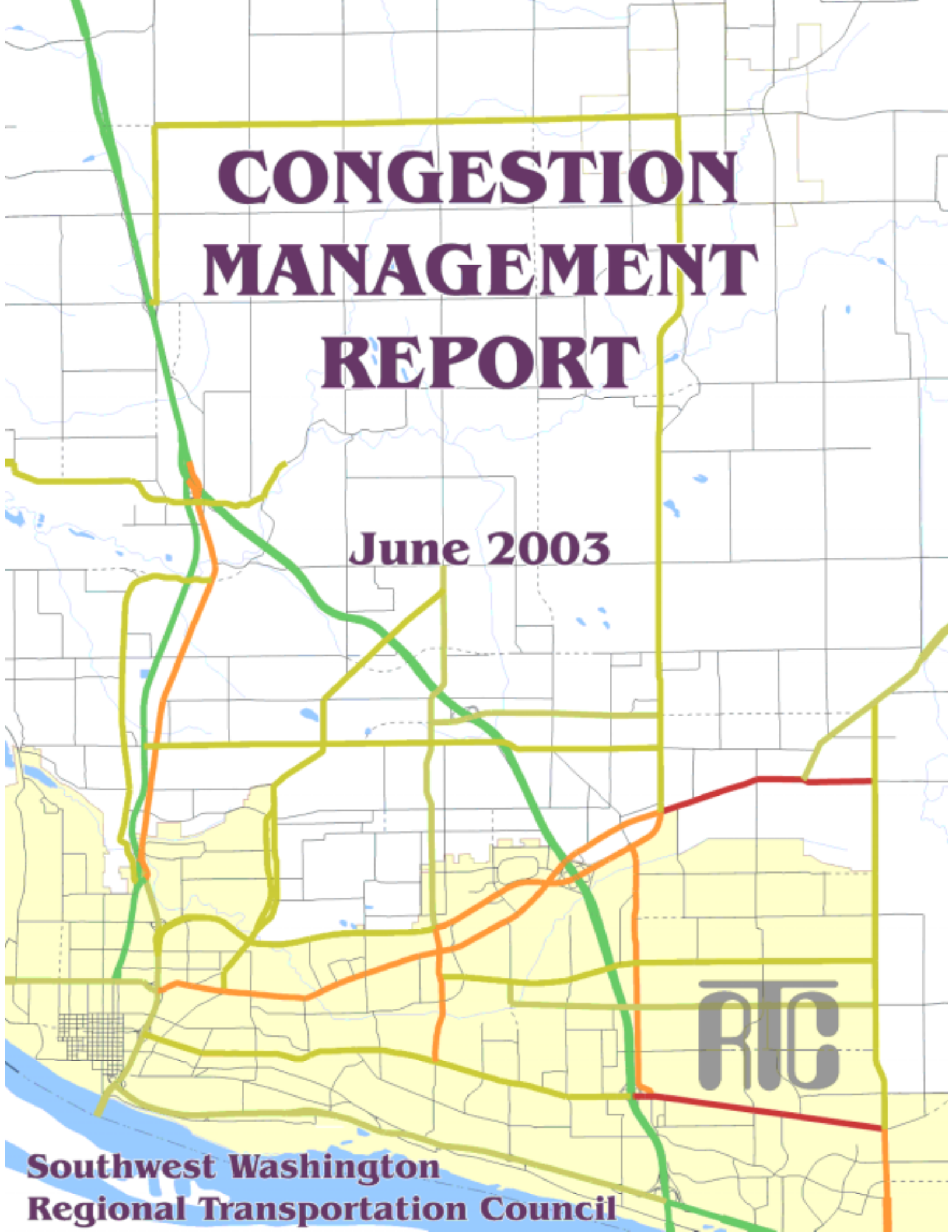
CONGESTION MANAGEMENT REPORT

June 2003



RTC

Southwest Washington
Regional Transportation Council

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CHAPTER I.
INTRODUCTION

A. PURPOSE

The purpose of the Congestion Management System (CMS) is to improve how transportation system performance is measured and analyzed. This is accomplished through comprehensive data collection, development of a system monitoring program, the identification of performance measures, development of system performance methodologies, and the preparation of a Congestion Management Report.

Traffic congestion negatively impacts the region's natural environment, economy, and quality of life. RTC's first CMS report was initiated as a result of the 1991 Intermodal Surface Transportation Efficiency Act which required regions like the Vancouver/Clark County urban area to develop congestion management systems. The federal interest in management systems was to have the regional planning process develop better analysis tools through the collection and monitoring of performance data. This Act required that any federally funded facility being considered for capacity expansion must be analyzed through the CMS process. The 1998 Transportation Equity Act for the 21st Century amended this requirement. This 1998 Act recognized the value of the CMS by directing regions like ours to continue the data collection and monitoring elements and have a process in place to assess transportation system performance and to evaluate alternative strategies for addressing traffic congestion problems.

The value of the CMS process is to improve the decision-making process by identifying the most congested parts of the transportation system now and in the future. Previously, most of the monitoring of congestion in our region has focused on traffic count data. The traffic count data is used to determine the corridor congestion ratio for each of the congestion management corridors. The congestion ratio, similar to volume to capacity ratio, is then converted into a congestion index. The congestion index is like a level-of-service measure except that the index assesses the overall performance of a full corridor instead of the operation of specific intersections. The index is used as a means to classify each corridor according to its relative level of congestion, to identify the need for further evaluation, and to determine how alternative strategies are considered.

The congestion management network consists of 29 regional transportation corridors that are monitored as part of the CMS for the Clark County region.

The performance of the congestion management corridors has previously focused only on the corridor congestion index as a measure of transportation system performance. At the direction of the RTC Board, the 1999 Transportation System Monitoring and Congestion Management Report added several new data elements including travel time, speed, automobile occupancy, truck percentages, and transit ridership and capacity. In addition, the report included other transportation related information compiled and collected by RTC that is not part of the congestion management corridor summaries, but provides other measures of system performance.

This report continues to utilize the results of updated traffic count data, other data collection and the compilation of information from other data sources to

provide an overall look at the performance of the regional transportation system.

The development of the 2002 Congestion Management Report includes several components. The intent of the report is to continue existing traffic monitoring and providing transportation system performance information to decision-makers that must identify the most cost-effective strategies for addressing transportation congestion and improving mobility. The key goals of the congestion management monitoring project in 2002 consisted of transportation data collection, analysis of transportation system performance, and the preparation of a Congestion Management Report. The primary activities are summarized below:

Data Assessment/Data Collection: RTC reviewed the status of current data collection and identified additional data needed to enhance the monitoring of the congestion management corridors. Some of the needed data elements are currently collected by other transportation agencies within the Clark County region, such as travel time and transit ridership. RTC was responsible for setting up a process for collecting this data on a regular basis. RTC has also initiated and managed the collection of additional traffic counts, automobile occupancy information, travel time data, and transit capacity and ridership information. This included working with local transportation agencies for the collection, compilation, and receipt of data used for monitoring the regional transportation system.

Data Analysis/System Performance: The comprehensive transportation data was analyzed and validated for use in monitoring system performance. The collected data is being applied to develop system performance measures for the transportation corridors in the congestion management network. This system performance information is used to identify system needs and solutions and will be incorporated in the Metropolitan Transportation Plan. The transportation data is also being used to enhance the regional traffic count program, initiate the establishment of a comprehensive transportation data program, and improve the regional travel forecasting model.

Data Distribution/Reporting: The collected system data is distributed to local member agencies and the general public for congestion analysis and other transportation efforts. Regional traffic count data has already been made available through map object application and on the Internet at www.rtc.wa.gov/tc/explain.htm.

The traffic count data is currently used by local agencies for concurrency analysis and for other transportation-related analysis. This activity includes the production and distribution of this report. The detailed database established for this project is included in this report and is available online through RTC's web page.

B. SCOPE

The scope of the CMS originally began with an emphasis on traffic volumes and transportation facility capacity to monitor transportation system congestion through the development of a corridor congestion index. The corridor congestion index provides an aggregate picture on the capacity of the regional transportation system. It utilizes segment by segment traffic volume and capacity data for the congestion management corridors to develop a single congestion value. It was important to incorporate a wider range of data into the CMS process as monitoring the regional transportation system became more important.

1. CONGESTION MANAGEMENT SYSTEM

a. Foundation for Analysis of System Performance

The CMS serves as the foundation for monitoring the regional transportation system and for providing ongoing information. The monitoring element of the congestion management network is designed as an informational tool to be used within the decision-making process. It is also intended to provide an understanding of the transportation system's operating conditions and deficiencies and to assess the impacts of alternative improvement strategies. In this way, it will help to focus efforts while allowing flexibility in the project selection process. The keys to the approach used in developing the framework for the CMS were:

- focus upon congestion
- be practical and easy to apply
- emphasize regional travel characteristics

The initial approach to use roadway congestion as the foundation of the Vancouver/Clark County CMS was selected, in part, to maintain simplicity and because of the lack of a satisfactory multimodal measure. RTC has continued the annual data collection to enhance and update the existing traffic count data base. Traffic counts were collected primarily for the congestion management corridors. In addition, RTC has coordinated with Washington State Department of Transportation and local jurisdictions to compile traffic count data, including turn movements, throughout Clark County. This traffic count program builds the base for the CMS.

The second characteristic of the initial Vancouver/Clark County CMS is that it is practical and easy to apply. While a more complex system is ultimately more appropriate, a simpler system was implemented at first. As experience with the CMS is gained, more complexity and detail is being added. The 1999 CMS was the beginning of that process. The third point is that the CMS has been designed from a regional perspective. Certain elements of the CMS, such as the network, were designed from this perspective to provide a regional picture of the transportation system rather than focusing on local arterials. The potential exists to expand the CMS in the future to include more detail as is deemed necessary. Also, the CMS is a passive system that provides the information needed to support the decision-making process. Again, this approach was taken to ensure a more manageable system that, in the future, may be adapted to be more active.

The CMS has been evolving to incorporate time-based and other multimodal measures to improve knowledge regarding the operation of the transportation system and the characteristics of regional travel. Within the CMS, the new multimodal data elements described in part (b) of this section will allow better tools for the analysis and management of congestion.

b. Expansion of Existing CMS

Until the 1999 report, the CMS data monitoring, as mentioned previously, has focused only on congestion. In order to provide a more comprehensive analysis of the operation of the transportation system, the CMS was expanded to include additional data elements. The additional data provides better support for travel demand analysis and includes travel time, auto occupancy, and transit ridership and capacity. The expansion of the CMS data facilitates a more complete picture of the characteristics of the transportation system and better analysis and consideration of travel demand strategies.

Except for the traffic count program, there has been a lack of easily accessible transportation data available in the region for use in the CMS. In addition to coordination with other transportation agencies for the receipt of traffic count data, there were two key activities conducted since 1999 by Clark County transportation agencies that supported the expansion of the CMS monitoring element.

The City of Vancouver and Clark County initiated an extensive travel time data collection effort to support the concurrency program. This effort provided the groundwork for travel time and speed information incorporated in the CMS monitoring process. RTC reviewed the concurrency travel time data, which included most of the congestion management corridors and contracted to collect additional travel time information for the congestion management corridors that were not part of the City's or County's effort. RTC appended the local concurrency travel time data to match the congestion management corridors.

In 2000, RTC coordinated with C-TRAN for the collection of peak period passenger counts for every transit route along congestion management corridors. RTC utilized this detailed ridership information, along with route schedules and bus vehicle capacities to develop transit summary data for each of the congestion management corridors.

RTC also initiated a new effort for the collection of automobile occupancy information at key locations on various regional transportation facilities within the Vancouver urbanized area. A representative automobile occupancy rate by facility type and geographic area was developed based on analysis of the fifteen locations in the region for which data was collected. This information is critical in tracking and evaluating alternative and other multimodal strategies.

c. Description of CMS Corridor Concept and Network

1) CMS Corridor Concept

An important step in defining the congestion management network was to define the basic unit for describing the network and performing analysis. For the Vancouver/Clark County congestion management network, transportation corridors were selected as that unit. Where appropriate, individual corridors are made up for more than one transportation facility. The multi-facility corridors occur where there is more than one route within a corridor serving the same function and to support the concept that transit or transportation demand management services and improvements are likely to impact a corridor rather than a single facility. A corridor approach that incorporates parallel routes and transit services provides a regional orientation and responds to the multimodal and alternative travel themes of the Federal Transportation Act. In fact, when the corridor congestion index was the primary measure of corridor performance, parallel facilities within a given corridor were aggregated into a single value for reporting purposes. The evaluation of the congestion management corridors for this report has resulted in the reporting of the transportation data for each individual facility that comprises a corridor. This is due, in part, to the fact that the new performance measures provide a better understanding on transportation system performance when reported for individual facilities. In those cases where there is more than one facility in a corridor, the aggregate data will be reported for each of the facilities as the basic unit, rather than for individual links or intersections.

Although data is reported for individual facilities for the multiple facility corridors,

they are still grouped by the congestion management corridor they are associated with and by a set of specific endpoints. These constituent facilities are defined as those major regional facilities (i.e., principal arterials and freeways) that run in parallel and may be used as alternative routes. It should be noted that a corridor might consist of only one facility if there are no alternative facilities in close proximity. The endpoints for each corridor represent locations where the characteristics of the corridor change significantly. Examples of corridor endpoints can include:

- at the endpoints of a facility (e.g., where a major roadway ends)
- at a change in land use patterns
- at a point where the direction of peak flow changes
- at a location where transit service levels change significantly

Each facility within a corridor is further divided into a series of segments. A segment is the portion of roadway between major intersections or interchanges. To allow for consistent operational analysis, corridor segments were developed such that the capacity and number of lanes remain the same within each segment. Separate portions of a facility may be included in different corridors.

2) CMS Monitoring Network

The boundaries of the Vancouver/Clark County CMS were set as the Vancouver metropolitan area. The exceptions to this definition are the major inter-regional corridors and major arterial corridors connecting other cities to the base congestion management network, (I-5, SR-14, SR-501, SR-502, SR-503, and La Center Road). This included the addition of congestion management corridors to connect Battle Ground, Ridgefield, and La Center with the base network.

Within these boundaries, the first step in defining the network was to identify a set of candidate facilities and corridors. Only regionally significant corridors were considered as candidates for the network. A first cut of the network was defined by those corridors that included one or more regionally significant facility. These regionally significant facilities were those included in the Regional Transportation System and are identified in the Metropolitan Transportation Plan (MTP).

The initial CMS monitoring network was refined from the list of candidate corridors. Using federal guidelines to include facilities with "existing or potential recurring congestion," professional judgment was used to identify those corridors that are currently or are likely to become congested. These corridors (and their component facilities) form a subset of the Vancouver/Clark County Regional Transportation System. As conditions or facilities change, corridors have been modified or refined.

The original CMS network was made up of twenty-one transportation corridors. The 2002 CMS is comprised of twenty-nine corridors. The primary reasons have been to provide more logical breakpoints, to connect to other significant urban areas, or recognize new connections. The initial CMS, for example, identified SR-14 as a single corridor from I-5 to 164th Avenue. A review of the data and traffic operations in the corridor and changes in the growth of travel on SR-14 resulted in dividing it into two corridors: I-5 to I-205 and I-205 to 164th Avenue. The existing CMS network is listed in Table 1 and illustrated in Figure 1.

2. Other Transportation System Performance

In addition to the congestion management corridor information, this report also includes other transportation-related information. The additional transportation system performance measures have been separated from the congestion management corridor data because: the data does not relate to the congestion management corridors or the raw CMS monitored data was applied in conjunction with other data to develop other information. The other transportation system elements include peak period vehicle volumes, truck percentages, high volume intersections within Clark County, Columbia River vehicle crossings, transit system passenger ridership, and park and ride capacity. A description of all the data elements including the CMS data is contained in the following section.

3. Description of Data Elements

This section is intended to serve as a glossary of data items and terms and an explanation of the information contained in the summary of transportation system performance in Chapter II and the detailed corridor data in Chapter III.

Corridor Congestion Ratio - The CCR is an aggregation of the volume/capacity (V/C) ratios for the individual segments that make up a facility within a corridor. The CCR is calculated for both the AM and PM peak hours, and for both directions of travel within a corridor. For each segment in a corridor, the V/C ratio, vehicle miles traveled (VMT), and VMT-weighted V/C ratio (the product of the V/C ratio and VMT) for the peak hour are calculated. The CCR is the sum of the weighted link ratios.

Vehicle Volumes - AM and PM peak hour vehicle volumes were compiled from the 2002 traffic count database and used to derive vehicle volumes for the congestion management corridors. Volumes represent traffic counts for the congestion management corridors and provide a good comparison of the relative differences in travel demand among the congestion management corridors.

Travel Time - In 2002, the City of Vancouver and Clark County collected pm peak period travel time for concurrency purposes along many congestion management corridors. RTC has contracted with Clark County to collect additional travel time data in congestion management corridors that were not part of the 2002 concurrency data collection effort. The process of collecting travel time data was used to develop region-wide travel time data along the CMS network.

Corridor Travel Speed – Travel speed was computed from the travel time data calculated in the previous section. It consists of utilizing the travel time and distance information to calculate an average travel speed.

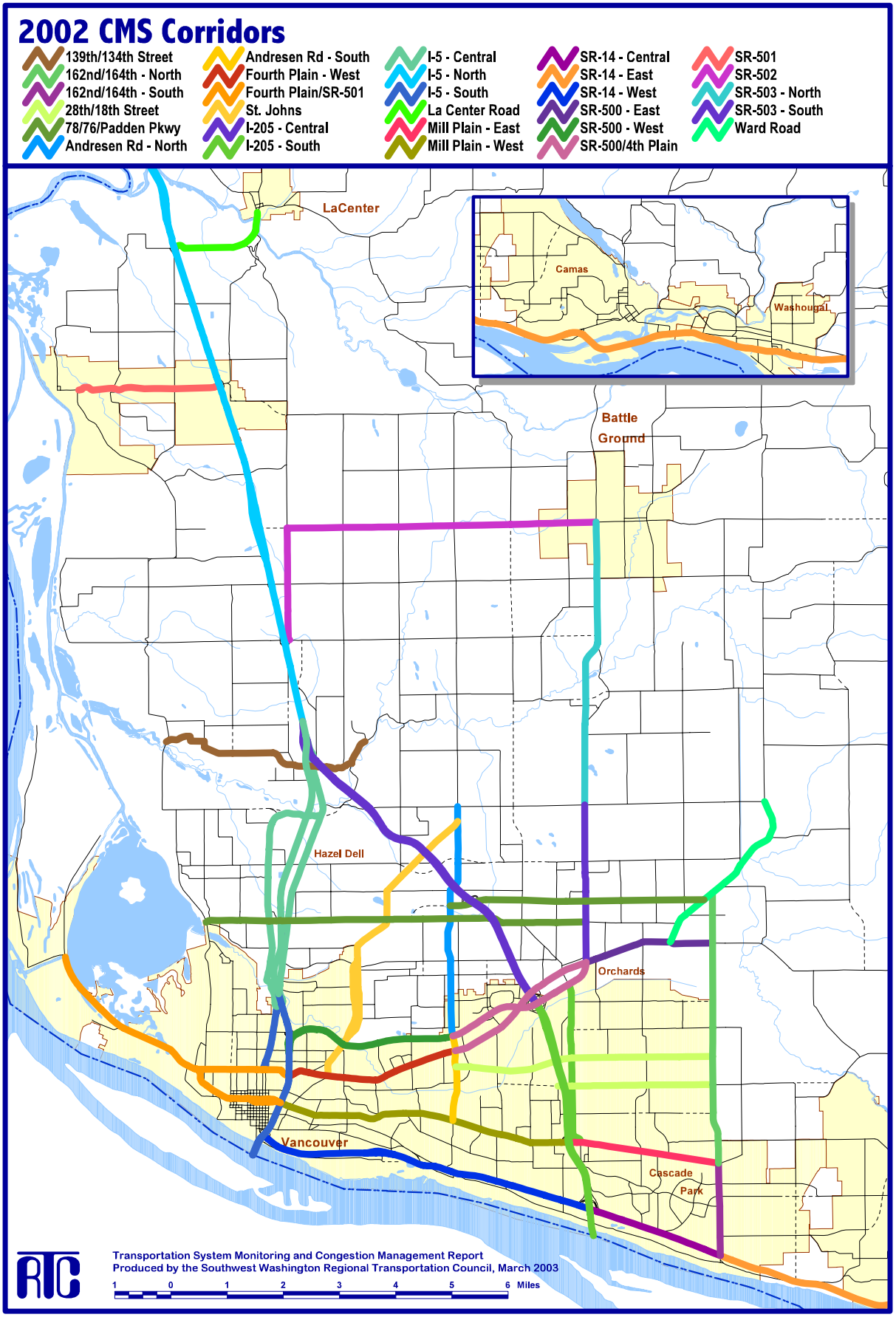
Speed as Percent of Posted Speed - Travel speed was then converted to a percent of posted speed for each of the congestion management corridors. This was intended to provide another measure of the delay along the corridor.

Intersection Delay – This is a new data element in the 2002 Report. The time stopped at an intersection, for the CMS corridor through movement, was recorded as part of the travel time data. The stop time at an intersection was averaged for the multiple travel time runs. Intersections with an average stop time of greater than 30 seconds were identified as a location of delay along a corridor. This delay is only calculated along CMS corridors and does not include turn lane delay or cross street delay.

Table 1 – Corridors in the CMS Network

Corridor Name	Facilities	Endpoints	
I-5 – North	I-5	County Line	I-205 Interchange
I-5 – Central	I-5, Hwy 99, Hazel Dell	I-205 Interchange	Main St.
I-5 - South	I-5, Main Street	Main St. Interchange	State line
I-205 – Central	I-205	I-5 interchange	Fourth Pl./SR 500
I-205 – South	I-205, 112th/Chkalov Dr./Gher Road	Fourth Pl./SR 500	State line
Grand/St. Johns Blvd.	St. Johns Rd./St. James Rd., Fort Vancouver Way, Grand Blvd.	NE 72nd Ave.	Fourth Plain Blvd.
Andresen Road - North	Andresen Rd. / N.E. 72nd Avenue.	119th St	SR 500
Andresen Road - South	Andresen Rd.	SR 500	Mill Plain Blvd.
SR 503 South	SR 503	119th St.	Fourth Pl./SR 500
SR-503 North	SR 503	SR 502	119th St.
Ward Road	Ward Road	119th St.	SR 500
162nd Ave. North	162nd/164th Ave.	Ward Rd.	Mill Plain Blvd.
164th Ave. South	162nd/164th Ave.	Mill Plain Blvd.	SR-14
SR 14 West	SR 14	I-5	I-205
SR 14 Central	SR 14	I-205	164th Ave.
SR 14 East	SR 14	164th Ave.	County Line
Mill Plain West	Mill Plain	I-5	I-205
Mill Plain East	Mill Plain	I-205	164th Ave.
Fourth Plain West	Fourth Plain	I-5	Andresen Rd.
SR 500 – West	SR 500	I-5	Andresen Rd.
SR 500/Fourth Plain Central	SR 500, Fourth Plain	Andresen Rd.	SR 503
SR 500 – East	SR 500	SR 503	162nd Ave.
78th/76th/Padden Parkway	78th St./76th St., Padden Parkway	Lakeshore Ave.	Ward Rd.
Fourth Plain/SR-501	SR-501/Mill Plain, Fourth Plain	I-5	TMA Boundary (Port of Vancouver)
28th St/18th Street	28th Street, 18th Street	Andresen Rd.	164th Avenue
134th Street	134th St./139th St./Salmon Creek Ave.	NW 36th Ave.	WSU Entrance
SR-502	SR 502	I-5	SR 503
SR 501	SR 501	I-5	9th St. (Ridgefield)
La Center Rd.	La Center Rd.	I-5	E. Fork Lewis Rv.

Figure 1 – CMS Map



Automobile Occupancy – Average automobile occupancy was collected for the first time in 1999. Average automobile occupancy is calculated by counting passenger cars at a given location and the number of people in each vehicle. The number of people divided by the number of passenger cars is the average automobile occupancy for that location. Trucks, buses, and other commercial vehicles are excluded from average automobile occupancy. Data was collected for freeways and arterials during the AM, PM, and midday time periods.

Transit Capacity Used - The percent of transit seat capacity that is occupied by passengers is calculated by identifying the peak ridership location for the segment within a corridor and calculating the bus capacity at the same location based on transit vehicle type and frequency. Transit capacity used includes all transit riders divided by the transit capacity at the peak location.

In 2000, individual line ridership information was collected by C-TRAN in peak periods for every transit line along congestion management corridor. RTC has compiled this data. In addition, "seat capacity" by line has been compiled based on C-TRAN's 2000 service schedule. This process has allowed the estimation of transit patronage and capacity for the congestion management corridors and individual transit lines.

Truck Percentage – Collected Traffic counts include several locations that classified vehicles according to the number of axles. This is a measure of trucks as a percentage of all vehicles traveling on the roadway. Trucks are defined as vehicles with more than two axles, such as typical tractor/trailer rigs, traveling on the roadway during the peak period.

Highest Volume Intersections - This measure identifies the busiest intersections in Clark County based on the 2002 average weekday traffic volumes entering an intersection.

Columbia River Crossings - Average weekday traffic volumes in both directions crossing the Interstate and Glenn Jackson Bridges between Washington and Oregon.

Transit Seats as Percentage of Vehicle Lane Capacity - A comparison of the seat capacity of transit in the corridor as a percentage of vehicle capacity per lane in the corridor.

