

HOV Lane Evaluation and Monitoring Project

HOV Travel Times (by Floating Car Method)

by

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HOV Travel Times (Floating Car Method)

Abstract

This report summarizes the travel time data collected by the Floating Car Method between October 1, 1995, and March 31, 1997. This method (HOV TT fcm) was developed in response to renewed inquiries from the Washington State Department of Transportation (WSDOT) for current travel time data, and was designed to provide data with a minimum use of resources. Data collected by this method can not be considered statistically significant because of the sampling procedure used; but rather it should be viewed as spot checks of the HOV system's performance. Included within this report are a brief introduction to the HOVTT program, an overview of the methodology employed to analyze the data, statistical analysis of the data, and a section outlining the conclusions and summary.

Executive Summary

Monitoring of the HOV system's performance is crucial if HOV lanes are to successfully help manage congestion in the Puget Sound region. With several different design orientations currently in use, continued evaluations are required to understand the characteristics of each and to determine which combination of ideas will provide the level of service desired for future transportation planning. The following report provides transportation planners with some insight regarding the efficiency of various HOV lane sections.

Over the past quarter (January 1 to March 31), the performance levels of HOV lanes were surprising, considering the higher congestion levels noted along the freeways of Puget Sound. Thanks to added HOV capacity along the I-5 Downtown corridor, the southbound evening commutes realized a 6.2 percent to 15.1 percent boost in performance levels. Even peak period

commutes with a history of performance disappointments, such as the southbound evening commutes through South I-5, posted performance level increases of 1 percent to 12 percent over the previous year. Results from the I-405 South corridor, where HOV lanes were recently relocated to the inside median, showed travel time savings ranging from 11 seconds per mile (spm) to an amazing 84 spm (1 min. and 24 sec per mile) over travel times in the general purpose lanes. The largest improvements occurred along the southbound HOV lanes of the I-405 South corridor and along the northbound HOV lanes of the I-405 North corridor. Throughout the quarter, performance levels jumped 5 percent to 20 percent over performance measured during the first quarter of 1996.

Unfortunately, some commute corridors showed a decline in performance during certain peak periods. The southbound morning commutes along the I-5 North corridor were a prime example; there performance levels dropped 3.6 percent to 8.5 percent, with virtually no difference in travel speeds between HOV and SOV commuters. Performance values along the I-405 North commute also decreased 7.1 percent to 14.1 percent during the southbound morning peak period commute. Two other surprises in performance occurred northbound along the northern sections of the I-405 South corridor, where HOV lanes were recently switched to the inside, and southbound along the I-5 Downtown corridor during the morning commute between Denny Way and Spokane Street.

An introduction to the evaluation method employed and the results of this travel speed study along the Puget Sound region's HOV system are presented in the following report. Each observation corridor was examined to determine the benefits realized by HOV commuters, any possible trends with the previous year's results, and whether performance levels are satisfying the criterion established by Washington State Freeway HOV System Policy. Data results regarding

travel time savings presented in Figure 1.1 and in the conclusion section of this report include only savings associated with freeway travel on HOV lanes. The total travel time savings realized by an HOV commuter must include savings accumulated along the entire commute trip (e.g., ramp meter queuing times, arterial HOV bypass signals, arterial HOV lanes, HOV restricted access ramps, etc.) Statistical tables tracking the performance of individual HOV lane segments are provided in Appendix B, and data comparing them with adjacent general purpose lanes are provided in Appendix C.

Figure 1.1: Travel Time Savings in seconds per mile (spm) between HOV lanes and General Purpose Lanes determined from Average Speed

Observation Corridor	Southbound/ WESTB		Northbound/ EB	
	Morning	Evening	Morning	Evening
I-5 North	1.4	2.6	3.7	6.2
I-5 Downtown	1.3	10.9	8.3	4.0
I-5 South	4.2	25.3	6.0	2.3
SR 520	22.0	N/A	N/A	N/A
I-90	1.0	N/A	N/A	-2.2
I-405 South	22.4	23.6	83.0	10.3
I-405 North	2.4	4.9	-4.4	36.1
SR 167	3.5	5.8	7.1	0.2

Introduction to HOVTT (fcm)

The collection of travel time data by traditional means requires a substantial investment in personnel, equipment, and time. WSDOT examined several alternatives to determine the most favorable collection method in light of the constraints imposed by financial limitations. The HOV TT (fcm) program was the result.

