downtown Milwaukie area.

- Would not provide LRT service to Oregon City, the county seat.

3. Oregon City via McLoughlin Boulevard Terminus

Advantages:

- Highest total transit and second highest LRT ridership of the South terminus alternatives.

- Total transit travel times between Oregon City and downtown Portland would be two minutes faster than the auto travel times.

- Would provide direct LRT service to the County seat.

- The lowest (same as CTC) operating cost per trip of the alternatives.

- Some opportunities for redevelopment on McLoughlin Boulevard.

Disadvantages:

- Second highest capital cost southern terminus alternative, almost $600 million more costly than the Milwaukie Terminus and $140 million more than the CTC Terminus, and second highest O&M costs.

- The second highest cost effectiveness ratio.

- Park-and-ride demand from east of Milwaukie must be accommodated with a lot near or north of the Milwaukie CBD which may result in more local traffic impacts within the downtown Milwaukie area.

- Traffic impacts on McLoughlin Boulevard would include left turns being restricted to intersections and impacts during construction.

- Limited opportunities for new development.

- Would not provide LRT service to CTC.

4. Oregon City via I-205 Terminus

Advantages:

- Would have the highest LRT ridership and second highest total transit ridership of the southern terminus alternatives.

- Would provide LRT access to the CTC area, the highest growth rate and highest planned density use area of the County, and to Oregon City, the County seat.

Disadvantages:

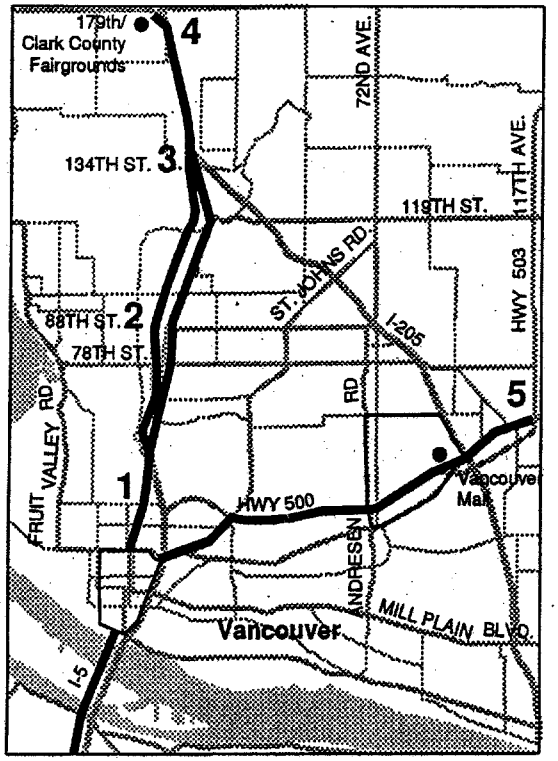
- Highest cost alternative, with over $1 billion more capital costs than the Milwaukie Terminus and $2.7 million more annually in additional O&M costs.

- Least cost effective of the South Terminus Alternatives, with the highest annualized cost per LRT rider and the highest LRT operating costs per rider.

- Total transit times would remain longer for trips between Oregon City and downtown Portland than for trips taken using an automobile.

- Limited station opportunities between Clackamas Town Center and Gladstone.

North Study Terminus Alternatives



The above map illustrates the five alternative terminus points for the North that could be selected to advance into Tier II. The selection of a Study Terminus will define the northern limits of the Tier II analysis. Within those limits shorter segments may be studied for either phasing opportunities or as required by the federal government to evaluate shorter segments.

1. Vancouver CBD/39th Street Terminus

Advantages:

- The least costly of the four alternative northern termini, with a capital cost savings in $YOE of $224 (88th Street) to $495 (179th Street) million.
- The least costly of the alternatives to operate ($530,000 to $2.3 million less annually).
- The most cost effective northern terminus alternative.
- Total transit travel time between Vancouver and Portland CF would be less than auto travel times during the peak hour.

Disadvantages:

- Lowest LRT and total transit (LRT + bus) ridership, with 1,550 to 2,750 fewer LRT trips and 700 to 1,350 fewer total transit trips.
- Would provide only limited LRT service into Clark County and to major activity centers within the county.
- Limited park-and-ride lot opportunities with the high park-and-ride demand would result in higher capital costs and/or lower ridership estimates with greater traffic impacts than currently estimated.
- Would leave many of the transportation problems within the Clark County segment unaddressed, with slower total transit travel times for north Clark County and Vancouver Mall.
- LRT would not extend far enough into Clark County to assist in the management of growth within Clark County.

2. 88th Street Terminus

Advantages:

- The lowest cost (both capital and O&M) and the most cost effective of the alternatives that extend well into Clark County. Total transit ridership is only slightly lower than the further termini but at a substantially lower cost.
- Would provide LRT access into the north I-5 corridor area, designated within the growth management plan as a high growth area with intense development pasterns.
- Would provide higher transit reliability for patrons than the Vancouver CBD Alternative and the same reliability as the further extensions at a much lower cost (based on the percent of passenger miles within protected ROW).
- The lowest (same as Vancouver CBD) operating cost per trip.
- Total transit travel time from Portland CBD to Vancouver CBD and 88th Street would be less than or similar to auto travel times during the peak hour.

Disadvantages:

- Higher cost (both capital and O&M than the Vancouver CBD Terminus.
- Lower LRT ridership than extensions north and to Vancouver Mall.

From Portland CBD to:	Vancou... CBD	88th	134th	179th	V... Mall/Orchards
Year of Expenditure Cost (millions)	$1,199	$1,423	$1,563	$1,694	$1,660
LRT Weekday Ridership from Oregon City to:	60,050	61,600	62,200	62,800	62,450
Total Weekday Corridor Transit Ridership	130,000	131,150	131,300	131,350	130,700
Effective LRT Operating Cost (millions) Oregon City to:	$15.27	$15.80	$16.47	$17.55	$17.60
Cost Effectiveness Ratio	7.65	7.98	8.23	8.48	8.47
Additional park-and-ride capacity may be required to accommodate demand at a cost (millions $YOE) of up to:	$45	$30	$23	$4	$6

- SR-500 park-and-ride demand would need to be accommodated with a lot near or north of the Vancouver CBD which may result in more local traffic impacts near central Vancouver.

3. 134th Street Terminus

Advantages:

- Second highest total transit ridership of the North terminus alternatives.
- Would provide LRT access to the 134th Street area with possible shuttle access to WSU Campus. This area has been designated as a major growth and activity center. Would forward growth management planning goals.

Disadvantages:

- Third highest capital cost of the northern terminus alternatives, $364 million more costly than the Vancouver CBD Terminus and $140 million more than the 88th Street Terminus.
- SR-500 park-and-ride demand would need to be accommodated with a lot near or north of the Vancouver CBD which may result in more local traffic impacts near central Vancouver.
- Total transit travel times would remain longer than the auto travel times for trips from 134th Street, 179th Street and Vancouver Mall to Portland CBD.

4. 179th Street Terminus

Advantages:

- Would have the highest LRT ridership and highest total transit ridership of the northern terminus alternatives.
- Would provide direct LRT access to the 134th Street area with possible shuttle service to the WSU Branch Campus area.

Disadvantages:

- Highest capital cost alternative, over $495 million more than the Vancouver CBD Terminus and $2.28 million more in O&M costs.
- Total transit travel times would remain longer than the auto travel times from 134th Street, 179th Street and Vancouver Mall to downtown Portland.
- Least cost effective of the North Terminus Alternatives.
- Terminus at 179th Street is very close to the interim growth boundary and could result in pressure to extend the boundary. If the boundary is not expanded it could lead to underutilization of the transit system.

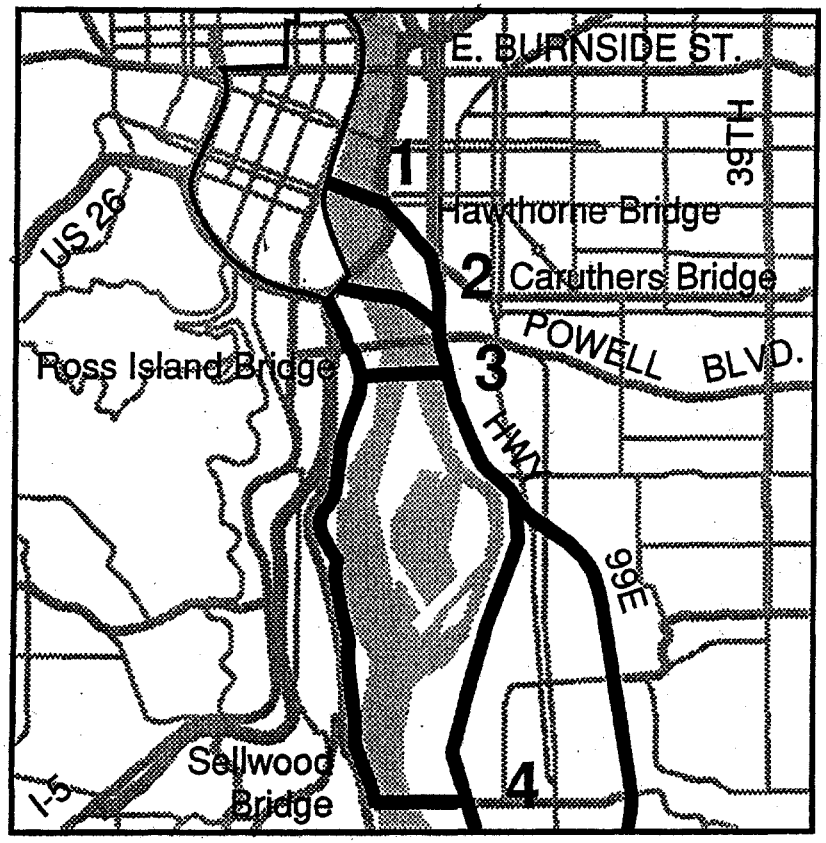
4. Vancouver Mall/Orchards Terminus

Advantages:

- Would have the second highest LRT ridership of the northern termini.
- Would provide LRT access to the Vancouver Mall area, a high growth rate and high intensity use area within Clark County.

Disadvantages:

- Highest LRT operating costs per rider.
- Total transit travel times would remain longer than auto travel times from Vancouver Mall, 134th Street and 179th Street to downtown Portland.
- I-5 park-and-ride demand would need to be accommodated with a lot near the Vancouver CBD which may result in local traffic impacts near central Vancouver.



The above map illustrates the alignment alternatives between the Portland CBD and downtown Milwaukie that could be selected to advance into Tier II for further study. Within this segment there are two different sets of alternatives being compared. First are the alternate locations for a crossing of the Willamette River south of the Portland CBD.

Second, for the Hawthorne, Caruthers and Ross Island Bridge Crossing alternatives, two Eastbank routes south are being compared: either the Portland Traction Company rail right-of-way or an alignment adjacent to McLoughlin Boulevard.

Note that the capital cost estimates include both the cost of the bridge and the alignment from the Portland CBD to the Milwaukie CBD. This is done to be able to account for the full costs of using a part r crossing location. A lower cost bridge may require a higher cost alignment in order to reach that location.

A. South Willamette River Crossings

1. Hawthorne Bridge Alternative

Advantages:

- The least costly of the four alternatives with a cost savings in $YOE of $59 to $65 million.
- Would provide the best LRT access to the Central Eastside and OMSI.
- May provide better opportunity for SE bus connections to LRT.
- Would provide LRT access to inner SE neighborhoods (Brooklyn and Moreland).

Disadvantages:

- Would provide the least LRT access to the southern portions of the Portland Central City including PSU, and no access to the North Macadam area and to the South Waterfront District.
- Frequent bridge openings for river traffic would cause LRT reliability problems, decrease LRT ridership and increase operating expenses by approximately $500,000 per year (included within the ridership and O&M cost estimates). Because of the bridge's age, direct bridge operating costs would be higher.
- Difficult to bring the existing Hawthorne Bridge up to seismic and operational standards and a new span would increase costs and would significantly impact the Portland CBD.
- Total transit ridership would be lower than the Caruthers Bridge.