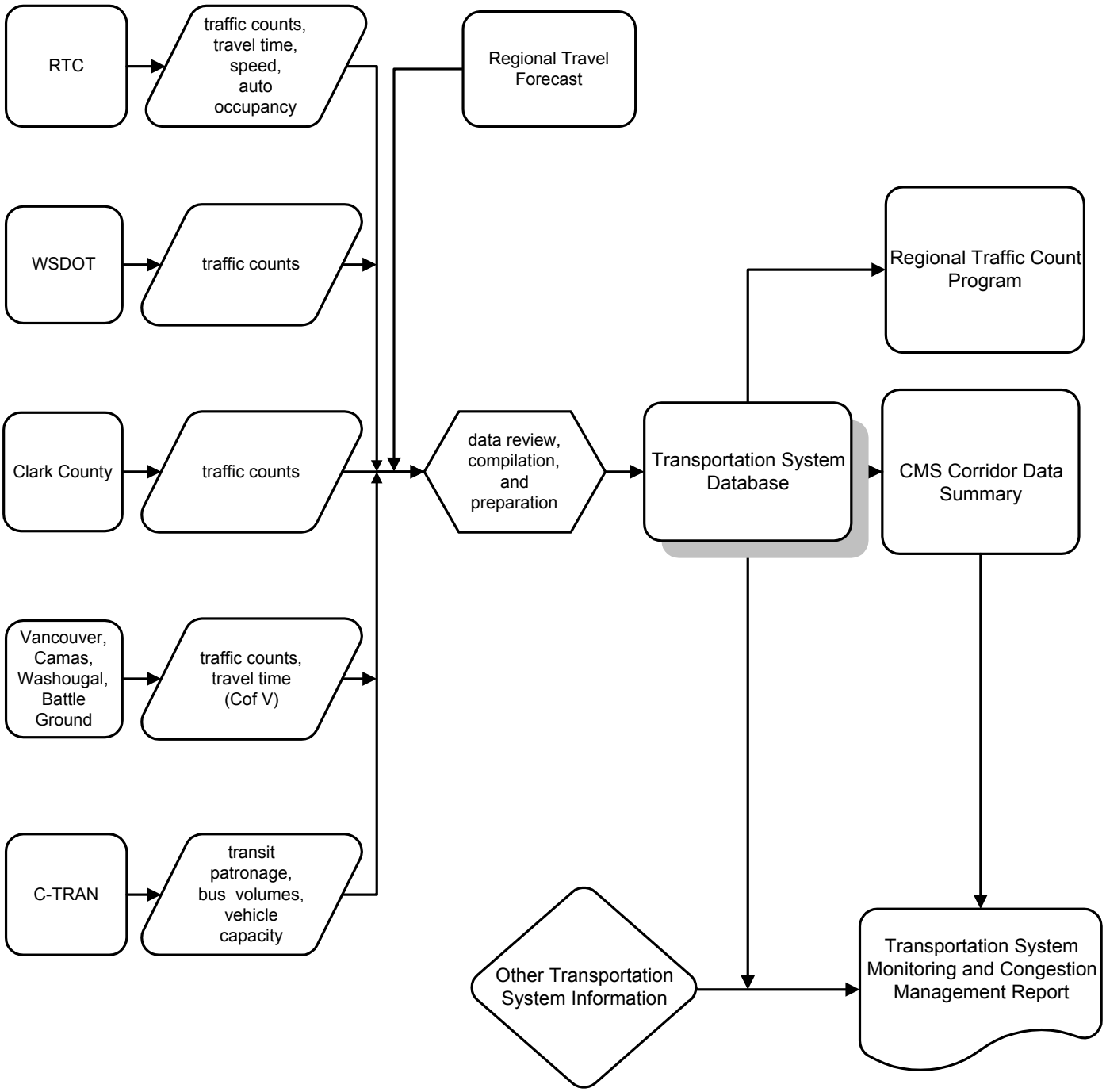
Transit System Ridership - Average weekday ridership by type of service (commuter, urban, and rural) and total weekday transit riders.

Park and Ride Capacity - Identifies vehicle capacity of park and ride lots in Clark County and for the individual facilities. Also includes a discussion of demand at the facilities.

4. TRANSPORTATION DATA COLLECTION AND DISTRIBUTION PROCESS

Figure 2 outlines the data collection and distribution process. Clark County agencies and jurisdictions including RTC collect a wide range of transportation data. Transportation information is reviewed and prepared by RTC for incorporation into the transportation system database. The database is used to develop the regional traffic count program and the CMS corridor summaries. The congestion management corridor data, in conjunction with other transportation system information, make up the information in this report.

Figure 2 - Transportation Data Flow



CHAPTER II.
SUMMARY OF PERFORMANCE

This section contains a discussion and display of information described in the previous chapter. Part A consists of the data compiled and collected for the Congestion Management System (CMS) and comprised of data that is configured to match the congestion management corridor delineation. Part B consists of other transportation information and data elements that do not necessarily match the congestion management corridors, although in some cases makes use of the data developed in Part A.

A. CONGESTION MANAGEMENT CORRIDORS

1. CORRIDOR CONGESTION RATIO

Figures 3 and 4 display the corridor congestion index for both AM and PM periods. The PM period displays similar or higher congestion on most corridors than that experienced in the AM period. One exception includes Main Street in the I-5 South Corridor, which may be attributed to morning commuters using Main Street as an alternative to the congested I-5 corridor. Most of the AM period congestion can be attributed to the bottlenecks at the two Interstate Bridges. Both the AM and PM periods show congestion along major facilities such as I-5, I-205, SR-14, SR-500, and Burton Road. In the PM period, additional congestion is shown along Mill Plain-East, SR-503-South, SR-502, 164th Avenue North, 134th Street, and 18th Street. The planned improvements along Burton Road are likely to reduce the congestion index in this corridor.

2. VEHICLE VOLUMES

Peak hour traffic volumes for the congestion management corridors are delineated by four volume range categories. These categories are intended to provide a regional picture of travel flows for the Clark County congestion management corridors. During the AM peak (Figure 5), I-5, I-205, SR-14, and SR-500 display volumes greater than 3,000 vehicles per hour. Within the urban area, facilities carrying more than 1,500 vehicles per hour are primarily state facilities including other segments of SR-14 and SR-500. The only other facilities carrying more than 1,500 vehicles per hour are Mill Plain east of I-205 and 164th Avenue south of Mill Plain Blvd. PM peak hour (Figure 6) trends for traffic volumes for most of the congestion management corridors are similar. There are some notable exceptions; many congestion management corridors carry significantly higher volumes during the PM peak. The corridors with the highest peak hour volume difference (at least 500 additional vehicles) between the PM and AM peak include: I-5 North and South, I-205, 112th Avenue, Andresen Road South, and Fourth Plain West and Central corridors.

3. CORRIDOR TRAVEL SPEED

In general, facilities with multiple at-grade intersections, display lower speeds. While grade-separated facilities show much faster speeds. Figure 7 displays the PM period corridor travel speed. While speed is not an indicator of congestion, higher speed facilities generally carry more vehicles. The low

speed on SR-500 Central, was created by the construction of the SR-500/Thurston Way interchange.

4. Speed as Percent of Speed Limit

The speed percentages for the freeway facilities are generally close to 100% of the posted speed limit. While facilities with multiple signalized intersections are generally between 60% and 80% of the posted speed limit. In the AM period, Mill Plain east of I-205 and the eastern portion of SR-500 operate at less than 60% of the posted speed (Figure 8). In the PM peak, arterials and freeways generally display lower percentages, due to higher congestion (Figure 9). In the PM period, the Andresen, 164th Avenue South, Mill Plain East, SR-500/Fourth Plain (construction), SR-500 East, and Burton Road operate at less than 60% of the posted speed. The SR-500, Andresen to SR-503 corridor operated at only 35% of the posted speed in the PM peak, due to the construction of the Thurston Way interchange.

5. Intersection Delay

Generally, intersections that displayed a 30 second or greater delay, for the through movement on a CMS corridor, were located where two major arterials intersect. Figure 10 displays the location of the 24 intersections that demonstrated this delay characteristics. Delay at these intersections add to the overall travel time and reduce the corridor's full capacity and increase travel time.

In addition to intersection delay, delay can also occur at freeway off ramps, where high volumes of traffic are loaded on to the arterial system.

6. Automobile Occupancy

The AM time period displays the lowest average automobile occupancy for all facility types, with the AM average automobile occupancy generally at 1.15 persons per vehicle or lower. The one exception was along west 139th Street near the Vancouver Schools (High, Middle, and elementary). This high vehicle occupancy can be attributed to school trips where children are frequently transported by bus, parents, or friends. The I-205 and SR-14 corridors have the lowest AM automobile occupancy all at 1.03. In the PM peak, SR-14, I-205 south and I-5 south have the lowest average automobile occupancy rates (1.03 to 1.08). The Fourth Plain, Mill Plain, and Highway 99 corridors have the highest PM average automobile occupancy rates (1.31-1.34). This may be due to a higher percentage of non-commute trips in these corridors. Overall, the midday automobile occupancy rates are near 1.23, with a lower variation between corridors. It may be that the AM peak period is more of a traditional commute time. The PM and the midday time periods likely have a greater percentage of discretionary trips such as shopping where drive alone trips are less prominent. Figures 11, 12, and 13 display the average automobile occupancy information.

7. Truck Percentage

Overall, the freeway facilities, Fourth Plain/Mill Plain west of I-5 display the highest percentage of truck volumes during the PM peak period (Figure 14). The exception to this is on SR-500, which has truck percentages similar to major arterials, such as Andresen Road and 164th Avenue. SR-14, I-5 and I-205 corridors have truck percentages of 5% or higher. Fourth Plain Boulevard and Mill Plain from I-5 to the Port of Vancouver both have percentages greater than 10%. I-5 North and I-205 Central also have significant truck percentages (13.8% and 10.3%).

8. TRANSIT SEAT CAPACITY USED

Transit seat capacity is based on 2000 bus service and represents the percentage of seats that are occupied during the two hour peak period. During the AM (Figure 15), I-5 south of 134th St., I-205 south, and SR-14 west of 164th utilize more than 70% of the available seats. In corridors without express service, 162nd Avenue North of Mill Plain and NE 28th Street corridors utilizes more than 50% of the available seats in the AM. PM trends (Figure 16) are similar to the AM except that PM percentages are generally higher. In addition, the Fourth Plain corridor west of Andresen uses more than 60% of the available seats in the PM, which is double the AM use.