Data are collected by sending observers into the peak-hour commute to record real-time spot checks of the HOV system. Observers are instructed to observe the flow of traffic within the HOV lanes and to maintain a speed equivalent to other HOV commuters. Similar instructions are given to observers collecting data in the general purpose (GP) lanes. These sessions require two observers (three on SR 520) to satisfy the HOV lanes' vehicle passenger requirements, so one person drive's and the other runs the data collection program. However, the computer program is simple enough that only one person is needed when observing the GP lanes. The HOV TT (fcm) program was designed to merge with the existing CT.EXE computer program to reduce confusion and to allow continued use of the project's HP-95 palmtops. This design allows observers to access all three data collection subroutines (ACO, TT, and HOVTT) housed within the CT.EXE main program.

The new HOV TT program was laid out much like the other CT.EXE subroutines and requires little additional training to master. The program records the corridor, direction, time, and location for file-naming purposes and displays a summary of this information for review before proceeding. This program also possesses built-in conditional statements to prevent observers from starting at a location not valid in the direction of travel selected.

The HOV TT (fcm) program records travel times through a series of “time-stamps” that are entered when the observer has reached a designated point along the freeway. During a session, observers loop along a given corridor, collecting travel times for each time they traverse a section. Currently eight corridors are under observation within the Puget Sound region; these are defined further in Appendix A.

Methodology of Data Analysis

Definition of Performance Criteria

The Washington State Freeway HOV System Policy states the following:

- HOV lane vehicles should maintain or exceed an average speed of 45 mph or greater at least 90 percent of the time they use that lane during the peak hours (measured for a consecutive six-month period).

HOVTT data are useful in determining whether this criterion has been met along the HOV lanes of the Puget Sound region.

Determination of Travel Speed

On a weekly basis all of the HOVTT files are analyzed to convert these “time-stamp” records into useable travel speeds. This is accomplished by linking each “time-stamp” with the milepost of its data entry point. The milepost of each point is determined from the State Highway Log; these are listed by corridor in Appendix A. The final travel speed can then be calculated by examining consecutive data entries within any given file to find the distance between them and the time elapsed. The resulting travel speed is then the quotient of the distance by the time differential.

Results are recorded in weekly reports that catalog the file’s name, the observer’s name, the section speeds recorded, and any data errors and/or adjustments made to the data.

Occasionally errors are made when the data are entered, and adjustments are necessary. These errors are quite evident, and all time corrections are documented on both the weekly report and in the file itself.

Limitation of Analysis Procedure

Although this method is very efficient in a financial sense, the data's sensitivity to true travel times are dependent on a variety of factors. Factors such as the observer's driving style, the exact point of data entry, weather conditions, congestion levels, adjustment of data errors, and day of week all have an uncertain effect on travel times. Normally, variances within the data are accounted for by obtaining a large sample size. However, because these data are compiled on a quarterly basis, this method of data collection produces relatively small sample sizes. Therefore, any conclusions drawn from the data presented herein can not be considered statistically significant.

Data Results

The tables in Appendix B and Appendix C represent performance summaries of all corridors under observation between October 1, 1995, and March 31, 1997. There are several tables for each corridor, one for each direction of travel (e.g., southbound, northbound, westbound, eastbound) and peak commute period (e.g., a.m. or p.m.). Tables in Appendix B are divided by corridor sections and include the following values: the minimum and maximum speeds, the median speed, the average speed, the standard deviation of the data population, the 90 percentile travel speed (speed that 90 percent of the data points exceed), the percentage of data points exceeding the 45 mph criterion, and the number of data points. In Appendix C, tables also are divided by corridor sections and provide average speed data that compare the performance of HOV lanes to adjoining general purpose lanes. Corridor section numbers are organized by increasing milepost (generally south to north or west to east).

Conclusions

Construction of HOV lanes has reached an all time high, with over six major projects devoted to rapid expansion of the HOV system. Noted events that occurred over the past quarter (January 1 to March 31) include the opening of additional HOV capacity southbound along the Downtown Seattle I-5 corridor and the realignment of HOV lanes to the inside median of the I-405 South corridor. HOVTT data continued to show a sizable benefit in travel time savings as a result of the HOV system within the Puget Sound. Below, each of the corridors is examined to determine the benefits realized by HOV commuters, any possible trends with the previous year's results, and whether performance levels satisfy the criterion established by Washington State Freeway HOV System Policy. Where a section of the system has failed to meet the criterion, this report attempts to provide a possible reason for the lack of performance.

