BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE SOUTH/NORTH STEERING COMMITTEE COMMUTER RAIL OVERVIEW AND RECOMMENDATION REPORT	))))	RESOLUTION NO. 97-2507 Introduced by: Councilor Washington

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

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

WHEREAS, In June and July 1993, a series of South/North Transit Corridor Study mode and alignment workshops were held and over 71 percent of respondents preferred light rail over the other mode options while only 7 percent preferred commuter rail; and

WHEREAS, The 1993 *South/North Scoping Process and Narrowing Report* evaluated commuter rail as one of several high-capacity mode alternatives for the South/North Transit Corridor and, based on that analysis, it was determined that commuter rail should not be studied further in the South/North Draft Environmental Impact Statement; and

WHEREAS, In November 1996, an analysis was initiated by the South/North Project Management Group to evaluate commuter rail as a potential cost-cutting alternative for the South/North Transit Corridor Study; and

WHEREAS, The South/North Project Management Group analysis found that commuter rail generally serves longer distance inter-regional trips, typically 15 to 75 miles in length, while the South/North Corridor travel market consists of shorter urban trips, generally less than 15 miles long; and

WHEREAS, The South/North Project Management Group analysis found that commuter rail in the South/North Corridor would not address the transportation problems and growth management goals in the South/North Corridor; and

WHEREAS, The South/North Project Management Group analysis found that commuter rail costs, ridership and other benefits and impacts are dependent upon a specific corridor's travel market and availability of existing freight rail lines and may be appropriate in some travel

corridors; and

WHEREAS, In March 1997, the South/North Light Rail Project initiated a 30-day public comment period on cost-cutting measures proposed by the South/North Project Management Group including a recommendation for the Joint Policy Advisory Committee on Transportation to host a series of workshops to determine if commuter rail should be considered further for inclusion in the Regional Transportation Plan; and

WHEREAS, In April 1997, the South/North Steering Committee endorsed the Project Management Group's and Citizen Advisory Committee's recommendation that commuter rail not be studied further in the South/North Draft Environmental Impact Statement and that the Joint Policy Advisory Committee on Transportation host a series of workshops to determine if commuter rail should be considered further for inclusion in the Regional Transportation Plan; now, therefore,

BE IT RESOLVED:

1. That Exhibit A is hereby adopted as the *South/North Commuter Rail Overview and Findings Report.*

2. That commuter rail not be studied further in the South/North Draft Environmental Impact Statement.

3. That the Joint Policy Advisory Committee on Transportation conduct a series of workshops to determine if commuter rail should be considered further for inclusion in the Regional Transportation Plan.

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

Jon Kvistad

Jon Kvistad, Presiding Officer

Approved as to Form:

Daniel B. Cooper, Legal Counsel

97-2507.RES/5-6-97
LS:lmk

South North
Transit Corridor Study

draft

Exhibit A

Commuter Rail Final Report

Metro Council

May 8, 1997

METRO

South/North Commuter Rail Draft Final Report

1. Introduction

During the South/North Scoping Process in 1993 commuter rail was studied as a possible high capacity transit (HCT) mode alternative for serving travel demand in the South/North corridor. Based on public comment and the analysis of criteria including ease of access, cost, ridership, and land-use implications, light rail was identified as the preferred mode for providing high capacity service in the corridor. It was recommended that commuter rail not be analyzed further in the South/North Transit Corridor Study.

Although it was determined that commuter rail was not a suitable HCT mode for the South/North Corridor, it may still serve a role in addressing future regional transportation needs. The purpose of this *South/North Commuter Rail Final Report* is to update and summarize earlier technical analysis and to describe the plan of action adopted by the Metro Council for further study of commuter rail in the Portland/Vancouver metropolitan region. Specifically, this final report describes a strategy to evaluate commuter rail as part of the comprehensive regional transportation planning process. To accomplish this, commuter rail will be addressed in a regionally coordinated effort to determine whether commuter rail should be incorporated into Metro's Regional Transportation Plan (RTP). The following sections describe commuter rail's general characteristics, applications of commuter rail in several west coast cities, an evaluation of how commuter rail would perform in the South/North Corridor and conclusions reached based upon this analysis.

The process which led to the *South/North Commuter Rail Final Report* included a 30-day public comment period, which extended from March 14 to April 14, 1997. Public comments were received at two meetings hosted by the South/North Steering Committee on April 8 and 9, 1997. Comments were also received by mail, through the Transportation Hotline and on the project's Web page. Documentation of all citizen input received during the comment period is provided in the *Public Comments on South/North Cost-Cutting Proposals Report* (Metro: April 1997). The public comment period was followed by the adoption recommendations from the Project Management Group (PMG), Citizens Advisory Committee (CAC) and Steering Committee. In summary, each of these committees recommended: 1) that commuter rail not be studied as part of the South/North Draft Environmental Impact Statement (DEIS); and 2) that the Joint Policy Advisory Committee on Transportation (JPACT) host a series of workshops to determine whether commuter rail should be studied further in the RTP.

2. Commuter Rail Overview

2.1 Mode Description

Commuter rail is passenger rail service which typically operates within a large, expansive metropolitan area, typically during the a.m. and p.m. peak commute periods serving peak directional flows from outlying communities to major employment centers, usually the central business district (CBD). Commuter rail lines range in length, but on average the length from an exurban terminus to the central business district ranges from 40 to 80 miles. Commuter rail uses existing railroad right-of-way when possible, which can reduce construction costs and the need to acquire land. However, some degree of track improvement or new trackage is usually required by the host railroad company.

Operations is usually handled as part of the regional transportation system or by a railroad company under contract to a public agency. Oversight of rail operations is provided by a range of public agencies including local and regional governments, transit agencies, state departments of transportation (DOT) and non-profit, quasi-public, single-purpose passenger rail agencies.

In comparison with light rail, commuter rail is typically used for longer distance service from relatively large, outlying communities to a CBD with dense employment, stops are less frequent than LRT, averaging between one and four miles with some spaced as much as fifteen miles apart. Commuter rail trips are typically longer and more expensive than a light rail trip. Light rail also tends to carry many times more trips per station because its operation is typified by all-day service with frequent headways and frequent stops.

In order to understand better the characteristics of new commuter rail systems, Metro has conducted research, with particular emphasis on recent, west coast operations. The typical east coast commuter rail service (e.g. New York, Philadelphia, Boston), tends to be much older and serves urban areas of a scale and type that are not representative of Portland. The following sections provide detail on west coast commuter rail operations, with particular focus on San Diego and Vancouver, British Columbia (B.C.) which are the two west coast cities with existing commuter rail operations that are most similar to Portland, although both are larger cities.

2.2 Fare Structure

Based primarily on west coast commuter rail service, fares are typically categorized by travel zones and range widely based on distance traveled. Discounts are offered for 10-ride tickets, monthly tickets and in many cases tickets are valid for transfers to other regional transit modes. Below are comparisons between the cost for a 20 mile trip to a CBD for various commuter rail lines.