Figure 3 - AM Congestion Ratio

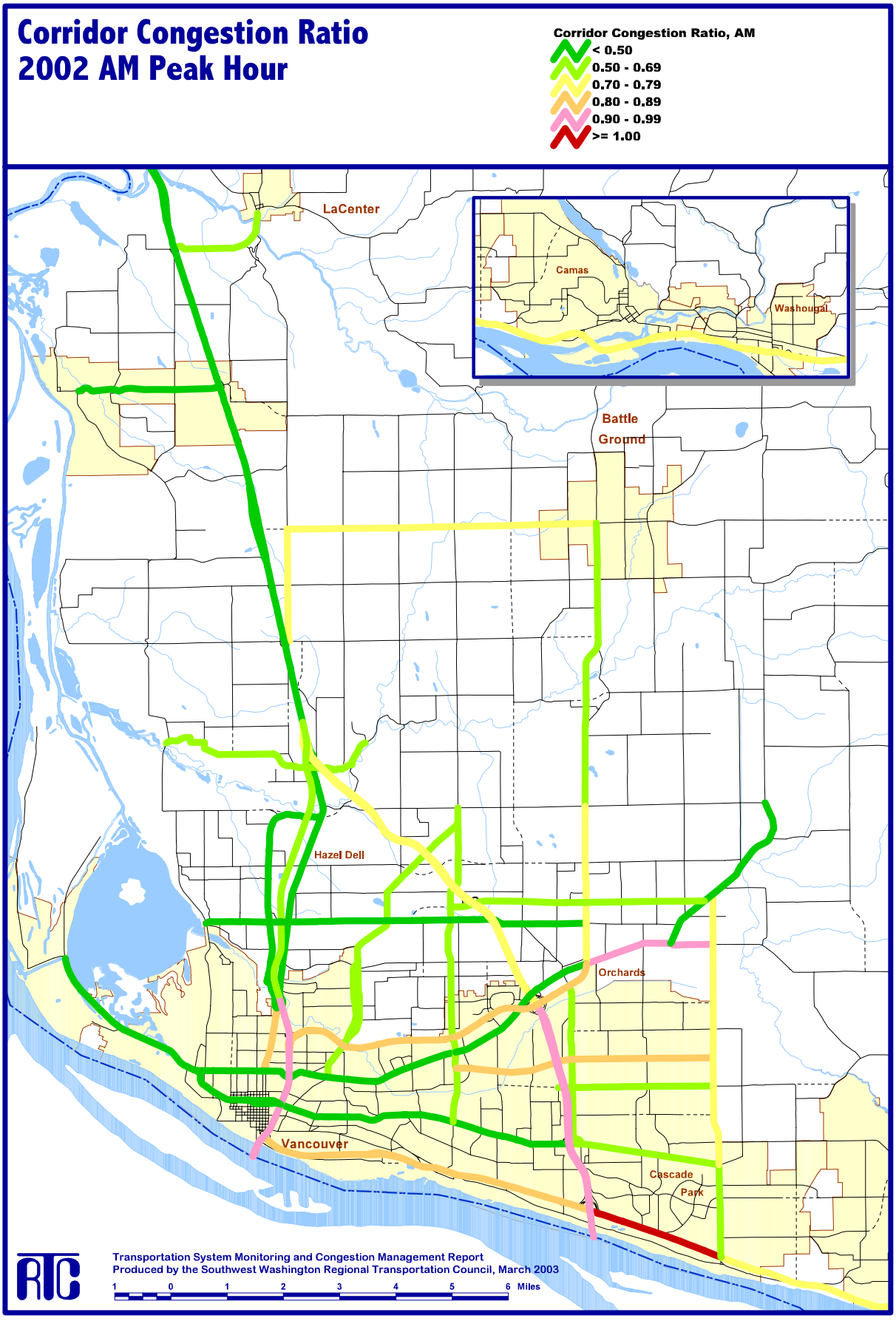


Figure 4 - PM Congestion Ratio

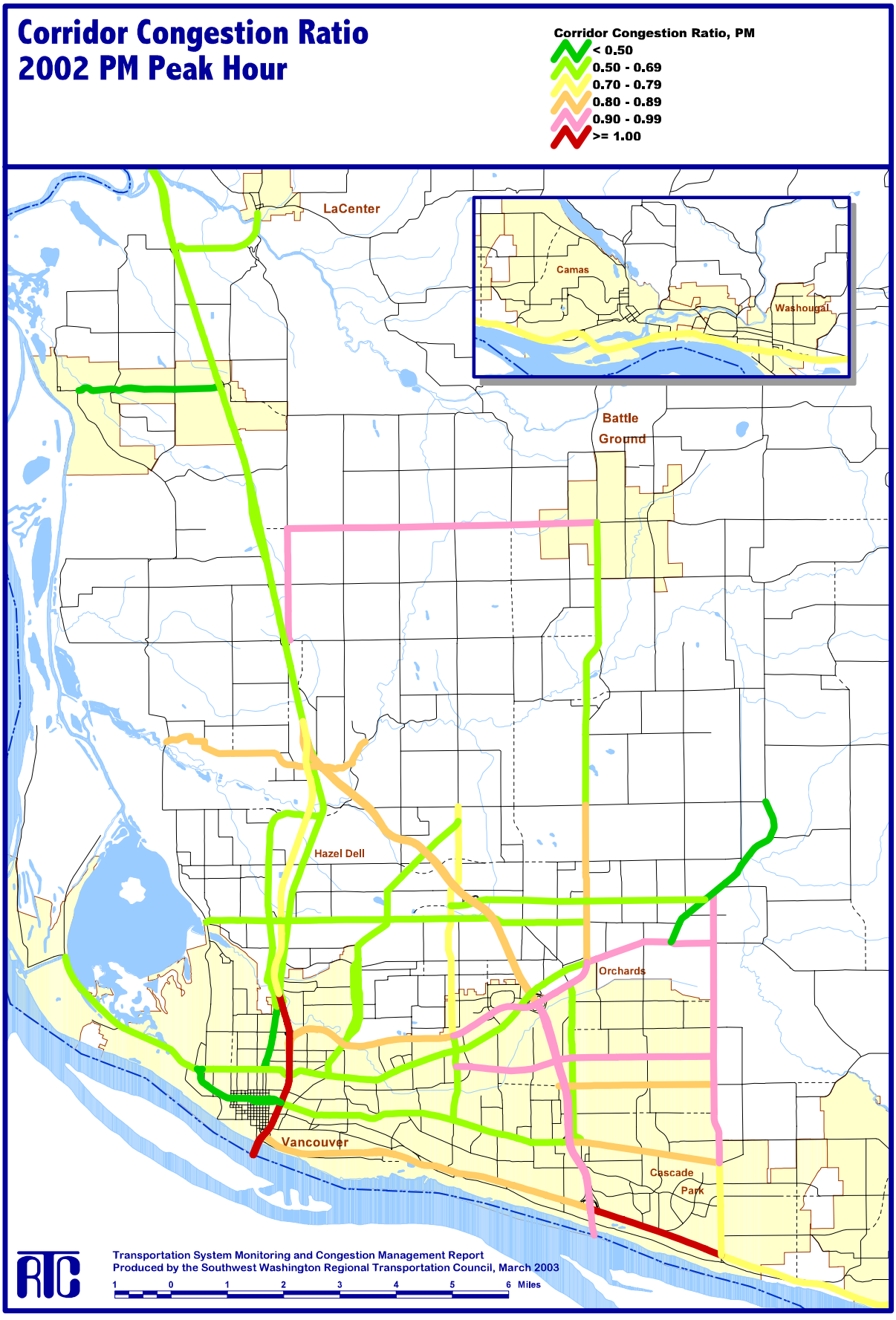


Figure 5 - AM Vehicle Volumes

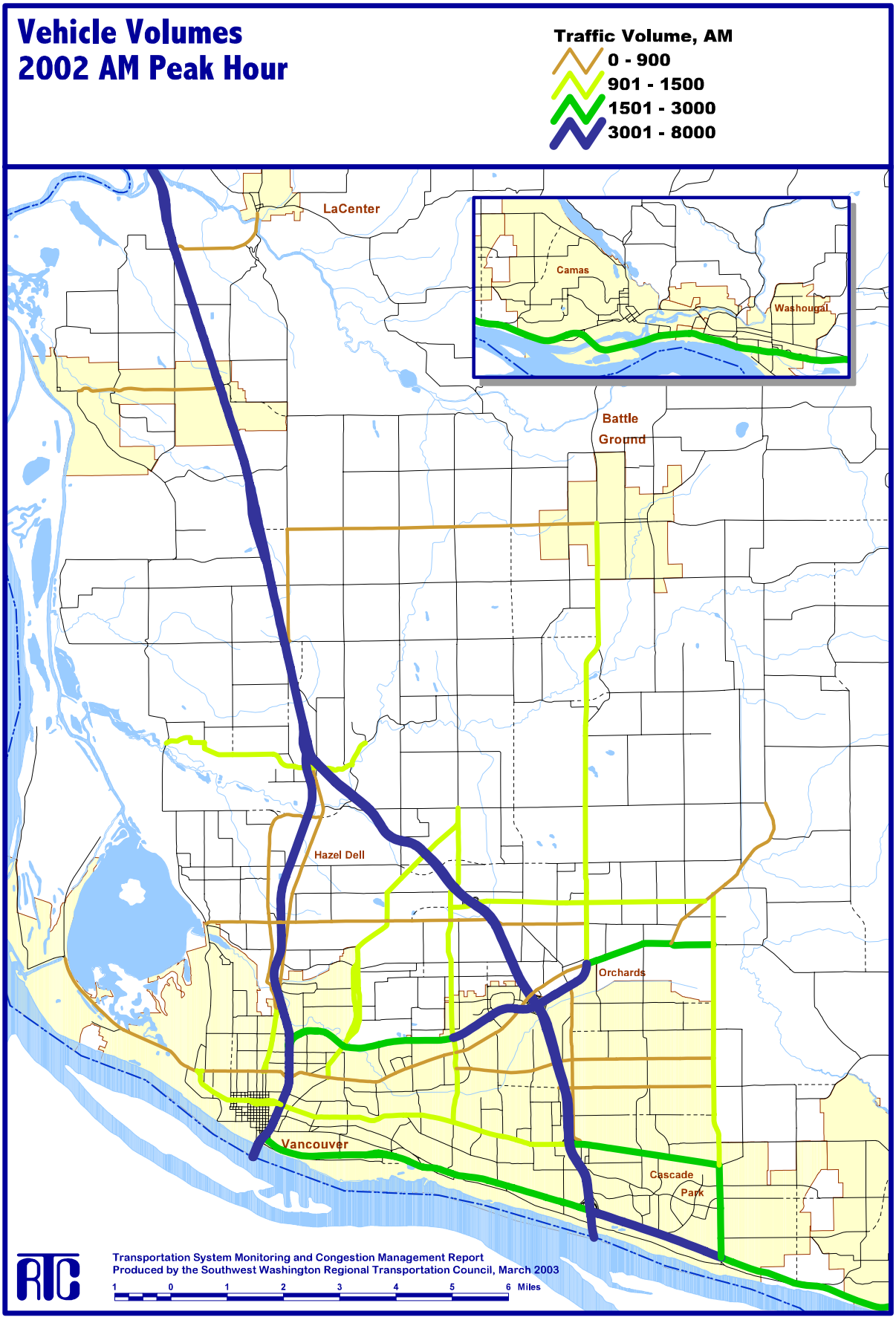


Figure 6 - PM Vehicle Volumes

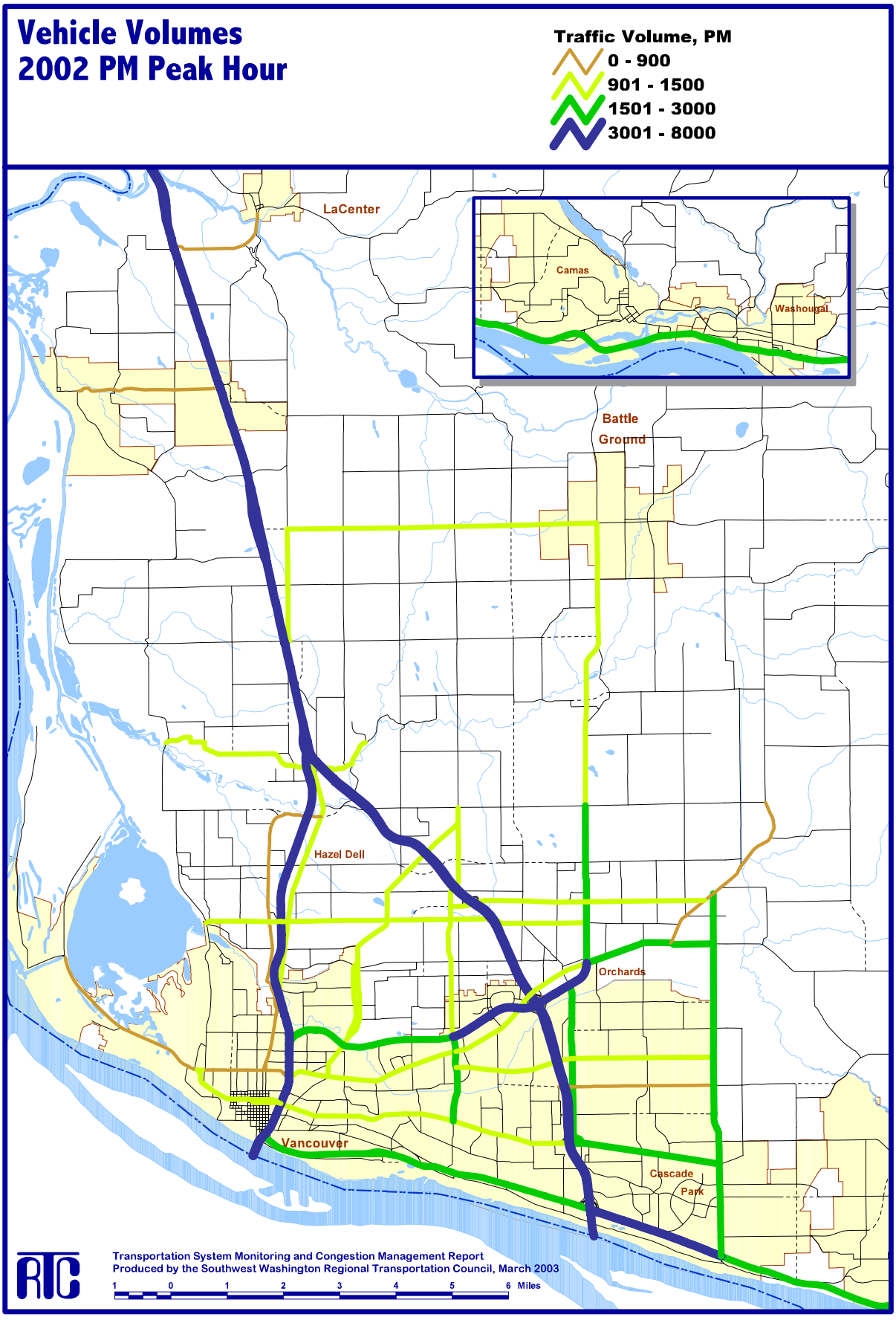


Figure 7 - PM Corridor Travel Speed

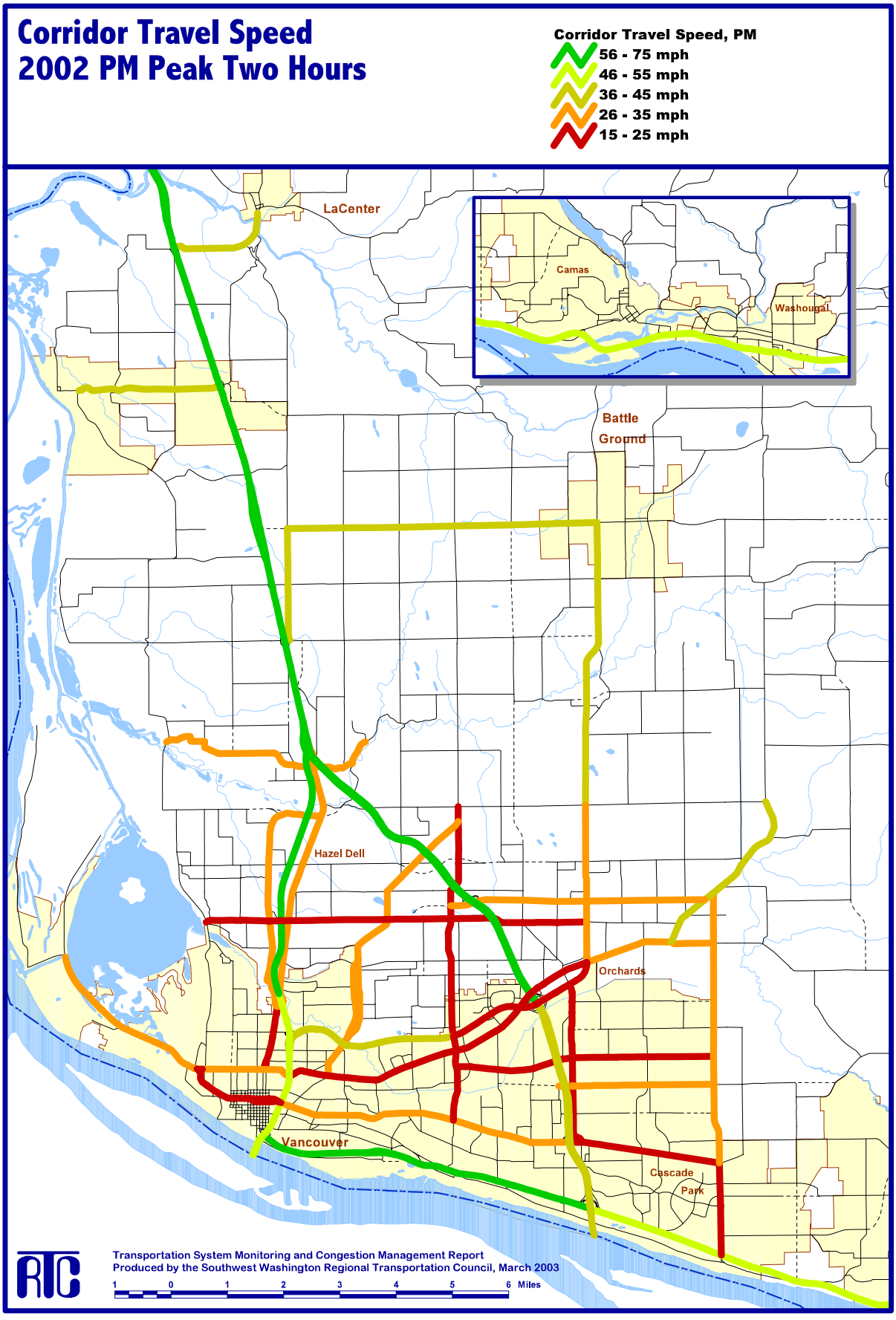


Figure 8 – AM Speed as Percent of Speed Limit

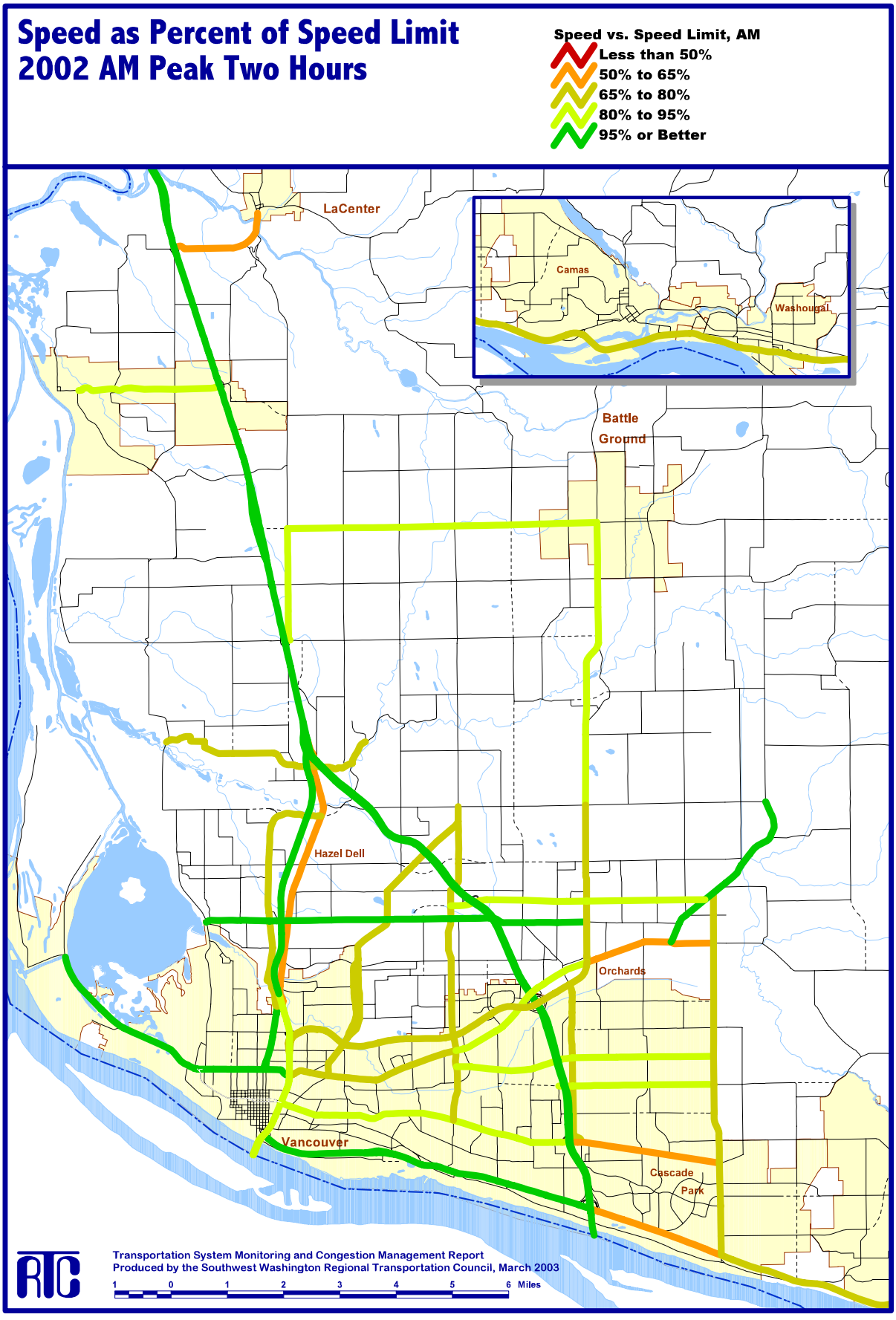


Figure 9 - PM Speed as Percent of Speed Limit

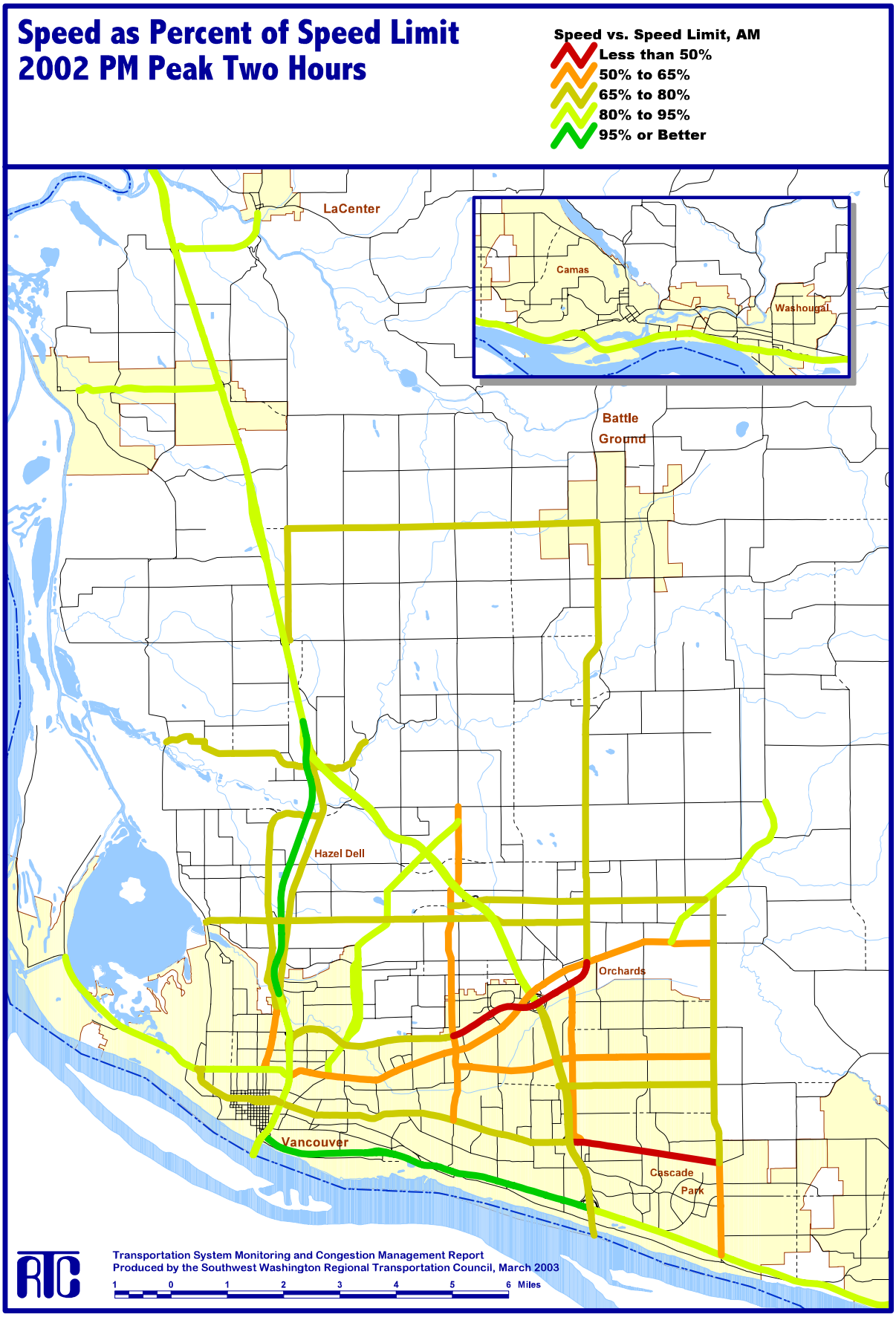


Figure 10 - PM Intersection Delay

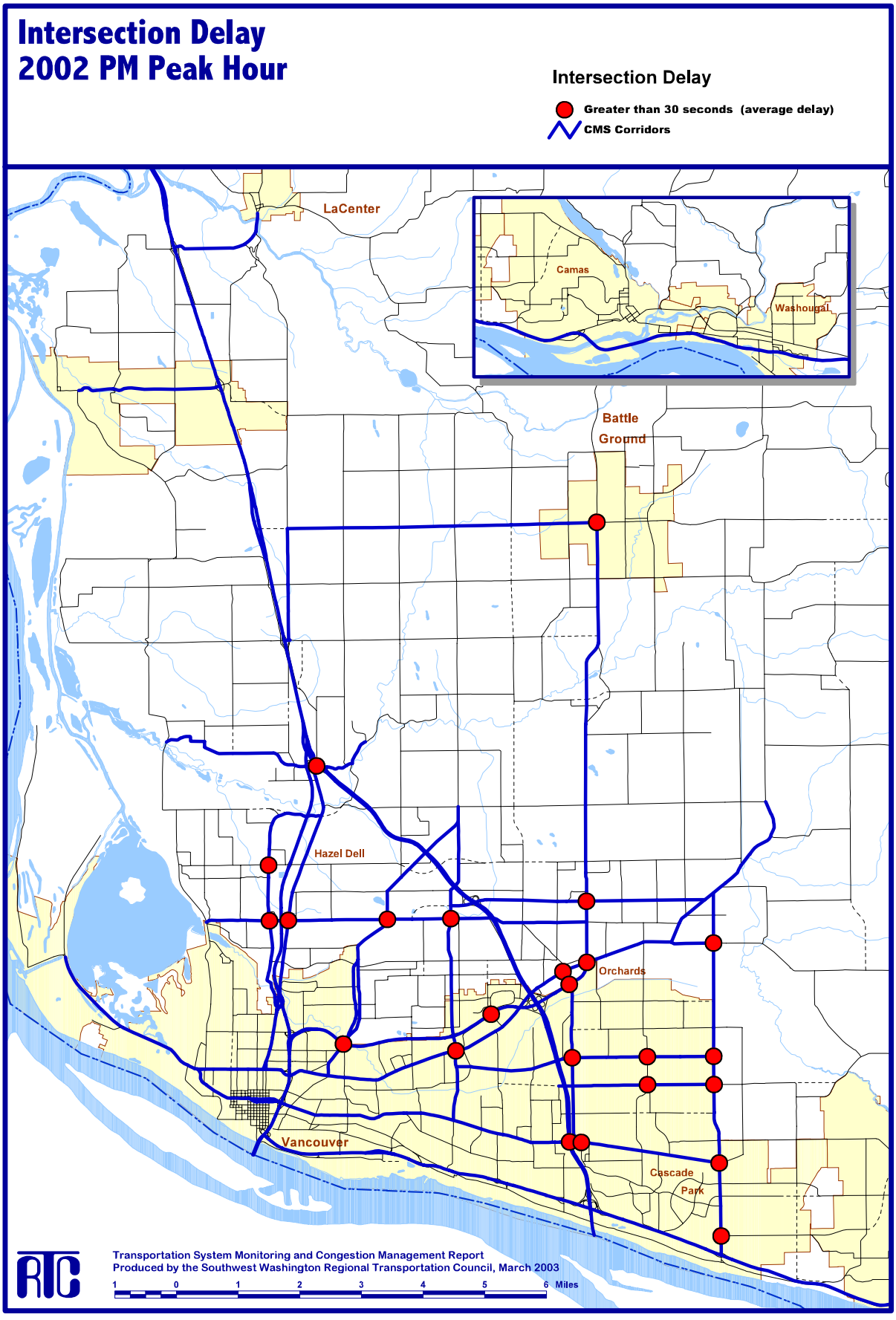


Figure 11 - AM Auto Occupancy

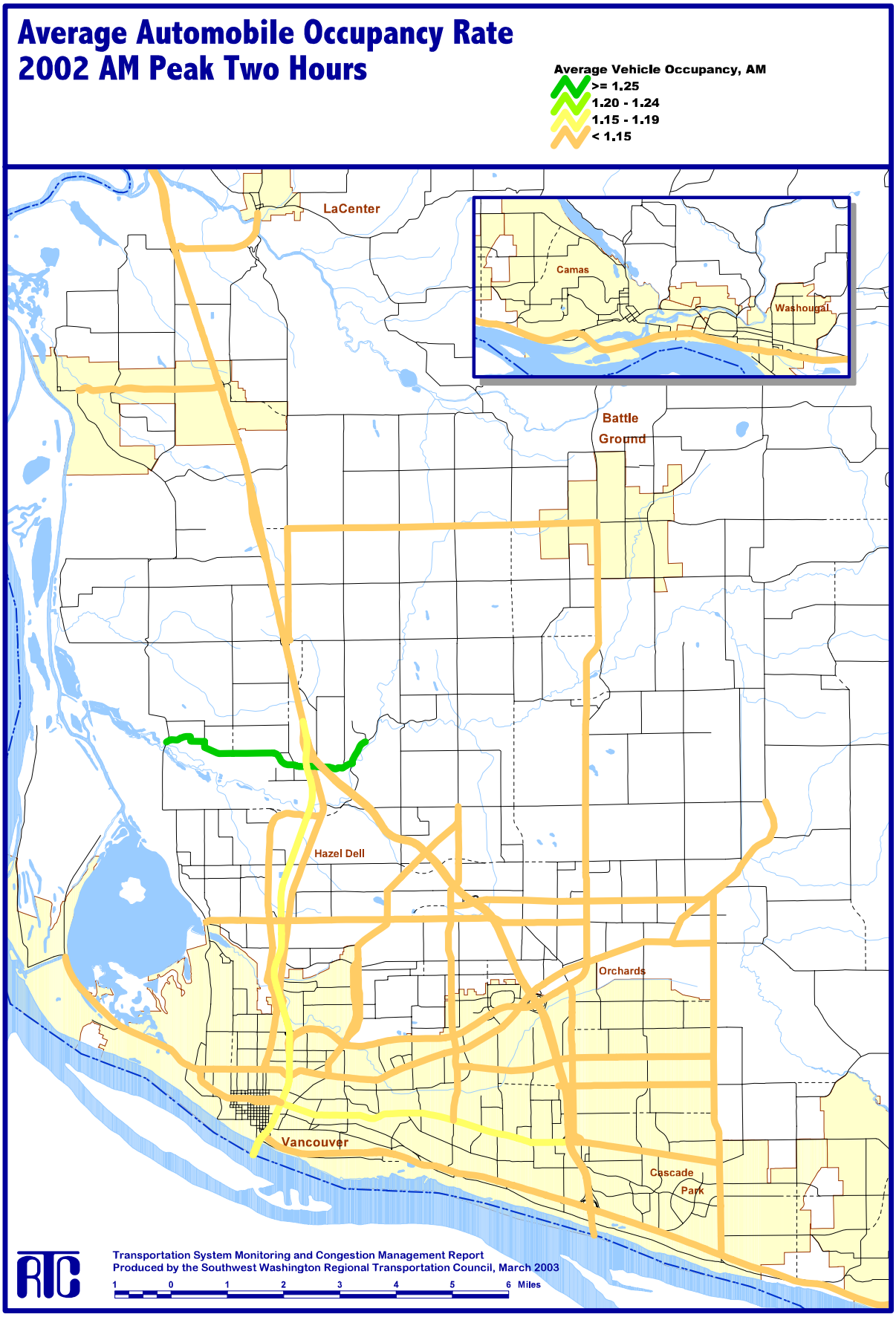


Figure 12 - PM Auto Occupancy

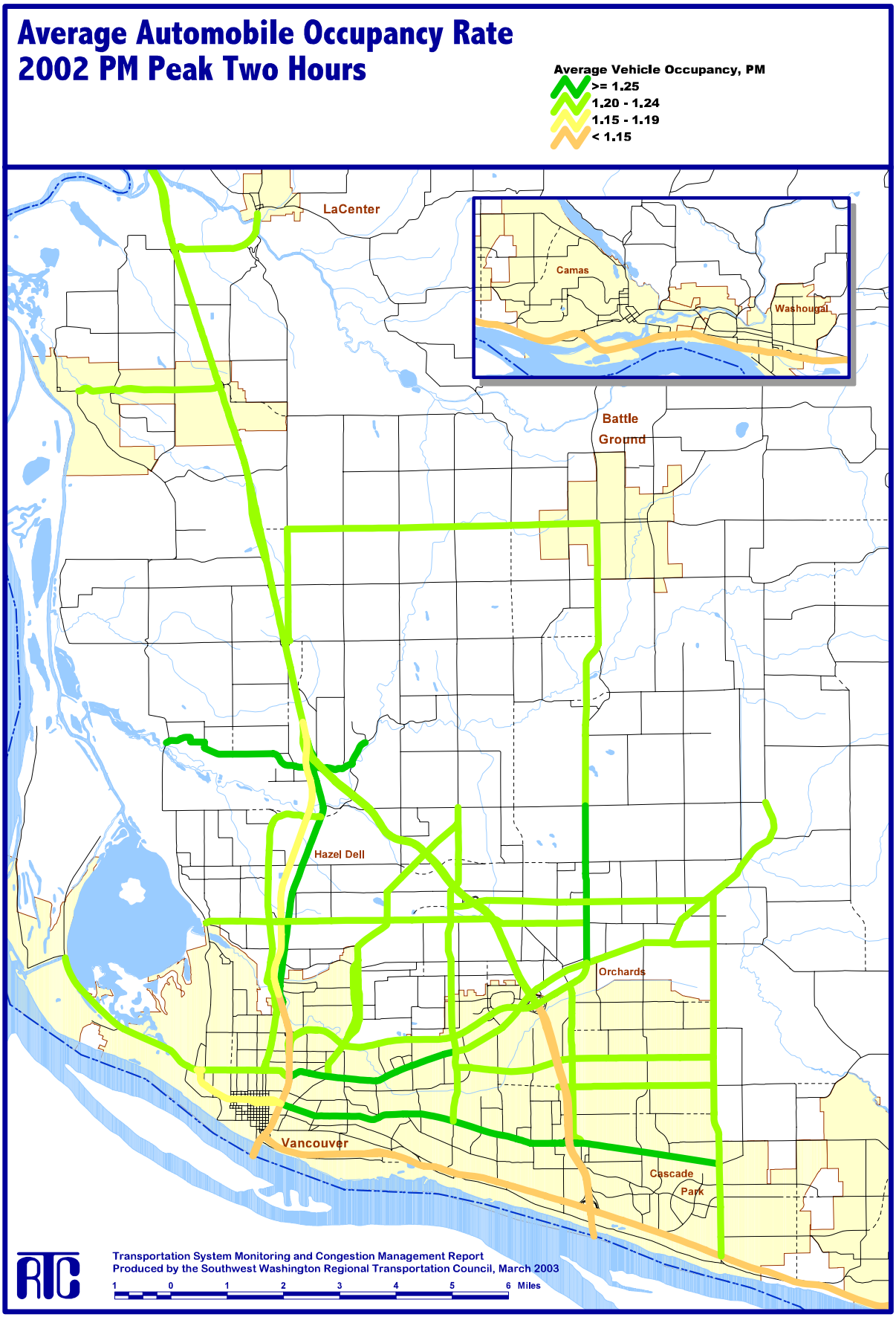


Figure 13 - Midday Auto Occupancy

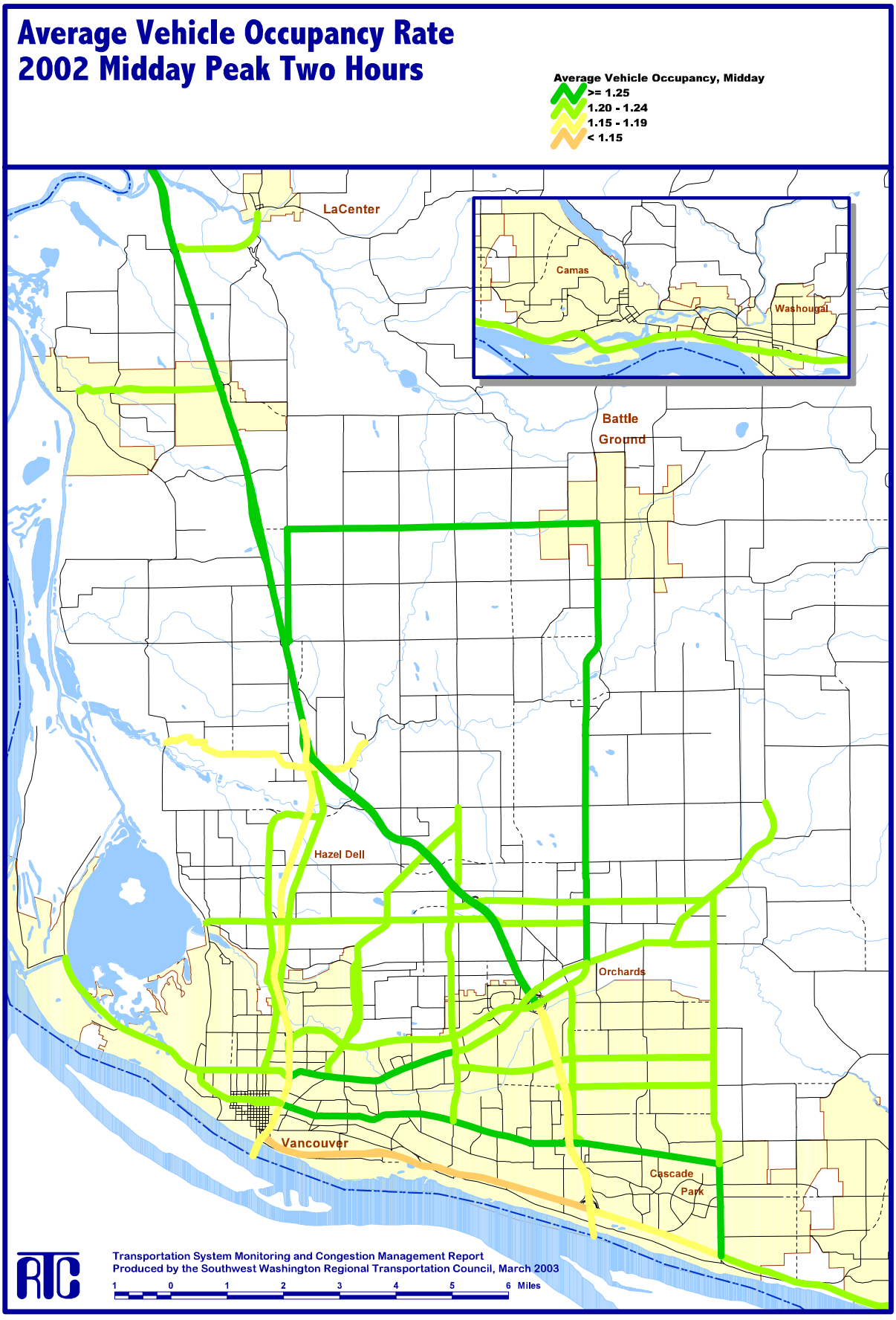


Figure 14 - PM Truck Percentage

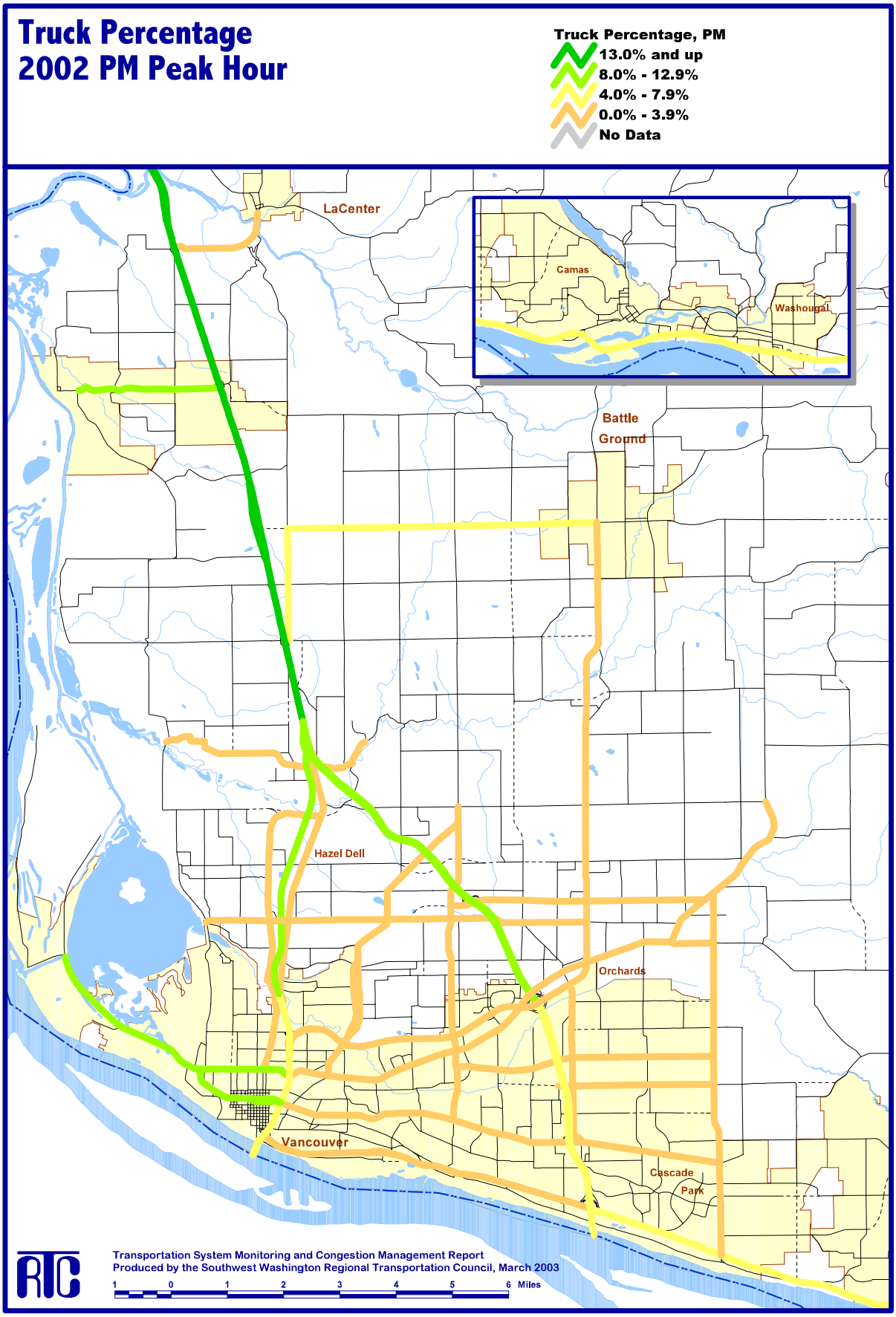


Figure 15 - AM Transit Seat Capacity Used

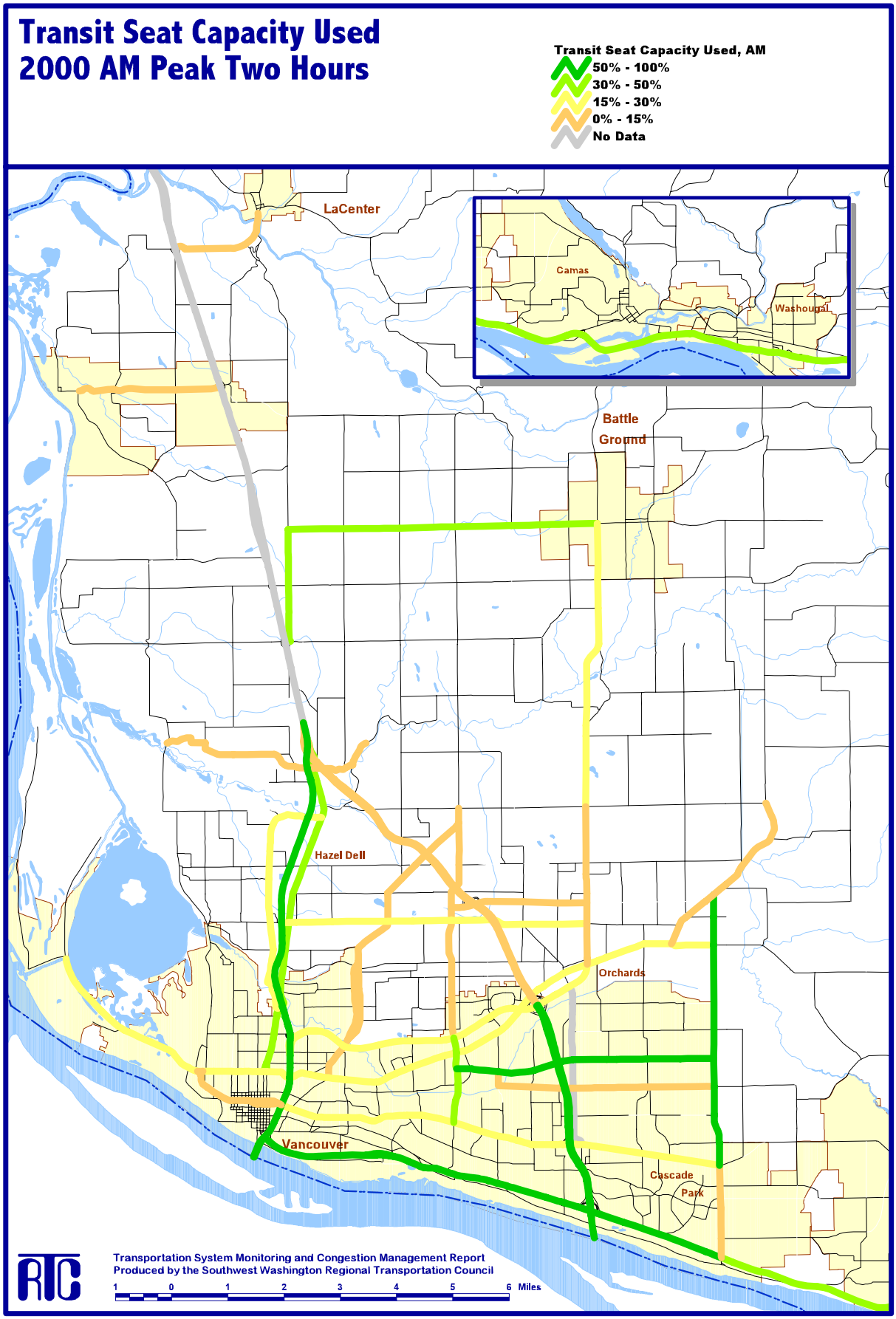
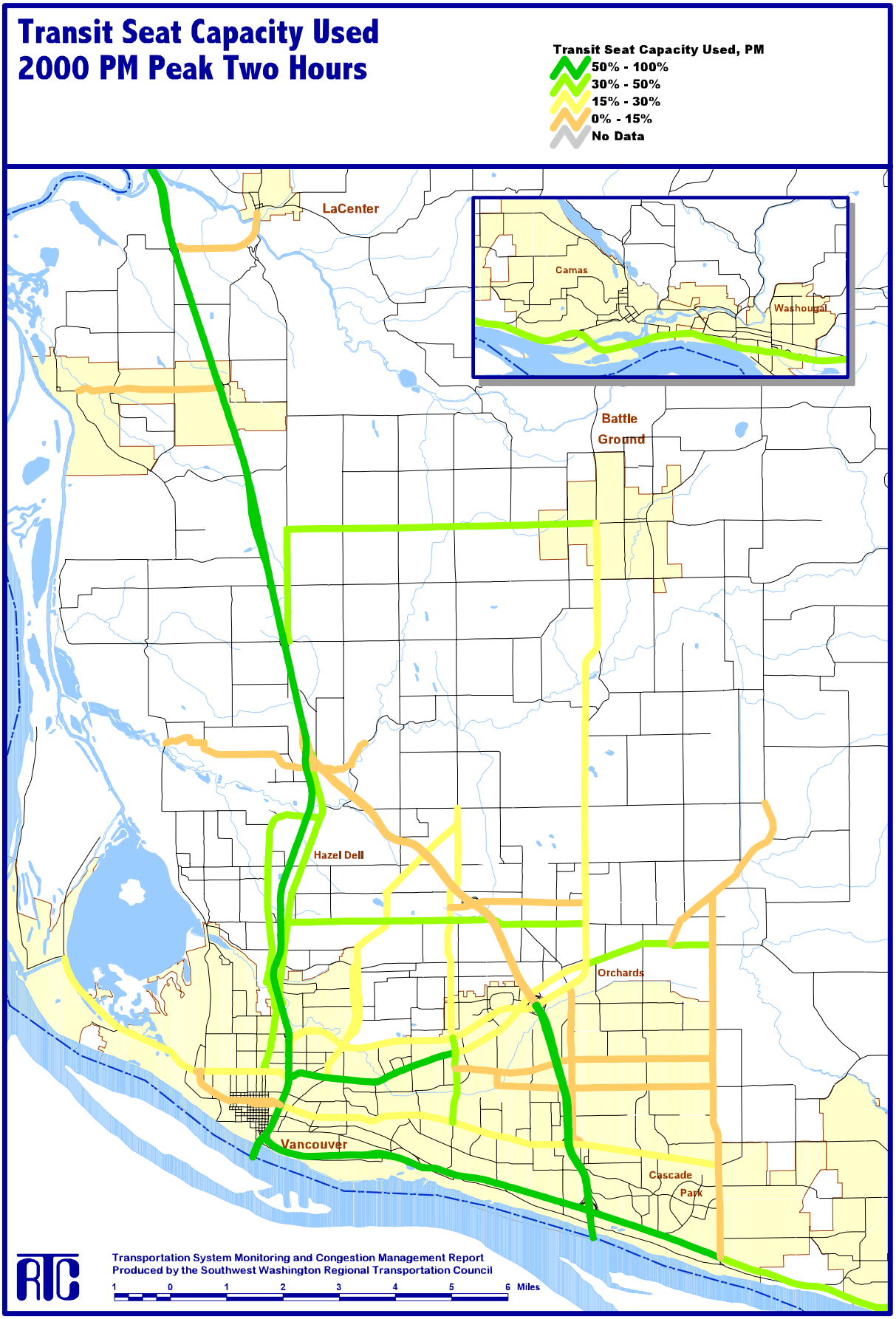


Figure 16- PM Transit Seat Capacity Used



B. Other Transportation Measures

1. Highest Volume Intersections

Table 2 displays the highest volume intersections in 2002. It is based on the total number of vehicles entering an intersection on an average weekday. At-grade intersections along SR-500, Mill Plain, and SR-503 dominate the list. The at-grade intersections along SR-500 make up a third of the fifteen intersections and also has three of the four highest rankings. Mill Plain Boulevard has four of the top fifteen intersections. SR-503 in the Orchards area also has three intersections in the top fifteen.

Table 2 - Highest Volume Intersections

Rank	East/West	North/South	Volume
1	SR-500	Gher/112th	85,000
2	Mill Plain	Chkalov Dr.	78,000
3	SR-500	St. Johns Rd.	64,000
4	SR-500	SR-503	60,000
5	Mill Plain	136th Ave.	60,000
6	SR-500	54th Ave.	58,000
7	SE 34th St.	SE 164th Ave.	58,000
8	SR-500	42nd Ave.	56,000
9	Fourth Plain	Andresen Rd.	55,000
10	Padden Pkw.	SR-503	54,000
11	76th St.	SR-503	54,000
12	Mill Plain	123rd/124th Ave.	52,000
13	78th St.	Highway 99	50,000
14	Mill Plain	Andresen Rd.	47,000
15	134th Street	Highway 99	44,000

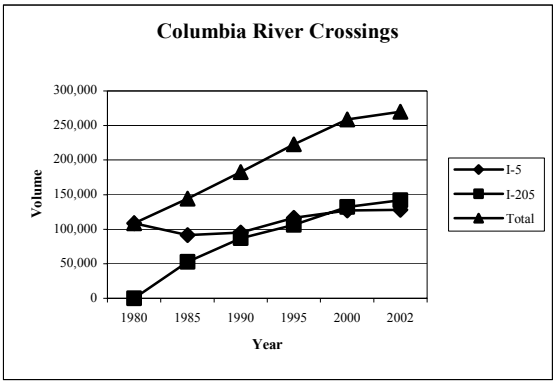
2. Columbia River Bridge Vehicle Volumes

A good indicator of change to bi-state travel is the amount of vehicle travel across the Columbia River bridges. Table 3 and Figure 17 show the historical growth in Columbia River bridge crossings since 1980. In 1980, the only highway across the Columbia River was the Interstate Bridge that carried 108,600 vehicles a day. By 1985, with the opening of the Glenn Jackson Bridge in 1983, Interstate Bridge volumes decreased to 91,400 vehicles a day. However, the new Glenn Jackson Bridge carried 52,600 day for a combined river crossing of 144,000 vehicles a day. By 1995, total river crossings (222,700) had more than doubled compared to 1980 (108,600). While traffic on both bridges has continued to grow since 1990, the Interstate Bridge is at or near capacity about six hours a day. As a result, in 1999 the Glenn Jackson Bridge traffic volumes exceeded the Interstate Bridge traffic volumes on a daily basis. This trend continues today. By 2002, total river crossings had reached 270,000. Future growth is expected to continue at a higher rate on the Glenn Jackson Bridge.

Table 3 - Average Weekday Traffic Across the Columbia River

Year	I-5	I-205	Total
1980	108,600	N/A	108,600
1985	91,400	52,600	144,000
1990	95,400	87,100	182,500
1995	116,600	106,100	222,700
2000	126,900	132,100	259,000
2002	128,150	141,850	270,000

Figure 17 - Columbia River Crossings



3. Transit Seats as Percentage of Lane Capacity