Portland CBD to Milwaukie via:	Hawthorne Bridge	Caruthers Bridge	Ross Island Bridge	Sellwood Bridge
Year of Expenditure Cost (millions)	$674	$739	$733	$739
LRT Weekday Ridership 179th to Oregon City	61,400	62,800	62,300	61,400
Total Corridor Transit Weekday Ridership	131,350	132,200	131,400	130,750
Effective LRT Operating Cost (millions) Oregon City to 179th	$18.43	$17.93	$17.93	$19.12
Cost Effectiveness Ratio	8.72	8.64	8.70	8.90

- Impacts of bridge reconstruction on the Willamette River ecosystem. Using the McLoughlin alignment on the eastside south to Sellwood would displace approximately 50 structures and could adversely impact historic structures. Use of the PTC alignment could have significant impacts upon the adjacent wildlife habitat and natural environment. (See *Disadvantages* for the McLoughlin and PTC alignments).

2. Caruthers Bridge

Advantages:

- Highest total transit and LRT ridership.
- Would provide LRT access to the South Central City area including PSU, Riverplace and the South Waterfront Development.
- Would provide LRT access to OMSI, inner SE neighborhoods (Brooklyn and Moreland).
- The lowest (same as Ross Island Bridge) operating cost per trip and the lowest cost effectiveness ratio.

Disadvantages:

- Highest cost (similar to Sellwood) Willamette River crossing ($65 million more than the Hawthorne Bridge).
- Severe design constraints due to the close proximity of the Marquam Bridge may increase costs.
- Known and possibly unknown hazardous material sites.
- Impacts of bridge construction to the Willamette River ecosystem.
- Using the McLoughlin alignment on the eastside south to Sellwood would displace approximately 40 structures and could adversely impact historic structures. Use of the PTC alignment could have significant impacts upon the adjacent wildlife habitat and natural environment. (See *Disadvantages* below for the McLoughlin and PTC alignments).
- Possible impact on design of future development in South Waterfront Development.

3. Ross Island Bridge

Advantages:

- Second highest total transit ridership.
- Would provide LRT access to the north Macadam redevelopment area and the South Central City area including PSU, Riverplace and the South Waterfront Development.
- Would provide LRT access to inner SE neighborhoods (Brooklyn and Moreland).
- Low operating costs, moderate operating cost per trip, capital costs and cost effectiveness ratio, and lowest capital costs of the fixed span alternatives.
- May provide the opportunity to use a portion of the Shoreline right-of-way.

Disadvantages:

- Capital costs would be $59 million more than Hawthorne Bridge.
- Impacts of bridge construction to the Willamette River ecosystem.
- Using the McLoughlin alignment on the eastside south to Sellwood would displace approximately 60 structures and could adversely impact historic structures. Use of the PTC alignment could have significant impacts upon the adjacent wildlife habitat and natural environment. (See *Disadvantages* for the McLoughlin and PTC alignments).
- Possible impact on design of future development in South Waterfront and North Macadam Development areas.
- Would not provide direct LRT service to OMSI.

4. Sellwood Bridge

Advantages:

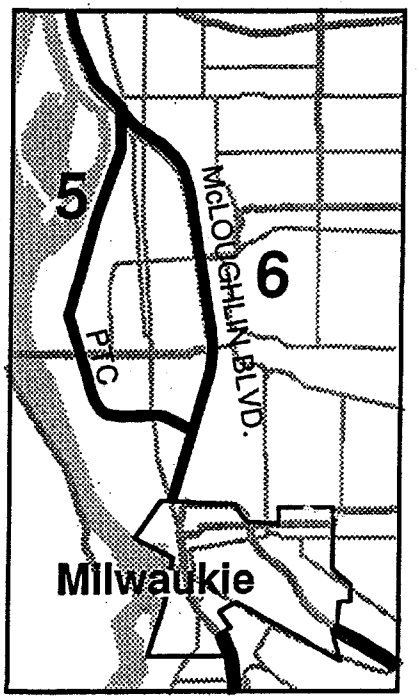
- Would provide LRT access to the North Macadam redevelopment area, the South Central City area including PSU, Riverplace, the South Waterfront Development and Johns Landing.
- May provide the opportunity to reduce total transportation costs and impacts by combining highway and transit river crossing.
- May provide the opportunity to use a portion of the Shoreline right-of-way.

Disadvantages:

1. Highest cost (similar to Caruthers Bridge) Willamette river crossing alternative ($65 million more than Hawthorne and similar to Ross Island).
- Lowest LRT ridership and total transit ridership.
- Highest operating costs, highest operating costs per rider and highest cost effectiveness ratio.
- Local neighborhood and social impacts (e.g. noise and vibration) in the Johns Landing area.
- Impacts due to bridge construction to the Willamette River ecosystem.
- Slowest travel times between Clackamas County and downtown Portland (approximately 5 minutes slower).
- Would not provide LRT access to Brooklyn and Moreland neighborhoods or OMSI.

B. Eastbank Alignments

The map below illustrates the Portland Traction Company Alignment Alternative and the McLoughlin Boulevard Alignment Alternative. The costs within the following analysis assume a Hawthorne Bridge crossing but the cost differential would apply to either the Hawthorne, Caruthers or Ross Island crossing.



'ortland Traction Company Alignment

Advantages:

- Would have fewer residential displacements and fewer construction impacts on local neighborhoods and businesses.

Disadvantages:

- Higher O&M and higher capital costs than the McLoughlin Boulevard Alignment Alternative.
- Lower ridership due to longer travel times, fewer transfer opportunities and less access to eastside neighborhoods.
- Higher LRT operating costs per ride and highest cost effectiveness ratio.
- Possible significant environmental impacts due to the alignment's proximity to wildlife habitat which could lead to higher costs in order to avoid, minimize or mitigate impacts.
- Because of the restrictions placed on much of the land adjacent to the alignment it would have relatively little ability to shape and support transit supportive land use patterns and urban redevelopment.
- Would relocate active freight rail service and approximately 20 commercial or industrial structures.

6. McLoughlin Boulevard Alignment

Advantages:

- Would have higher LRT and higher total transit ridership than the PTC Alignment Alternative due to shorter travel times and better access to eastside neighborhoods.
- Would have lower capital and O&M costs due in part to the shorter alignment length.
- Exhibits the lowest operating cost per rider and the lowest cost effectiveness ratio.
- Would provide the best opportunity to support and shape transit supportive and more intense urban development.
- Would have fewer significant environmental impacts, especially on wildlife habitat and the natural environment.

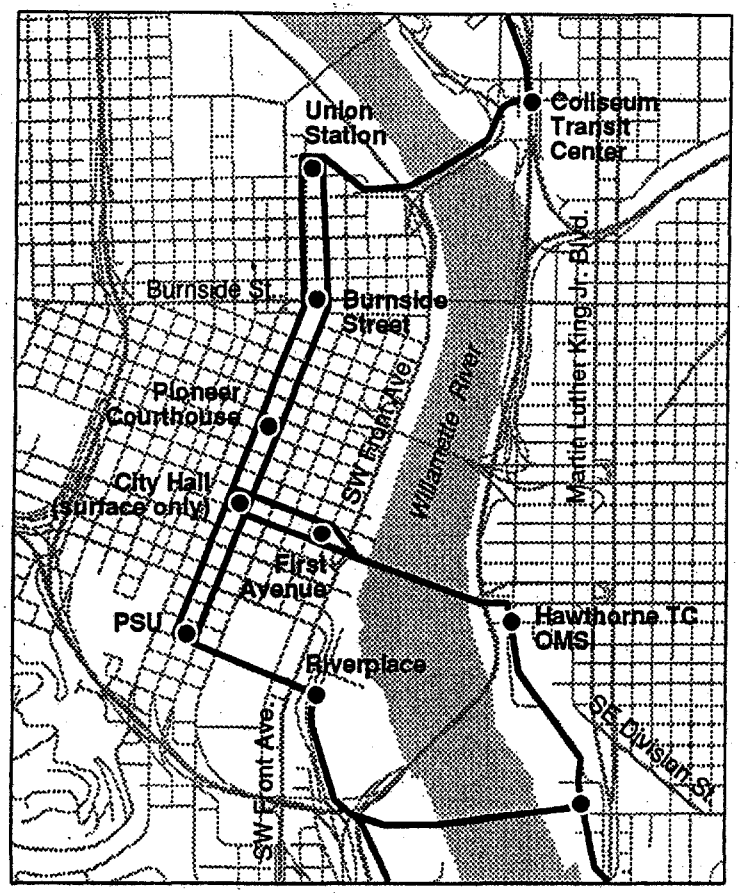
Disadvantages:

- Would displace approximately 50 residences/businesses along McLoughlin with potential impact on historical and cultural resources.

North River Crossings to Milwaukie Via:	PTC	McLoughlin
Year of Expenditure Cost (millions)	$695	$674
LRT Weekday Ridership from Oregon City to 179th	58,250	62,750
Total Corridor Weekday Transit Ridership	131,050	131,350
Effective LRT Operating Cost (millions) from Oregon City to 179th	$18.76	$18.19
Cost Effectiveness Ratio	9.26	8.52

Note: Costs assume a Hawthorne Bridge crossing, but the cost differential between alternatives would generally hold constant for the Ross Island or Caruthers bridge crossings as well.

II. Portland CBD Alignment Alternatives



The above map illustrates the alignment alternatives within the Portland Central Business District (CBD) from the Steel Bridge in the north to Riverplace in the south. Within this segment there are two different sets of alternatives being compared.

First is the Surface Alternative which would use the existing Transit Mall on 5th and 6th Avenues. Several options for the Surface Alternative have been developed and will be refined before Tier II is initiated.

Second is the Subway Alternative that could be built under one of four north/south streets: 4th, 5th, 6th, or Broadway Avenues. The subway would be built using tunnel boring and cut and cover techniques. For this analysis a dual tube subway (see Subway Cross-Section on Page 17) under Broadway Avenue (and 5th Avenue for additional cost analysis) has been assumed. If a subway is selected for further study within Tier II then further refinement of the subway options would be made prior to initiating the DEIS.

If a subway is selected for further study, the surface alignment will also advance into the DEIS, because of the high costs associated with a subway and the need to have intermediate cost alternatives within a DEIS.

Downtown Portland via:	Surface	Subway
Year of Expenditure Cost (millions)	$288 -$309	$551 - $584
LRT Weekday Ridership from Oregon City to 179th	61,400	64,900
Total Corridor Transit Weekday Ridership	130,750	132,850
Effective LRT Operating Cost (millions) from Oregon City to 179th	$19.12	$20.91
Cost Effectiveness Ratio	8.90	9.07

1. Surface Alignment Alternative

Advantages:

- The least costly of the alternatives to build and operate, with a capital cost savings in $YOE of approximately $263 to $275 million and O&M cost savings in $1994 of $1.8 million.
- Would have adequate operational capacity to accommodate additional South/North Corridor demand beyond the forecast year of 2015.
- Would have lower operating costs per rider and would be the most cost effective Portland CBD alternative.
- Would provide more visible and direct access from LRT to bus connections and to adjacent retail, commercial and residential properties.

Disadvantages:

- Would have lower LRT and total transit ridership.

- Spatial constraints on the Transit Mall will require some trade-offs between capacity for buses, LRT, pedestrian movements and general purpose auto access.

- Travel time through downtown Portland is approximately four minutes slower than with the subway alternative.

- Construction activities on the Transit Mall would affect bus and auto operations and pedestrian movements.

2. Subway Alignment Alternative

Advantages:

- Highest total transit and LRT ridership due to faster travel times (by four minutes) through downtown Portland.

- Would minimize changes to Transit Mall auto, pedestrian and bus travel patterns and existing auto capacity on the Mall could be maintained.

- Ultimate capacity would exceed the surface alignment.