Commuter Rail Cost Comparisons for 20 Mile Trip

Commuter Rail Service	Cost of 1-Way 20 Mile Trip (1997)
MetroLink (Los Angeles Area)	$ 4.50
CalTrain (San Francisco)	$ 3.75
West Coast Express (Vancouver, B.C.)	$ 3.00 (U.S.)
The Coaster (San Diego)	$ 3.00

Source: Metro 1997

2.3 Station Spacing

Station spacing varies considerably among west coast commuter lines. Portions of CalTrain's San Francisco service and Los Angeles' MetroLink service, for example, have station spacing of 1 to 3 miles. For other sections of service, particularly on express trains, stations can be spaced 5 to 15 miles apart. The West Coast Express which serves Vancouver, British Columbia has spacing

between stations of 2 to 15 miles. Such differences in station spacing appear to be linked to the density of population and employment in the areas served by a commuter rail line.

2.4 Description of Service

Commuter rail service hours of operation and headways vary substantially. Generally, in larger urbanized areas where commuter rail serves the CBD, as well as major population and employment centers, service is provided throughout the day with higher frequency in both directions during the morning and evening peaks. In San Francisco and Los Angeles, for example, some a.m. and p.m. peak period trains run at 10 to 15 minutes headways for lines which service large population and employment centers outside the CBD. Service continues mid-day for many lines (some lines are peak-hour only). Mid-day headways in these cities generally range from 30 to 60 minutes.

In comparison, in cities with well-defined CBDs and few additional large population and employment centers, service may be during the peak hour and in the peak direction only. Examples are San Diego and Vancouver, B.C. (peak periods are approximately 5:30 to 8:30 in the morning and 3:30 to 6:30 in the evening). Headways for both cities are 30 minutes. One mid-day train, and limited weekend and special event service have also been integrated in San Diego.

2.5 Function, Purpose and Market Niche

Findings in a recent study of planned and existing light rail and commuter rail service across the nation help define the function, purpose and market niche filled by commuter rail. They are listed below. Many of these findings were substantiated by a closer evaluation of five west coast commuter rail lines (4 existing and 1 planned) included in this memorandum.

- Commuter rail service requires dense Central Business Districts (CBDs) but can operate in low density residential areas, especially if access via park-and-rides and feeder bus service is provided.
- Commuter rail costs vary with CBD size and line length, however, cost-effectiveness increases with CBD employment size and residential density.
- In comparison with light rail, ridership depends on large CBDs and relatively long distance lines.
- In comparison with light rail, commuter rail provides service to lower residential densities further from the CBD.

Based on the abovementioned analysis and more recent commuter rail patron surveys conducted by San Diego and Vancouver, B.C., it has been found that the majority of commuter rail patrons hold professional/technical positions and ride the train during the peak periods to and from place of employment in or near the CBD. The percentage of home-to-work trips of all commuter rail trips

was 79% in San Diego (1995), 84% in Los Angeles (1995) and approximately 95% in Vancouver, B.C. (1996). Surveys indicate that riders have above average income and are predominantly in the age range of 30 to 50. Most riders have 1 or 2 vehicles available for use in their household.

Most patrons board commuter rail via park-and-rides. However, as shown below, percentages for each mode of access can vary considerably between jurisdictions.

Mode of Access to Commuter Rail Stations

Mode of Access	San Diego (Coaster)[1]	Los Angeles (MetroLink)[2]	Vancouver, B.C. (West Coast Express)[3]
Park-and-Ride (including carpools)	60.4%	79%	70%
Bus Service	9.8%	3%	20%
Walk-Ons	11.3%	3%	5%
Drop-Offs	15.3%	14%	5%
Other (e.g. bikes)	3.2%	1%	0%

1 1995 San Diego Association of Governments Onboard Transit Survey
2 June 1995 MetroLink Customer Satisfaction Survey
3 1996 West Coast Express Survey

2.6 Average Weekday Ridership Comparison

The following table provides average weekday ridership data for five operating west coast commuter rail lines. The average one-way length for these 5 operations is 59 miles and the average daily ridership is 8,500. The Caltrain operation between Gilroy and San Francisco displays exceptional ridership because it operates through several major employment centers such as San Jose, Santa Clara, Palo Alto and downtown San Francisco. The average daily ridership of the other four routes when not including the exceptional CalTrain Bay Area service is 4,850.

Each of these commuter rail routes are located in metropolitan areas with higher population and employment than is found in Portland and each has a central business district with higher employment levels than Portland's CBD.

Comparisons in Average Weekday Ridership

Commuter Rail Service Provider	1996 Average Weekday Ridership	Miles of Service to CBD	Regional Population (millions)
MetroLink: Santa Clarita to Los Angeles	3,588	77	14.5
MetroLink: San Bernardino to Los Angeles	6,883	56	14.5
CalTrain: Gilroy and points north to San Francisco	23,000	77	6.3
West Coast Express: Mission to Vancouver, B.C.	6,000	41	1.5
The Coaster: Oceanside to San Diego	3,000	43	2.5

Source: Metro 1997

3. Summary of Commuter Rail in other Regions of the West Coast

This section summarizes commuter rail service in other west coast cities including San Diego, CA, Los Angeles, CA, San Francisco, CA, Seattle, WA, and Vancouver, B.C. In general, the locations served by commuter rail in these areas are more densely populated and more extensively urbanized than the Portland metropolitan region. However, this information can provide insight into important criteria and objectives when studying commuter rail service in Portland and its environs.

3.1 San Diego – The Coaster

3.1.1 Description of Service and Market Niche

"The Coaster" built 2½ years ago operates on 43 miles of single track (with passing sides), with maximum speed of 90 mph, from Oceanside, CA to San Diego, CA. There are 8 stations. Service is primarily during the peak periods. Trains operate approximately every half-hour in the peak direction (Oceanside to San Diego) from 5:30 a.m. to 8:00 a.m. and from 3:45 p.m. to 6:35 p.m. There is one mid-day train and some special service on Friday nights and weekends.

3.1.2 Planning Issues

North County Transit District and Metropolitan Transit Development Board purchased the right-of-way for the Coaster in a joint purchase of Santa Fe right-of-way with Orange County and Los Angeles. The commuter rail service is a component of a multi-transportation district Regional Transportation Plan voted on in 1987. The transportation package called TransNet comprised commuter rail, light rail, high occupancy vehicle (HOV) lanes, and road expansion. Amtrak is under lease agreement to maintain and operate the Coaster. Express buses that provided similar service were redeployed in other corridors.

3.1.3 Ridership Estimate/Boardings and Deboardings per Station

Daily boardings are approximately 3,000. Below is mileage between Coaster stations.