This measure is intended as a planning analysis tool. It utilizes information from the congestion management data to calculate transit seat capacity as a percentage of vehicle capacity per lane for the congestion management corridors. It provides a picture of how much transit service is in the corridors in relation to the road capacity and presents an idea of the potential of transit to mitigate or manage auto demand on the congestion management corridors. The AM and PM maps (Figures 18 and 19) are almost identical because of the similarities of the morning and evening peak transit service. SE 164th Avenue and I-5 south have the highest percentage of transit seats due to the high level of vehicles accessing the Fisher's Landing Transit Center and commuter service crossing the Interstate Bridge in the I-5 corridor. The Fourth Plain corridor has the highest percentage of urban lines. In contrast, SR-14 between I-5 and I-205 has only one bus during the two hour peak period.

4. Transit System Ridership

Figure 20 and Table 4 provide information on 2002 annual C-TRAN patronage by type of service. Almost 96% of C-TRAN system ridership was made up of fixed route service. Urban fixed route service carries three-quarters of C-TRAN's total annual ridership. This is followed by commuter service that carries approximately 19% of the total riders. Table 5 compares growth in Clark County population with changes to C-TRAN system ridership during the same period. The average annual growth rate in Clark County population since 1985 has ranged from 2.5% to 4.5% per year depending on the time period. At the same time, C-TRAN ridership growth rate has been higher than the population growth rate. The passage of Initiative 695 had a serious impact on transit service in Clark County in 2000. The impact to operating revenue resulted in more than a 25% reduction in service levels from 1999. However, even with reductions C-Tran ridership has continued to grow.

Figure 20 - Ridership by Type of Service

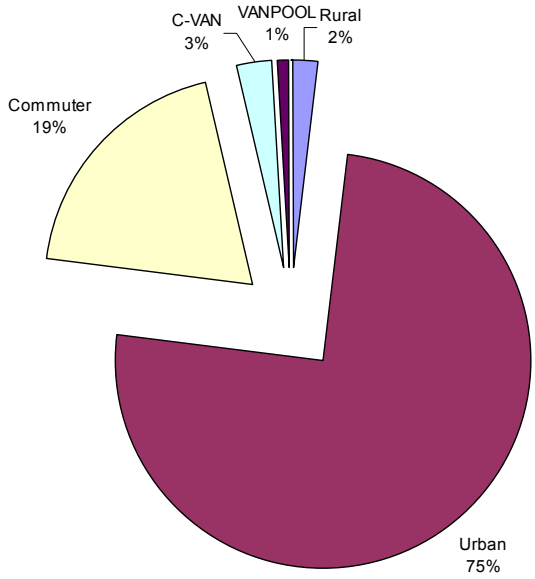


Table 4 - 2002 Ridership by Type of Service

Type of Service	Annual Riders	Percent of Total
Rural	114,866	1.8%
Urban	4,838,657	75.2%
Commuter	1,208,685	18.8%
Events/Other	53,216	0.8%
C-VAN	180,867	2.8%
Vanpool	35,911	0.8%
Total	6,432,202	100.0%

Table 5 – Historical Population and Patronage Growth

Year	Population	Annual Growth Rate	System Passenger Trips	Annual Growth Rate
1985	206,744		1,765,423	
1990	238,053	3.0%	2,840,724	12.2%
1995	291,000	4.4%	4,327,291	10.5%
2000	345,238	3.7%	5,437,084	5.1%
2002	363,400	2.6%	6,432,202	9.2%

5. PARK AND RIDE CAPACITY

In 2000, the opening of the Fisher's Landing park and ride lot added 560 spaces to the total park and ride spaces available through the County. However, as previously noted the reductions in service levels constrained total ridership, with standing passenger occurring on all commuter service. Clark County park and ride capacity is shown in Table 6. In addition to the capacity shown in Table 6, there are informal park and ride facilities located throughout the County.

Table 6 - Clark County Park and Ride Capacity

Facility	Lot Capacity
Battle Ground	28
Evergreen	279
Salmon Creek	438
BPA Ross	200
Ridgefield	42
Fisher's Landing	560
Vancouver Mall	60
Camas/Washougal	20
Total	**1,627**

Figure 18 - AM Transit Seats: Percent of Lane Capacity

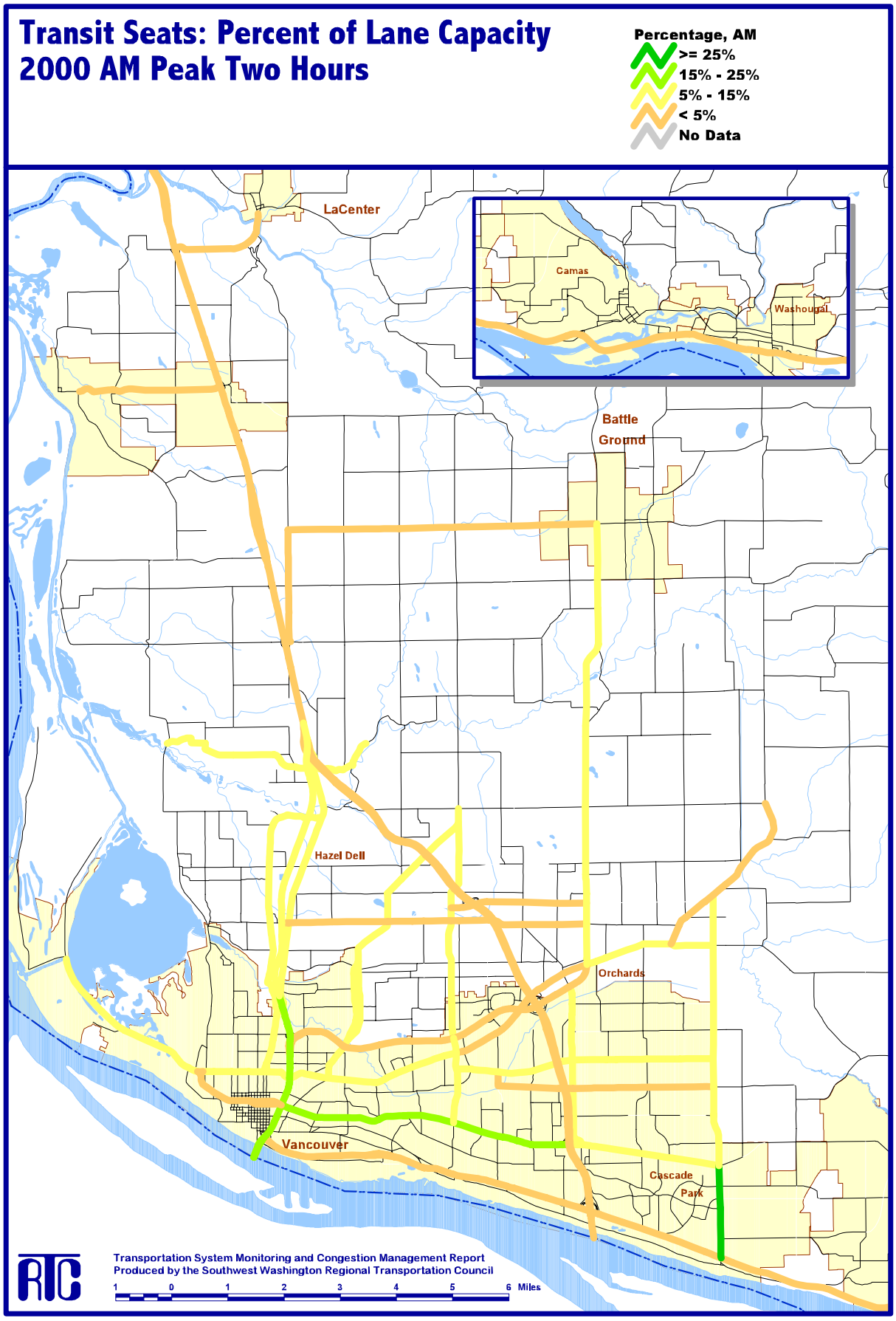
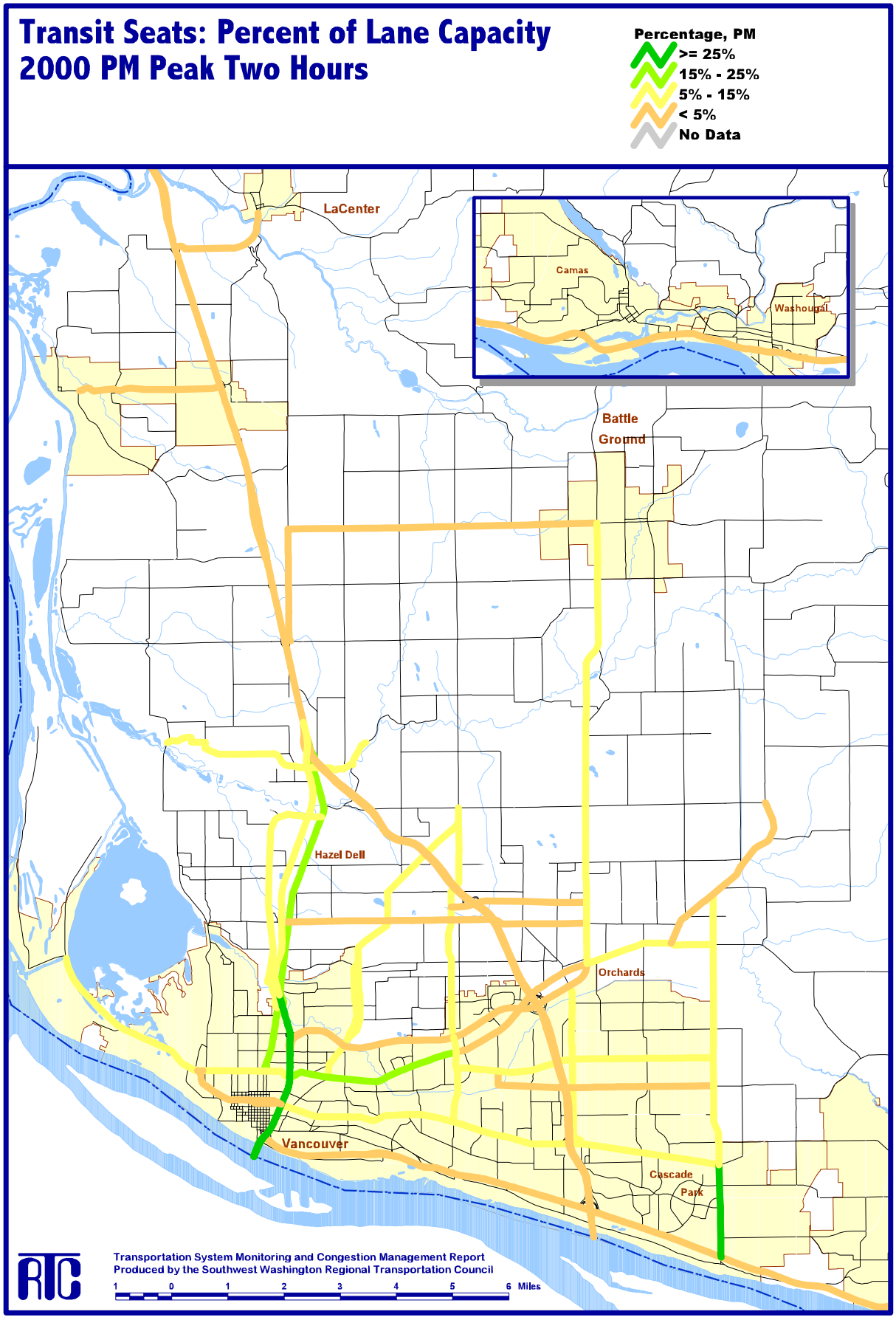


Figure 19 - PM Transit Seats: Percent of Lane Capacity



C. 1999-2002 TRENDS

1. CORRIDOR CONGESTION

Through the four-year period, both the AM and PM periods show congestion along major facilities, with additional congestion shown along a few arterial corridors.