Disadvantages:

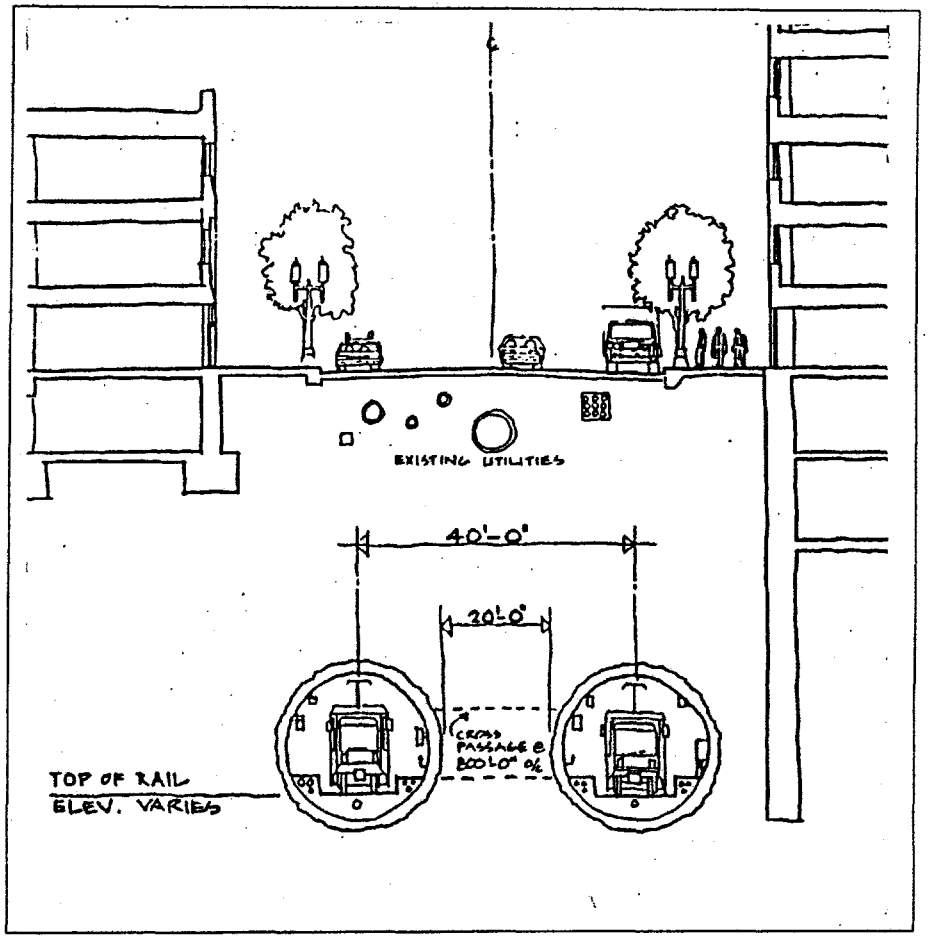
- Highest capital and O&M costs with approximately $263 to $275 million ($YOE) in additional capital costs and $1.8 million ($1994) in additional annual operating costs.

- Would have the highest operating cost per rider and the highest cost effectiveness ratio of the Portland CBD Alternatives.

- Traffic, displacements and other impacts during construction associated with the subway portals and stations would be significant.

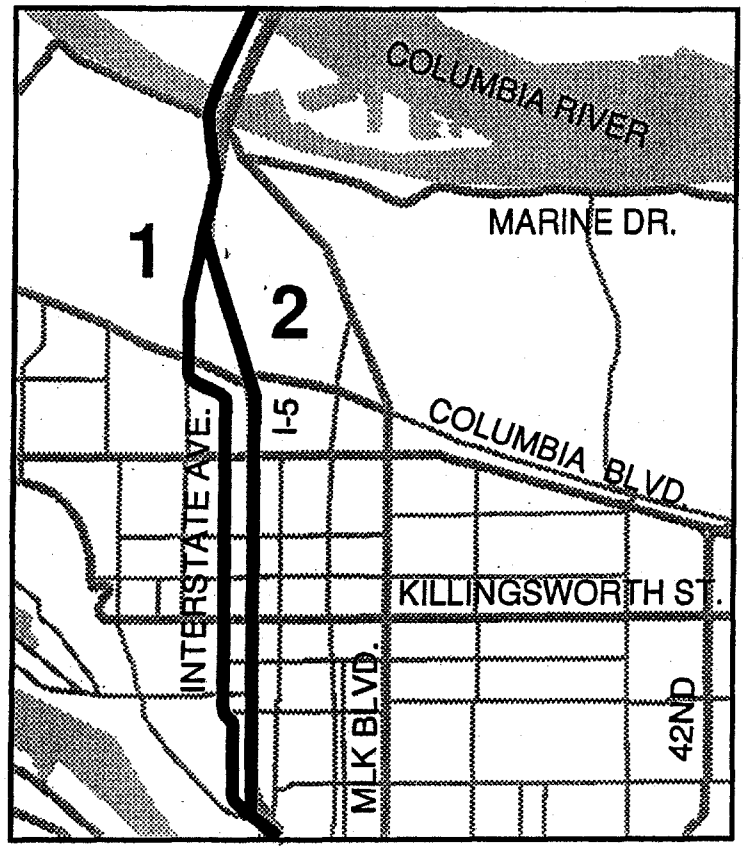
- Would have a lower visibility and less direct access to bus connections and to adjacent retail, commercial and residential properties adjacent to the alignment.

- Total transportation costs and constructions impacts may be higher than projected due to the planned Transit Mall reconstruction would not be incurred with the Surface alignment alternative.



Subway Cross-Section

Portland CBD to Vancouver CBD Alignment Alternativ



The above map illustrates the alignment alternatives between the Portland CBD in the south and the Vancouver CBD in the North. Within this segment there are two different sets of alternatives being compared. Appendix D includes cross-section drawings of the two alternatives.

First is the Interstate Avenue Alternative that would use an alignment generally within the center of Interstate Avenue. Several options for the Interstate Avenue Alternative have been developed for this analysis. First is a two-lane option that would use two general purpose lanes from Interstate Avenue to accommodate LRT, leaving two lanes, one in each direction. Second, the four-lane option would expand the Interstate Avenue right-of-way to accommodate both LRT within a median strip and four lanes of general purpose auto traffic, two in each direction. A third option, a two-lane configuration with four-lane expansion at the key intersections has also been developed and costed. In general, its costs fall between the less expensive two-lane option and the higher cost four-lane option and are used below for comparison with the I-5 Alternative. It would also reduce impacts (e.g. displacement) associated with the four-lane option while generally providing adequate roadway capacity for auto use.

Second is the I-5 Alternative that would be located just west of the existing I-5 freeway, up at the level of the neighborhood generally within or adjacent to the Minnesota Avenue right-of-way and generally separated from the neighborhood with noise walls. Pedestrian access improvements across I-5 would be included within the I-5 Alignment Alternative. There are no significant design options for the I-5 Alignment Alternative assumed within this analysis. However, design options could be developed for the I-5 Alternative which would provide direct LRT service to the Kenton business and neighborhood areas.

1. Interstate Avenue Alignment Alternative

Advantages:

- Would have higher LRT visibility and provide more direct LRT access to retail, commercial and residential properties on Interstate Avenue and within the Kenton area.
- Would provide good (and similar to the I-5 alignment) access to the planned mixed use and higher density housing between Interstate Avenue and I-5 designated within the Albina Community Plan.
- Would provide more direct LRT access to the residential areas west of Interstate Avenue.

Disadvantages:

- Would have lower LRT (1,400 fewer) and lower total transit ridership (1,450 fewer) than the I-5 Alignment Alternative.
- Would be more costly to construct (by $114 million in $YOE) and more costly to operate (by about $120,000 a year in 1994 dollars).
- LRT travel time in this segment would be two minutes slower than the I-5 Alignment due to a longer alignment and a lower maximum operating speed.

/ould have higher operating costs per rider and a higher cost effectiveness ratio than the I-5 Alignment Alternative.

- Would require approximately 40 residential/business displacements for a two-lane option and up to 120 residential/business displacements for the four-lane option. The combined two-lane/four-lane would require approximately 65 residential/commercial displacements.

- Potential noise impacts on Interstate Avenue would be more difficult to mitigate due to the difficulty of constructing noise walls within the median strip, where LRT would be located.

- Traffic impacts on Interstate Avenue would include left turns being restricted to intersections and the removal of parking near intersections.

- Construction impacts on local traffic using Interstate Avenue would be significant and construction impacts through the middle of the established neighborhoods would be more significant than with the I-5 Alternative which is on the edge of the neighborhoods.

2. I-5 Alignment Alternative

Advantages:

- Higher total transit (by 1,450 daily) and higher LRT (by 1,400 daily) ridership than the Interstate Alignment Alternative. Increased transit ridership would be generated both within Clark County and within north Portland.

- Lower capital costs (by $114 million in $YOE) and lower annual O&M costs (by $120,000 annually in $1994).

- Would have lower operating costs per rider and a lower cost effectiveness ratio than the Interstate Avenue Alternative.

- LRT travel times would be two minutes quicker through this segment because of the higher maximum LRT operating speeds between stations and the shorter alignment length.

- Would provide better access to the PCC campus on N.E. Killingsworth and neighborhoods east of I-5.

- Would provide good (and similar to the Interstate Avenue alignment)

From Portland CBD to Vancouver CBD via:	Interstate Avenue 2-Lane/4-Lane	I-5
Year of Expenditure Cost (millions)	$1,199	$1,085
LRT Weekday Ridership from Oregon City to 179th	64,000	65,400
Total Weekday Corridor Transit Ridership	131,350	132,800
Effective LRT Operating Cost (millions) from Oregon City to 179th	$18.14	$18.02
Cost Effectiveness Ratio	8.36	7.94

access to the planned mixed use and higher density housing between Interstate Avenue and I-5 designated within the Albina Community Plan.

- Noise impacts caused by LRT could be more easily mitigated through noise walls west of the proposed LRT alignment. Those noise walls could have the added benefit of reducing existing freeway-generated noise to some of the neighborhoods west of the I-5 freeway.

Disadvantages:

- Would provide less LRT visibility and access to the properties along Interstate Avenue.

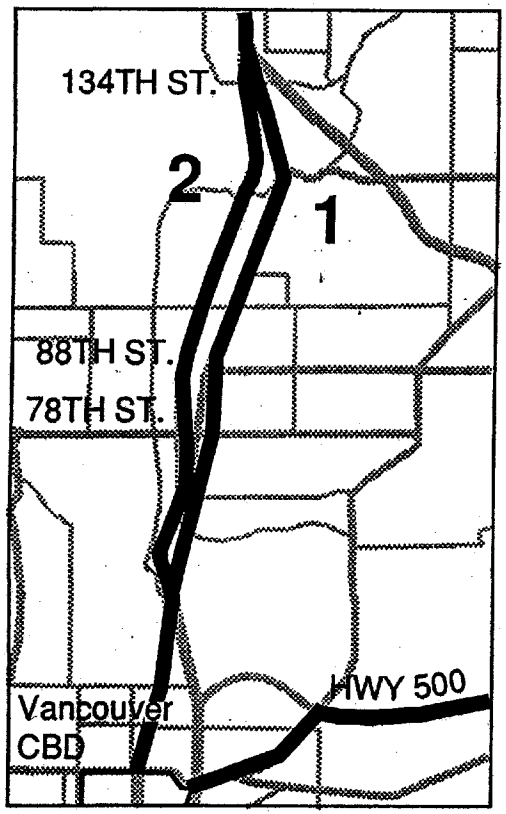
- The current design of the I-5 Alternative would provide only limited LRT access to the Kenton neighborhood and no LRT access to the Kenton business district.

- Would provide less LRT visibility and access to the neighborhoods west of Interstate Avenue.

- Physical constraints may make it more difficult to provide station sites and layouts that maximize development potential around the LRT station areas.

- Would require approximately 70, mostly residential, displacements.

Vancouver CBD to 179th Alignment Alternatives



The map to the left illustrates the alignment alternatives between the Vancouver CBD in the south and 179th Street in the north. Within this segment there are two different alternatives being compared. Both alternatives would use the same alignment south of the Main Street/I-5 interchange. The 88th Street, 134th Street and 179th Street North Study Terminus Alternatives are affected by these Alignment Alternatives.

First, the Highway 99 Alternative would use an alignment generally within the center of Highway 99.

Second, the I-5 Alternative would be located just west or east of the existing I-5 freeway.

1. Highway 99 Alignment Alternative

Advantages:

- Would have higher LRT visibility and provide more direct LRT access to retail, commercial and residential properties along Highway 99. Both alternatives would support the proposed transit overlay district (TOD) for this portion of the corridor.

Disadvantages:

- Would have lower LRT (1,150 fewer) and lower total transit ridership (1,250 fewer).

- Would be more costly to construct (by $79 million $YOE to 88th Street and by $167 million $YOE to 134th or 179th St) and more costly to operate by about $110,000 a year in 1994 dollars.