Station Spacing on San Diego Coaster Commuter Rail

Coaster Stations	Station Spacing (miles)
Oceanside (north terminus)	
Carlsbad Village	2.8
Carlsbad Poinsettia	4.1
Encinitas Transit Center	4.4
Solana Beach	4.1
Sorrento Valley	7.2
Old Town Transit Center	15.2
Santa Fe Depot (San Diego)	3.4

Source: North County Transit District 1997

3.1.4 Current Status

An extension is currently being planned from Oceanside to Escondido using self-propelled diesel rail cars rather than locomotive push-pull in service today. This line would be a hybrid of light rail and commuter rail. Rail right-of-way has already been purchased. The line is not straight like Oceanside to San Diego and operating speeds will be substantially lower. Staff is currently developing the Environmental Impact Statement and the planned opening is estimated to be sometime in the year 2000.

3.1.5 Travel Time

56 minutes to 58 minutes from Oceanside to San Diego.

3.1.6 Fare Structure

$6.50 round-trip. $5.75 for trip-length less than Oceanside to San Diego. This cost is comparable to bus fare for similar service. Discounts similar to Tri-Met's apply: 10% for ten tickets; discount for monthly pass.

3.1.7 Population and Employment Center Size

The City of San Diego is the primary population and employment center served by the Coaster.

Other regional centers served along 43 mile route include DelMar, Carlsbad, Oceanside, however, majority of employment base is in San Diego. The 1995 regional population of the San Diego area was 2,498,016. Regional square mileage is 4,205.

1992 Population and Employment for Areas Served by the Coaster

Jurisdiction	Population[1]	Employment[2]
Oceanside	147,200	29,300
Carlsbad	68,200	35,900
Encinitas	57,100	20,100
Solana Beach	13,600	7,500
Del Mar	5,100	5,000
San Diego	1,183,100	659,000

[1] Population figures as of January 1996
[2] Employment figures as of 1992

3.1.8 Capital and Operating Costs

Right-of-way purchase was $92 million and capital expenditure for cars, locomotives, stations, maintenance facility, and upgrading cost $70 million for a total capital cost of $162 million (1992). Annual operating expenses for 1996 are estimated at $8 million. Annual farebox revenue is approximately $2.4 million (a 30% farebox recovery rate).

3.1.9 Access (feeder buses, park-and-rides)

A total of 1,200 new parking spaces were constructed for access to the Coaster. In addition, a number of spaces are shared with Amtrak and MetroLink has a terminus at the Oceanside station. In a recent survey (1995) of mode of access to Coaster stations for inbound trips to San Diego, the following information was gathered: 53% drive alone, 7.4% carpool, 11.3% walk-on, 3.8% take a bus, 6% take a Coaster shuttle bus, 15.3% are dropped off, and 3.2% fall into the other category (e.g. bikes).

3.2 Los Angeles – MetroLink

3.2.1 Description of Service and Market Niche

MetroLink operates six lines providing service in Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties and also service from Los Angeles to Oceanside. Five of the six lines provide service to Los Angeles. One line provides service between San Bernardino and Irvine. Total length

of service provided is 444 miles.

3.2.2 Ridership Estimate/Boardings and Deboardings per Station

Average weekday ridership for the entire 444 mile system was 23,100 in 10/96, 23,221 in 11/96 and 21,255 in 12/96. Ridership by line into Los Angeles is summarized in the table below.

Line	1996 Ridership	Miles	Travel Time
Ventura	2,900	66.1	1 hr 30 min
Santa Clarita	3,600	76.6	1 hr 45 min
San Bernardino	6,900	56.2	1 hr 20 min
Riverside	3,700	58.7	1 hr 10 min
Orange County	4,900	87.2	1 hr 50 min

Source: MetroLink 1997

3.2.3 Current Status

All lines have been built.

3.2.4 Population Center Size

Regional population of Los Angeles was 14,531,529 in 1995. Regional square mileage: 33,966.

3.2.5 Fare Structure

Base one-way cost is $3.50 with a $1 zone charge (approximately every 11 miles). There are a total of seven zones. A one-way ticket traveling through all seven zones costs $9.50.

3.2.6 Capital and Operating Costs

Annual operating expenses for 1995/96 were $63.3 million.

3.2.7 Access (feeder buses, park-and-rides)

Some employer transportation provided from station to employment sites.

3.3 San Francisco – CalTrain

3.3.1 Description of Service and Market Niche

CalTrain consists of 48 miles of service in the urbanized area from San Francisco to San Jose with 27 stations. Stops include populated areas such as San Mateo, Sunnyvale, Santa Clara, Mountainview, Burlingame. Commuter rail service continues south 28 miles south from San Jose to Gilroy (more agricultural/rural areas) with 5 stations.

3.3.2 Ridership Estimate/Boardings and Deboardings per Station

Average weekday ridership is 23,000 trips per day. Saturday: 12,000 to 13,000 and Sunday 8,000 to 9,000. Average increase in ridership per year is 5%. Ridership attributed to improved bike program (approximately 1,000 bikes per day access CalTrain), shuttle bus access and marketing.

3.3.3 Travel Time

Varies depending on service. Fastest express train from San Francisco to San Jose would be 64 minutes. With basic service (all station stops) it would be 90 minutes. Headways vary depending on population density and demand, for example, Gilroy to San Francisco trains operate at 30 minutes headways in the a.m. and p.m. peak while San Jose peak headways are 10 minutes and Palo Alto to San Francisco headways are approximately 15 minutes during the peaks. Below is a list of stations and spacing.

Station	Spacing (miles)	Station (cont'd)	Spacing (miles)
Gilroy (south terminus)			
San Martin	6.1	Redwood City	2.4
Morgan Hill	3.6	San Carlos	2.2
Blossom Hill	12.3	Belmont	1.3
Capitol	3.5	Hillsdale	1.6
Tamien	2.4	Hayward Park	1.4
San Jose	2.0	San Mateo	1.0
College Park	1.2	Burlingame	1.6
Santa Clara	1.4	Broadway	1.1
Lawrence	3.5	Millbrae	1.5
Sunnyvale	2.0	San Bruno	2.1
Mountainview	2.7	South San Francisco	2.3
Castro	1.3	Bayshore	4.1
California Avenue	3.0	Paul Avenue	1.1
Palo Alto	1.7	22nd Street	2.2
Menlo Park	1.2	San Francisco	1.9
Atherton	1.1		

3.3.4 Population Center Size

The 1995 regional population of the San Francisco Bay area was 6,253,311. Regional square mileage is 7,369. The table below contains 1990 population for the cities and towns served by CalTrain.