I-5 North

In September 1996 a new segment of HOV lane opened in the northbound direction between NE 185th Street and 164th Street SW in Lynnwood. Over the last quarter of observation, northbound performance levels continued to outshine those of the same quarter of the previous year (Q1/96), with all sections surpassing the HOV policy criterion. The most impressive result along this commute corridor was the stability in travel speeds realized by evening HOV commuters over performance levels of just a year ago. Opening the section of HOV lane between NE 185th St. and Lynnwood was instrumental in stabilizing travel speeds along this section of freeway.

However, one particular concern was the steady decline of performance levels during the southbound morning peak period in relation to the commuter's proximity to the express lane entrance. This reduction in speed may be due to friction with congested adjacent general purpose lanes. WSDOT is developing a design for a new lane configuration at Northgate to help alleviate this tension and elevate travel speeds. The southbound morning commutes showed a decline in performance levels of 3.6 percent to 8.5 percent in comparison with the previous year's levels, with little difference in average travel speeds between HOV and SOV commuters. HOV traffic moving in the opposite direction of the peak commute (e.g., northbound a.m. and southbound p.m.) had no problem meeting the selected standards.

I-5 Downtown

The HOV lane southbound through the Downtown Seattle corridor was recently extended from its previous terminus at Spokane Street to the Boeing Access Road interchange. Thanks to the added HOV capacity, performance levels during the southbound evening commute rose 6.2 percent to 15.1 percent over previous first quarter results. Ongoing construction between the I-405 interchange and the Boeing Access Road will provide additional HOV lane extensions in both directions. Commuters traveling along the HOV lanes continued to enjoy travel time savings of 8 seconds per mile (spm) during the northbound morning commute and 11 spm during the southbound evening commute. The largest concern along this corridor continued to be decreased performance levels near the northern terminus of the northbound carpool lane. Criterion speed (90 percent above) remained above 45 mph along most of the segment, but it declined sharply at the express lane entrance ramp to approximately 16 mph to 21 mph. One final trend was the apparent decline in performance levels for sections between Denny Way and Spokane Street of

the southbound HOV lanes during the morning commutes. At this time, no reason is available to explain this trend.

Collection along this corridor was performed on a low priority basis. This means that sessions were usually conducted on the way to and returning from other corridors, rather than targeting the corridor itself. Therefore, data for the downtown HOV lanes were usually collected at the beginning and/or end of the peak commute time. The result may be that observed trends were biased or skewed.

I-5 South

Performance along the HOV lanes between Southcenter and Federal Way was outstanding with the exception of the southbound evening peak commute. Although the corridor did not satisfy the HOV policy requirements during the southbound evening peak commute, performance levels did improve 1 percent to 12 percent over levels recorded during the same period of the previous year. More important, southbound HOV commuters still realized travel time savings of 13 spm, even with the current heavy levels of congestion. At this time, WSDOT contractors are constructing new HOV lanes through the I-405 interchange so buses can maintain their speeds up the incline at Southcenter. The scheduled completion date for this project is spring 1999.

SR 520

This HOV lane was not utilized as heavily as other HOV lanes because of its 3+ person requirement. The HOV lane is squeezed in on the right shoulder, primarily to allow freeway flyer buses a congestion bypass route to the Evergreen Point floating bridge. The result is a lane that possesses little or no shoulder, blind corners, and problems with merging ramp traffic. All of these reduce travel speeds for the HOV commuters. Understandably, no sections along this

corridor met the travel speed criterion. A brief study of the situation would reveal that the problem with the lane is not limited capacity but drawbacks in design and function. Because of equipment problems and time limitations, a complete set of data was not collected for this corridor.

I-90

HOV lanes along the I-90 corridor were relatively free of congestion in all directions and at all peak commute times. The data have remained uniform over the history of the project, with travel speeds concentrated near the posted limits. This corridor was also designated as a low priority, but these trends were supported by I-90's history of lower congestion levels.

Apparently, the system here performed above expectations and needed no additional design measures. Observers did comment that traffic along the general purpose lanes between East Mercer Way and downtown Seattle appeared to be more congested than in previous quarters.

I-405 South

WSDOT completed its restriping project in February 1997, effectively eliminating the HOV lane cross-over at the Renton S-curves, and successfully relocated the HOV lanes to the inside of the freeway as far north as the I-90 interchange. Because the project was completed midway through the quarter, data required to analyze changes in performance levels along the affected sections were less robust than normal. Therefore, until further data can be collected, the validity of any results concerning this reconfiguration is minimal at best.