- Travel time through this segment would be three minutes slower than with the I-5 Alignment.

- Would have the highest operating costs per rider and the highest cost effectiveness ratio of the two north Clark County alignment alternatives.

- Would require approximately 106 displacements, most of which would be commercial displacements.

- Traffic impacts on Highway 99 would include left turns being restricted to intersections and capacity reductions at intersections that are currently nearing capacity and significant traffic impacts would be caused by construction.

From Vancouver CBD to 134th via:	Highway 99	I-5	
		West	East
Year of Expenditure Cost (millions)	$531	$379	$364
LRT Weekday Ridership from Oregon City to 179th	61,600	62,750	62,750
Total Corridor Weekday Transit Ridership	130,100	131,350	131,350
Effective LRT Operating Cost (millions) from Oregon City to 179th	$18.31	$18.20	$18.20
Cost Effectiveness Ratio	9.05	8.56	8.52

5 Alignment Alternative

Advantages:

- Higher LRT ridership (by 1,150 daily) and higher total transit ridership (by 1,250 daily).

- Lower capital costs (by $79 million $YOE to 88th Street and by $167 million $YOE to 134th or 179th Streets) and lower annual operating costs (by $110,000 annually).

- Would have lower operating costs per rider and a lower cost effectiveness ratio.

- LRT travel times would be three minutes quicker through this segment because of the higher maximum LRT operating speeds between stations and the shorter alignment length.

- Noise impacts would be less and mitigation of noise impacts would be easier to design and implement.

- Would provide greater LRT visibility and would provide more direct LRT access to residential area west of I-5. Both alternatives would support the proposed transit overlay district (TOD) for this portion of the corridor.

Disadvantages:

- Would cause a variety of local traffic impacts due to park-and-ride lot access.

- Less direct LRT access to the properties along Highway 99.

- Would require approximately 80 residential/commercial displacements.

Appendix A

Summary Tables

Criteria	Measure	PTC	McLoughlin
Fiscal Efficiency	Capital Cost (1994 $); Pioneer Square to Milwaukie	$437.20	$424.0
Cost	Capital Cost (YOE $); Pioneer Square to Milwaukie	$695.20	$674.20
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$18.76	$18.20
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.00	$0.01
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.98	$0.88
	Cost Effectiveness Ratio	9.26	8.52
Promote Desired Land Use	Major Activity Centers Served	Milwaukie CBD	SE Neighborhoods, Milwaukie CBD
Support Major Activity Centers			
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes
Environmental Sensitivity	Possible Displacements (Residential/Commercial)	20+ commercial/indust. Existing freight line	50+, commercial and residential
	Noise Impacts	Greater risks due to lower existing noise	
	Ecosystem Impacts	Wetlands & wildlife habitat	
	Historical and Cultural Impacts		Greater risk due to more displacements

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Displacement data based on preliminary design without specific efforts to mitigate possible impacts.

Summary of Measurement Criteria
Portland CBD Alignment Alternatives

Criteria	Measure	Surface	Subway
Transit Service	Peak Hour Accessibility		
Ease of Access	Households within 45 minutes by transit to:		
	Vancouver CBD	114,750	143,710
	Portland CBD	219,150	234,580
	Milwaukie CBD	82,410	103,630
	Employment within 45 minutes by transit to:		
	Vancouver CBD	306,970	344,300
	Portland CBD	579,600	598,400
	Milwaukie CBD	348,490	382,970
Travel Time	Total Travel Time, PM Peak Hour (in minutes)		
	Transit from Portland CBD to Milwaukie (auto = 27)	32	28
	Transit from Portland CBD to Vancouver CBD (auto = 39)	38	36
Reliability	Miles of Reserved or Separate ROW	35.3	35.2
	% of Corridor Passenger-miles on Reserved ROW	25.3%	23.7%
Ridership	Weekday Corridor Transit Trips	130,750	132,850
	Weekday S/N LRT Trips	61,400	64,900
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:		
Highway Use	River Crossings (Fremont - Ross Island)	1.07	1.07
	River Crossings (Sellwood Bridge)	1.27	1.27
	N of Prescott (Denver, I-5, Interstate, MLK Blvd., Vancouver)	0.76	0.76
	At Boundary (Macadam, Corbett)	1.04	1.03
Traffic Issues		At grade crossings	Portal impacts

Criteria	Measure	Surface	Subway
Fiscal Efficiency	Capital Cost (1994 $); South Waterfront to Union Station	$180.8 - $194.4	$353.2 - $367.3
Cost	Capital Cost (YOE $); South Waterfront to Union Station	$287.5 - $309.1	$551.0 - $584.0
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$19.12	$20.93
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.00	$0.02
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.95	$0.98
	Total Annualized LRT Cost per Rider	$8.90	$9.07
Promote Desired Land Use	Major Activity Centers Served	Portland CBD	Portland CBD
Support Major Activity Centers			
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes
Environmental Sensitivity	Possible Displacements (Residential/Commercial)	Potential at mall connections	Potential at portals.
	Noise Impacts	Possible vibrations	Potential at portals.
	Ecosystem Impacts	No significant impacts	No significant impacts
	Historical and Cultural Impacts	Potential impacts	Potential at portals

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.

Summary of Measurement Criteria
Portland CBD to Vancouver CBD Alignment Alternatives

Criteria	Measure	Interstate Ave.	I-5
Transit Service	Peak Hour Accessibility		
Ease of Access	Households within 45 minutes by transit to:		
	Swan Island	126,840	131,810
	Kenton	178,050	184,810
	Hayden Island	163,300	170,270
	Vancouver CBD	138,650	150,000
	Employment within 45 minutes by transit to:		
	Swan Island	369,490	377,770
	Kenton	450,430	472,540
	Hayden Island	402,300	408,530
	Vancouver CBD	310,400	337,200
Transferability	Mode of Access		
	Walk on	60%	61%
	Transfer	40%	39%
	Park-and-ride	0%	0%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)		
	Transit from Portland CBD to Swan Island (auto = 17)	29	28
	Transit from Portland CBD to Kenton (auto = 20)	26	24
	Transit from Portland CBD to Hayden Island (auto = 28)	33	31
	Transit from Portland CBD to Vancouver CBD (auto = 40)	38	36
Reliability	Miles of Reserved or Separated ROW	4.0	3.9
	% of Corridor Passenger-miles on Reserved ROW	38.0%	40.4%
Ridership	Weekday Corridor Transit Trips	131,350	132,800
	Weekday S/N LRT Trips	64,000	65,400
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:		
Highway Use	Columbia River Crossing (I-5 Bridge)	1.31	1.30
	N of Columbia (I-5, Interstate, MLK Blvd.)	0.70	0.69
	N of Prescott (Denver, I-5, Interstate, MLK Blvd., Vancouver)	0.76	0.76
	River Crossings (Fremont - Ross Island)	1.07	1.07
Local Traffic		At grade crossings Changes street design Removes some parking	Ramp impacts Removes some parking

Criteria	Measure	Interstate Ave.	I-5
Fiscal Efficiency	Capital Cost (1994 $)	$753.9	$682.2
Cost	Capital Cost (YOE $)	$1,198.7	$1,084.7
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$18.20	$18.02
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.06	$0.00
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.86	$0.84
	Cost Effectiveness Ratio	8.36	7.94
Promote Desired Land Use	Major Activity Centers Served	Coliseum, N/NE Neighborhoods, Vancouver CBD	Coliseum, N/NE Neighborhoods, Vancouver CBD
Support Major Activity Centers			
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes
Environmental Sensitivity	Possible Displacements (Residential/Commercial)	65+, mostly commercial	65+, almost all residential
	Noise Impacts	More difficult to mitigate	Replace existing and new noise wall
	Ecosystem Impacts	Columbia Slough and River Xing	Columbia Slough and River Xing
	Historical and Cultural Impacts	Slightly higher risk of impacts	

Notes:

All data is for year 2015, unless otherwise noted.
Data represents build out from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Displacement data based on preliminary design without specific efforts to mitigate possible impacts.
Note capital costs and cost effectiveness for Interstate Avenue are for the two-lane/four-lane hybrid option.

Summary of Measurement Criteria
39th to 179th Street Alignment Alternatives

Criteria	Measure	Highway 99	I-5
Transit Service	Peak Hour Accessibility		
Ease of Access	Households within 45 minutes by transit to:		
	Vancouver CBD	136,040	137,020
	134th St.	80,240	87,110
	Vancouver Mall	97,010	99,390
	Employment within 45 minutes by transit to:		
	Vancouver CBD	304,760	295,800
	134th St.	103,560	119,190
	Vancouver Mall	117,290	119,500
Transferability	Mode of Access; Vancouver CBD to 179th St.		
	Walk on	23%	23%
	Transfer	45%	45%
	Park-and-ride	32%	32%
Travel Time	Total Travel Time, PM Peak Hour (in minutes)		
	Transit from Portland CBD to Vancouver CBD (auto = 39)	38	38
	Transit from Portland CBD to 88th St. (auto = 44)	48	46
	Transit from Portland CBD to 134th St. (auto = 48)	54	51
	Transit from Portland CBD to 179th St. (auto = 52)	58	55
	Transit from Portland CBD to Vancouver Mall (auto = 44)	60	60
Reliability	Miles of Reserved or Separate ROW	34.8	34.7
	% of Corridor Passenger-miles on Reserved ROW	37.7%	38.0%
Ridership	Weekday Corridor Transit Trips	130,100	131,350
	Weekday S/N LRT Trips	61,600	62,750
Traffic	PM Peak Hour, Peak Direction V/C Ratio at:		
Highway Use	Between Mill & 4th Plain (I-5, Main, Broadway, Ft. Van.)	0.54	0.54
	N of 39th (15th, Main, I-5)	0.79	0.79
	S of 78th (Hwy 99, Hazel Dell Ave., I-205)	0.63	0.63
	St. Johns/Andreson (18th, 40th, 4th Plain, SR 500)	0.72	0.72
Traffic Issues		Restricted left turns	

Criteria	Measure	Highway 99	I-5
Fiscal Efficiency	Capital Cost (1994 $); 39th to 134th	$334	$229
Cost	Capital Cost (YOE $); 39th to 134th	$531	$364
(in millions of $)	Annual LRT Operating and Maintenance Cost (1994 $)	$18.59	$18.20
	Annual Bus Operating and Maintenance Savings (1994 $)	$0.28	$0.00
Cost Effectiveness	Effective LRT Operating Cost per Rider	$0.91	$0.88
	Cost Effectiveness Ratio	9.05	8.52
Promote Desired Land Use	Major Activity Centers Served	Vancouver CBD, Salmon Creek/WSU	Vancouver CBD, Salmon Creek/WSU
Support Major Activity Centers			
Support Bi-State Policies	Maintain Urban Growth Boundaries	yes	yes
Environmental Sensitivity	Possible Displacements (Residential/Commercial)	100+, mostly commercial	80+, commercial and residential
	Noise Impacts	More difficult to mitigate	Can mitigate with noise walls
	Ecosystem Impacts	Salmon Creek Xing	Salmon Creek Xing
	Historical and Cultural Impacts	No difference	

Notes:

All data is for year 2015, unless otherwise noted.
Data assumes LRT from Oregon City via I-205 to 179th St. in Clark County, unless otherwise noted.
Costs are in millions of $.
I-5 data assumes an east of I-5 alignment.
Bus O&M savings represents cost reduction from highest bus cost alternative.
Displacement data based on preliminary design without specific efforts to mitigate possible impacts.

Appendix B

Summary of Year of Expenditure Capital Costs

ıth/North Corridor Year of Expenditure Costs

I. Termini Alternative Costs
($Millions in Year of Expenditure)

By using the following table the various costs of the Tier I alternatives can be calculated. Select the cell that corresponds to the particular South and North Termini and then adjust that cost up or down according to the *Adjustment* provided.

Note: These termini costs are based on the Order of Magnitude (OOM) cost estimate ($1994) of the generic representative alignment factored to year of expenditure through proto-typical construction schedules.