1990 Population of Areas Served by CalTrain

City/Town	1990 Population
Gilroy	31,487
Morgan Hill	23,928
San Jose	782,225
Santa Clara	93,613
Sunnyvale	117,229
Mountainview	67,460
Castro Valley	48,619
Palo Alto	55,900
Menlo Park	28,001
Atherton	7,163
Redwood City	66,072
San Carlos	26,167
Belmont	24,127
Hayward	111,498
San Mateo	85,486
Burlingame	26,801
Millbrae	20,412
San Bruno	38,961
San Francisco	723,959

3.3.5 Fare Structure

9 zone system. One-way travel within Zone 1 is $1.25. Increment per zone of travel is $0.50 to $0.75. For a 77 mile one-way trip from Gilroy to Francisco, the fare is $6.00.

3.3.6 Access (feeder buses, park-and-rides)

Park-and-rides between San Jose and Gilroy, but none in the 48 mile urbanized area between San Francisco and San Jose. Subsidized shuttles/mini-vans to employer doorsteps.

3.4 Seattle

3.4.1 Description of Service and Market Niche

Commuter rail planning is underway to add two-way peak period train service using existing Burlington Northern railroad track between Everett, Seattle, Tacoma, and Lakewood, Washington. The completed system would be 81 miles in length with 14 stations. Additional stations may be built in the future. Several shared stations with Amtrak are planned to connect to intercity rail service between Portland and Vancouver, B.C.

The first line planned to begin operating is Tacoma to Seattle, including a spur to Renton. It is estimated that track and signal improvements may take two to four years to complete. The approximate length is 46 miles with 9 stations.

Planned train frequency is every 15 minutes during peak periods in peak direction only. The morning peak is expected to be from 6:00 - 9:00 a.m. and the evening peak is expected to be from 3:30 to 6:30 p.m. Limited special event service may also be provided.

3.4.2 Planning Issues

Commuter rail is one component of a ten year Regional Transit System Plan proposed by the Central Puget Sound Regional Transit Authority referred to as "Sound Move." Sound Move comprises plans for expanding the capacity of the major transportation corridors by adding new high-capacity transportation facilities and services. This includes commuter rail, HOV lanes, regional express bus routes, and light rail. The plans include improved suburban and urban connections to the rest of the region.

3.4.3 Current Status

Currently working on environmental assessment for south corridor (Seattle to Tacoma). Should be complete by Fall 1997. South service expected by 12/99.

3.4.4 Travel Time

Seattle to Tacoma: 55 minutes
Seattle to Lakewood: 68 minutes
Seattle to Everett: 55 minutes to 1 hour

3.4.5 Fare Structure

The fare structure is currently under development. Current express bus service between Tacoma and Seattle cost $2.50 for a one-way trip.

3.4.6 Population Center Size

The 1995 regional population of the Seattle area was 2,559,164. Regional square mileage: 5,892.

3.4.7 Access (feeder buses, park-and-rides)

As many as 7,075 new park-and-ride spaces are planned, approximately 200 - 700 spaces per commuter rail station. Network of bus routes serving commuter rail stations.

3.5 Vancouver, B.C. – West Coast Express

3.5.1 Description of Service and Market Niche

The West Coast Express operates between Vancouver and Mission (east of Vancouver) and began service in 11/95. The line is slightly more than 41 miles in length with 5 trains into Vancouver during the a.m. peak and 5 trains to Mission in the p.m. peak. Peak hour trains in the morning leave Mission between 5:30 to 7:00 a.m. and arrive in Vancouver between 6:45 to 8:15 a.m.

The commuter rail line uses existing Canadian Pacific track. There are 8 stations and equipment includes 28 Bombardier cars which seat 146 people and 5 locomotives. Trains are typically 4 to 7 cars in length.

Vancouver, B.C. West Coast Express Commuter Rail Station Spacing

West Coast Express Stations	Station Spacing (miles)
Mission (eastern terminus)	
Port Haney	15.0
Maple Meadows	3.6
Pitt Meadows	0.9
Port Coquitlam	4.6
Coquitlam Center	1.5
Port Moody	2.2
Vancouver (north CBD)	13.5

3.5.2 Planning Issues

Canadian Pacific Railroad maintains, crews, and operates West Coast Express under contract for BC Transit. BC Transit also pays the railroad for use of their track.

Competitive service issues: some express buses to downtown Vancouver were redeployed to serve as feeder buses to commuter rail stations, however trunk route and local bus service with frequent headways remain in place in the corridor.

3.5.3 Ridership

In the opening months of West Coast Express service, ridership was approximately 5,000 person rides per day. Currently, it is approximately 6,000 person rides per day. Total number of riders from 11/95 to 11/96 was 1.5 million.

West Coast Express reports that 7% of daily ridership is intra-suburban; 93% is from outlying areas to downtown Vancouver.

3.5.4 Passenger Profile

The average age of West Coast Express patrons is between 30 and 50 years (slightly higher than the average age of SkyTrain patrons). There are slightly more men than women riders. The typical West Coast Express passenger is professional with higher than average income compared with other transit patrons. 90% of passengers are one to two car households. It is estimated that 75% of patrons used to commute by personal vehicle prior to West Coast Express service. Approximately 95% of passenger trips are home to work based.

3.5.5 Current Status

There are no current plans for expansion. The mayor of Vancouver has expressed concern over the level of operating cost per rider. The long-term viability of this service will be based on the willingness of the province and region to continue an appropriate level of subsidy.

3.5.6 Travel Time

The distance between Vancouver and Mission is 41 miles with a total trip length of 71 minutes.

3.5.7 Fare Structure

One way fares:

$3 (Canadian) for two zones (basically downtown only); $2.20 U.S.
$4 (Canadian) for three zones; $3.00 U.S.
$5 (Canadian) for four zones; $3.70 U.S.
$7 (Canadian) for five zones; $5.20 U.S.
(Exchange rate: $1 Canadian = 0.74 U.S.)

Return trips are 2½% off. Weekly tickets are 10% off and Monthly tickets are 25% off.

3.5.8 Population and Employment Center Sizes

The 1995 regional population for the Vancouver, B.C. area was 1,547,000. Below is a breakdown of population and employment in cities and districts served by the West Coast Express. The Tri-cities area to east does have a small employment area, but does not comprise a significant percentage of ridership.

Population and Employment in Cities and Districts Served by West Coast Express

City or District	Station	Population[1]	Number of Employees[2]
City of Vancouver	Waterfront	521,050	345,100
City of Port Moody	Port Moody	20,500	5,900
City of Coquitlam	Coquitlam Central	100,900	31,100
City of Port Coquitlam	Port Coquitlam	45,700	17,000
District of Pitt Meadows	Pitt Meadows	13,900	3,100
District of Maple Ridge	Maple Meadows Way and Port Haney	56,700	16,200
District of Mission	Mission City	37,900	9,100

[1] District of Mission population figure is for 1996 from BC Stats; all other population figures are for 1995 and were obtained from Greater Vancouver Regional Council.