The freeway here continued to support peak commutes in both directions of travel with traffic volumes well beyond the capacity of the road's two general purpose lanes. The result of the HOV lanes' realignment north of the Renton S-Curves appeared mixed, with most of the

benefits evident along the southbound sections. Southbound performance levels increased approximately 10 percent to 20 percent over those recorded during the first quarter of 1996, but performance levels lagged behind the HOV policy criterion in a few key areas. The SR 167 interchange was one such area. Northbound performance levels varied greatly, depending on the time of commute. The evening commutes benefited greatly from the switch, with all sections exceeding the 45 mph criterion and sizable improvements in performance levels along all affected sections. Although the northbound morning commutes performed adequately as a whole, all sections effected by the switch showed approximately a 10 percent decrease in HOV performance.

The biggest highlight of this corridor was the travel time savings achieved by HOV commuters. Over the past quarter, the HOV lanes along the I-405 South corridor obtained travel time savings ranging from 11 spm to an amazing 84 spm (1 min. and 24 sec per mile). In general, the switch of the HOV lanes to the inside lane increased the stability of travel time for HOV users.

At this time, travel time data collection is not scheduled to begin again until October 1997, with the next quarterly report due January 1998. Plans call for relocating all remaining I-405 outside HOV lanes to the inside lane during the '97-'99 biennium. This reconfiguration should help reduce instability in travel speeds along the eastside HOV system.

I-405 North

HOV performance along this corridor varied greatly, depending on the time of commute; with the morning peak period faired better than the corresponding evening commute. Only two sections failed to reach the 45 mph standard during the morning commute: southbound between NE 124th Street and SR 908 in Kirkland (29.2 percent), and southbound along the southern

terminus (77.3 percent). Results from the evening commute made evident several areas of concern along both directions of travel.

Northbound HOV lane performance was phenomenal with several sections posting 5 percent to 20 percent increases in performance levels, but results did point out two areas that need improvement. The first was the weave problems produced by the SR 520 interchange. The second was the back-ups at the northern terminus of the HOV lanes. In November of 1996, the HOV lanes at the NE 160th Street Overpass were opened, but they did little to alleviate congestion levels at the terminus of the northbound HOV lanes because of new construction on the SR 522 interchange.

The most alarming issue along the southbound HOV lanes was the apparent decline in performance levels. The percentage of data satisfying the 45 mph criteria dropped an average of 7.1 percent during the evening commute and 14.1 percent during the morning commute. Further analysis of the HOV TT data showed that the decline in performance levels originated from two possible areas of concern. The first was the Totem Lake on-ramps (NE 124th St.), where high levels of morning commute traffic merge through the outside HOV lanes. The second centered on sections south of the SR 520 interchange that pass through Bellevue's CBD. As stated before, the HOV lanes will eventually be switched to the inside, which may help stabilize travel speeds through these problem areas.

SR 167

These HOV lanes were opened in November of 1994 and performed well in both the morning and evening peak commutes. HOV performance along the commute direction (e.g., northbound a.m. and southbound p.m.) was encouraging, with average travel speeds in the mid-to-upper fifties and travel time savings ranging from 3 spm to 7 spm.

Currently, this corridor is undergoing heavy construction between the HOV lanes' southern terminus and SR 18 as work continues to add another 5.5 miles of HOV lane in each direction. This project is scheduled for completion in August 1998. With further expansion of this route, the need for a complete freeway speed interchange between I-405 and SR 167 will continue to grow. The present collector-distributor design is grossly inadequate for the present level of demand.

Appendix A:

Data Entry Points by Corridor

(with milepost (MP) locations)

I-5 North Corridor #1:

SB SR 524 (196th St. SW) ⇒ NE 117th St.
 NB NE 117th St. ⇒ SR 524 (196th St. SW)

	MP
• NE 117th St. Overpass @ mid-span	173.15
• NE 145th St. Overpass @ mid-span	174.58
• NE 185th St. Overpass @ mid-span	176.72
• SR 104 Interchange (NE 205th St.) @ beginning of bridge	NB 177.75
(Mount Lake Terrace)	SB 177.78
• 220th St. SW Overpass @ mid-span	179.35
• SR 524 Overpass (196th St. SW) @ mid-span	181.53

Southbound sessions exit @

- 1) N. 80th St.
- 2) Cross overpass & turn
left onto Banner Way NE
- 3) Enter Freeway NB