Terminus Alternatives	39th St	88th St	134th St	179th St	Vancouver Mall
Milwaukie CBD	$2,108	$2,333	$2,472	$2,603	$2,569
Clackamas Town Center	$2,565	$2,790	$2,929	$3,060	$3,026
Oregon City via McLoughlin	$2,706	$2,930	$3,070	$3,201	$3,167
Oregon City via I-205	$3,122	$3,347	$3,486	$3,617	$3,584

II. Adjustments for Alignment Alternatives (YOE $millions)

Add (if a positive number) or subtract (if a negative number) these factors to any of the terminus alternatives above to determine year of expenditure capital cost of any combination of terminus and alignment alternatives. Costs are in millions of year of expenditure dollars.

1. *South Willamette River Crossings*

Hawthorne	*$ 0*
Caruthers	*$65*
Ross Island	*$59*
Sellwood	*$64*

2. *Eastbank Alternatives*

McLoughlin	*$ 0*
PTC	*$21*

3. *CBD Alternatives*

Surface	*$ 0*
Subway	*$275*

4. *Portland CBD - Vancouver*

I-5	*-$114*
Interstate Avenue	*$ 0*

5. *Vancouver - 179th Alternatives*

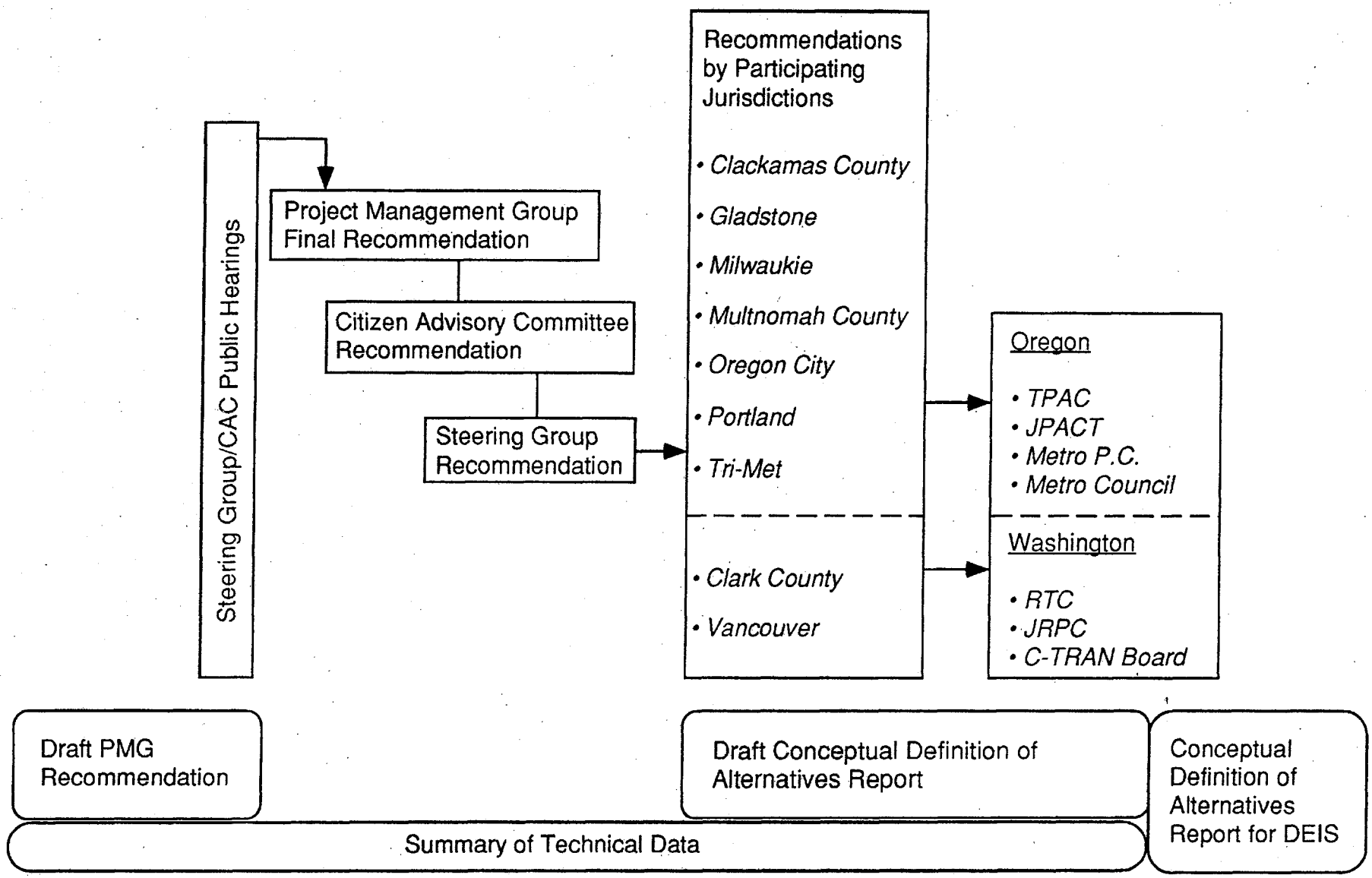
I-5 (east)	*$ 0*
I-5 (west)	*$15*
Highway 99	*$167*

Note: YOE costs reflect a final design and construction schedule, adjustments for inflation, reserve for yet-to-be determined design options, bonding issuance costs, interim borrowing costs and CAPRA.