[2] Employment figures are from Estimation of 1994 Spatial Distribution of Employment in Greater Vancouver

3.5.9 Funding and Subsidies

Implementation of the West Coast Express was subsidized by the provincial government (1/3), Vancouver Regional Transit Commission (1/3) and fares which go directly to the province (1/3). The capital budget was $96.2 million (1995 U.S. dollars). This amount included infrastructure improvements, land acquisition, station and parking construction, locomotive acquisition and project management. The 28 bi-level passenger cars were acquired through an operating lease and therefore are included in the annual operating budget. For 1996/97, annual operating costs are expected to be approximately $14.8 million (U.S.). This includes fees to the Canadian Pacific Railroad for operating rights on its track.

3.5.10 Access (feeder buses, park-and-rides)

A total of 1,900 new parking spaces were built to accommodate West Coast Express riders. There are park-and-rides at 6 of the 8 stations ranging in size from 112 to 370 spaces.

Approximately 20% of all riders arrive at commuter rail stations via feeder buses which were realigned to serve stations instead of downtown Vancouver, 5% of riders are walk-ons, 5% are drop-offs and the remaining 70% are park-and-riders. West Coast Express estimates that 75 to 80% of riders formerly used their car to travel to Vancouver and environs.

The tri-cities area (suburban area near Vancouver) has a higher percentage of riders arriving at station via bus (25-30%) compared to other stations. In addition, there is a suburban station very close to a densely populated residential area with higher than average walk-on riders.

3.6 Summary Table

The table below summarizes key characteristics of the five commuter rail lines discussed above.

City	Regional Population (millions)	Commuter Rail Line	Length of Line to CBD	Average Weekday Ridership
San Diego, CA	2.5	The Coaster	43 miles	3,000
Los Angeles, CA	14.5	MetroLink:		
		Ventura	66 miles	2,900
		Santa Clarita	77 miles	3,600
		San Bernardino	56 miles	6,900
		Riverside	59 miles	3,700
		Orange County	87 miles	4,900
San Francisco, CA	6.3	CalTrain	77 miles	23,000
Seattle, WA	2.6	(in planning)	46 miles	–
Vancouver, B.C.	1.6	West Coast Express	41 miles	6,000

4. Commuter Rail in the Portland/Vancouver Region and South/North Corridor

4.1 Overview

The analysis of commuter rail concepts within the South/North Corridor have been summarized in two reports: *Commuter Rail Phase I Conceptual Alternatives Report* and the *Scoping Process Narrowing Report.* The initial assessment was documented in the *Commuter Rail Phase I Conceptual Alternatives* report. This report included a general description of potential rail lines and operating concepts, an assessment of ridership potential and a discussion of capital and operating costs.

This report was used to a provide a general framework for the discussion of commuter rail as a mode option in the South/North Corridor. Following discussion of this report, it was determined that a more detailed ridership assessment was needed to adequately evaluate commuter rail as a mode option. The results of this more detailed ridership analysis and other data are summarized in the *Scoping Process Narrowing Report.*

The analysis in the *Scoping Process Narrowing Report* is formatted to address criteria such as ridership, access, transit operations, environmental impacts and land use. The assessment of land use focused on the objective "Promote Desired Land Use Patterns and Development." This analysis

found that commuter rail is not an appropriate option to provide transportation capacity conforming to changes in growth patterns or to emerging growth corridors within the Urban Growth Boundary (UGB). It also found that commuter rail encourages growth in outlying areas and does not limit sprawl.

The *Scoping Process Narrowing Report* utilized the updated commuter rail ridership analysis and portions of the other analyses from *Commuter Rail Phase I Conceptual Alternatives*, to compare commuter rail with busways, river transit and light rail as high capacity transit mode alternatives for serving the South/North Corridor. The *Scoping Process Narrowing Report* did not include specific capital and operating costs for the commuter rail mode.

As commuter rail continued to be discussed as a mode to consider in the corridor, it was clear that the best available data should be used to inform that discussion. Revised ridership estimates were prepared and included in the *Scoping Process Narrowing Report*, which provided the basis for the decision to not study commuter rail further as a mode option in the South/North Corridor. The data on capital and operating costs for commuter rail were not revised, nor specifically addressed, during the scoping process. Updated costs for commuter rail service sized consistently with the level of forecast demand have since been prepared and are included in this report.

The following sections describe the ridership estimates for commuter rail in the corridor and present an updated commuter rail cost discussion.

4.2 Ridership Estimates

Ridership estimates for commuter rail in the South/North corridor have been prepared twice using two different methodologies. The first estimate was prepared for the *Commuter Rail Phase I Conceptual Alternatives* report, the second was prepared for the *Scoping Process Narrowing Report.* These two estimates differed in method and assumptions.

Commuter Rail Phase I Conceptual Alternatives

Year 2010 ridership estimates included in the *Commuter Rail Phase I Conceptual Alternatives* report were determined to be of marginal value since they were based on a sketch-level analysis which assumed that commuter rail would function as complementary service to light rail.

Scoping Process Narrowing Report

The Scoping Process Narrowing Report includes a more detailed analysis of the ridership potential of a commuter rail line serving the South/North corridor.

The commuter rail year 2010 ridership forecast included in this report was based on modeling a commuter rail line through the South/North Corridor from Canby to Ridgefield, Washington. This analysis used the regional travel demand model to forecast ridership on a commuter rail line assuming no light rail in the corridor. This report provided the data which was used by decision-makers to determine whether to study commuter rail further in the corridor.

Specific assumptions are required to model all modes of travel. The assumptions used in this modeling effort were as follows:

- Headways were assumed at 20 minute peak and 60 minute off-peak.
- Fares were assumed to be consistent with existing Tri-Met and C-TRAN fares for a similar distance trip.
- Bus service was assumed to remain in the major trunk corridors, such as I-5/Interstate Avenue and McLoughlin Boulevard.
- Feeder bus service was assumed to continue to serve major transit centers (i.e. Clackamas Town Center, Milwaukie Transit Center and Downtown Vancouver Transit Center) and where possible, to serve commuter rail stations.
- Park-and-ride access was provided to commuter rail stations and to trunk bus lines.
- Commuter rail stations were assumed at Canby, Oregon City, Clackamas, Milwaukie, Brooklyn, OMSI, Union Station, Willbridge (N.W. Portland), East St. Johns, Vancouver Amtrak Station, Vancouver Junction (North Vancouver) and Ridgefield.

The year 2010 ridership forecast for Canby to Ridgefield was 2,100 daily trips. The proportion of forecast ridership in the south portion of the corridor and in the north portion of the corridor is roughly equal at approximately 1,000 daily trips each (500 trips in each peak direction).

4.3 Commuter Rail Capital and Operating Costs

This section presents an updated assessment of the potential capital and operating costs associated with providing commuter rail service in the South/North Corridor. This section describes the capital improvements and operating scenario for commuter rail serving the forecast demand of approximately 1,000 daily trips. Also presented are the improvements and operations that could be added to provide a higher capacity service, if such a higher level of service should be desirable. Current projections indicate that there is not enough demand to justify such higher service levels.