Northbound sessions exit @

- 1) 164th St. SW
- 2) Cross overpass
- 3) Enter Freeway SB

I-5 Downtown Corridor #2: (Low Priority)

SB Denny Way ⇒ Albro Place

	MP
• Denny Way Overpass @ mid-span	166.36
• Yesler Way Overpass @ mid-span	165.10
• Holgate St./Beacon Ave. Overpass @ mid-span	163.96
• Spokane St./Columbia Way Off-Ramp SB	163.33
• Albro Pl. Overpass @ mid-span	161.21
(The HOV lane ends 1.41 miles to the north of this location)	

Southbound sessions exit @

- 1) Interurban Ave. Exit
- 2) Turn left & cross under freeway
- 3) Enter Freeway NB

I-5 Downtown Corridor #2: (Low Priority)

NB S 107th St. (Boeing Access Rd.) ⇒ Yesler Way

MP

• S 107th St. (Boeing Access Rd.) Overpass @ mid-span		158.01
• Military Rd. S Underpass @ beginning of bridge	SB	159.71
	NB	159.67
• Albro Pl. Overpass @ mid-span		161.21
• Spokane St./ Columbia Way Off-Ramp NB		162.57
• Holgate St./Beacon Ave. Overpass @ mid-span		163.96
• Yesler Way Overpass @ mid-span		165.10
(The HOV lane ends .64 miles to the south of this location)		

Northbound sessions exit @

- 1) W Mercer St.
- 2) Turn around
- 3) Enter Freeway SB

I-5 South Corridor #3

SB Klickitat Drive ⇒ SR 516(Kent-Des Moines Rd.)

MP

• Klickitat Drive Underpass @ beginning of bridge SB		154.16
• S 178th St. Overpass @ mid-span		153.15
• Military Rd. S (S 200th St.) Overpass @ mid-span		151.18
• S 216th St. Overpass @ mid-span		150.33
• SR 516 Underpass (Kent-DesMoines Rd.) @ beginning of bridge SB		149.22

Southbound sessions exit @

- 1) S 320th St.
- 2) Cross overpass
- 3) Enter Freeway NB

I-5 South Corridor #3

NB Military Rd. S @ S 320th St. ⇒ Klickitat Drive

MP

• Military Rd. S Underpass (S 320th St.) @ beginning of bridge NB		144.65
• S 272nd St. Underpass @ beginning of bridge NB		146.81
• SR 516 Underpass (Kent-DesMoines Rd.) @ beginning of bridge NB		149.17
• S 216th St. Overpass @ mid-span		150.33
• Military Rd. S (S 200th St.) Overpass @ mid-span		151.18
• S 178th St. Overpass @ mid-span		153.15
• Klickitat Drive Overpass @ mid-span		154.13

Northbound sessions exit @

- 1) SR 599 to Interurban Ave. S
- 2) Turn left onto Interurban Ave. S
- 3) Turn left onto S 133rd St.
(Gateway Dr.)
- 4) Turn right & enter Freeway SB

SR 520 Corridor #4: (Low Priority)
WB 108th Ave. NE ⇒ 76th Ave. NE(Evergreen Point Rd.)

	MP
• SR 908 Overpass (Bellevue Way Intersection)	5.97
• 92nd Ave. NE (Yarrow Point) Overpass @ mid-span	5.17
• Pedestrian Overpass @ Hunts Point	4.28
• 76th Ave. NE (Evergreen Point Rd.) Overpass @ mid-span	4.08

Westbound sessions exit @

- 1) Lake Washington Blvd.
- 2) Turn right & continue to Montlake Blvd. NE
- 3) Enter Freeway EB

Eastbound return trip exit @

- 1) SR 908(Bellevue Way NE)
- 2) Enter Freeway WB

I-90 Corridor #5: (Low Priority)

WB West Side of Mt. Baker Lid ⇒ SR 900
EB SR 900 ⇒ West Side of Mt. Baker Lid

	MP
• West Side of Mt. Baker Lid	3.57
• East Side of Mt. Baker Tunnel	4.22
• West Side of Mercer Lid	6.03
• Island Crest Way Overpass @ mid-span	7.11
• East Mercer Way Overpass @ mid-span	8.35
• 142nd Ave. SE Overpass @ mid-span	11.03
• Newport Way Pedestrian Overpass @ mid-span	13.04
• SR 900 (17th Ave. NW Issaquah) Overpass @ mid-span	15.82