The change in corridor congestion ratio has been very reflective of where road improvements have been made to the congestion management system. In the past few years, capacity has been added with improvements along the following corridors: 164th Avenue, Mill Plain Extension, Burton Road, I-5, SR-500, Ward Road, NW 78th Street, Fourth Plain, and Padden Parkway. Capacity was reduced along Fourth Plain, between I-5 and Fruit Valley Road, where the facility was restriped as a three lane road.

In the four-year period, most corridors displayed higher congestion due to traffic volume increases. However, several corridors have shown significant increases in traffic volumes. They include: Main Street, I-205 Central, 112th Avenue, and Andresen North. Traffic volumes along the Main Street corridor have increased from 450 vehicles in AM peak to 1,400 vehicles. This increase may be attributed to AM congestion in the I-5 corridor. The I-205 corridor displayed a significant increase in corridor congestion. North of SR-500, the peak hour traffic volumes on I-205 increased by 400 vehicles in the AM hour and 700 vehicles in the PM hour. This increase is likely attributed to the construction of the Padden Parkway. The 112th Avenue corridor experienced increased congestion with a growth rate higher than most other corridors. This can be attributed to increased land development along this corridor.

There were a few corridors that showed a decrease in congestion, without an improvement in the corridor. However, this decreased congestion is probably related to trips that have shifted to the Padden Parkway corridor. The SR-500 East corridor and SR-503 south of 76th Street appears to have volumes and congestion levels decreased as trips moved onto the Padden Parkway corridor.

2. SPEED AS PERCENT OF SPEED LIMIT

Over the four-year period, speed as percent of posted speed limit remained relatively constant through the various corridors. Arterials with multiple at-grade intersections display lower speed percentages. While, freeway facilities display higher speed percentages, due to grade separated interchanges.

Corridors that display a decrease in speed compared to 1999 include Main Street, I-205, St. Johns, Andresen North, 162nd/164th Avenue, SR-14 east of I-205, Mill Plain East, and 139th/134th Street corridors. Although the SR-500 Central corridor had a decrease in speed, it was excluded from the list due to the slower speed associated with construction activity. Other corridors are likely approaching saturation levels, which will result in decreased speed.

3. AUTOMOBILE OCCUPANCY

The four-year period showed a similar trend for automobile occupancy. Automobile occupancy is lowest on freeways and in the AM Peak period and highest on arterials in the midday. The automobile occupancy did show a small increase in the I-5 corridor, which can be attributed to HOV lanes in the corridor.

CHAPTER III.
INDIVIDUAL CMS CORRIDOR DATA

This chapter considers and displays the transportation data by individual segment along each of the CMS corridors. The detailed data was used to develop the congestion management corridor summaries in the previous chapter and provides a comprehensive set of transportation data for the individual segments and facilities that comprise the corridors. The purpose of considering transportation data by individual segments is to identify specific locations where congestion is occurring, which may or may not be affecting the operation of the corridor as a whole.

A. CORRIDOR DATA

This section contains detailed transportation data for each of the congestion management corridors, for both the AM and PM peak periods. Information by corridor contains an individual data sheet and a schematic map of the corridor. The following corridors make up this section:

I-5

I-205

Grand/St. Johns

Andresen Road/72nd Avenue

SR-503

Ward Road

162nd/164th Avenue

SR-14

Mill Plain Boulevard

Fourth Plain Boulevard

SR-500

78th/76th/Padden Parkway

28th/18th

134th/139th Streets

SR-502/219th Street

SR-501

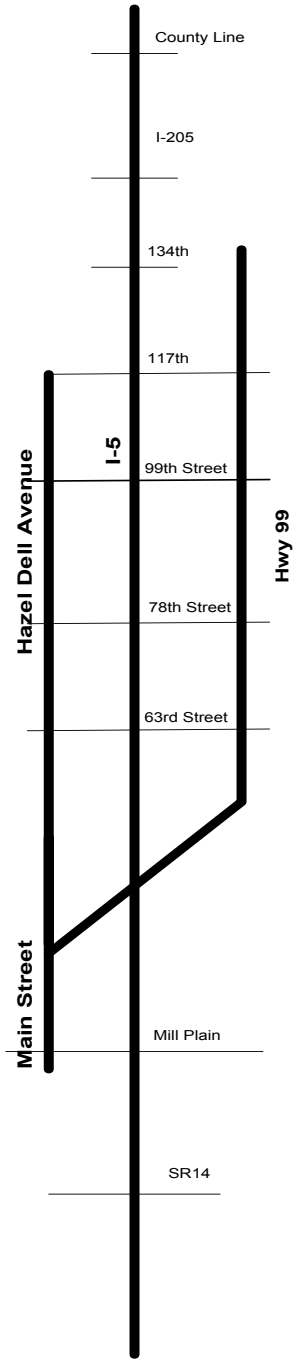
La Center Road

B. AREAS OF CONCERN

Using the individual CMS corridor data areas of concerns were identified. Areas of concern are defined as segments within an individual corridor that has a volume to capacity (V/C) ratio greater that 0.9 or a travel speed 60% or less of the posted speed limit.

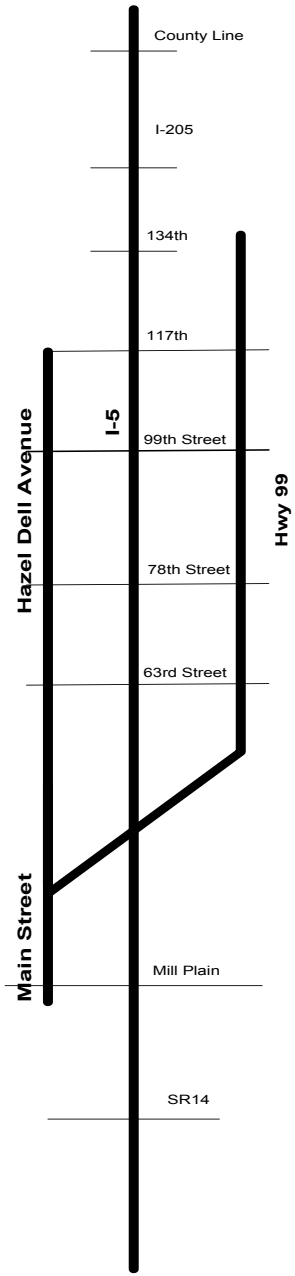
The volume to capacity ratio identifies road segments where current volumes are approaching road capacity. This limitation on road capacity leads to congestion. A travel speed lower than 60% of the posted speed limit is an indicator of delay, which can result in congestion. This section does not attempt to develop solutions to these areas of concern, but takes these segments and cross-references to the transportation solutions identified in a TIP or MTP. These areas of concerns warrant further analysis and monitoring.

Table 7 and Figures 21-22 provide information on both AM and PM volume to capacity ratio segments of concern. Table 8 and Figures 23-24 provide information on both AM and PM speed segments of concern.



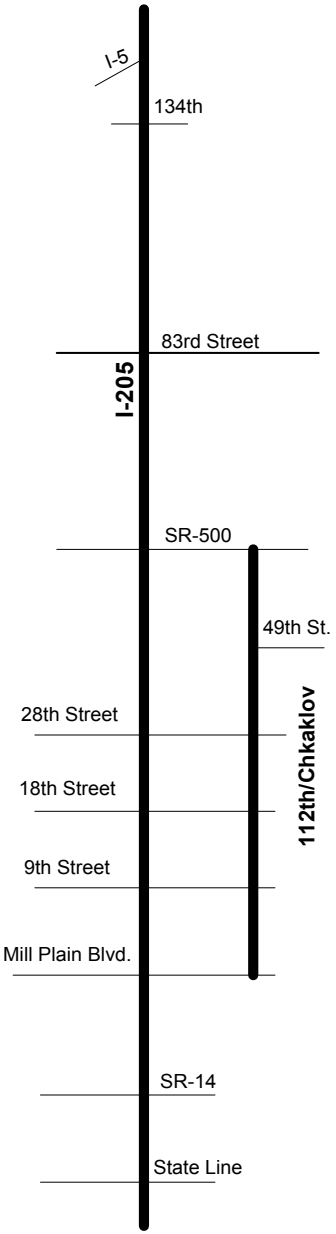
I-5 Corridor

AM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	AM - Southbound/Westbound										
I-5														
County Line	- 319th St.	2.91	5400	1713	0.32			149	70					
319th St.	- SR 501	2.63	5400	2442	0.45			135	70					
SR 501	- SR 502/179th St.	4.69	5400	2508	0.46		1.12	248	68					
SR 502/179th St.	- I-205	1.96	5400	3506	0.65			140	63					
		12.19		**3506**	**0.48**		**1.12**	**672**	**68**					
I-5														
I-205	- 134th St.	0.50	3400	2374	0.70			"	"	134,173				
134th St.	- 99th St.	1.49	3600	2635	0.73			89	60					
99th St.	78th St.	1.01	6000	3725	0.62			59	62					
78th St.	- Main St.	1.49	6000	3824	0.64	6%		95	56		236	470	50.2%	
		4.49		**3824**	**0.66**	**6%**	**1.15**	**243**	**59**	**134,173**	**236**	**470**	**53.33%**	**13.8%**
Hwy 99														
134th St.	- 119th St.	0.72	1700	391	0.23	9%		119	22	71	14	175	8.0%	
119th St.	- 99th St.	1.12	1700	426	0.25	6%		120	34	71	18	175	10.3%	
99th St.	- 78th St.	1.04	1700	496	0.29	6%		158	24	71	28	175	16.0%	
78th St.	- 63rd St.	0.75	1700	834	0.49	6%	1.12	117	23	21,71	80	295	27.1%	
63rd St.	- Main St.	0.52	1700	741	0.44					21,71	88	295	29.8%	
		4.15		**834**	**0.35**	**7%**	**1.14**	**514**	**25**	**21,71**	**88**	**295**	**29.8%**	**17.4%**
Hazel Dell														
117th St.	- 99th St.	1.47	800	424	0.53			200	26	6	34	175	19.4%	
99th St.	- 78th St.	0.99	1700	426	0.25			155	23	6	38	175	21.7%	
78th St.	- 63rd St.	0.74	800	496	0.62			99	27	6				
		3.20		**496**	**0.47**		**1.11**	**454**	**25**	**6**	**48**	**175**	**27.4%**	**10.9%**
I-5														
Main St.	- SR 500	0.79	5400	3909	0.72	6%		52	55	134,154,155				
SR 500	- 4th Plain	0.70	5400	4892	0.91	6%	1.15	113	54	134,154,155				
4th Plain	- Mill Plain	0.56	5400	5222	0.97	6%		"	"	134,154,155				
Mill Plain	- SR 14	0.43	5400	5345	0.99	6%		"	"	134,154,155	294	600	49.0%	
SR 14	- State line	0.27	5400	5413	1.00	7%				105,134,154,155	558	1040	53.7%	
		2.48		**5400**	**0.90**	**6%**	**1.15**	**165**	**54**	**105,134,154,155**	**558**	**1040**	**53.7%**	**28.9%**
Main Street														
I-5	- 39th St.	0.67	1700	1401	0.82			140	35	6,21,71,173	146	500	29.2%	
39th St.	- Fourth Plain	0.70	1200	979	0.82			"	"	3, 6,21,71,173	169	590	28.6%	
		1.37		**1401**	**0.82**		**1.11**	**140**	**35**	**3, 6,21,71,173**	**169**	**590**	**28.6%**	**24.6%**



I-5 Corridor

PM Peak			Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
			Length	Capacity	PM - Nouthbound/Eastbound										
I-5															
County Line	-	319th St.	3.81	5400	2267	0.42	16%		215	64					
319th St.	-	SR 501	2.60	5400	2783	0.52	13%		156	60					
SR 501	-	SR 502/179th St.	4.79	5400	3007	0.56	13%		269	64					
SR 502/179th St.	-	I-205	1.73	5400	4021	0.74	13%	1.23	129	62					
			12.93		**4021**	**0.55**	**14%**	**1.23**	**769**	**61**					
I-5															
I-205	-	134th St.	0.50	3400	2735	0.80	9%		"	"					
134th St.	-	99th St.	1.94	3600	2957	0.82	9%	1.17	115	61					
99th St.		78th St.	1.13	6000	3735	0.62	9%		63	65					
78th St.	-	Main St.	1.24	6000	4070	0.68	6%		69	65	134,173	144	270	53%	
			4.81		**4070**	**0.72**	**8%**	**1.17**	**247**	**63**	**134,173**	**144**	**270**	**53%**	**7.9%**
Hwy 99															
134th St.	-	119th St.	0.91	1700	668	0.39	2%		130	25	71	13	175	7%	
119th St.	-	99th St.	0.92	1700	870	0.51	2%		91	37	71	13	175	7%	
99th St.	-	78th St.	1.04	1700	1133	0.67	2%		154	24	71	38	175	22%	
78th St.	-	63rd St.	0.75	1700	1285	0.76	2%	1.31	105	26	21,71	78	295	26%	
63rd St.	-	Main St.	0.52	1700	993	0.58	2%		72	26	21,71	92	295	31%	
			4.14		**1285**	**0.61**	**2%**	**1.31**	**552**	**27**	**21,71**	**92**	**295**	**31%**	**17.4%**
Hazel Dell															
117th St.	-	99th St.	1.68	800	569	0.71	3%		175	35	6	19	210	9%	
99th St.	-	78th St.	0.99	1700	661	0.39	2%		162	22	6	20	210	10%	
78th St.	-	63rd St.	0.73	800	751	0.94	1%		119	22	6	32	210	15%	
			3.40		**751**	**0.67**	**2%**	**1.24**	**455**	**27**	6	**32**	**210**	**15%**	**13.1%**
I-5															
Main St.	-	SR 500	0.77	5400	4541	0.84	5%		62	45	134,154,155				
SR 500	-	4th Plain	0.70	5400	6054	1.12	4%	1.08	106	58	134,154,155				
4th Plain	-	Mill Plain	0.56	5400	5816	1.08	4%		"	"	134,154,155				
Mill Plain	-	SR 14	0.45	5400	5019	0.93	6%		"	"	134,154,155	241	680	35%	
SR 14	-	State line	0.27	5400	5165	0.96	5%				105,134,154,155	413	1120	37%	
			2.48		**6054**	**1.00**	**5%**	**1.08**	**168**	**53**	**105,134,154,155**	**413**	**1120**	**37%**	**31.1%**
Main Street															
I-5	-	39th St.	0.69	1700	591	0.35	3%		118	21	6,21,71,173	176	535	33%	
39th St.	-	Fourth Plain	0.70	1200	687	0.57	3%		147	17	3, 6,21,71,173	199	595	33%	
			1.39		**687**	**0.47**	**3%**	**1.24**	**265**	**19**	**3, 6,21,71,173**	**199**	**595**	**33%**	**24.8%**



I-205 Corridor

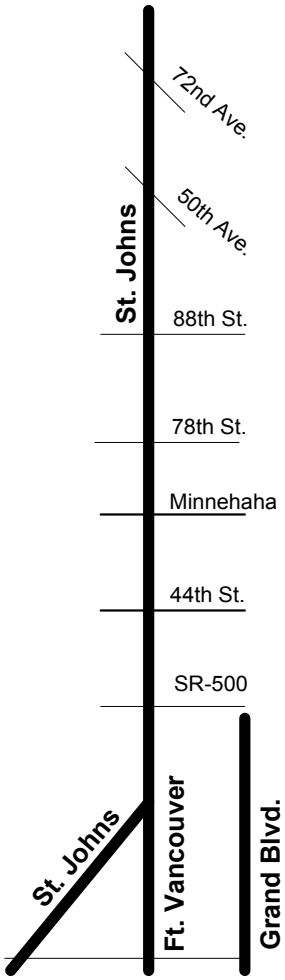
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
I-205														
I-5	- 134th St.	0.52	3200	1886	0.59			31	60					
134th St.	- 83rd St.	3.36	3600	2330	0.65			200	60					
83rd St.	- SR 500	2.00	3600	3387	0.94		1.10	117	62					
		5.88		**3387**	**0.77**		**1.10**	**348**	**61**					
I-205														
SR 500	- Mill Plain	2.79	5700	5283	0.93			164	61	176	35	200	18%	
Mill Plain	- SR 14	1.02	5700	5746	1.01		1.03	59	62	175,176,177	238	720	33%	
SR 14	- State line	0.51	7200	7251	1.01	4%				175,176,177	238	720	33%	
		4.32		**7119**	**0.96**	**4%**	**1.03**	**223**	**62**	**175,176,177**	**238**	**720**	**33%**	**20.0%**
112th Ave. NE / Chkalov Drive / Gher Road														
SR 500	- 49th St.	0.32	1600	895	0.56			35	33	12	21	140	15%	
49th St.	- 28th St.	1.00	1600	845	0.53			124	29	12	50	140	36%	
28th St.	- 18th St.	0.50	1600	682	0.43			60	30	12	49	140	35%	
18th St.	- 9th St.	0.50	1600	814	0.51			51	35	12	49	140	35%	
9th St.	- Mill Plain	0.58	1600	875	0.55			121	17	12	43	140	31%	
		2.90		**895**	**0.52**		**1.11**	**391**	**27**	**12**	**50**	**140**	**36%**	**8.8%**

I-205 Corridor

PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
I-205														
I-5	- 134th St.	0.52	3600	2070	0.58	11%		34	55					
134th St.	- 83rd St.	3.82	3600	2534	0.70	11%		251	55					
83rd St.	- SR 500	2.28	3600	3909	1.09	9%	1.24	141	58					
		6.62		**3909**	**0.87**	**10%**	**1.24**	**426**	**56**					
I-205														
SR 500	- Mill Plain	2.55	5700	5275	0.93	6%		211	44	176	23	160	14%	
Mill Plain	- SR 14	0.95	5700	5415	0.95	9%	1.04	89	38	175,176,177	205	800	26%	
SR 14	- State line	0.51	7200	7831	1.09	4%				175,176,177	205	800	26%	
		4.01		**7831**	**0.96**	**6%**	**1.04**	**300**	**42**	**175,176,177**	**205**	**800**	**26%**	**22.2%**
112th Ave. NE / Chkalov Drive / Gher Road														
SR 500	- 49th St.	0.31	1600	1528	0.96	2%		100	11	12	40	140	29%	
49th St.	- 28th St.	0.99	1600	1124	0.70	2%		136	26	12	35	140	25%	
28th St.	- 18th St.	0.49	1600	922	0.58	2%		82	21	12	30	140	21%	
18th St.	- 9th St.	0.49	1600	984	0.62	2%		76	23	12	30	140	21%	
9th St.	- Mill Plain	0.58	1600	955	0.60	2%		62	33	12	29	140	21%	
		2.86		**1528**	**0.69**	**2%**	**1.24**	**458**	**23**	**12**	**40**	**140**	**29%**	**8.8%**



Grand/St. Johns Corridor

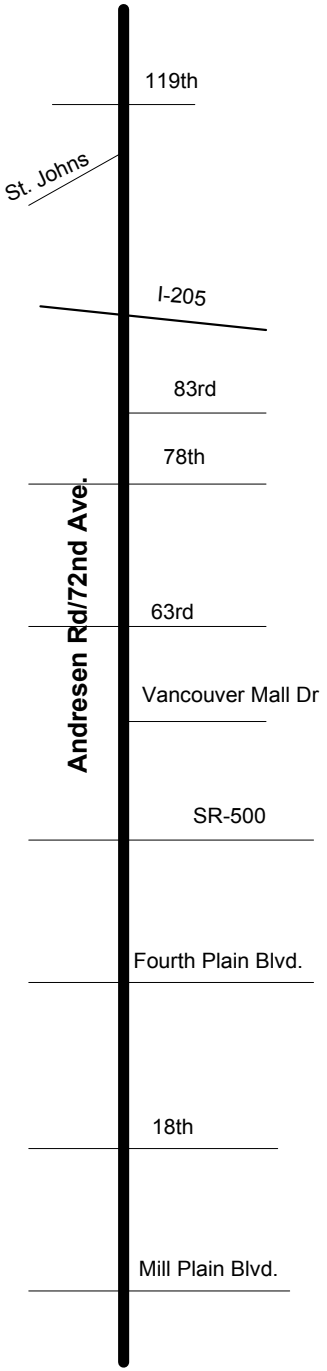
AM Peak

	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	AM - Southbound/Westbound										
St. Johns Rd.													
NE 72nd Ave. - 50th Ave.	1.44	800	564	0.71	3%		183	35					
50th Ave. - NE 88th St.	0.36	1700	1081	0.64			"	"	25	18	120	15%	
NE 88th St. - NE 78th St.	0.50	1700	912	0.54	6%		83	22	25	22	120	18%	
NE 78th St. - NE Minnehaha St.	1.07	1800	796	0.44	8%		116	33	25	22	120	18%	
St. Johns Rd./St. James Rd.													
NE Minnehaha St. - NE 44th St.	0.93	1800	652	0.36			122	27	25	43	120	36%	
NE 44th St. - SR 500	0.55	1800	1103	0.61	4%		108	18	25	45	120	38%	
Fort Vancouver Way													
St. Johns Blvd. - Fourth Plain Blvd.	0.23	900	673	0.75					25	41	120	34%	
Grand Blvd.													
St. Johns Blvd. - Fourth Plain Blvd.	0.58	1200	287	0.24					3	9	120	8%	
St. Johns Blvd.													
SR 500 - Ft. Vancouver Way	0.44	900	829	0.92			151	19	25	46	120	38%	
Ft. Vancouver Way - Fourth Plain Blvd.	0.37	900	147	0.16			"	"					
	5.66		**1103**	**0.57**	**5%**	**1.11**	**763**	**23**	**25**	**35**	**120**	**29%**	**6.7%**

Grand/St. Johns Corridor

PM Peak

	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	PM - Nouthbound/Eastbound										
St. Johns Rd.													
NE 72nd Ave. - 50th Ave.	1.40	800	575	0.72	5%		144	44					
50th Ave. - NE 88th St.	0.36	1700	963	0.57	5%		"	"	25	7	120	6%	
NE 88th St. - NE 78th St.	0.50	1700	851	0.50	5%		80	23	25	9	120	8%	
NE 78th St. - NE Minnehaha St.	1.07	1800	852	0.47	5%		128	30	25	8	120	7%	
St. Johns Rd./St. James Rd.													
NE Minnehaha St. - NE 44th St.	0.94	1800	924	0.51	3%		120	28	25	9	120	8%	
NE 44th St. - SR 500	0.55	1800	1043	0.58	3%		60	33	25	31	120	26%	
Fort Vancouver Way													
St. Johns Blvd. - Fourth Plain Blvd.	0.23	900	433	0.48	2%				25	35	120	29%	
Grand Blvd.													
St. Johns Blvd. - Fourth Plain Blvd.	0.58	1200	491	0.41	2%				3	24	120	20%	
St. Johns Blvd.													
SR 500 - Ft. Vancouver Way	0.44	900	417	0.46	4%		179	16	25	34	120	28%	
Ft. Vancouver Way - Fourth Plain Blvd.	0.36	900	176	0.20	2%		"	"					
	5.62		**1043**	**0.54**	**4%**	**1.24**	**710**	**28**	**25**	**35**	**120**	**29%**	**6.7%**



Andresen Rd./72nd Av. Corridor

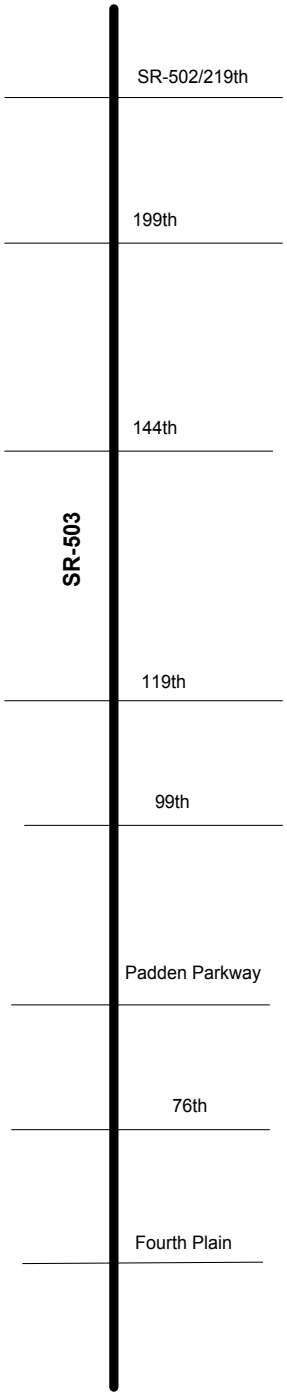
AM Peak

	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	AM - Southbound/Westbound										
Andresen Rd. / N.E. 72nd Avenue.													
119th St. - St. Johns Rd.	0.26	1600	1108	0.69			173	38					
St. Johns Rd. - I-205	1.21	800	562	0.70			"	"					
I-205 overcrossing - 83rd St.	0.37	1800	1000	0.56			"	"					
83rd St. - 78th St.	0.23	1800	785	0.44			76	11	99	1	120	1%	
78th St. - 63rd St.	0.77	1800	564	0.31			76	36	7,78,99	32	360	9%	
63rd St. - Vancouver Mall Dr.	0.71	1800	856	0.48			76	34	7,78,99	32	360	9%	
Vancouver Mall Dr. - SR 500	0.63	1800	1176	0.65			87	26	32	19	140	14%	
	4.18		**1176**	**0.57**		**1.11**	**488**	**31**	**7,78,99**	**32**	**360**	**9%**	**20.0%**
Andresen Rd.													
SR 500 - Fourth Plain Blvd.	0.27	1800	1123	0.62			61	16	32	18	140	13%	
Fourth Plain Blvd. - 18th St.	0.56	1800	807	0.45			68	30	32	26	140	19%	
18th St. - Mill Plain Blvd.	0.69	1800	654	0.36			77	32	32	46	140	33%	
	1.52		**1123**	**0.46**		**1.11**	**206**	**27**	**32**	**46**	**140**	**33%**	**7.8%**