Appendix C

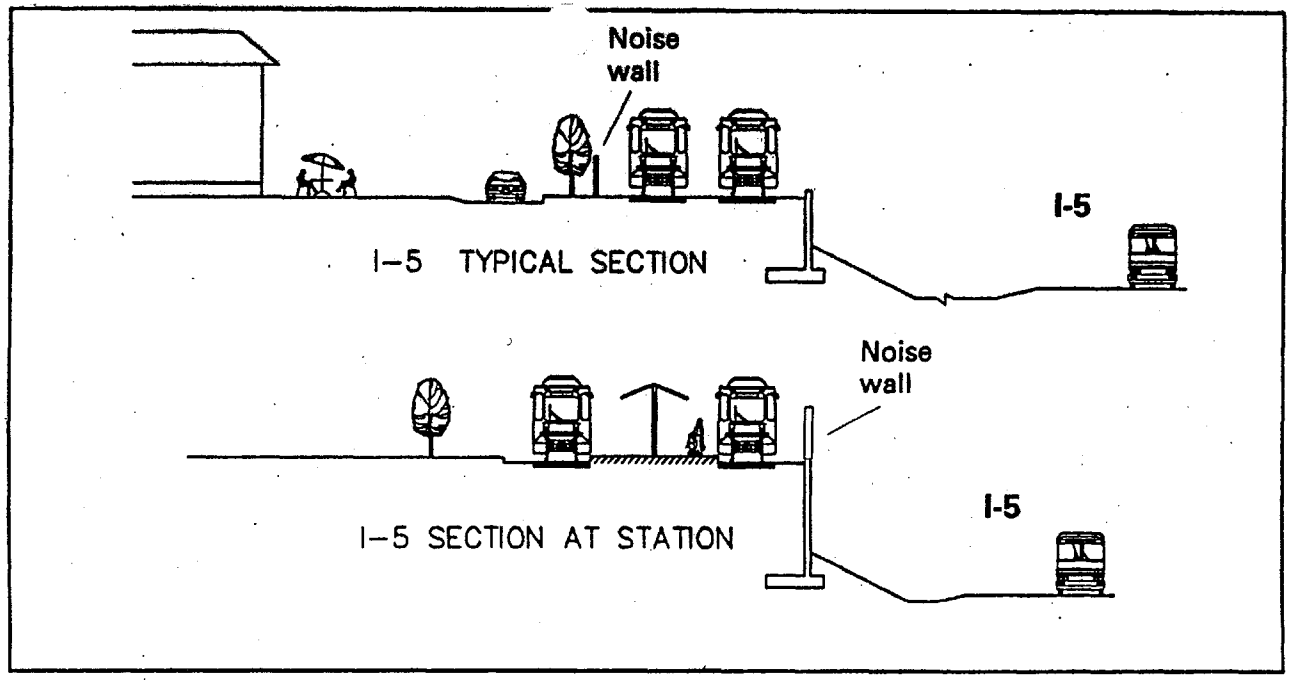
Tier I Process

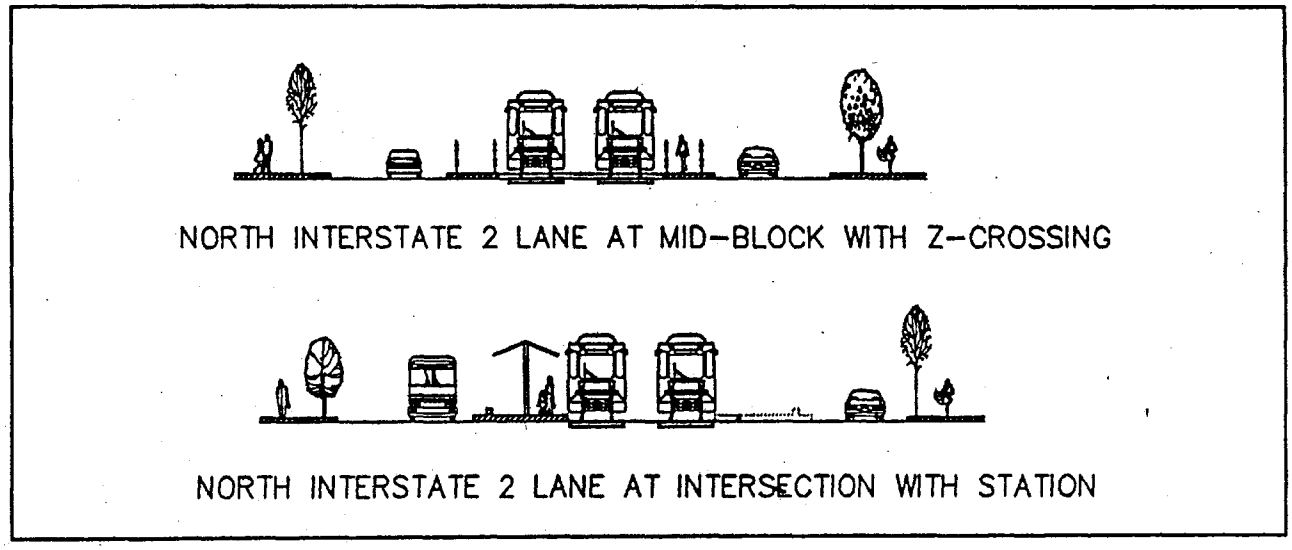
Tier I Decision Process



Appendix D

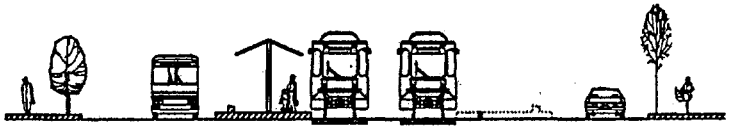
Sample Cross-Section Drawings





NORTH PORTLAND ALIGNMENT ALTERNATIVES
TYPICAL CROSS SECTIONS

SOUTH MCLOUGHLIN 4 LANE AT MID-BLOCK WITH Z-CROSSING



SOUTH MCLOUGHLIN 4 LANE AT INTERSECTION WITH STATION

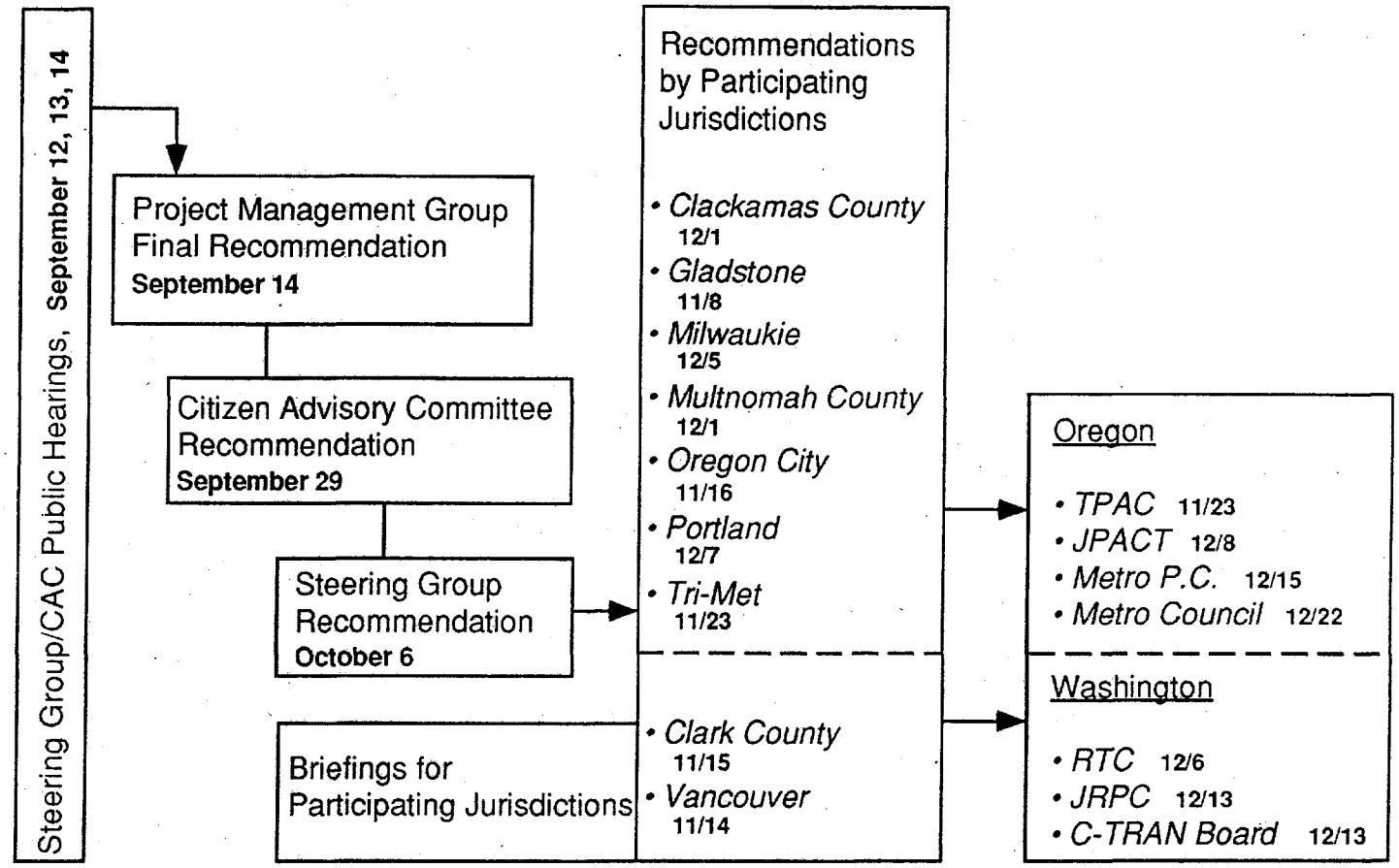
SOUTH MCLOUGHLIN ALIGNMENT ALTERNATIVES
TYPICAL CROSS SECTIONS

Attachment B

RESOLUTIONS OF SOUTH/NORTH PARTICIPATING JURISDICTIONS

- Clackamas County
- City of Gladstone
- City of Milwaukie
- Multnomah County
- Oregon City
- City of Portland
- Tri-Met
- Clark County
- City of Vancouver

Tier I Alternative Selection Process



Draft PMG Terminus Recommendation
August 25

Summary of Technical Data

Conceptual Definition of Alternatives Report for DEIS

BEFORE THE BOARD OF COUNTY COMMISSIONERS

OF CLACKAMAS COUNTY, STATE OF OREGON

FILED

DEC 9- 1994

JOHN F. KAUFFMAN, County Clerk

By _____ Deputy

In the Matter of Supporting the South/North Tier 1 Final Recommendation Report describing Light Rail Alternatives to Advance into the Tier II Draft Environmental Impact Statement for further study.

BOARD ORDER NO.: 94-1297

WHEREAS, in April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement, and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the Federal Register to publish a South/North Draft Environmental Impact Statement; and

WHEREAS, in December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North Evaluation Methodology Report, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the tier I study process is to forward its final Tier I Recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and.

WHEREAS, the Evaluation Methodology Report, further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected the conclusion of Scoping have been developed and the criteria and assumes from the Evaluation Methodology Report have been developed and documented within various technical memoranda, including the South/North Tier I Technical Summary Report and the South/North Tier I Briefing Document; and

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF CLACKAMAS COUNTY, STATE OF OREGON

In the Matter of Supporting the South/North Tier 1 Final Recommendation Report describing Light Rail Alternatives to Advance into the Tier II Draft Environmental Impact Statement for further study.

BOARD ORDER NO.:94-1297

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that, "The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study," and

WHEREAS, a comprehensive public involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an ongoing Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I recommendation identifies the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the Evaluation Methodology Report; now therefore,

BE IT RESOLVED, that the Clackamas County Board of Commissioners recommends to the Metro Council and the C-TRAN Board of Directors the following approach to continuation of the South/North Transit Corridor Study:

1. To pursue the South/North Corridor in two study phases:

   a. Phase I would consider a Light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.

   b. Phase II would consider an extension of the Phase I LRT Project south to Oregon City and north to the 134th Street/WSU area.

In the Matter of Supporting the South/North Tier 1 Final Recommendation Report describing Light Rail Alternatives to Advance into the Tier II Draft Environmental Impact Statement for further study.

These study phases would proceed as follows:

a. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.

b. If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

a. Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the Detailed Definition of Alternatives Report and developed further in the DEIS.

b. Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS.

c. Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS.

Because it has found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait completion of additional technical work and evaluation.

and further,

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF CLACKAMAS COUNTY, STATE OF OREGON

In the Matter of Supporting the South/North Tier 1 Final Recommendation Report describing Light Rail Alternatives to Advance into the Tier II Draft Environmental Impact Statement for further study.

BOARD ORDER NO.: 94-1297

BE IT RESOLVED, that the Clackamas County Board of Commissioners recommends that the Metro Council and the C-TRAN Board of Directors adopt the South/North Steering Group Tier I Final Recommendation Report describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

DATED this 1st day of December, 1994

BOARD OF COUNTY COMMISSIONERS

Ed Lindquist, Chairperson

Judie Hammerstad, Commissioner

Darlene Hooley, Commissioner

cc/rs/1115:jb

239 - 767

RESOLUTION NO. 730

RECOMMENDATION OF THE CITY OF GLADSTONE IN SUPPORT OF THE SOUTH/NORTH STEERING GROUP TIER I FINAL RECOMMENDATION REPORT DESCRIBING THE LIGHT RAIL ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY.

WHEREAS, in April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied with a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the Federal Register to publish a South/North Draft Environmental Impact Statement; and

WHEREAS, in December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North Evaluation Methodology Report, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the Evaluation Methodology Report, further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of Scoping have been developed and the criteria and measures from the Evaluation Methodology Report have been developed and documented within various technical memoranda, including the South/North Tier I Technical Summary Report and the South/North Tier I Briefing Document; and

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that, "The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study;" and

WHEREAS, a comprehensive involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an on-going Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in

September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identified the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the Evaluation Methodology Report,

NOW, THEREFORE, BE IT RESOLVED THAT THE COMMON COUNCIL OF THE CITY OF GLADSTONE recommends to the Metro Council and the C-TRAN Board of Directors the following approach to continuation of the South/North Transit Corridor Study:

1. *To pursue the South/North Corridor in two study phases:*

   a. *Phase I would consider a Light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.*

   b. *Phase II would consider an extension of the Phase I LRT Project south through Gladstone to Oregon City and north to the 134th Street/WSU area.*

2. *These study phases would proceed as follows:*

   a. *Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.*

   b. *If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.*

3. *The following alignments are alternatives for further study within the Draft Environmental Impact Statement:*

   a. *Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate Streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the Detailed Definition of Alternatives Report and developed further in the DEIS.*

   b. *Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS.*

   c. *Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS;*

4. *Because it has found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait completion of additional technical work and evaluation.*

BE IT FURTHER RESOLVED, THAT THE COMMON COUNCIL OF THE CITY OF GLADSTONE recommends that the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group Tier I Final Recommendation Report describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

This Resolution adopted by the Gladstone City Council and approved by the Mayor this _____ day of _____, 1994.

Attest:

Wade Byers

Wade Byers, Mayor

Verna Howell

Verna Howell, CMC, City Recorder

RESOLUTION NO. 51-1994

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILWAUKIE, OREGON, IN SUPPORT OF THE SOUTH/NORTH STEERING GROUP TIER I FINAL RECOMMENDATION REPORT DESCRIBING THE LIGHT RAIL ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY.

WHEREAS, in April, 1993, Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied with a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October, 1993, the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the Federal Register to publish a South/North Draft Environmental Impact Statement; and

WHEREAS, in December, 1993, the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North Evaluation Methodology Report, as adopted by the South/North Steering Group in December, 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the Evaluation Methodology Report further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of scoping have been developed and the criteria and measures from the Evaluation Methodology Report have been developed and documented within the various technical memoranda, including the South/North Tier I Technical Summary Report and the South/North Tier I Briefing Document; and

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that " ....the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study;" and

WHEREAS, a comprehensive involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an on-going Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identified the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December, 1993, by the South/North Steering Group within the Evaluation Methodology Report,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MILWAUKIE:

Section 1. That the Metro Council and the C-TRAN Board of Directors adopt the following approach to continuation of the South/North Transit Corridor Study:

A. To pursue the South/North Corridor in two phases:

1. Phase I would consider a Light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.

2. Phase II would consider an extension of the Phase I LRT Project south to Oregon City via I-205 or McLoughlin Blvd. and north to the 134th Street/WSU area.

B. These study phases would proceed as follows:

1. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.

2. If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

C. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

1. Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate Streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the Detailed Definition of Alternatives Report and developed further in the DEIS.

2. Within the Portland CBD that a surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS. If at the time the Draft Environmental Impact Statement is initiated it is concluded that a 5th/6th Avenue alignment cannot be developed that addresses those principles, other alternatives will be studied for further study in the DEIS.

3. Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS;

D. Because it has been found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait for completion of additional technical work and evaluation.

E. The following alignments will be considered for the Phase II extensions:

1. Following completion of the Detailed Definition of Alternatives Report, an analysis of the I-205 alignment from the CTC terminus and the McLoughlin alignment from the Milwaukie CBD to Oregon City will be made to determine which alignment will advance into the Phase II DEIS. The Portland Traction Company (PTC) right-of-way will not be considered as a Phase II alignment.

2. Between the vicinity of 99th Street and the area of 134th Street/WSU Branch Campus, the I-5 East alignment will advance into the Phase II DEIS.

Section 2. That the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group Tier I Final Recommendation Report describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

Introduced and adopted by the City Council on December 6, 1994.

Craig J. Lomnicki

Craig Lomnicki, Mayor

ATTEST:

Pat DuVal

Pat DuVal, City Recorder

Approved as to form:

O'Donnell Ramis Crew Corrigan & Bachrach

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

Recommendation in support of the South/North Steering Group Tier I Final Recommendation Report describing the Light Rail Alternatives to advance into Tier II Draft Environmental Impact Statement for further study.	)))))	RESOLUTION 94-231

WHEREAS, in April 1993 Metro Council and the C-Tran Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study, and combined them into the South/North Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Draft Environmental Impact Statement (DEIS); and

WHEREAS, in December 1993 the South/North Steering Group including Multnomah County representation, concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives into Tier I for further study; and

WHEREAS, the South/North *Evaluation Methodology Report*, as adopted by the South/North Steering Group in December 1993, prescribes the South/North Study organization and process for the conclusion of the Tier I study process, and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to Multnomah County and the other participating jurisdictions for their consideration, so that the County and other participating jurisdictions may forward their recommendations to the C-Tran Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the *Evaluation Methodology Report* further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of the Scoping Process have been developed, and the criteria and measures from the *Evaluation Methodology Report* have been developed and documented within various technical memoranda, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document*; and

WHEREAS, the technical methodologies, assumptions, and results have been reviewed by the South/North Expert Review Panel which found, in summary, that "The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study," and

WHEREAS, a comprehensive public involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an ongoing Citizens Advisory Committee including representation from Multnomah County, that received staff reports and presentations, provided regular public comment opportunities, and in September 1994, formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered Citizens Advisory Committee and Project Management Group recommendations, public comment, and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-Tran Board of Directors, and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identifies LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report*;

NOW, THEREFORE, BE IT RESOLVED that the Multnomah County Board of Commissioners recommends to the Metro Council and the C-Tran Board of Directors the following approach to continuation of the South/North Transit Corridor Study:

1. To pursue the South/North Corridor in two study phases:

   A. Phase I would consider a Light Rail Transit project between the Clackamas Town Center (CTC) area and the 99th Street area in Clark County.