4.3.1 Assumptions in Cost Estimates

In order to develop cost estimates it is necessary to define the assumptions on capital needs and operating concept. In the case of commuter rail there are perhaps more uncertainties than are found in cost estimates for other transportation modes. Contributing to the uncertainty is the lack of eminent domain authority over railroad property. This means that government agencies are required to negotiate a lease or purchase agreement with a railroad which is under no obligation to settle. Therefore, the capital and lease costs described below are tentative and are based on a reasonable assessment at this time what is likely to be sought by the railroad company.

Conversations with local railroad officials indicate that a high level of improvements may be necessary for commuter rail to function from Portland to Canby at any service level. This is due to possible capacity limitations as freight service and intercity passenger service increases.

Costs in this section are revised from previous estimates and are based on a 23.2 mile Canby-to-Portland commuter rail line (see Figure 1) operating in the peak direction only. Costs are in year

2000 dollars. Costs are estimated for: 1) a basic service level that is appropriate to serve the ridership level identified in the *Scoping Process Narrowing Report* (approximately 1,000 for the south portion of the corridor); and 2) additional enhancements to the basic service level that provides the same capacity as LRT in the corridor.

The vehicle type assumed for the cost estimates below is the Bombardier bi-level car and diesel locomotive used in Vancouver, B.C., San Diego and Los Angeles. This vehicle was selected because it is approved by the Federal Railroad Administration (FRA) and can be operated mixed with freight traffic without a special FRA waiver. The Siemens Regio Sprinter was considered, however, it would require a waiver from the FRA for operation in this corridor, or a third main track solely dedicated for commuter trains would need to be constructed. The Regio Sprinter costs are comparable to the Bombardier bi-level trains, therefore, the locomotive technology does not significantly affect capital costs.

Stations assumed include Canby, Oregon City, Highway 212/224, Milwaukie, Hawthorne Bridge and Union Station. Parking would be provided at all stations except Hawthorne Bridge and Union Station.

4.3.2 Service Level Scenarios

Forecast Based Service Level (Basic Service)

The capital improvements included in the cost estimates for commuter rail service that could serve the forecast demand of 1,000 daily trips are:

- Equipment and stations;
- Crossovers at East Portland and centralized train control between Willsburg Junction (SE Tacoma Street) and East Portland to allow commuter trains to bypass freight traffic;
- Two yard leads between Brooklyn Yard and SE Tacoma Street to allow freight trains to quickly exit mainline;
- Improvements at Canby to allow commuter trains to enter and exit mainline; and
- Track rehabilitation effort to allow continued maximum operating speed.

In this scenario, two trains are assumed to operate in the peak direction only. The capacity of two trains with three passenger cars each would be 960. The Canby to Portland alignment would include 15 miles of single track for the 23.2 mile line. Freight traffic could impact commuter trains on the single track sections between Willsburg Junction and Canby which could affect reliability. Morning inbound runs of commuter trains may be affected by UP's intermodal train and UPS train.

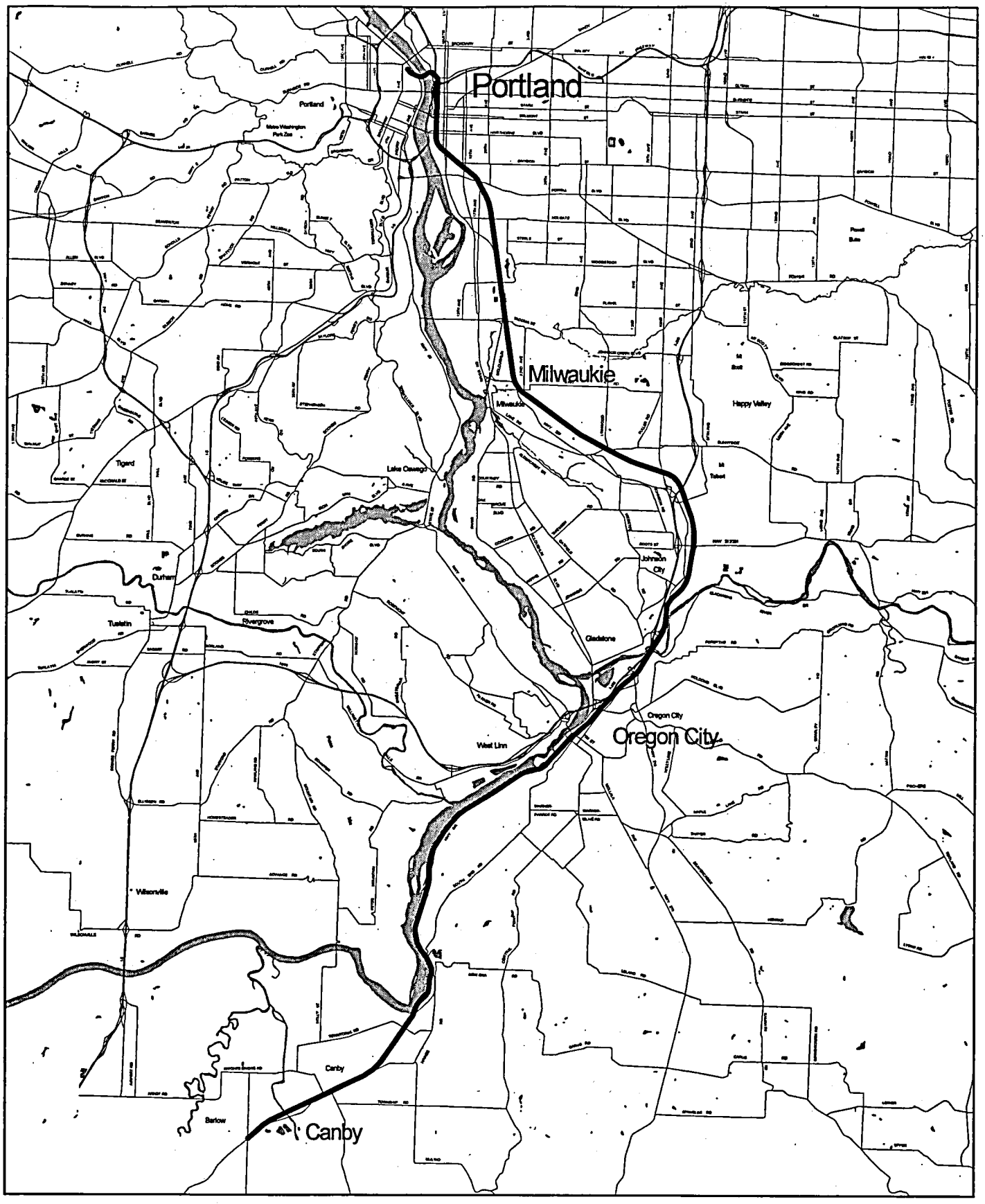

Figure 1

Canby to Portland Commuter Rail Alignment

These trains are given highest priority over the UP system and commuter trains would likely be held if these two trains are within the area. With the low level service it is unlikely that reliable mid-day service could be provided. The capital cost for this service level is estimated to be approximately $98 million (Year 2000 dollars). The tables below summarize capital cost and characteristics.