Andresen Rd./72nd Av. Corridor

PM Peak

	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	PM - Nouthbound/Eastbound										
Andresen Rd. / N.E. 72nd Avenue.													
119th St. - St. Johns Rd.	0.24	1600	1375	0.86	3%		35	24	n/a				
St. Johns Rd. - I-205	0.71	800	800	1.00	2%		188	19	n/a				
I-205 overcrossing - 83rd St.	0.28	1800	1305	0.73	2%		"	"	n/a				
83rd St. - 78th St.	0.28	1800	1019	0.57	4%		43	23	99	17	120	14%	
78th St. - 63rd St.	0.75	1800	912	0.51	3%		105	26	7,78,99	67	360	19%	
63rd St. - Vancouver Mall Dr.	0.71	1800	1197	0.67	3%		113	23	7,78,99	66	360	18%	
Vancouver Mall Dr. - SR 500	0.63	1800	1496	0.83	2%		95	24	32	26	360	7%	
	3.60		**1496**	**0.68**	**3%**	**1.24**	**578**	**28**	**7,78,99**	**67**	**360**	**19%**	**20.0%**
Andresen Rd.													
SR 500 - Fourth Plain Blvd.	0.25	1800	1689	0.94	2%		36	25	32	29	140	21%	
Fourth Plain Blvd. - 18th St.	0.56	1800	1021	0.57	2%		156	13	32	31	140	22%	
18th St. - Mill Plain Blvd.	0.69	1800	1096	0.61	2%		82	30	32	33	140	24%	
	1.50		**1689**	**0.67**	**2%**	**1.24**	**273**	**20**	**32**	**33**	**140**	**24%**	**7.8%**



SR-503 Corridor

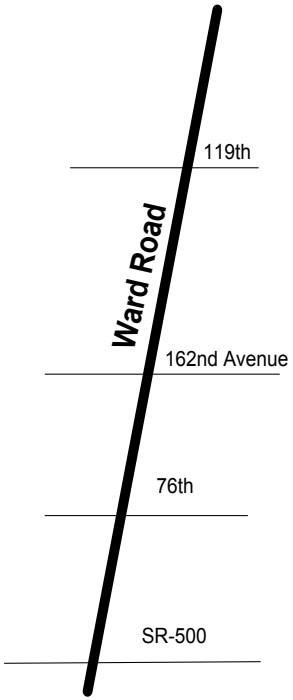
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
SR 503														
119th St.	- 99th St.	1.01	1800	1409	0.78	5%		97	37	7	21	90	23%	
99th St.	- Padden Parkway	0.76	1800	1358	0.75			84	33	7	21	90	23%	
Padden Parkway	- 76th St.	0.32	1800	1104	0.61	7%		60	19	7	21	90	23%	
76th St.	- Fourth Plain/SR 500	0.74	1800	1109	0.62		1.09	86	31	31	13	90	14%	
		2.83		**1409**	**0.72**	**6%**	**1.09**	**327**	**31**	**7**	**21**	**90**	**23%**	**5.0%**
SR 503														
SR-502	- 199th St.	1.00	1800	929	0.52	5%		70	51	7	22	90	24%	
199th St.	- 149th St.	2.82	1800	1157	0.64		1.11	185	55	7	22	90	24%	
149th St.	- 119th St.	1.27	1800	1360	0.76	3%		151	30	7	23	90	26%	
		5.09		**1360**	**0.66**	**4%**	**1.11**	**406**	**45**	**7**	**23**	**90**	**26%**	**5.0%**

SR-503 Corridor

PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
SR 503														
119th St.	- 99th St.	0.99	1800	1151	0.64	4%		108	33	7	31	90	34%	
99th St.	- Padden Parkway	0.78	1800	1341	0.75	3%		97	29	7	32	90	36%	
Padden Parkway	- 76th St.	0.30	1800	1421	0.79	2%		32	34	7	27	90	30%	
76th St.	- Fourth Plain/SR 500	0.72	1800	1844	1.02	2%	1.26	100	26	31				
		2.79		**1844**	**0.91**	**3%**	**1.26**	**337**	**30**	**7**	**32**	**90**	**36%**	**5.0%**
SR 503														
SR-502	- 199th St.	0.99	1800	962	0.53	4%		135	26	7	28	90	31%	
199th St.	- 149th St.	2.55	1800	1066	0.59	4%	1.23	197	47	7	28	90	31%	
149th St.	- 119th St.	1.50	1800	1233	0.69	3%		122	44	7	30	90	33%	
		5.04		**1233**	**0.61**	**4%**	**1.23**	**454**	**40**	**7**	**30**	**90**	**33%**	**5.0%**

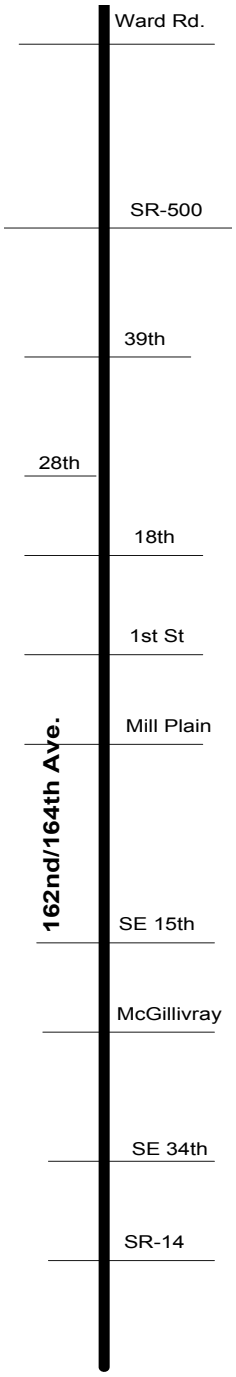


Ward Road Corridor

AM Peak	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	AM - Southbound/Westbound										
Ward Road													
119th St. - 162nd Ave.	2.12	1800	336	0.19			120	64					
162nd Ave. - 76th St.	0.81	1800	666	0.37			80	36					
76th St. - SR 500	0.37	1800	604	0.34			38	35					
	3.30		**666**	**0.28**		**1.11**	**238**	**50**					

Ward Road Corridor

PM Peak	Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
	Length	Capacity	PM - Nouthbound/Eastbound										
Ward Road													
119th St. - 162nd Ave.	1.43	1800	717	0.40	2%		105	49					
162nd Ave. - 76th St.	0.79	1800	803	0.45	2%		73	39					
76th St. - SR 500	0.37	1800	537	0.30	2%		45	30					
	2.59		**803**	**0.40**	**2%**	**1.24**	**222**	**42**					



162nd/164th Avenue Corridor

AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
162nd/164th Ave.														
Ward Rd.	- SR 500	0.90	800	747	0.93			161	20					
SR 500	- 39th St.	0.61	800	744	0.93			129	17					
39th St.	- 28th St.	0.91	1800	952	0.53			57	57	18	7	90	8%	
28th St.	- 18th St.	0.41	1800	1144	0.64			61	24	18	7	90	8%	
18th St.	- 1st St.	1.62	1800	1213	0.67			113	52	18	7	90	8%	
1st St.	- Mill Plain	0.40	1800	1412	0.78	7%		72	20	18				
		4.85		**1412**	**0.72**	**7%**	**1.11**	**593**	**29**	**18**	**7**	**90**	**8%**	**5.0%**
162nd/164th Ave.														
Mill Plain	- 15th St.	0.37	2400	1138	0.47	9%		44	30	41	18	120	15%	
15th St.	- McGillvray	0.40	2400	1204	0.50		1.11	54	27	41	20	120	17%	
McGillvray	- 34th St.	0.53	2400	1385	0.58			76	25	41	19	120	16%	
34th St.	- SR 14	0.35	2400	2325	0.97			43	29	41	19	120	16%	
		1.65		**2325**	**0.67**	**9%**	**1.11**	**217**	**27**	**41**	**20**	**120**	**17%**	**7.1%**

162nd/164th Avenue Corridor

PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
162nd/164th Ave.														
Ward Rd.	- SR 500	0.87	800	847	1.06	4%		109	29	n/a				
SR 500	- 39th St.	1.50	800	1034	1.29	6%		234	23	n/a				
39th St.	- 28th St.	0.51	1800	1120	0.62	2%		58	32	18	10	100	10%	
28th St.	- 18th St.	0.50	1800	1370	0.76	2%		48	37	18	9	100	9%	
18th St.	- 1st St.	1.01	1800	1080	0.80	3%		91	40	18	8	100	8%	
1st St.	- Mill Plain	0.38	1800	1790	0.99	2%		53	26	18	3	100	3%	
		4.77		**1790**	**0.94**	**3%**	**1.24**	**592**	**29**	**18**	**10**	**100**	**10%**	**5.6%**
162nd/164th Ave.														
Mill Plain	- 15th St.	0.37	2400	1589	0.66	3%		35	38	18,41	32	220	15%	
15th St.	- McGillvray	0.40	2400	1588	0.66	2%	1.23	51	28	18,41	32	220	15%	
McGillvray	- 34th St.	0.53	2400	1520	0.63	2%		64	30	18,41	32	220	15%	
34th St.	- SR 14	0.34	2400	2248	0.94	2%		130	9	41	29	120	24%	
		1.64		**2248**	**0.73**	**2%**	**1.23**	**280**	**21**	**18,41**	**32**	**220**	**15%**	**12.9%**

SR-14 Corridor

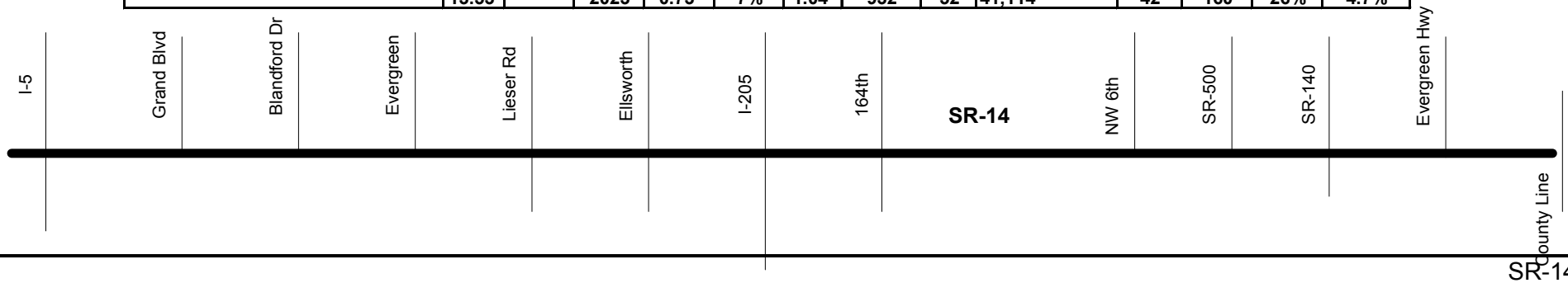
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
SR 14														
I-5	- Grand Blvd.	1.45	3000	2614	0.87	4%		362	60	114	16	40	40%	
Grand Blvd.	- Blandford Dr.	0.96	3400	2842	0.84			"	"	114	16	40	40%	
Blandford Dr.	- Evergreen Blvd.	0.55	3400	2842	0.84		1.03	"	"	114	16	40	40%	
Evergreen Blvd.	- Lieser Rd.	1.29	3400	2886	0.85			"	"	114	16	40	40%	
Lieser Rd.	- Ellsworth Rd.	1.23	3400	2979	0.88			"	"	114	16	40	40%	
Ellsworth Rd.	- I-205	0.51	3400	2676	0.79	3%		"	"	114	16	40	40%	
		5.99		**2979**	**0.85**	**4%**	**1.03**	**362**	**60**	**114**	**16**	**40**	**40%**	**1.2%**
SR 14														
I-205	- 164th Ave.	2.45	3400	3819	1.12	7%		237	37	114	16	40	40%	
		2.45		**3819**	**1.12**	**7%**	**1.04**	**237**	**37**	**114**	**16**	**40**	**40%**	**1.2%**
SR 14														
164th Ave.	- 6th Ave. NW	3.55	3400	2022	0.59			371	34	41,114	36	160	23%	
6th Ave. NW	- SR 500	2.18	1100	1121	1.02			157	50					
SR 500	- 32nd St.	2.42	1000	1051	1.05	4%		197	44					
32nd St.	- Evergreen Hwy.	1.19	1000	328	0.33			69	62					
Evergreen Hwy.	- County Line	2.30	1000	153	0.15									
		11.64		**2022**	**0.74**	**4%**	**1.10**	**794**	**42**	**41,114**	**36**	**160**	**23%**	**4.7%**

SR-14 Corridor

PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
SR 14														
I-5	- Grand Blvd.	1.45	3000	2701	0.90	4%		176	61	114	15	40	38%	
Grand Blvd.	- Blandford Dr.	0.96	3400	2821	0.83	4%		"	"	114	15	40	38%	
Blandford Dr.	- Evergreen Blvd.	0.56	3400	2897	0.85	4%	1.03	"	"	114	15	40	38%	
Evergreen Blvd.	- Lieser Rd.	1.24	3400	2855	0.84	4%		176	60	114	15	40	38%	
Lieser Rd.	- Ellsworth Rd.	1.20	3400	2921	0.86	4%		"	"	114	15	40	38%	
Ellsworth Rd.	- I-205	0.50	3400	2628	0.77	3%		"	"	114	15	40	38%	
		5.91		**2921**	**0.85**	**4%**	**1.03**	**352**	**61**	**114**	**15**	**40**	**38%**	**1.2%**
SR 14														
I-205	- 164th Ave.	2.46	3400	3451	1.02	5%	1.11	184	48	114	15	40	38%	
		2.46		**3451**	**1.02**	**5%**	**1.11**	**184**	**48**	**114**	**15**	**40**	**38%**	**1.2%**
SR 14														
164th Ave.	- 6th Ave. NW	3.99	3400	2023	0.60	5%		248	58	41,114	42	160	26%	
6th Ave. NW	- SR 500	2.59	1100	1014	0.92	8%		170	55					
SR 500	- 32nd St.	2.45	1000	1150	1.15	5%		192	46					
32nd St.	- Evergreen Hwy.	2.20	1000	342	0.34	7%		322	50					
Evergreen Hwy.	- County Line	2.30	1000	205	0.21	8%		"	"					
		13.53		**2023**	**0.73**	**7%**	**1.04**	**932**	**52**	**41,114**	**42**	**160**	**26%**	**4.7%**



Mill Plain Blvd. Corridor

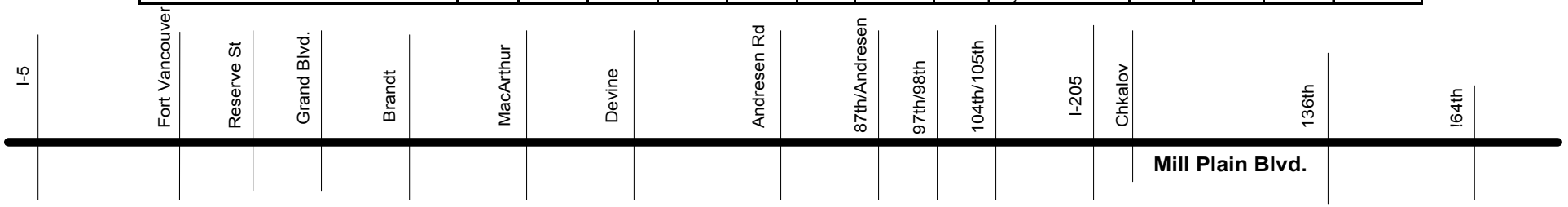
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
Mill Plain														
I-5	- Ft. Vancouver	0.16	1800	758	0.42	2%		24	24	37	54	240	23%	
Ft. Vancouver	- Reserve St.	0.47	1800	623	0.35	3%		59	29	37,38	115	380	30%	
Reserve St.	- Grand Blvd.	0.58	1800	585	0.33	1%		56	37	37,38	125	380	33%	
Grand Blvd.	- Brandt Rd.	0.58	1800	615	0.34	6%		54	39	37,38	118	380	31%	
Brandt Rd.	- MacArthur Blvd.	0.51	1800	662	0.37	3%		51	36	37,38	115	380	30%	
MacArthur Blvd.	- Devine Rd.	0.25	1800	666	0.37	4%		37	24	37	66	240	28%	
Devine Rd.	- Andresen Rd.	0.60	1800	615	0.34	3%	1.17	52	42	37	73	240	30%	
Andresen Rd.	- 87th/Leiser Rd.	0.82	1800	667	0.37	3%		106	28	37	69	240	29%	
87th/Leiser Rd.	- 97/98th Ave.	0.64	1800	870	0.48	3%		66	35	37	38	240	16%	
97/98th Ave.	- 104/105th Ave.	0.41	1800	899	0.50	3%		43	34	37	34	240	14%	
104/105th Ave.	- I-205	0.26	1800	970	0.54	3%		30	31	37	27	240	11%	
		5.28		**970**	**0.40**	**3%**	**1.17**	**578**	**33**	**37,38**	**125**	**380**	**33%**	**21.1%**
Mill Plain														
I-205	- Chkalov Drive	0.21	2400	2250	0.94			42	18	37,175	52	440	12%	
Chkalov Drive	136th Ave.	1.09	2400	1374	0.57		1.13	207	19	37,175	48	440	11%	
136th Ave.	- 164th Ave.	1.40	2400	1636	0.68			186	27	41	19	120	16%	
		2.70		**2250**	**0.67**		**1.13**	**435**	**22**	**37,175**	**52**	**440**	**12%**	**27.5%**

Mill Plain Blvd. Corridor

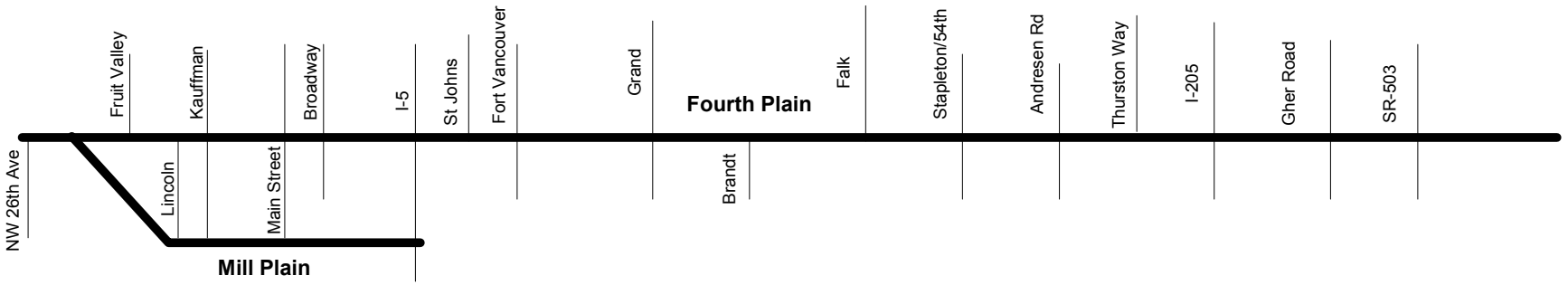
PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
Mill Plain														
I-5	- Ft. Vancouver	0.17	1800	1103	0.61	1%		34	18	37	108	240	45%	
Ft. Vancouver	- Reserve St.	0.46	1800	828	0.46	1%		46	36	37,38	151	380	40%	
Reserve St.	- Grand Blvd.	0.58	1800	757	0.42	1%		69	30	37,38	142	380	37%	
Grand Blvd.	- Brandt Rd.	0.58	1800	698	0.39	2%		54	39	37,38	137	380	36%	
Brandt Rd.	- MacArthur Blvd.	0.51	1800	880	0.49	2%		54	34	37,38	137	380	36%	
MacArthur Blvd.	- Devine Rd.	0.25	1800	989	0.55	1%		35	26	37	102	240	43%	
Devine Rd.	- Andresen Rd.	0.57	1800	1230	0.68	1%	1.34	68	30	37	100	240	42%	
Andresen Rd.	- 87th/Leiser Rd.	0.91	1800	1182	0.66	2%		106	31	37	86	240	36%	
87th/Leiser Rd.	- 97/98th Ave.	0.54	1800	1312	0.73	1%		81	24	37	69	240	29%	
97/98th Ave.	- 104/105th Ave.	0.40	1800	1290	0.72	1%		84	17	37	54	240	23%	
104/105th Ave.	- I-205	0.25	1800	1458	0.81	1%		58	15	37	58	240	24%	
		5.22		**1458**	**0.61**	**1%**	**1.34**	**690**	**27**	**37,38**	**151**	**380**	**40%**	**21.1%**
Mill Plain														
I-205	- Chkalov Drive	0.21	3000	2713	0.90	2%		125	6	37,175	80	440	18%	
Chkalov Drive	136th Ave.	1.07	2400	2076	0.87	2%	1.25	156	25	37,175	69	440	16%	
136th Ave.	- 164th Ave.	1.37	2400	1889	0.79	2%		228	22	41	35	120	29%	
		2.65		**2713**	**0.83**	**2%**	**1.25**	**509**	**19**	**37,175**	**80**	**440**	**18%**	**27.5%**



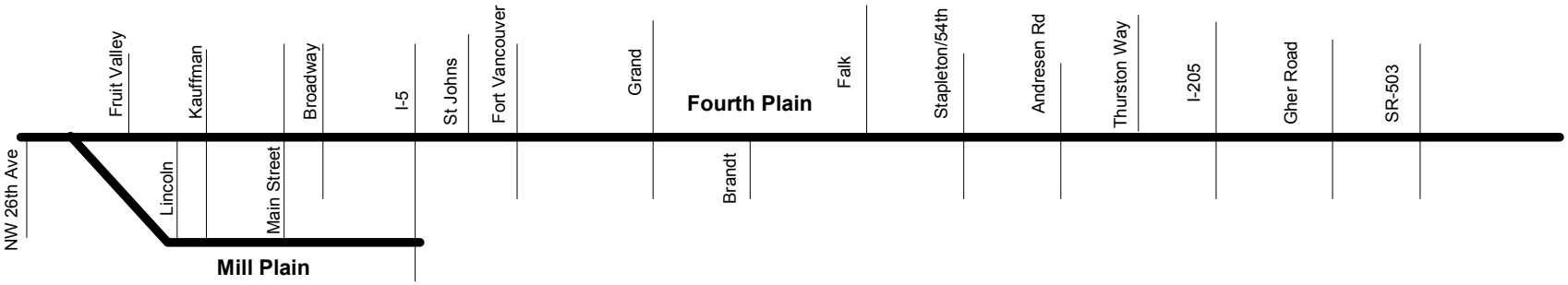
Fourth Plain Blvd. Corridor

AM Peak		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
Fourth Plain/SR 501														
I-5	- Broadway	0.55	1000	694	0.69	8%		49	40					
Main St.	- Kaufman	0.46	1000	432	0.43			63	26					
Kaufman	- Fruit Valley Rd.	0.57	1000	323	0.32	16%	1.09	64	32	1	17	105	16%	
Fruit Valley Rd.	- Port Office	0.60	1000	553	0.55	12%	1.03	57	38					
NW 26th St.	- TMA Boundary	1.85	1000	180	0.18	27%								
		4.03		**694**	**0.46**	**16%**	**1.06**	**233**	**34**	**1**	**17**	**105**	**16%**	**6.2%**
Mill Plain/SR 501														
I-5	- Broadway	0.27	1800	1070	0.59	3%								
Main St.	- Lincoln	0.63	1800	859	0.48	4%								
Lincoln	- Fourth Plain	0.86	1800	319	0.18	18%								
		1.76		**1070**	**0.43**	**8%**	**1.11**							
Fourth Plain														
I-5	- St. Johns Blvd.	0.36	1700	456	0.27			85	15	4	148	320	46%	
St. Johns Blvd.	- Ft. Vancouver	0.32	1700	720	0.42			37	31	4	142	320	44%	
Ft. Vancouver	- Grand Blvd.	0.30	1700	622	0.37			43	25	4	145	320	45%	
Grand Blvd.	- Brandt Rd.	0.58	1700	542	0.32			55	38	4	142	320	44%	
Brandt Rd.	- Falk Rd.	0.22	1700	504	0.30			29	27	4	132	320	41%	
Falk Rd.	- Stapleton Rd.	0.50	1700	541	0.32			59	31	4	104	320	33%	
Stapleton Rd.	- Andresen Rd.	0.81	1700	704	0.41		1.14	99	29	4	91	320	28%	
		3.09		**720**	**0.36**		**1.14**	**407**	**27**	**4**	**148**	**320**	**46%**	**18.8%**
Fourth Plain														
Andresen Rd.	- Thurston Way	0.95	1800	484	0.27			119	29	4	72	320	23%	
Thurston Way	- 54th St.	0.93	1800	502	0.28			103	33	31	16	90	18%	
54th St.	- Gher Rd.	0.70	1800	665	0.37			86	29	31	20	90	22%	
Gher Rd.	- SR 503	0.46	1800	429	0.24			64	26	31	17	90	19%	
		3.04		**665**	**0.30**		**1.11**	**372**	**29**	**4**	**72**	**320**	**23%**	**17.8%**