   B. Phase II would consider an extension of the Phase I LRT project south to Oregon City and north to the 134th Street/WSU area.

2. These study phases would proceed as follows:

   A. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for Phase I LRT alternative would begin immediately.

   B. If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

3. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

   A. Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate Streets in the south, and the McLoughlin Blvd. alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further to determine whether it should also be included in the *Detailed Definition of Alternatives Report* and developed further in the DEIS.

B. Within the Portland CBD, a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS.

C. Between the Vancouver CBD and the 134th Street/Washington State University branch campus area for both Phase I and Phase II termini, the I-5 east Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS.

4. Because it has been found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall be made following completion of additional technical work and evaluation;

And further,

BE IT RESOLVED, that Multnomah County Board of Commissioners recommends that the C-Tran Board of Directors and Metro Council adopt the South/North Steering Group *Tier I Final Recommendation Report* describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

DATED this 1st day of December, 1994.

BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

Beverly Stein, Chair

REVIEWED:

LAURENCE KRESSEL, COUNTY COUNSEL
FOR MULTNOMAH COUNTY, OREGON

By _____
Assistant County Counsel

EPCK0870.RES

RESOLUTION NO. 94-56

A RESOLUTION EXPRESSING CITY COMMISSION SUPPORT OF TIER 1, SOUTH/NORTH LIGHT RAIL RECOMMENDATIONS

WHEREAS, on October 19, 1994, the Oregon City Urban Renewal Agency met in work session to review and comment on the final Tier 1 Final Recommendations adopted by the South/North Steering Committee; and

WHEREAS, on October 26, 1994, the Oregon City Commission met in work session to review and comment on the final Tier 1 Final Recommendations; and

WHEREAS, the Oregon City Commission believes that the South/North Light Rail (LRT) line is an essential element in addressing long range transportation needs in Oregon City, Clackamas County and the Region; and

WHEREAS, the Oregon City Commission believes that the South/North LRT project will reduce the dependency on the automobile, will provide better service to existing and future transit users, will support the End of the Oregon Trail Center and mixed-use development at Clackamette Cove, and will enhance revitalization efforts now underway in downtown Oregon City; and

WHEREAS, the Oregon City Commission is committed to a strong regional partnership which the Commission feels is necessary in order to advance future light rail projects in all parts of the Metro area.

Now, therefore,

BE IT RESOLVED that the City Commission of Oregon City, Oregon, supports of the Tier 1 Final Recommendations adopted by the South/North Steering Committee on October 6, 1994, which call for an ultimate Phase II South Terminus of the LRT Alternative in Oregon City; and

That the City Commission supports the Tier 1 Final Recommendations which identify the Clackamas Town Center as the Phase I South Terminus of the S/NLRT Alternative; and

That the City Commission commits the City to actively participate in all Phase I and II activities outlined in the Tier 1 Final Recommendations, and in coordination and advocacy activities involving Clackamas County and the cities in the County; and

That the Oregon City Commission recommends a "yes" vote on Measure No. 26-13, which will authorize Tri-Met to issue general obligation bonds to match federal funds to build the South/North LRT line.

BE IT FURTHER RESOLVED that the Oregon City Commission will request a joint meeting or meetings with the Clackamas County Commission to discuss and obtain County Commission support for several actions which will strengthen the prospects for extending LRT to Oregon City, and to formulate a joint City-County resolution in support of the project; and

That copies of the resolution be forwarded to the Clackamas County Commission.

Adopted, signed and approved this 2nd day of November, 1994.

Mayor

Commissioner

Commissioner

Commissioner

Commissioner

Comprising the City Commission
of Oregon City, Oregon

RESOLUTION NO. 35339

SUPPORT THE SOUTH/NORTH STEERING GROUP TIER I FINAL RECOMMENDATION REPORT DESCRIBING THE LIGHT RAIL ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY

WHEREAS, in April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Draft Environmental Impact Statement: and

WHEREAS, in December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North *Evaluation Methodology Report*, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement: and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAM Board of Directors and Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the *Evaluation Methodology Report*, further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of Scoping have been developed and the criteria and measures from the *Evaluation Methodology Report* have been developed and documented within various technical memoranda, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document*, and

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, the "The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study," and

WHEREAS, a comprehensive public involvement program was developed and implemented by the south/north study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meeting for the Steering Group to receive oral public comment, and an on-going Citizens Advisory Committee that received staff reports and presentations, provided regular public

comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identifies the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report*; now therefore,

BE IT RESOLVED, that the Portland City Council recommends to the Metro Council the following approach to continuation of the South/North Transit Corridor Study:

1. To pursue the South/North Corridor in two study phases:

    a. Phase I would consider a light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.

    b. Phase II would consider an extension of the Phase I LRT Project south to Oregon City and north to the 134th Street/WSU area.

2. These study phases would proceed as follows:

    a. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.

    b. If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

3. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

    a. Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the *Detailed Definition of Alternatives Report* and developed further in the DEIS.

    b. Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles, for further study within the DEIS. If at that time it is not concluded that a 5th/6th Avenue Surface Alignment can be developed that addresses the principles identified in the Tier I Final Recommendation, other alternatives would be developed for further study within the DEIS.

c. Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS:

4. Because it has found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait completion of additional technical work and evluation; and further

BE IT RESOLVED, that the Portland City Council recommends that the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group *Tier I Final Recommendation Report* describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

Adopted by the Council: NOV 30 1994
Commissioner Blumenauer
Barrow Emerson
Nov. 20, 1994

BARBARA CLARK
Auditor of the City of Portland
By: Deputy
Britta Olson

TRI-COUNTY
METROPOLITAN
TRANSPORTATION
DISTRICT
OF OREGON

TRI-MET

4012 S.E. 17TH AVENUE
PORTLAND, OREGON 97202
(503) 238-RIDE

December 1, 1994

Councillor Rod Monroe, Chair
Joint Policy Advisory Committee on Transportation
Metro Regional Center
600 NE Grand Avenue
Portland, Oregon 97232-2736

Dear Councillor Monroe:

The enclosed resolution adopted by the Tri-Met Board on November 30, 1994, supports the recommendations of the S/N Steering Committee in its Alignment Alternatives Report dated October 6, 1994.

Our Board appreciates the effort and leadership you and the Steering Committee have contributed in advancing the S/N project thus far.

Two recommendations in your report, referenced in our resolution, need special comment:

1. On the Willamette River crossing south of downtown, we expect that both the Ross Island options and the Caruthers option will be given equal consideration during the next phase of study scheduled to be completed in April.

2. On the downtown alignment we expect a detailed and comprehensive analysis of the 5th and 6th Avenue surface alignment to be completed by April. If the analysis is unable to demonstrate that the 5th and 6th Avenue surface alignment is capable of handling future service levels anticipated over the next 30 years we would then expect that other options (including tunnel) would be introduced into the process.

Our support of the attached resolution is conditioned upon the above stated expectations. We request that project staff report findings on these two alignment options to our Board prior to commencement of the DEIS phase of the project in April, 1995.

Sincerely,

William D. Robertson/dsmith

William D. Robertson, Jr.
President, Board of Directors

RESOLUTION 94-11-91

RESOLUTION OF THE TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT (TRI-MET) BOARD OF DIRECTORS IN SUPPORT OF THE SOUTH/NORTH STEERING GROUP TIER I FINAL RECOMMENDATION REPORT.

WHEREAS, in April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Draft Environmental Impact Statement; and

WHEREAS, in December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North *Evaluation Methodology Report*, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the *Evaluation Methodology Report*, further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of Scoping have been developed and the criteria and measures from the *Evaluation Methodology Report* have been developed and documented within various technical memoranda, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document*; and

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that, " The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study;" and

WHEREAS, a comprehensive public involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an on-going Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identifies the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report;*

NOW, THEREFORE, BE IT RESOLVED:

1. That the Tri-Met Board of Directors recommends to the Metro Council and the C-TRAN Board of Directors the following approach to continue the South/North Transit Corridor Study:

    A. Pursue the South/North Corridor in two study phases:

        1.) Phase I would consider a Light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.

        2.) Phase II would consider an extension of the Phase I LRT Project south to Oregon City and north to the 134th Street/WSU area.

B. These study phases would proceed as follows:

1.) Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.

2.) If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

C. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

1.) Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further to determine whether it also should be included in the *Detailed Definition of Alternatives Report* and developed further in the DEIS.

2.) Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS.

3.) Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS.

D. Because it has found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs should wait completion of additional technical work and evaluation.

2. That the Tri-Met Board of Directors recommends that the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group Tier I Final Recommendation Report describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

Dated: November 30, 1994

Presiding Officer

Attest:

Recording Secretary

Approved as to Legal Sufficiency:

Legal Department

CLARK COUNTY, WASHINGTON

RESOLUTION NO. 1994-11-31

RECOMMENDATION OF THE BOARD OF COUNTY COMMISSIONERS OF CLARK COUNTY IN SUPPORT OF THE SOUTH/NORTH STEERING GROUP TIER I FINAL RECOMMENDATION REPORT DESCRIBING THE LIGHT RAIL ALTERNATIVES TO ADVANCE INTO THE TIER II DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR FURTHER STUDY.

WHEREAS, in the April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study. These corridors were identified as the South/North Corridor for further study within the federal Alternatives Analysis/Draft Environmental Impact Statement. In October 1993, the Federal Transit Administration approved the South/North application to initiate the Alternative Analysis/Draft Environmental Impact Statement and a South/North Preliminary Work Plan. In addition, the Federal Transit Administration issued a notification of intent in the *Federal Register* to publish a South/North Draft Environmental Impact Statement.

In December 1993, the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives. Based on this analysis, the light rail transit and various light rail terminus and alignment alternatives were advanced into the Tier I phase for further study. In addition, the South/North Steering Group adopted the *South/North Evaluation Methodology Report* prescribing the South/North study organization and process for the conclusion of the Tier I study process and selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement. From the completed work of Tier I, the South/North Steering Group developed a set of recommendations for consideration from participating jurisdictions. These jurisdictions will forward their recommendations on to the C-TRAN Board of Directors and the Metro Council who will make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement. The *Evaluation Methodology Report* describes the criteria and measures to be used to select the alternatives into Tier II and the Draft Environmental Impact Statement.

The alternatives that were selected at the conclusion of Scoping have been developed and the criteria and measures from the *Evaluation Methodology Report* have been developed and documented within various technical memorandum, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document.*

These recommendations of the Steering Group were developed with input from the South/North Expert Review Panel, Citizen Advisory Committee, and the general public. A comprehensive public involvement program was developed which yielded many opportunities for citizens to participate through community meetings, and a 60-day comment period on Tier I alternatives and data. In addition, the Citizen Advisory Committee in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration.

In October 1994 the Steering Group considered the Citizen Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures

and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration. In addition, the Growth Management planning process supports these recommendations throughout the Clark County region. Moreover, the Steering Group's Final Tier I Recommendation identifies the Light Rail Transit alternatives that they concluded best meeting the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report*.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF CLARK COUNTY, STATE OF WASHINGTON, recommends to the Metro Council and the C-TRAN Board of Directors the following approach to continuation of the South/North Transit Corridor Study:

1. To pursue the South/North Corridor in two study phases:

   a. Phase I would consider a Light Rail Transit (LRT) Project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.

   b. Phase II would consider an extension of the Phase I LRT south to Oregon City and north to the 134th Street/WSU area.

2. These study phases would proceed as follows:

   a. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.

   b. IF LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

3. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

   a. Between the Portland and Milwaukie CBDs, the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the *Detailed Definition of Alternatives Report* and developed further in the DEIS.

   b. Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within DEIS.

   c. Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS.

4. Because it has been found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait completion of additional technical work and evaluation.

FURTHER BE IT RESOLVED, that the Board of County Commissioners of Clark County recommends that the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group *Tier I Final Recommendations Report* describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

ADOPTED by the Board of County Commissioners of Clark County, Washington, at a regular open public meeting thereof, this 15th day of November 1994.