Westbound sessions exit @

- 1) Kingdome Viaduct
- 2) Turn around & re-enter Freeway EB

Eastbound sessions exit @

- 1) Front St. S
- 2) Turn left
- 3) Enter Freeway WB

I-405 South Corridor #6:

SB 112th SE(Lake Washington Blvd. SE) ⇒ 68th Ave. S(Tukwila Pkwy)
NB 68th Ave. S(Tukwila Pkwy) ⇒ 112th SE(Lake Washington Blvd. SE)

		MP
• 68th Ave. S (Tukwila Pkwy) Overpass @ mid-span		0.77
• Lind Ave. SW Overpass @ mid-span		2.06
• Benson Rd. Overpass @ mid-span		2.86
• S-curve Overpasses @ Cedar Ave. S	NB	3.58
• @ Renton Ave. S	SB	3.66
• SR 900 Underpass (NE Park Drive) @ beginning of bridge	NB	5.40
	SB	5.44
• NE 44th St. Overpass @ mid-span		7.47
• 112th Ave. SE (Lake Washington Blvd.) Overpass @ mid-span		9.26

Southbound sessions exit @

- 1) Southcenter Blvd.
- 2) Turn right & cross overpass
- 3) Turn left & enter Freeway NB

Northbound sessions exit @

- 1) Coal Creek Pkwy
- 2) Turn left & cross under Freeway
- 3) Enter Freeway SB

I-405 North Corridors #7 & #8:

SB NE 160th St. (Juanita-Woodinville Way) ⇒ I-90 Interchange
 NB I-90 Interchange ⇒ NE 160th St. (Juanita-Woodinville Way)

		MP
• I-90 Interchange Underpass @ beginning of bridge	NB	11.05
•	SB	11.18
• SE 8th St. Underpass @ beginning of bridge	NB	12.77
•	SB	12.80
• NE 8th St. Overpass @ mid-span		13.82
• SR 520 E-N Ramp (Fly-over ramp)		14.76
• Pedestrian Overpass @ SR 908 (NE 85th St.)		17.84
• NE 124th St. Overpass @ mid-span		20.31
• NE 160th St. (Juanita-Woodinville Way) Overpass @ mid-span		22.62

Southbound sessions exit @

- 1) Coal Creek Pkwy
- 2) Turn left & cross under Freeway
- 3) Enter Freeway SB

Northbound sessions exit @

- 1) NE 195th St.
(Bearsdlee Blvd./Hollyhills Dr.)
- 2) Turn left & cross overpass
- 3) Enter Freeway SB

SR 167 Addition Corridor #9:

SB I-405/SR 167 Interchange ⇒ S 212th St.
 NB S 212th St. ⇒ I-405/SR 167 Interchange

		MP
• S 212th St. Overpass @ mid-span		22.40
• S 180th St. Overpass (also called SW 43rd St.)		24.42
• I-405 Interchange	Southern On-Ramp	SB 25.92
•	Southern Off-Ramp	NB 25.95