Fourth Plain Blvd. Corridor

PM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	PM - Nouthbound/Eastbound										
Fourth Plain/SR 501														
I-5	- Broadway	0.55	1000	855	0.86	8%		80	25					
Main St.	- Kaufman	0.46	1000	810	0.81	8%		97	17					
Kaufman	- Fruit Valley Rd.	0.57	1000	565	0.57	13%	1.22	58	35	1	14	140	10%	
Fruit Valley Rd.	- Port Office	0.60	1000	480	0.48	11%	1.18	60	36					
NW 26th St.	- TMA Boundary	1.85	800	219	0.27	21%		168	40					
		4.03		**855**	**0.61**	**12%**	**1.20**	**463**	**31**	**1**	**14**	**140**	**10%**	**8.2%**
Mill Plain/SR 501														
I-5	- Broadway	0.33	1800	1292	0.72	8%		55	22					
Main St.	- Lincoln	0.58	1800	750	0.42	8%		112	19					
Lincoln	- Fourth Plain	0.86	1800	323	0.18	16%	1.17	103	30					
		1.77		**1292**	**0.47**	**11%**	**1.17**	**270**	**24**					
Fourth Plain														
I-5	- St. Johns Blvd.	0.53	1700	760	0.45	2%		68	28	4	179	320	56%	
St. Johns Blvd.	- Ft. Vancouver	0.31	1700	773	0.45	2%		59	19	4	187	320	58%	
Ft. Vancouver	- Grand Blvd.	0.29	1700	930	0.55	2%		64	16	4	190	320	59%	
Grand Blvd.	- Brandt Rd.	0.57	1700	952	0.56	2%		69	30	4	179	320	56%	
Brandt Rd.	- Falk Rd.	0.22	1700	1026	0.60	2%		24	33	4	178	320	56%	
Falk Rd.	- Stapleton Rd.	0.48	1700	947	0.56	2%		83	21	4	151	320	47%	
Stapleton Rd.	- Andresen Rd.	0.80	1700	1252	0.74	2%	1.32	148	20	4	138	320	43%	
		3.20		**1252**	**0.60**	**2%**	**1.32**	**513**	**22**	**4**	**190**	**320**	**59%**	**18.8%**
Fourth Plain														
Andresen Rd.	- Thurston Way	0.94	1800	1302	0.72	2%		117	29	4	108	320	34%	
Thurston Way	- 54th St.	0.92	1800	1011	0.56	2%		115	29	31	48	120	40%	
54th St.	- Gher Rd.	0.52	1800	1245	0.69	2%		187	10	31	42	120	35%	
Gher Rd.	- SR 503	0.44	1800	861	0.48	1%		122	13	31	34	120	28%	
		2.82		**1302**	**0.64**	**2%**	**1.24**	**541**	**19**	**4**	**108**	**320**	**34%**	**17.8%**



SR-500 Corridor

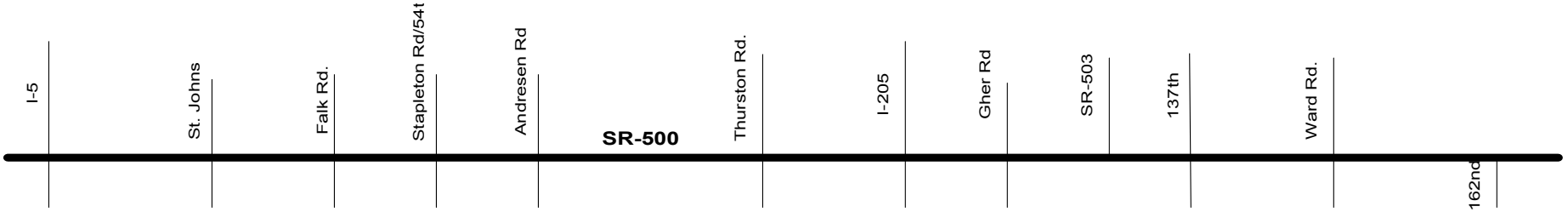
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
SR 500														
I-5	- St. Johns/Grand	1.08	2400	1967	0.82			70	56					
St. Johns/Grand	- Falk Rd.	0.66	2400	1922	0.80	4%		60	40					
Falk Rd.	- Stapleton Rd./54th	0.58	2400	1934	0.81			46	45					
Stapleton Rd./54th	- Andresen Rd.	0.75	2400	1999	0.83		1.14	131	21					
		3.07		**1999**	**0.82**	**4%**	**1.14**	**307**	**36**					
SR 500														
Andresen Rd.	- Thurston Way	0.95	3000	1897	0.63			56	61	190				
Thurston Way	- I-205	0.92	3000	2414	0.80	3%		124	46	12	22	140	15.7%	
I-205	- Gher Rd.	0.65	3000	3140	1.05			"	"	12	20	140	14.3%	
Gher Rd.	- SR 503	0.54	3000	2407	0.80			86	23					
		3.06		**3140**	**0.83**	**3%**	**1.11**	**266**	**41**	**12**	**22**	**140**	**15.7%**	**4.7%**
SR 500														
SR 503	- 137th Ave.	1.08	1800	1639	0.91			160	24	31				
137th Ave.	- Ward Rd.	0.50	1800	1179	0.66			64	28	31				
Ward Rd.	- 162nd Ave.	0.75	1000	1060	1.06			71	38					
		2.33		**1639**	**0.84**		**1.11**	**295**	**28**	**31**				

SR-500 Corridor

PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
SR 500														
I-5	- St. Johns/Grand	1.26	2400	1919	0.80	3%		113	40	190,191	16	80	20%	
St. Johns/Grand	- Falk Rd.	0.66	2400	2109	0.88	3%		52	46		16	80	20%	
Falk Rd.	- Stapleton Rd./54th	0.58	2400	2064	0.86	2%		59	35		16	80	20%	
Stapleton Rd./54th	- Andresen Rd.	0.74	2400	2133	0.89	2%	1.21	52	51		16	80	20%	
		3.24		**2133**	**0.85**	**2%**	**1.21**	**276**	**42**	**190,191**	**16**	**80**	**20%**	**3.3%**
SR 500														
Andresen Rd.	- Thurston Way	0.78	3000	2214	0.74	2%		163	17	190,191	16	80	20%	
Thurston Way	- I-205	0.87	3000	3004	1.00	2%		72	44	12	57	140	41%	
I-205	- Gher Rd.	0.65	3000	3172	1.06	3%		229	10	12	57	140	41%	
Gher Rd.	- SR 503	0.53	3000	2008	0.67	3%		71	27					
		2.83		**3172**	**0.91**	**2%**	**1.24**	**535**	**19**	**12**	**57**	**140**	**41%**	**4.7%**
SR 500														
SR 503	- 137th Ave.	1.07	1800	1776	0.99	2%		153	25	31	34	120	28%	
137th Ave.	- Ward Rd.	0.50	1800	1356	0.75	3%		61	30	31	29	120	24%	
Ward Rd.	- 162nd Ave.	0.74	1000	994	0.99	4%		97	27					
		2.31		**1776**	**0.94**	**3%**	**1.24**	**311**	**27**	**31**	**34**	**120**	**28%**	**6.7%**



78th/76th/Padden Parkway Corridor

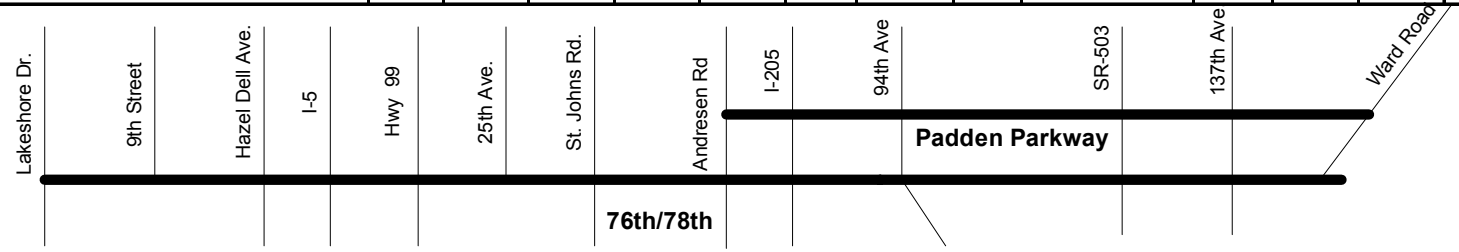
AM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		AM - Southbound/Westbound												
78th St./76th St.														
Lake Shore Av.	- NW 9th Av.	0.60	1800	340	0.19	7%		66	33					
NW 9th Av.	- Hazel Dell Av.	0.52	1800	723	0.40	7%		57	33	78	12	150	8%	
Hazel Dell Av.	- I-5	0.11	1800	899	0.50	7%		12	33	78	12	150	8%	
I-5	- Hwy 99	0.11	1800	586	0.33	7%		12	33	78	12	150	8%	
Hwy 99	- 25th Ave.	0.77	1800	505	0.28	8%		84	33	78	13	150	9%	
25th Ave.	- St. Johns Rd.	1.00	1800	522	0.29	7%		86	42	78	11	150	7%	
St. Johns Rd.	- Andresen Rd.	1.13	800	597	0.75	6%		181	22	78	11	150	7%	
Andresen Rd.	- Covington/94th	1.30	800	416	0.52			166	28	7	22	90	24%	
Covington/94th	- SR 503 (117th)	1.14	800	460	0.58	5%		135	30	7	22	90	24%	
		5.45		**597**	**0.47**	**7%**	**1.11**	**799**	**30**	**7**	**22**	**90**	**24%**	**5.6%**
Padden Parkway														
Andresen Rd.	- I-205	0.41	1800	824	0.46			81	18					
I-205	- 94th Av.	0.88	1200	1271	1.06			65	49					
94th Av.	- SR 503 (117th)	1.13	2000	1267	0.63			95	43					
SR-503	- 137th Av.	0.99	2000	577	0.29			83	43					
137th Av.	- Ward Rd.	0.97	1200	479	0.40			82	43					
		2.42		**1271**	**0.66**		**1.11**	**406**	**39**					

78th/76th/Padden Parkway Corridor

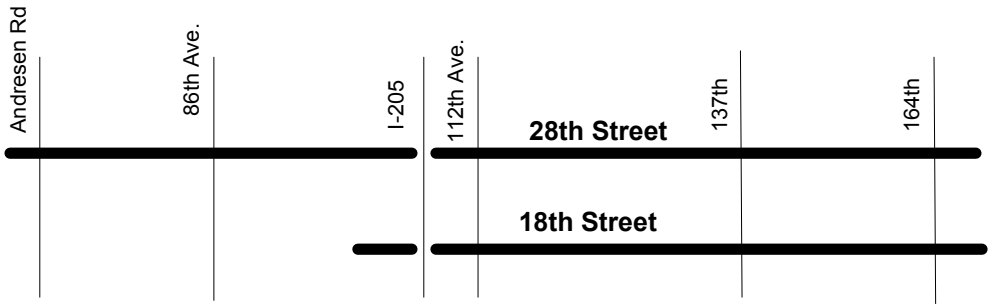
PM Peak

		Segment Length	Segment Capacity	Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		PM - Nouthbound/Eastbound												
78th St./76th St.														
Lake Shore Av.	- NW 9th Av.	0.60	1800	404	0.22	3%		59	37					
NW 9th Av.	- Hazel Dell Av.	0.52	1800	764	0.42	3%		114	16	78	12	150	8%	
Hazel Dell Av.	- I-5	0.17	1800	1081	0.60	3%		42	15	78	12	150	8%	
I-5	- Hwy 99	0.08	1800	1094	0.61	3%		61	5	78	8	150	5%	
Hwy 99	- 25th Ave.	0.77	1800	836	0.46	3%		71	39	78	16	150	11%	
25th Ave.	- St. Johns Rd.	0.99	1800	737	0.41	3%		103	35	78	11	150	7%	
St. Johns Rd.	- Andresen Rd.	1.12	800	886	1.11	4%		158	26	78	16	150	11%	
Andresen Rd.	- Covington/94th	1.30	800	560	0.70	3%		151	31	7	29	90	32%	
Covington/94th	- SR 503 (117th)	1.14	800	566	0.71	2%		201	20	7	31	90	34%	
		6.69		**1094**	**0.72**	**3%**	**1.24**	**960**	**25**	**7**	**31**	**90**	**34%**	**5.6%**
Padden Parkway														
Andresen Rd.	- I-205	0.41	1800	1009	0.56	4%		41	36					
I-205	- 94th Av.	0.78	1200	1167	0.97	3%		75	37					
94th Av.	- SR 503 (117th)	1.13	2000	1214	0.61	3%		141	29					
SR-503	- 137th Av.	0.99	2000	835	0.42	3%		111	38					
137th Av.	- Ward Rd.	0.97	1200	506	0.42	3%		92	38					
		4.28		**1214**	**0.62**	**3%**	**1.24**	**460**	**34**					



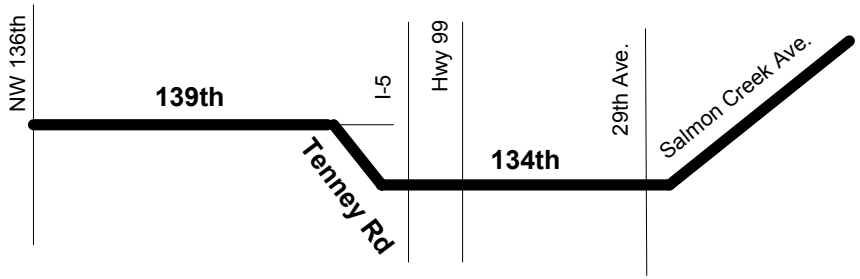
28th/18th Street Corridor														
AM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	AM - Southbound/Westbound										
28th Street														
Andresen Rd.	- 86th Ave.	0.70	1200	679	0.57			63	40	30	42	175	24%	
86th Ave.	- 112th Ave.	1.36	800	742	0.93			148	33	30	34	175	19%	
112th Ave.	- 137th Ave.	1.32	800	814	1.02			167	28	30	24	175	14%	
137th Ave.	- 164th Ave.	1.18	800	524	0.66			189	22					
		4.56		**814**	**0.85**		**1.11**	**567**	**29**	**30**	**42**	**175**	**24%**	**10.9%**
18th Street														
112th Ave.	- 137th Ave.	1.32	800	527	0.66			154	31	30(pm only), 177	176	320	55%	
137th Ave.	- 164th Ave.	1.19	800	568	0.71			160	27	n/a				
		2.51		**568**	**0.68**		**1.11**	**314**	**29**	**30(pm only), 177**	**176**	**320**	**55%**	**20.0%**

28th/18th Street Corridor														
PM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	PM - Nouthbound/Eastbound										
28th Street														
Andresen Rd.	- 86th Ave.	0.70	1200	711	0.59	2%		147	17	30	61	210	29%	
86th Ave.	- 112th Ave.	1.34	800	944	1.18	2%		236	20					
112th Ave.	- 137th Ave.	1.31	800	787	0.98	3%		223	21					
137th Ave.	- 164th Ave.	1.18	800	560	0.70	2%		181	24					
		4.53		**944**	**1.00**	**2%**	**1.24**	**786**	**21**	**30**	**61**	**210**	**29%**	**13.1%**
18th Street														
112th Ave.	- 137th Ave.	1.30	800	591	0.74	2%		168	28	30, 177	40	210	19%	
137th Ave.	- 164th Ave.	1.17	800	772	0.97	2%		168	25					
		2.47		**772**	**0.86**	**2%**	**1.24**	**335**	**27**	**30, 177**	**40**	**210**	**19%**	**13.1%**



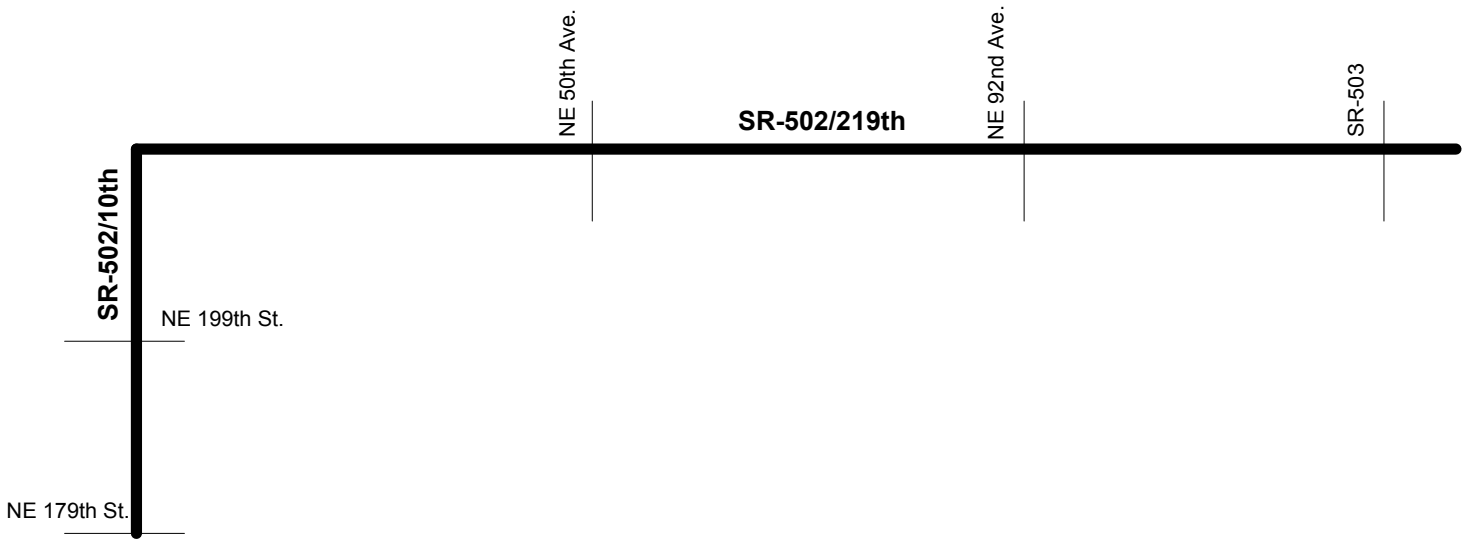
134th/139th Street Corridor														
AM Peak		**Segment**		**Traffic Volume**	**CCI**	**Truck Percent**	**AVO**	**Travel Time (Seconds)**	**Speed (MPH)**	**Transit Lines on CMS links**	**Transit Riders**	**Transit Seat Capacity**	**Transit Capacity Used**	**Transit Seats/Lane Capacity**
		Length	**Capacity**	**AM - Southbound/Westbound**										
134th St./139th St./Salmon Creek Ave.														
NW 36th Ave.	- 10th Ave.	2.02	1200	885	0.74	3%	1.27	440	23	21	21	120	18%	
10th Ave.	- I-5	0.79	1800	993	0.55	6%		"	"	21	16	120	13%	
I-5	- Salmon Cr. Ave.	0.73	800	490	0.61	5%		280	29	25	1	120	1%	
Salmon Cr. Ave.	- 50th Ave.	1.52	800	256	0.32	4%		"	"	25	2	120	2%	
		5.06		**993**	**0.63**	**5%**	**1.27**	**720**	**25**	**21**	**21**	**120**	**18%**	**7.5%**

134th/139th Street Corridor														
PM Peak		**Segment**		**Traffic Volume**	**CCI**	**Truck Percent**	**AVO**	**Travel Time (Seconds)**	**Speed (MPH)**	**Transit Lines on CMS links**	**Transit Riders**	**Transit Seat Capacity**	**Transit Capacity Used**	**Transit Seats/Lane Capacity**
		Length	**Capacity**	**PM - Nouthbound/Eastbound**										
134th St./139th St./Salmon Creek Ave.														
NW 36th Ave.	- 10th Ave.	2.39	1200	1038	0.87	3%	1.27	249	35	21	6	120	5%	
10th Ave.	- I-5	0.20	1800	1396	0.78	2%		31	23	21	6	120	5%	
I-5	- Salmon Cr. Ave.	0.76	800	798	1.00	2%		220	12	25	9	120	8%	
Salmon Cr. Ave.	- 50th Ave.	1.43	800	205	0.26	1%		123	42	25	8	120	7%	
		4.78		**1396**	**0.69**	**2%**	**1.27**	**623**	**28**	**25**	**9**	**120**	**8%**	**7.5%**



SR-502/219th St. Corridor														
AM Peak		**Segment**		**Traffic Volume**	**CCI**	**Truck Percent**	**AVO**	**Travel Time (Seconds)**	**Speed (MPH)**	**Transit Lines on CMS links**	**Transit Riders**	**Transit Seat Capacity**	**Transit Capacity Used**	**Transit Seats/Lane Capacity**
		Length	**Capacity**	**AM - Southbound/Westbound**										
SR 502														
179th St.	- 199th St.	1.00	800	657	0.82			162	44	173	11	30	37%	
199th St.	219th St.	1.00	800	591	0.74	9%		"	"	173	11	30	37%	
10th Ave.	- 50th Ave.	2.00	800	572	0.72			438	45	173	11	30	37%	
50th Ave.	- 92nd Ave	2.00	800	630	0.79		1.09	"	"	173	11	30	37%	
92nd Ave.	- SR-503	1.50	800	708	0.89	5%		"	"	173	11	30	37%	
		7.50		**708**	**0.79**	**7%**	**1.09**	**600**	**45**	**173**	**11**	**30**	**37%**	**1.9%**

SR-502/219th St. Corridor														
PM Peak		**Segment**		**Traffic Volume**	**CCI**	**Truck Percent**	**AVO**	**Travel Time (Seconds)**	**Speed (MPH)**	**Transit Lines on CMS links**	**Transit Riders**	**Transit Seat Capacity**	**Transit Capacity Used**	**Transit Seats/Lane Capacity**
		Length	**Capacity**	**PM - Nouthbound/Eastbound**										
SR 502														
179th St.	- 199th St.	0.98	800	929	1.16	4%		81	44	173	8	30	27%	
199th St.	219th St.	1.00	800	680	0.85	8%		81	44	173	8	30	27%	
10th Ave.	- 50th Ave.	1.98	800	614	0.77	6%		159	45	173	8	30	27%	
50th Ave.	- 92nd Ave	1.99	800	650	0.81	5%	1.22	180	40	173	8	30	27%	
92nd Ave.	- SR-503	1.53	1000	1158	1.16	3%		228	24	173	8	30	27%	
		7.48		**1158**	**0.97**	**5%**	**1.22**	**729**	**42**	**173**	**8**	**30**	**26%**	**1.9%**



SR-501 & La Center Road Corridors

AM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	AM - Southbound/Westbound										
SR 501														
I-5	- NW 31st Ave.	0.80	800	363	0.45			228	41	8	1	70	1%	
NW 31st Ave.	- 9th St.	1.79	800	254	0.32			"	"	8	7	70	10%	
		2.59		**363**	**0.37**		**1.11**	**228**	**41**	**8**	**7**	**70**	**10%**	**4.4%**
La Center Rd.														
I-5	- E. Fork Lewis Rv.	1.86	800	492	0.62			218	31	8	7	70	10%	
		1.86		**492**	**0.62**		**1.11**	**218**	**31**	**8**	**7**	**70**	**10%**	**4.4%**

SR-501 & La Center Road Corridors

PM Peak		Segment		Traffic Volume	CCI	Truck Percent	AVO	Travel Time (Seconds)	Speed (MPH)	Transit Lines on CMS links	Transit Riders	Transit Seat Capacity	Transit Capacity Used	Transit Seats/Lane Capacity
		Length	Capacity	PM - Nouthbound/Eastbound										
SR 501														
I-5	- NW 31st Ave.	0.80	800	399	0.50	9%		211	44	8	9	50	18%	
NW 31st Ave.	- 9th St.	1.79	800	272	0.34	8%		"	"	8	9	50	18%	
		2.59		**399**	**0.40**	**9%**	**1.24**	**211**	**44**	**8**	**9**	**50**	**18%**	**3.1%**
La Center Rd.														
I-5	- E. Fork Lewis Rv.	1.87	800	573	0.62	3%		148	45	8	5	50	10%	
		1.87		**573**	**0.62**	**3%**	**1.24**	**148**	**45**	**8**	**5**	**50**	**10%**	**3.1%**