ATTEST:

By _____
Clerk to the Board

Approved as to Form Only
ARTHUR D. CURTIS
Prosecuting Attorney

By _____
Richard S. Lowry, Chief Civil Deputy
Prosecuting Attorney

BOARD OF COUNTY COMMISSIONERS
FOR CLARK COUNTY, WASHINGTON

By _____
JOHN C. MAGNANO, Chair of the Board

By _____
BUSSE NUTLEY, Commissioner

By _____
DAVID W. STURDEVANT, Commissioner

STAFF REPORT

DEPARTMENT/DIVISION:	Public Works/Transportation
DATE:	November 2, 1994
SPECIFIC REQUEST:	Board Approval of the Attached Resolution for South/ North Transit Corridor Study Tier I Final Recommendations
CHECK ONE:	[X] Consent [ ] Worksession [ ] Public Hearing

BACKGROUND: Because of the size and complexity, the Alternative Analysis and Draft Environmental Impact Statement for the South/North Transit Corridor Study are being undertaken in two steps (Tier I and II). Work for Tier I has been completed through a collaborative effort by staff from affected jurisdictions in the Clark County region and Oregon. On the basis of this work, the Regional Steering Group for this study has brought forward a set of recommendations for approval by local jurisdictions, and final adoption by the C-TRAN Board and Metro. Tier II will focus on preparing a Draft Environmental Impact Statement on a narrowed set of Light Rail Transit alternatives, a No-Build alternative and a Transportation Systems Management alternative. Tier II will conclude with the selection of the Locally Preferred Alternative.

Tier I included the examination of four major issues in order to narrow the number of alternatives to be addressed in the Draft Environmental Impact Statement. These issues included the evaluation of 1) modal alternatives (busways, river transit, commuter and light rail), 2) alignment alternatives, 3) terminus alternatives and 4) design options. The following summary details the recommendations directly impacting the Clark County region.

- The examination of the modal alternatives of Tier I started about one year ago with the initiation of the federally-mandated *Scoping* process. Based on analyses and public input provided during *Scoping*, the high capacity transit alternatives were narrowed to one mode -- light rail transit.

- With regard to the analysis of terminus alternatives, the Steering Group has recommended that the South/North Project be pursued in two phases. Phase I would consider a project which best meets the evaluation criteria established for Tier I and is also constrained by current estimates of potential funding. Work on the Draft Environmental Impact Statement for a Phase I alternative would begin immediately. Phase II would consider a future extension of the South/North Light Transit Rail to endpoints farther into Clark County, if Light Rail Transit is the locally preferred alternative. Based on these premises, the Steering Group has recommended that the 99th Street area serve as the Phase I terminus while the 134th Street/WSU area is recommended as the Phase II terminus. A phased approach allows any Phase II projects to be included in the Regional Transportation Plans and Growth Management Policies of local jurisdictions.

- The examination of the alignment alternatives has led the Steering Group to recommend the I-5 East alignment alternative for the segment from the Vancouver Central Business District to the vicinity of 99th Street for Phase I. The I-5 East Alignment Alternative is also the recommended alignment between 99th Street and the 134th Street/WSU area for Phase II.

- Finally, within the alignment alternatives recommended above, the following more detailed "Design Options" will remain under study and will be addressed in the *Detailed Definition of Alternatives Report* (which will serve as a basis for the Draft Environmental Impact Statement):

a) The alignment through the Vancouver Central Business District

b) The Columbia River Crossing (high bridge, lift span, or tunnel).

c) The locations of park-and-ride lots, transit centers, stations and maintenance facilities.

d) Other design options as required.

The timing of local jurisdiction's approval and the C-TRAN/Metro adoption of these recommendations is directly related to the funding opportunities available for this project. It is essential that the C-TRAN Board and Metro adopt these recommendations by the end of this year. Approval of these recommendations by local jurisdictions will assist in expediting this process in a timely manner.

ACTION REQUESTED\BUDGET IMPLICATIONS: It is requested that the Board of County Commissioners approve, by signature, the attached resolution. The attached resolution does not have direct budget implications to the County at this time.

DISTRIBUTION: Return an approved copy of this Staff Report and the resolution to the Department of Public Works/Transportation Division.

Paul S. Haines, County Engineer

APPROVED: 11-15-94 SR 460-94
CLARK COUNTY, WASHINGTON
BOARD OF COMMISSIONERS

Ron S. Bergman, Director of Public Works

PSH:RSB:mw

Attachments: Tier I Final Recommendation Report
South/North Resolution

11/14/94

RESOLUTION NO. M-2930

A RESOLUTION recommending that the C-TRAN Board of Directors and Metro Council adopt the Tier I Final Recommendation Report which describes the light rail terminal and alignment alternatives and recommends that the process advance to the Tier II, Draft Environmental Impact Statement stage.

WHEREAS, in April 1993 Metro Council and the C-TRAN Board of Directors selected the Milwaukie and I-5 North Corridors as the region's next high capacity transit priority for study and combined them into the South/North Corridor to be studied within a federal Alternatives Analysis/Draft Environmental Impact Statement; and

WHEREAS, in October 1993 the Federal Transit Administration approved the South/North application to initiate Alternative Analysis/Draft Environmental Impact Statement and the South/North Preliminary Work Plan, and issued notification of intent in the *Federal Register* to publish a South/North Draft Environmental Impact Statement; and

WHEREAS, in December 1993 the South/North Steering Group concluded the federally prescribed Scoping Process, which included a comparative analysis of various high capacity transit mode alternatives, by selecting the light rail transit and various light rail terminus and alignment alternatives to advance into Tier I for further study; and

WHEREAS, the South/North *Evaluation Methodology Report*, as adopted by the South/North Steering Group in December 1993, prescribes the South/North study organization and process for the conclusion of the Tier I study process and the selection of the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the role of the South/North Steering Group in the Tier I study process is to forward its final Tier I recommendation to participating jurisdictions for their consideration, that participating jurisdictions are to forward their recommendations to the C-

TRAN Board of Directors and the Metro Council who are to make the final determination of the alternatives to advance into the Tier II Draft Environmental Impact Statement for further study; and

WHEREAS, the *Evaluation Methodology Report,* further prescribes the criteria and measures to be used to select the alternatives to advance into Tier II and the Draft Environmental Impact Statement; and

WHEREAS, the alternatives that were selected at the conclusion of Scoping have been developed and the criteria and measures from the *Evaluation Methodology Report* have been developed and documented within various technical memoranda, including the *South/North Tier I Technical Summary Report* and the *South/North Tier I Briefing Document*; and

WHEREAS, the technical methodologies, assumptions and results have been reviewed by the South/North Expert Review Panel which found, in summary, that, " The Panel finds that the data developed is sufficient to make the decisions regarding which alternatives should be carried forward for further study;" and

WHEREAS, a comprehensive public involvement program was developed and implemented by the South/North Study that included but was not limited to a variety of community meetings, a 60-day public comment period on the Tier I alternatives and data, meetings for the Steering Group to receive oral public comment, and an on-going Citizens Advisory Committee that received staff reports and presentations, provided regular public comment opportunities, and in September 1994 formed an independent Tier I recommendation that was forwarded to the Steering Group for its consideration; and

WHEREAS, in October 1994 the Steering Group considered the Citizens Advisory Committee and Project Management Group recommendations, public comment and the Tier I criteria and measures and issued its own unanimous Tier I recommendation to the participating jurisdictions, C-TRAN Board of Directors and Metro Council for their consideration; and

WHEREAS, the Steering Group's Final Tier I Recommendation identifies the LRT alternatives that they concluded best meet the project's goal and objectives as adopted in December 1993 by the South/North Steering Group within the *Evaluation Methodology Report*; and

WHEREAS, on November 7, 1994 the Vancouver City Council adopted the Vancouver Urban Area Comprehensive Plan which strongly emphasizes alternative modes of transportation, including light rail transit,

NOW THEREFORE,

BE IT RESOLVED BY THE CITY OF VANCOUVER:

Section 1. That the City of Vancouver recommends to the Metro Council and the C-TRAN Board of Directors the following approach to continuation of the South/North Transit Corridor Study:

1. To pursue the South/North Corridor in two study phases:
   a. Phase I would consider a Light Rail Transit project between the Clackamas Town Center area (CTC) and the 99th Street area in Clark County.
   b. Phase II would consider an extension of the Phase I LRT Project south to Oregon City and north to the 134th Street/WSU area.
2. These study phases would proceed as follows:
   a. Preparation of the Draft Environmental Impact Statement (DEIS) and funding plan for the Phase I LRT alternative would begin immediately.
   b. If LRT is selected as the Locally Preferred Alternative in Phase I, a DEIS and funding strategy for the Phase II LRT extension would be prepared upon completion of the Final Environmental Impact Statement (FEIS) for Phase I.

3. The following alignments are alternatives for further study within the Draft Environmental Impact Statement:

   a. Between the Portland and Milwaukie CBDs, that the Ross Island Bridge Crossing, generally between the Ross Island Bridge in the north and Bancroft and Holgate streets in the south, and the McLoughlin Boulevard alignment shall be developed for further study within the DEIS. The Caruthers area crossing will be evaluated further in order to determine whether it should also be included in the *Detailed Definition of Alternatives Report* and developed further in the DEIS.

   b. Within the Portland CBD that a Surface LRT Alternative on 5th and 6th Avenues shall be developed based upon several principles for further study within the DEIS.

   c. Between the Vancouver CBD and the 134th/Washington State University branch campus area for both the Phase I and Phase II termini, the I-5 East Alignment Alternative with station areas between I-5 and Highway 99 shall be developed for further study within the DEIS.

4. Because it has found that further discussions and analysis should occur, a recommendation for the segment between the Portland and Vancouver CBDs shall wait completion of additional technical work and evaluation.

and further, BE IT RESOLVED BY THE CITY OF VANCOUVER:

Section 2. That the City of Vancouver recommends that the C-TRAN Board of Directors and Metro Council adopt the South/North Steering Group *Tier I Final Recommendation Report* describing the light rail terminus and alignment alternatives to advance into the Tier II Draft Environmental Impact Statement for further study.

ADOPTED at regular session of the Council of the City of Vancouver, at 14th day of November, 1994.

Bruce E. Hagensen, Mayor

Attest:

H. K. Shorthill, City Clerk

Approved as to form:

Ted H. Gathe, City Attorney

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COMMITTEE MEETING TITLE JPACT

DATE 12-8-94

NAME	AFFILIATION
David Rasmussen	CWG #1
Jim Howell	AORTA
Mike Burton	metro
Robert Harrison	OMSI Board
Tom Groenfeldt	SEUL Board
Kent Curtis	Wash Co
Timothy Baker	SE Uplift
Chuck Steinwandel	B.I. Jaycees
Chris Matthews	Perkins Coie
Keith Ahola	WSDOT
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JOAN A. Kugler	CH2M Hill
ROD SANDOZ	CLACKAMAS COUNTY
✓ STEVE DOTTERRER	CITY OF PORTLAND STAFF
Col B. ARRINGTON	TRI-MET
✓ Meeky Blizzard	Earl Blumenauer's staff
Les White	C-TRAN
Bob Bothman	MCCI
Dave Unsworth	Metro
Molly O'Reilly	SOP
Heather Nelson	metro
Pat Collmeyer	Neil Goldschmidt, Inc.
Bob Boileau	SEDA
GORDON OLIVER	OREGONIAN
GINA Whitehill-Baziuk	Metro

COMMITTEE MEETING TITLE JPACT

DATE 12-8-94

NAME	AFFILIATION
Earl Blumenauer	Portland
Henry Smith	WSDOT
Dave Sturdevant	Clark Co.
Len Sklles	Metro
Richard Brandman	Metro
Karl Monroe	Metro Council
Andy Cotugno	Metro
Bob Post	TRI-MET
Jon Kvistad	Metro Council
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Susan McLain	Metro Council
R. E. Fallquist	Vancouver
[illegible]	Clackamas Co.
Bernie Giusto	Cities of Mult County
Rob Drake	Cities of Washington Co.
Bruce Warner	ODOT
Richard Ross	Cities of Mult Co.
Bing Sheldon	Ross Island Crossing
Leonard Bergstein	Northwest Strategies / Carruthers Crossing
Darin Atteberry	Vancouver
Dean Lookingbill	RTC
Mary Legry	WSDOT
Peter Fry	Central Eastside Industrial Council