Southbound sessions exit @

- 1) 84th Ave. S (E Valley Rd.)
- 2) Turn left
- 3) Enter Freeway NB

Northbound sessions exit @

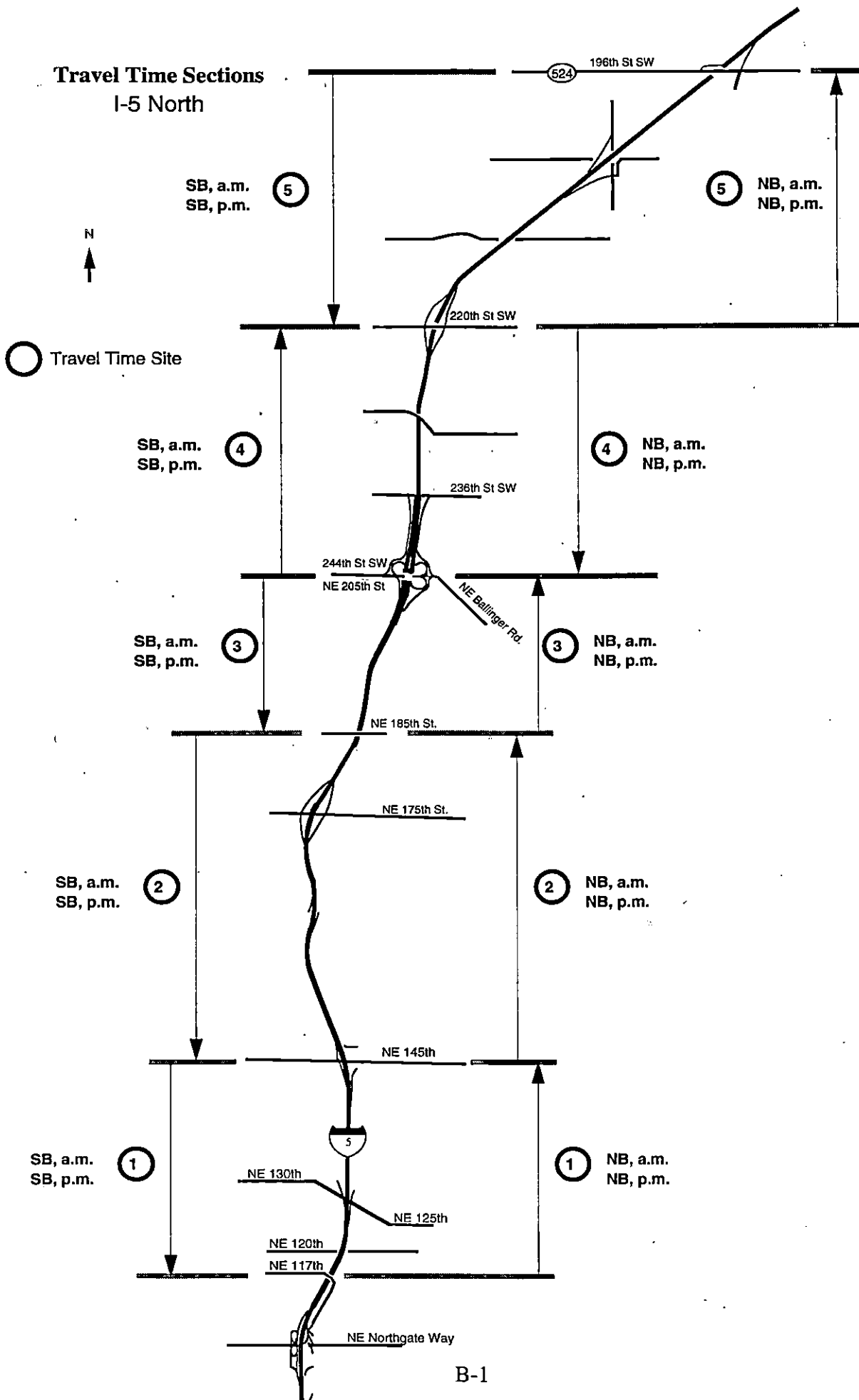
- 1) Off-ramp to I-405 southbound
- 2) Continue to southbound
SR 167n-ramp

Appendix B

Summary Statistics

(by corridor section)

Travel Time Sections I-5 North



NORTH I-5 CORRIDOR, A.M. SOUTHBOUND

1) NE 145th St. Overpass to NE 117th St. Overpass

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	25	65	46	45	10	32	51.9%	28
Q1/96	32	63	57	55	6	46	93.6%	32
Q2/96	45	63	58	57	5	49	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	30	63	46	47	9	33	63.9%	22
Q1/97	14	64	51	49	11	35	70.0%	32

2) NE 185th St. Overpass to NE 145th St. Overpass

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	21	62	48	48	9	39	66.7%	28
Q1/96	37	65	57	55	5	51	96.2%	32
Q2/96	51	64	60	58	4	52	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	22	63	49	49	10	37	66.1%	22
Q1/97	17	64	53	50	11	36	81.3%	32

3) SR 104 Interchange (NE 205th St.) to NE 185th St. Overpass

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	24	64	46	46	10	35	55.6%	28
Q1/96	21	62	57	52	9	42	82.6%	32
Q2/96	34	67	59	55	9	42	79.4%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	24	65	54	51	12	39	74.6%	21
Q1/97	23	66	52	50	11	30	74.1%	32

4) 220th St. Overpass to SR 104 Interchange (NE 205th St.)