Capital and Operating Costs (Year 2000 $) for Forecast Based Commuter Rail Service Between Canby, OR and Portland, OR

	Forecast Based Service Level
Total Capital Cost	$98 million
Annualized Capital Cost	$8.0 million
Annual Operating Cost	$2.4 million
Annual Railroad Lease	$6.5 million
Annual Rolling Stock Lease	$1.7 million
Total Annualized Cost Per Rider Including Annualized Capital Cost	$71

Source: Tri-Met 1997

Characteristics of Forecast Based Commuter Rail Service Between Canby, OR and Portland, OR

	Forecast Based Service Level
Equipment	Two trains composed of one locomotive and three cars each
Service	2 trains in peak direction only
Assumed Stations	6 stations: • Canby • Oregon City • Highway 212/224 • Milwaukie • Hawthorne Bridge • Union Station
Maintenance Facility	None
Trackwork	Crossovers in East Portland

Source: Tri-Met 1997

Higher Capacity Service

A policy choice could be made to provide a higher level of capital improvements or a higher level of service. This level of service would not be necessary to accommodate the forecast demand but it would allow commuter rail to function with mid-day and off-peak direction service, more similar to light rail service.

The higher level of capital improvements that could be added to provide a higher service level includes:

- Rolling stock purchased instead of leased
- Construction of 5 to 15 miles of second and third track sections between Union Station and Canby including central train control with universal crossovers
- A maintenance facility at Canby

In this scenario, six trains could operate in the peak direction with two of those trains also operating in the reverse peak. The capacity of six trains operating with three passenger cars each would be 2,880. There would be a double track main line from Canby to Portland with a series of crossovers and track improvements. This type of high cost upgrade may be necessary under any commuter rail scenario if UP determines that such improvements are required. High level improvements could provide the ability to expand capacity during the peak and possibly have off-peak and evening service. Freight traffic could avoid impacting commuter trains by using the other main of the two main tracks. If commuter trains are relegated to only one of the main lines, it may be difficult to provide reliable reverse commute trips. This may require more rolling stock to enable trains to meet schedules for round trip service. The capital cost for the high service level is estimated to be between $205 and $280 million (Year 2000 dollars) depending on the service level provided. The tables below summarize capital cost and characteristics.

Capital and Operating Costs (2000 $) for Higher Capacity Commuter Rail Service Between Canby, OR and Portland, OR

	Higher Capacity Service Level
Total Capital Cost	$205 - 280 million
Annualized Capital Cost	$16.5 - 22.6 million
Annual Operating Cost	$3.1 - 3.4 million
Annual Railroad Lease	$6.5 million
Annual Rolling Stock Lease	$0

Source: Tri-Met 1997

Comparison of Characteristics of Higher Capacity Commuter Rail Service Between Canby, OR and Portland, OR

	Additions Required for a Higher Capacity Service Level
Equipment	Two additional trains composed of one locomotive and three cars each
Service	4 additional trains in peak direction with 2 of these also in reverse peak
Assumed Stations	Same as for Forecast Based Service
Maintenance Facility	Canby
Trackwork	Double track main line from Canby to Portland with a series of crossovers and track improvements.

Source: Tri-Met 1997

5. Public Comment

In June and July, 1993, Metro in coordination with Tri-Met and participating jurisdictions, conducted a series of mode and alignment workshops as part of the South/North Transit Corridor Study public involvement work plan. The workshops were part of a comprehensive effort to identify potential alternatives to be studied during Tier I of Alternatives Analysis. The primary goals of the public involvement effort were to educate the public about the South/North project and to gather information from the public about their particular concerns and preferences for modes and alignments along the corridor.

The public involvement effort included eight public Mode and Alignment Workshops and additional meetings with individual neighborhoods, organizations, businesses, and elected officials. Public comment was obtained in the form of: 1) participant surveys distributed at eight mode and alignment workshops; 2) written comments and light rail alignment recommendations posted on the maps by workshop participants and 3) other written comments submitted during the public comment period from October 12 to November 12, 1993.

Of the 372 people who attended the workshops, 237 completed surveys. In the survey, respondents were asked which mode option they preferred: light rail transit, river transit, busway, or commuter rail. Over 71% (169) of respondents preferred light rail over the other mode options; 11% (26) preferred busways, 7% (16) preferred commuter rail, and 6% (13) preferred river transit.[1]

[1] Total does not equal 100% due to survey respondents circling more than one choice or not answering the question.

6. Conclusions

South/North Corridor

This report and previous studies conclude that commuter rail and light rail differ substantially in purpose and function. Because of this difference it is essential that they be studied in appropriate forums. The strategy adopted by the Metro Council is to address commuter rail as part of the RTP and not as part of the South/North DEIS.

The following conclusions were made in past evaluations of commuter rail as a mode alternative in the South/North Corridor. These conclusions were based on the analysis in the *Scoping Process Narrowing Report* and on public comments received during the scoping process. The scoping process analysis found that commuter rail would not adequately address the goals and objectives of the South/North Corridor and is not a promising alternative in the corridor. These findings led to a determination by the South/North Steering Committee and the Metro Council that commuter rail would not be studied further as a high capacity mode in the South/North Corridor. Although commuter rail can perform well with regard to travel time, reliability and capacity expansion, the updated information presented in this report is consistent with previous conclusions on commuter rail in the South/North Corridor. These include:

- Commuter rail would not directly serve the main trip generators in the corridor such as Clackamas Regional Center, Downtown Milwaukie, North Macadam/RiverPlace, South Downtown/Portland State University, Central Downtown and Rose Quarter.

- Distribution of trips in downtown Portland would be slow with transfers required either at Union Station or at a Hawthorne Bridge/OMSI station.

- Commuter rail attracted only 5% of the ridership projected for light rail in the same corridor.

- Commuter rail is unlikely to influence land use in the same manner as light rail given potential station locations and the qualities that allow light rail to be integrated into a built environment.

- While implementation costs are less than for light rail, the cost-effectiveness of commuter rail in the South/North Corridor is poor given the ridership potential.

JPACT Workshops on Commuter Rail

Current regional discussions on commuter rail in the South/North Corridor, the Washington County inter-city passenger rail study and proposed commuter rail studies in Yamhill County and Clark County point to the need for a coordinated regional approach to understand the potential role of commuter rail in the Portland/Vancouver metropolitan area. The role of commuter rail should be evaluated to determine whether it should be incorporated into the revision of Metro's RTP and coordinated with the Metropolitan Transportation Plan in Clark County and planning efforts in Yamhill County.