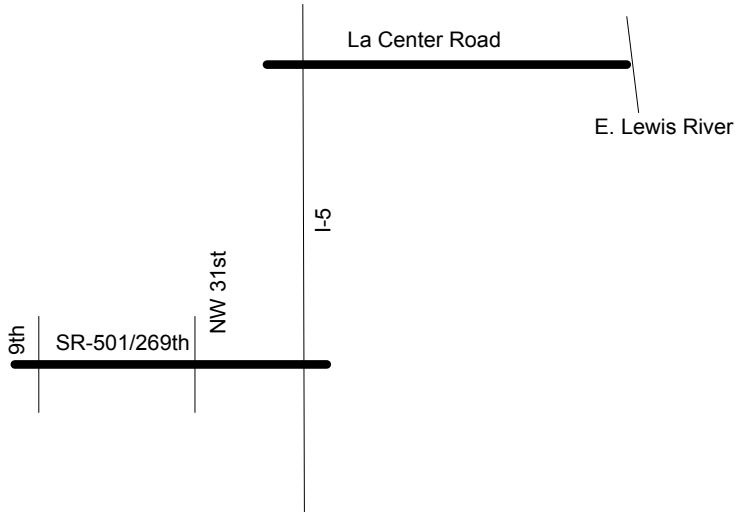


Table 7 - Areas of Concern: Volume/Capacity Ratio

AM Volume to Capacity Ratio Index Greater Than 0.9				
Jurisdiction	**Corridor**	**Segment**	**Identified Improvement**	**Estimated Completion**
Clark County	Padden Parkway	I-205 - 94th Av.	Existing Project: Signalize Northbound On-Ramp/Open Lane	2003
Clark/Vancouver	162nd Avenue	39th Street - Ward Road	TIP: Widen to 5 lanes	2005
Vancouver	164th Avenue	SR-14 - SE 34th Street	TIP: Construct 192nd Avenue	2004
Vancouver	28th Street	86th Av. - 137th Av.	TIP: Widen to 3 lanes	2003
Vancouver	Mill Plain Blvd.	I-205 - Chkalov	TIP: Off Ramp I-205 to 112th Avenue	2007
Vancouver	St. Johns	Ft. Vancouver - SR-500	TIP: Traffic Signal/Access Management	5-10 Years
WSDOT	I-205	SR-500 - 83rd Street	MTP: Widen to 6 lanes	10-20 Years
WSDOT	I-205	State Line - SR-500	MTP: Collector/Distributor System	10-20 Years
WSDOT	I-5	State Line - 39th Street	Strategic MTP: Collector/Distributor System	20+ Years
WSDOT	SR-14	I-205 - 164th Avenue	MTP: Widen to 6 lanes	10-20 Years
WSDOT	SR-14	6th Avenue - 32nd Street	MTP: Widen to 4 lanes	10-20 Years
WSDOT	SR-500	I-205 - Gher Rd.	TIP: SR-500/112th Avenue Interchange	2005
WSDOT	SR-500	SR-503 - 137th Av.	MTP: SR-503/SR-500 Fly-Over Ramp	10-20 Years
WSDOT	SR-500	Ward Rd. - 162nd Av.	TIP: Widen to 5 lanes	2006
PM Volume to Capacity Ratio Greater Than 0.9				
Jurisdiction	**Corridor**	**Segment**	**Identified Improvement**	**Estimated Completion**
Battle Ground/WSDOT	SR-502	92nd Av. - SR-503	TIP: Widen to 5 lanes	2004
Clark County	134th Street	I-5 - Salmon Cr. Av.	TIP/MTP: Widen/134th St. Interchange/Hwy. 99 Realignment	2-10 Years
Clark County	72nd Avenue	St. Johns to I-205	TIP: Widen to 5 lanes	2005
Clark County	78th Street	St. Johns Rd. - Andresen R	Existing Project: West Leg of Padden Parkway	2003
Clark County	Hazel Dell Avenue	63rd Street - 78th Street	None	
Clark County	Padden Parkway	I-205 - 94th Av.	Existing Project: Signalize Northbound On-Ramp/Open Lane	2003
Clark/Vancouver	162nd Avenue	39th Street - Ward Road	TIP: Widen to 5 lanes	2005
Vancouver	112th Avenue	49th Street - SR-500	TIP/MTP: SR-500 Interchange/Double left turn lane at 49th St.	2-10 Years
Vancouver	162nd Avenue	Mill Plain - SE 1st Street	TIP/MTP: Extend Mill Plain to 192nd Av./192nd Av.	2-10 Years
Vancouver	164th Avenue	SR-14 - SE 34th Street	TIP: Construct 192nd Avenue	2004
Vancouver	18th Street	137th Av. - 162nd Av.	MTP: Widen to 5 lanes	5-10 Years
Vancouver	28th Street	86th Av. - 137th Av.	TIP: Widen to 3 lanes	2003
Vancouver	Andresen Rd.	Fourth Plain - SR-500	None	
Vancouver	Mill Plain Blvd.	I-205 - Chkalov	TIP: Off Ramp I-205 to 112th Avenue	2007
WSDOT	I-205	SR-500 - 83rd Street	MTP: Widen to 6 lanes	10-20 Years
WSDOT	I-205	State Line - SR-500	MTP: Collector/Distributor System	10-20 Years
WSDOT	I-5	State Line - 39th Street	Strategic MTP: Collector/Distributor System	20+ Years
WSDOT	SR-14	I-5 - Grand Blvd.	None	
WSDOT	SR-14	I-205 - 164th Avenue	MTP: Widen to 6 lanes	10-20 Years
WSDOT	SR-14	6th Avenue - 32nd Street	MTP: Widen to 4 lanes	10-20 Years
WSDOT	SR-500	Thurston Way - Gher Rd.	TIP: SR-500/112th Avenue Interchange	2005
WSDOT	SR-500	SR-503 - 137th Av.	MTP: SR-503/SR-500 Fly-Over Ramp	10-20 Years
WSDOT	SR-500	Ward Rd. - 162nd Av.	TIP: Widen to 5 lanes	2006
WSDOT	SR-502	179th St. - 199th St.	MTP: 219th Street Interchange	5-10 Years
WSDOT	SR-503	Fourth Plain - 76th St.	MTP: SR-503/SR-500 Fly-Over Ramp	10-20 Years

Table 8 – Areas of Concern: Speed

AM Speed 60% or Less of Posted Speed Limit				
Jurisdiction	**Corridor**	**Segment**	**Identified Improvement**	**Estimated Completion**
Clark County	Andresen Rd.	78th Street - 83rd Street	TIP: Padden Parkway West Leg	2003
Clark County	Hwy. 99	63rd Street - 99th Street	None	
Clark County	Hwy. 99	117th Street - 134th Street	TIP: Hwy 99 realignment with 20th Avenue	2005
Clark County	Padden Parkway	Andresen Rd. - I-205	TIP: Padden Parkway West Leg	2003
Clark/Vancouver	162nd Avenue	39th Street - Ward Road	TIP: Widen to 5 lanes	2005
Vancouver	112th Avenue	Mill Plain - NE 9th St.	Existing Project: Signal Coordination	2003
Vancouver	162nd Avenue	18th Street - 28th Street	MTP: 18th & 28th Street Improvements	5-10 Years
Vancouver	162nd Avenue	Mill Plain - SE 1st Street	Private Construction in Cooridor/2003 data does not reflect issu	2002
Vancouver	Andresen Rd.	Fourth Plain - SR-500	Existing Project: Signal Coordination	2003
Vancouver	Fourth Plain	I-5 - St. Johns	TIP: Signal Coordination	1-3 Years
Vancouver	Mill Plain Blvd.	I-205 - 136th Avenue	Existing Project: Adaptive Control	2003
WSDOT	SR-500	Gher Rd. - SR-503	TIP: SR-500/112th Avenue Interchange	2005
WSDOT	SR-500	SR-503 - 137th Avenue	MTP: SR-500/SR-503 Fly-Over Ramp	10-20 Years
WSDOT	SR-503	76th Street - Padden Pkw.	MTP: Padden Parkway/SR-503 Interchange	10-20 Years
WSDOT	St. Johns	SR-500 - NE 44th St.	MTP: SR-500/St. Johns Interchange	5-10 Years
PM Speed 60% or Less of Posted Speed Limit				
Jurisdiction	**Corridor**	**Segment**	**Identified Improvement**	**Estimated Completion**
Battle Ground/WSDOT	SR-502	92nd Av. - SR-503	TIP: Widen to 5 lanes	2004
Battle Ground/WSDOT	SR-503	199th Street - SR-502	TIP: SR-502/SR-503 Intersection Improvements	2004
Clark County	134th Street	I-5 - I-205	MTP: 134th St. Interchange/Hwy 99 Realignment	5-10 Years
Clark County	78th Street	NW 9th Av. - Hwy. 99	None	
Clark County	Andresen Road	78th Street - 83rd Street	TIP: Padden Parkway West Leg	2003
Clark County	Fourth Plain Blvd.	102nd Av. - SR-503	MTP: SR-500/SR-503 Fly-Over Ramp	10-20 Years
Clark/Vancouver	162nd Avenue	39th Street - SR-500	TIP: Widen to 5 lanes	2005
Vancouver	112th Avenue	18th Street - 28th Street	TIP/MTP: 28th Street/18th Street Improvements	2003/5+ Years
Vancouver	112th Avenue	49th Street - SR-500	MTP: Signal Coordination, Double Left at 49th St.	5-10 Years
Vancouver	164th Avenue	SR-14 - SE 34th Street	TIP: Construct 192nd Avenue	2004
Vancouver	28th Street	Andresen Rd. - 137th Av.	TIP: Widen to 3 lanes	2003
Vancouver	Andresen Road	18th Street - Fourth Plain	Exisitng Project: Signal Coordination	2003
Vancouver	Andresen Road	SR-500 - Van Mall Dr.	Existing Project: Signal Coordination	2003
Vancouver	Fourth Plain Blvd.	Main St. - Kaufman	TIP: Signal Coordination	1-3 Years
Vancouver	Fourth Plain Blvd.	St. Johns - Grand Blvd.	TIP: Signal Coordination	1-3 Years
Vancouver	Fourth Plain Blvd.	Falk Rd. - Andresen Rd.	TIP: Signal Coordination	1-3 Years
Vancouver	Main Street	Fourth Plain - 39th Street	Existing Project: Signal Upgrade/Coordination	1-2 Years
Vancouver	Mill Plain Blvd.	I-5 - Ft. Vancouver Way	TIP: Signal Coordination	1-3 Years
Vancouver	Mill Plain Blvd.	97th Avenue - Chkalov	TIP: Signal Coordination	1-3 Years
Vancouver	St. Johns	Fourth Plain - SR-500	TIP: Traffic Signal/Access Management	5-10 Years
WSDOT	SR-500	Ward Rd. - 162nd Av.	TIP: Widen to 5 lanes	1-3 Years

Figure 21 – AM Areas of Concern: V/C Ratio

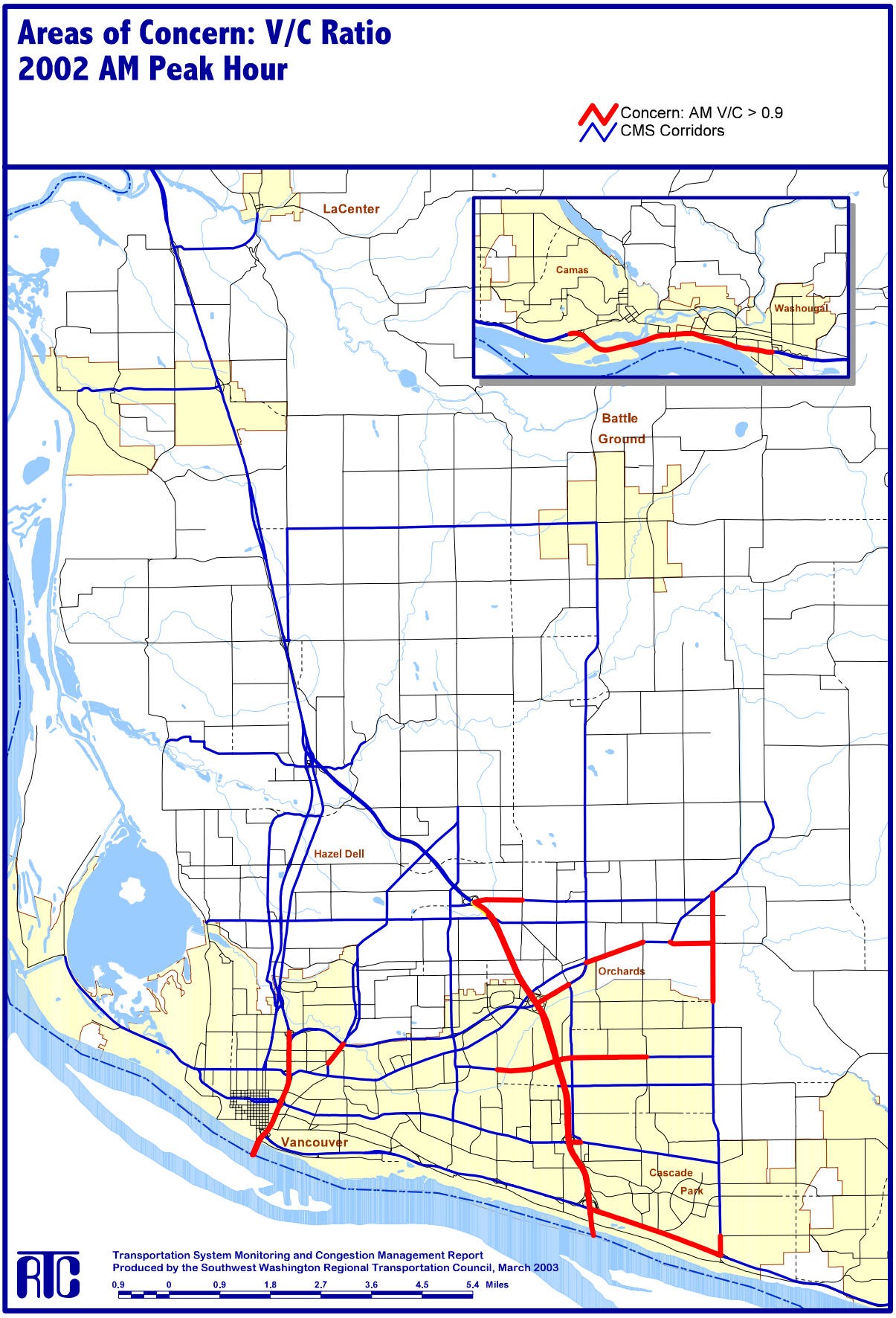


Figure 22 – PM Areas of Concern: V/C Ratio

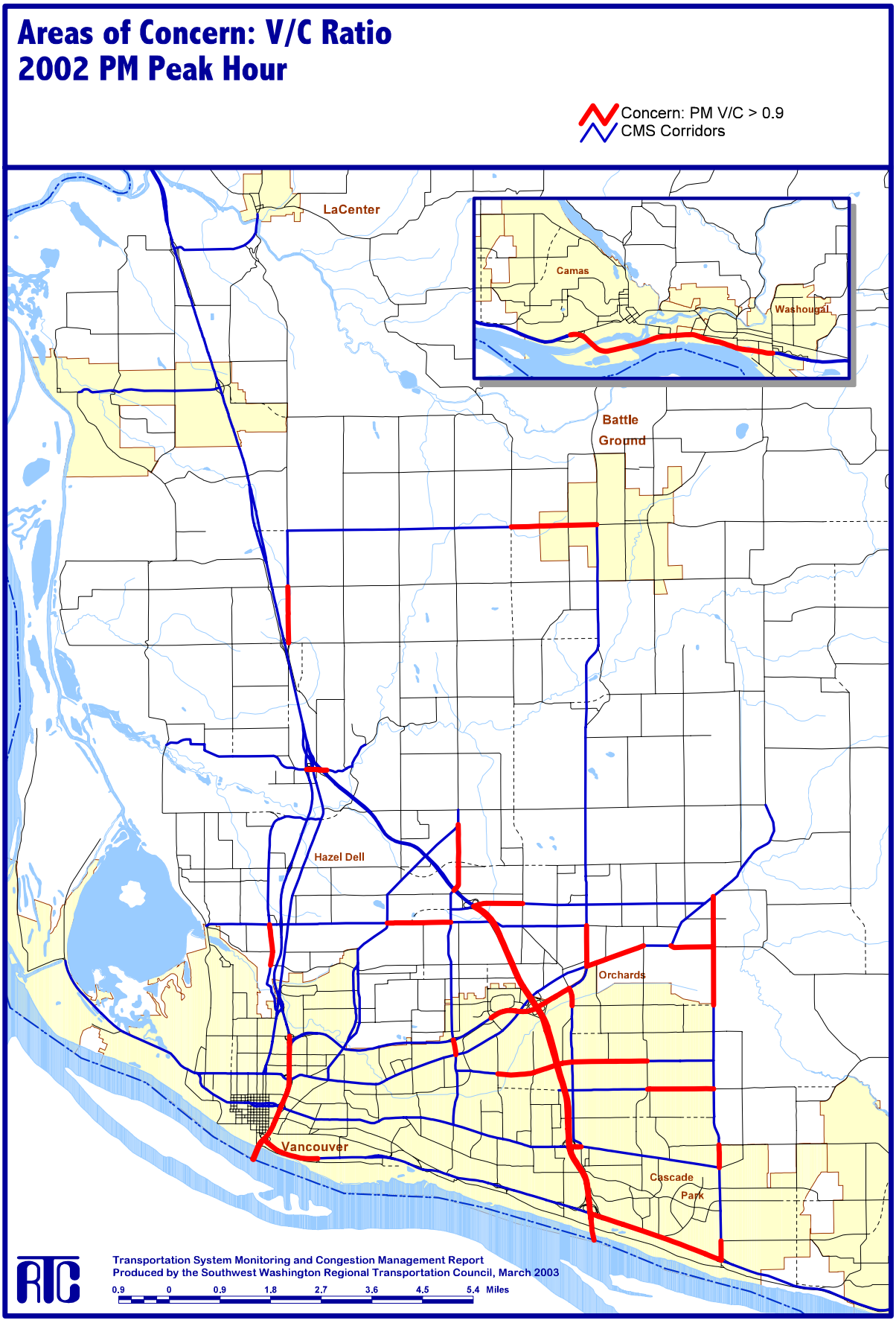


Figure 23 – AM Areas of Concern: Speed

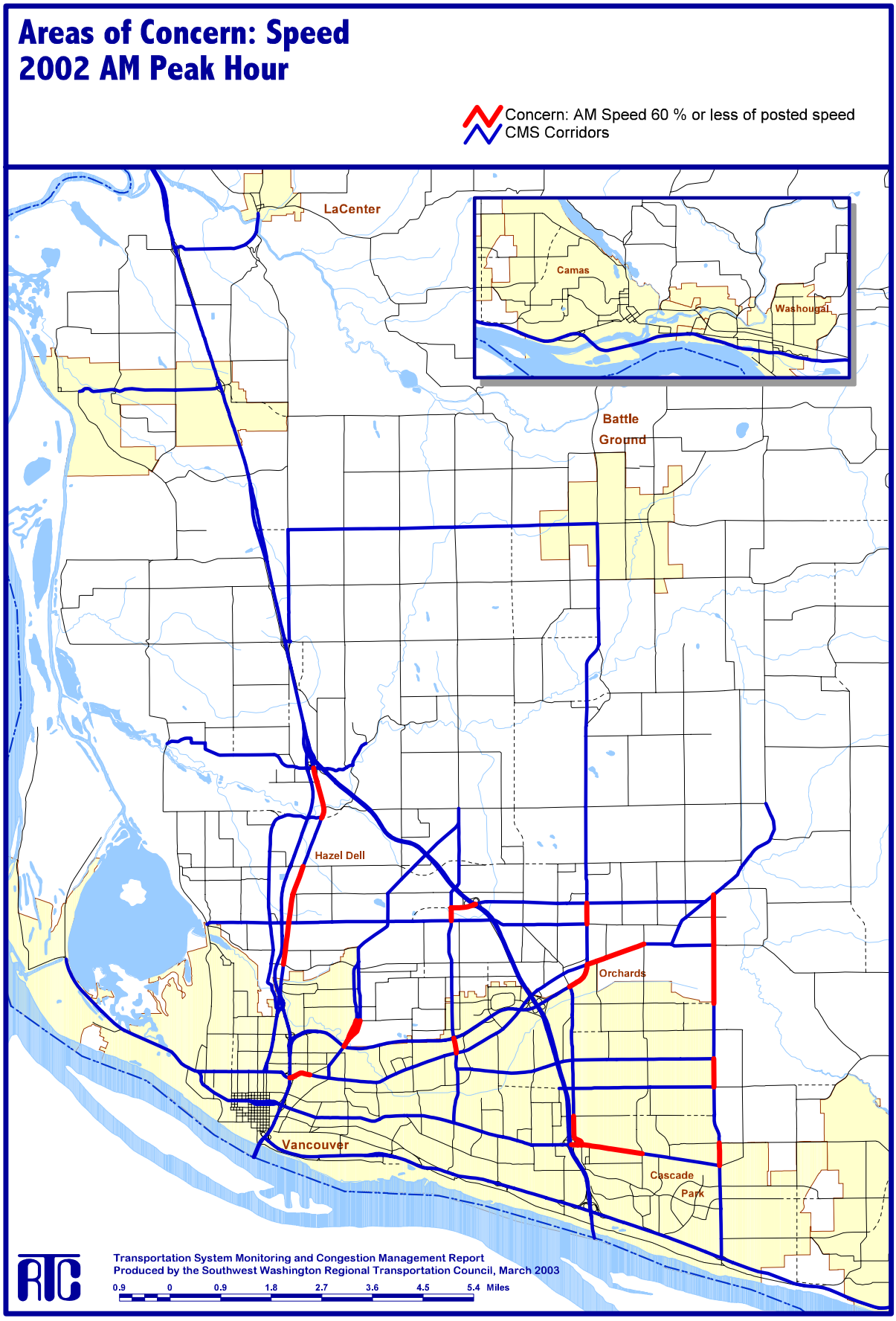
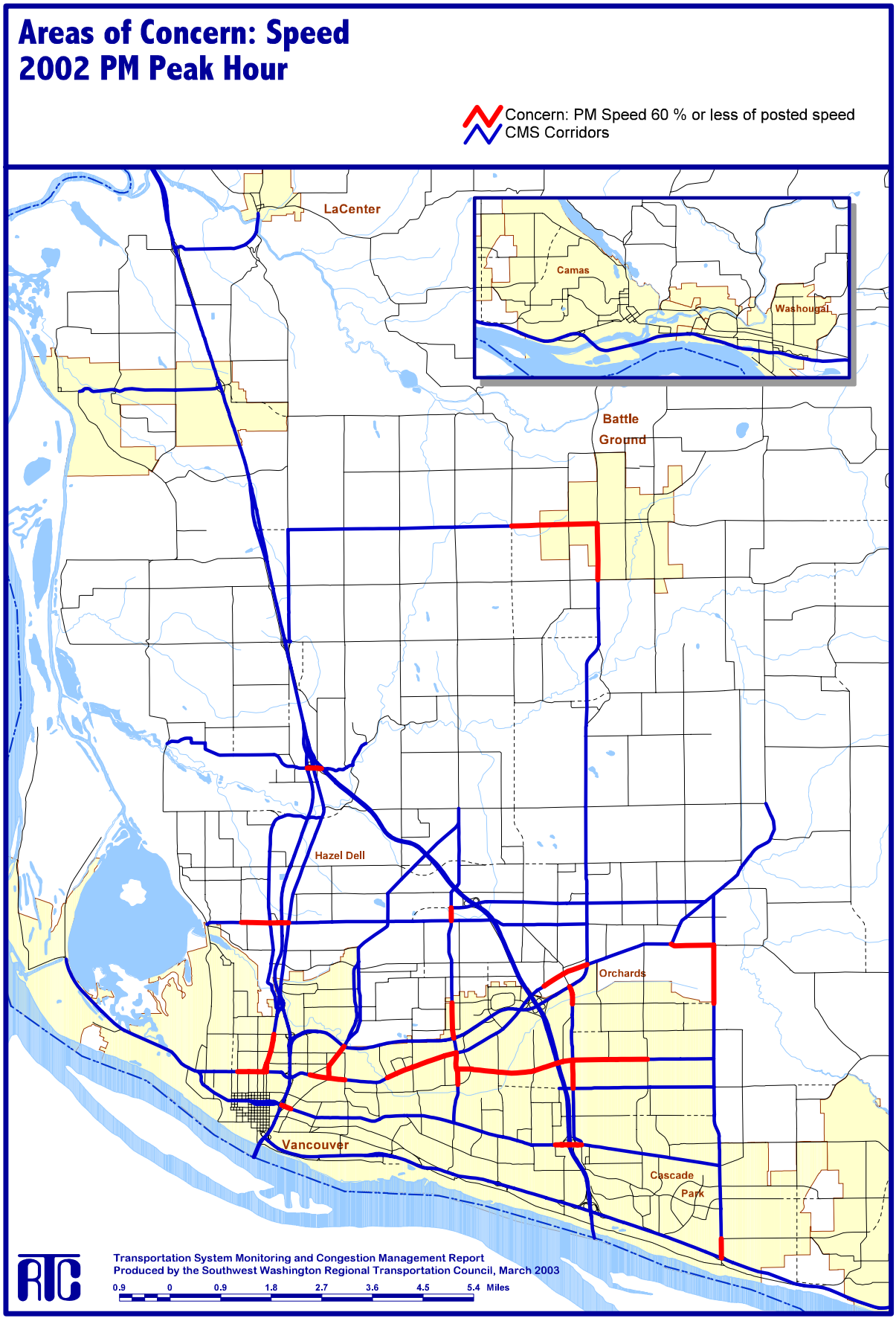


Figure 24 – PM Areas of Concern: Speed



CHAPTER IV.
PERFORMANCE MONITORING AND IMPLEMENTATION

The purpose of Congestion Management System (CMS) is to develop a better tool that provides information on the performance of the transportation system and identify strategies to alleviate congestion and enhance mobility.

This report contains the monitoring data for the continuing development and updating of information to track the performance of the regional transportation system.

The CMS database and the Congestion Management Report will accomplish several objectives. It will support the local decision-making process, increase public awareness of transportation issues and tradeoffs, improve calibration efforts related to the regional travel forecasting model, and facilitate the means to develop tools for a more comprehensive and innovative analysis of the transportation system.

The subsequent phase of the congestion monitoring development is to: 1) continue the enhanced data collection process for transit, travel time, and automobile occupancy, 2) identify additional data collection needs, 3) improve the data collection process, 4) and initiate a more seamless process to make the update and distribution of data more automated and dynamic. Another key activity is to begin the enhancement of the regional traffic count program to develop a regional transportation system database that incorporates the new activities and is accessible to users.

The CMS is intended to be a continuing systematic process that provides information on transportation system performance.

Continued coordination with local jurisdictions and local agencies is another key activity to ensure consistency of data collection, data factoring and ease of data storage/retrieval. This will also ensure the traffic count and turn movement and other data elements support local and regional transportation planning studies and Concurrency Management programs

Congestion monitoring is a key component of the regional transportation planning process. The CMS for the Clark County region supports the long-term transportation goals and objectives defined in the Metropolitan Transportation Plan. It assists in identifying the most effective transportation projects to address congestion. The Congestion Management System Monitoring element is closely related to the data management and travel forecasting model elements.

Data elements will be reviewed that began in the 1999 monitoring program such as transit ridership and capacity, travel time and speed for the congestion management corridors, auto occupancy information and vehicle classification data. The continued data collection need will be identified. Existing data collection activities in the region will be identified that can provide support for the CMS, such as corridor travel times for concurrency and will be utilized for application to the CMS. Additional data collection needs will be identified and initiated. These may include filling missing data from previous years, developing a process for ongoing transit ridership and travel time information, adding information roadway lane density, and vehicle classification counts for the congestion management corridors.