In order to determine whether commuter rail should be incorporated into the RTP, JPACT will conduct a series of approximately three workshops covering a broad base of information on commuter rail. The workshops will evaluate commuter rail's potential and provide an opportunity for public input. The following topics will be addressed:

- Background information on west coast/national commuter rail experience. The purpose will be to examine where commuter rail has been implemented and consider the applicability of that information to the Portland/Vancouver region. Areas to be examined include:

  – Vancouver, B.C.
  – San Diego
  – Los Angeles
  – San Francisco
  – East Coast/Midwest

- Information on local issues. The purpose will be to identify which rail corridors within the region might have potential for commuter rail. Information to be considered could include:

  – Inventory of existing rail lines
  – Freight operations
  – Amtrak/passenger rail operations
  – Previous local studies of commuter rail
  – Local station and development opportunities
  – Consistency with state and local planning goals

- A meeting to formulate a recommendation to JPACT. The JPACT subcommittee will evaluate information from the first two workshops and recommend a course of action on commuter rail for inclusion in the Regional Transportation Plan.

Appendix A: Previous Studies and Analyses of Commuter Rail in the South/North Corridor

The following documents contain data on early sketch-level analyses and more detailed assessments of commuter rail:

- Facility and Operating Guidelines Report, Tri-Met, 1992. A description of commuter rail systems and methodology for applying costs and performance assumptions.

- Commuter Rail Phase I Conceptual Alternatives, Tri-Met, February 8, 1993. Several commuter rail alignments including a Canby to Ridgefield line are developed. Capital costs, operating costs and ridership estimates are provided. A high level of service and improvements were assumed for fairly low ridership projections.

- Draft Description of Wide Range of Alternatives Report, Metro, July 20, 1993. Describes assumptions used for determining ridership for the commuter rail line from Canby to Ridgefield.

- Scoping Process Narrowing Report, Metro, October 25, 1993. Document adopted by Metro that provided data on mode alternatives under consideration as high capacity transit options in the South/North Corridor. Other mode alternatives analyzed in this report include busway, river transit and light rail. The South/North Steering Group and the Metro Council, based on the analysis in this report, concluded that commuter rail should not be studied further as a high capacity transit mode in the South/North Corridor.

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STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2507 FOR THE PURPOSE OF ADOPTING THE SOUTH/NORTH STEERING COMMITTEE COMMUTER RAIL OVERVIEW AND RECOMMENDATION REPORT

Date: April 30, 1997 *Presented by: Richard Brandman*

PROPOSED ACTION

This resolution adopts Exhibit A as the South/North Commuter Rail Overview Findings Report. The resolution also calls for commuter rail to be studied as part of the Regional Transportation Plan (RTP) and for the Joint Policy Advisory Committee on Transportation (JPACT) to conduct a series of commuter rail workshops to determine if commuter rail should be studied further and included in the Regional Transportation Plan.

FACTUAL BACKGROUND AND ANALYSIS

1. Background

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

Prior to the project's process of determining the alternatives and design options to be studied in the DEIS, a number of South/North Corridor transportation modes were evaluated including light rail, commuter rail, river transit and busways. A series of mode and alignment workshops were held in June and July, 1993 to provide citizens with an opportunity to suggest modes and alignments that should be considered within the South/North Transit Corridor Study. At these workshops, citizens were issued a questionnaire to determine their high-capacity mode preference for the South/North Corridor. Over 71 percent of respondents identified light rail as their preferred mode, while only 7 percent chose commuter rail.

In October 1993, the South/North Project Management Group (PMG) issued the *South/North Scoping Process and Narrowing Report* which evaluated river transit, commuter rail, busways and light rail to determine their potential performance in providing improved transit service in the South/North Corridor and proposed alternatives for further study. This report concluded that in the South/North Corridor: 1) commuter rail does not serve residential areas and employment centers as well as light rail and busways; 2) commuter rail has considerably lower projected ridership than light rail and busways; 3) commuter rail is most effective for trips at distances of 20 to 40 miles from an activity center; and 4) commuter rail may be incompatible with regional growth and land use policies.

In December 1993, following a 30-day public comment period on the South/North PMG's proposal of alternatives for further study, the Steering Committee adopted the *South/North Scoping Process and Narrowing Report* which recommended that commuter rail not be studied further as a mode alternative in the South/North Corridor.

2. Ballot Measure 32 Results

In November 1996, Ballot Measure 32 was defeated statewide. This measure would have provided $375 million in Oregon State Lottery funds for the state's share of South/North Light Rail's capital budget for the first construction segment. In response to the election results and analysis, the Steering Committee and Metro Council called upon project staff to develop a range of options and design changes to significantly reduce the cost of the project.

3. Evaluation of Commuter Rail as a Cost-Cutting Measure

In January 1997, the South/North Steering Committee and Citizens Advisory Committee (CAC) met in a joint work session to discuss project goals and objectives and cost-cutting measures, including other transportation modes such as commuter rail. In response, Tri-Met and Metro staff initiated work to review previous alignment choices and assess the viability of other modes which could be a promising alternative to light rail in the South/North Corridor.

In March 1997, the South/North PMG released the *Commuter Rail Overview and Recommendation* document which compared the functional differences between commuter rail and light rail, summarized commuter rail service in a number of west coast cities and revisited previous technical analyses of commuter rail service to downtown Portland. In this report the PMG recommended: 1) that commuter rail not be studied in the South/North DEIS; and 2) that JPACT host a series of workshops to determine whether commuter rail should be considered for inclusion in the RTP. Also in March, the South/North PMG released its recommendations for cost-cutting amendments to the project's alternatives and design options.

In its *Commuter Rail Overview and Recommendation* report, the PMG found that commuter rail typically serves longer trips and different markets than what is generally found within the South/North corridor travel shed. In an analysis of existing commuter rail service on the west coast, the length of routes was found to range from 40 to 75 miles with a minimum trip length of approximately 15 miles. In contrast, trips within the South/North Corridor are typically less than 15 miles long. In addition, the PMG concluded that commuter rail would not address the transportation problems in the South/North Corridor, would not serve neighborhoods and commercial districts, and would raise growth management issues since it would serve longer trips outside the Urban Growth Boundary (UGB).

The PMG initiated a 30-day public comment period on the proposed cost-cutting amendments and the *Commuter Rail Overview and Recommendation* document, beginning on March 14. The 30-day public comment period included six project open houses throughout the corridor to provide the general public with the opportunity to obtain information and ask questions about commuter rail and cost-cutting measures. In addition, two public comment meetings were held to take oral testimony from citizens. Written comments were accepted through April 14.

In summary, there was diverse public comment regarding commuter rail which led to the staff recommendation. Both the CAC and the PMG discussed commuter rail at length and unanimously endorsed this recommendation.

On April 23, 1997, the Steering Committee adopted the recommendation: 1) not to study commuter rail further in the South/North DEIS; and 2) to request that JPACT hold a series of workshops to determine whether commuter rail should be considered for inclusion in the RTP.