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	19	69	47	49	13	37	59.3%	28
Q1/96	18	64	59	56	10	46	91.0%	32
Q2/96	38	66	62	59	7	51	96.6%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	14	66	57	52	13	30	77.1%	21
Q1/97	27	70	58	56	10	42	87.4%	32

NORTH I-5 CORRIDOR, A.M. SOUTHBOUND
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5) SR 524 Overpass (196th St. SW) to 220th St. SW Overpass

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	8	62	55	51	11	40	81.5%	28
Q1/96	17	62	56	55	7	50	97.1%	32
Q2/96	40	63	60	59	5	55	96.6%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	12	67	59	55	11	48	91.3%	21
Q1/97	36	66	55	56	7	46	90.5%	32

NORTH I-5 CORRIDOR, P.M. SOUTHBOUND

1) NE 145th St. Overpass to NE 117th St. Overpass

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	68	61	61	4	57	100.0%	27
Q1/96	39	61	57	57	4	55	98.5%	30
Q2/96	52	64	62	61	2	60	100.0%	30
Q3/96	58	65	62	62	2	59	100.0%	12
Q4/96	44	67	61	59	6	48	95.0%	22
Q1/97	55	64	59	59	2	57	100.0%	24

2) NE 185th St. Overpass to NE 145th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	69	61	62	3	58	100.0%	27
Q1/96	56	64	58	59	2	57	100.0%	30
Q2/96	60	64	62	62	1	61	100.0%	30
Q3/96	60	65	62	62	2	60	100.0%	12
Q4/96	53	65	61	61	3	58	100.0%	22
Q1/97	53	63	60	60	2	58	100.0%	24

3) SR 104 Interchange (NE 205th St.) to NE 185th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	44	67	62	61	5	58	99.6%	27
Q1/96	54	61	59	59	2	57	100.0%	30
Q2/96	52	65	62	62	2	59	100.0%	30
Q3/96	59	64	62	62	2	60	100.0%	12
Q4/96	58	68	63	62	3	59	100.0%	23
Q1/97	56	64	61	61	2	59	100.0%	24

4) 220th St. Overpass to SR 104 Interchange (NE 205th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	71	64	64	4	59	100.0%	26
Q1/96	55	64	60	60	2	58	100.0%	30
Q2/96	60	67	64	64	2	62	100.0%	30
Q3/96	61	67	65	65	2	63	100.0%	11
Q4/96	59	67	64	64	2	61	100.0%	23
Q1/97	58	66	63	63	2	60	100.0%	24

NORTH I-5 CORRIDOR, P.M. SOUTHBOUND**5) SR 524 Overpass (196th St. SW) to 220th St. SW Overpass**

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	64	59	59	3	55	100.0%	26
Q1/96	54	60	57	57	2	55	100.0%	30
Q2/96	58	63	60	60	1	59	100.0%	30
Q3/96	58	63	60	61	2	59	100.0%	11
Q4/96	57	64	60	60	2	58	100.0%	23
Q1/97	53	63	59	59	2	57	100.0%	24

NORTH I-5 CORRIDOR, A.M. NORTHBOUND

1) NE 117th St. Overpass to NE 145th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	73	61	61	4	57	100.0%	31
Q1/96	50	61	57	57	2	56	100.0%	34
Q2/96	59	65	61	62	1	60	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	57	63	60	60	2	58	100.0%	22
Q1/97	54	65	59	59	4	55	100.0%	34

2) NE 145th St. Overpass to NE 185th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	68	60	61	3	58	100.0%	31
Q1/96	56	63	58	58	2	57	100.0%	34
Q2/96	58	65	62	62	2	60	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	68	61	61	3	58	100.0%	22
Q1/97	54	68	60	60	4	55	100.0%	34

3) NE 185th St. Overpass to SR 104 Interchange (NE 205th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	49	66	62	61	4	56	100.0%	31
Q1/96	54	65	58	58	3	55	100.0%	32
Q2/96	51	64	62	61	3	57	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	56	65	61	60	2	58	100.0%	20
Q1/97	53	69	61	60	5	55	100.0%	34

4) SR 104 Interchange (NE 205th St.) to 220th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	34	71	65	63	7	60	97.6%	31
Q1/96	56	68	60	61	3	58	100.0%	32
Q2/96	56	69	65	65	3	63	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	61	68	64	64	2	62	100.0%	20
Q1/97	51	69	65	63	5	58	100.0%	34

NORTH I-5 CORRIDOR, A.M. NORTHBOUND
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5) 220th St. SW Overpass to SR 524 Overpass (196th St. SW)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	68	61	60	3	56	100.0%	31
Q1/96	8	65	56	55	9	54	97.3%	32
Q2/96	53	64	60	61	2	59	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	57	62	59	59	1	58	100.0%	20
Q1/97	47	64	59	58	5	54	100.0%	34

NORTH I-5 CORRIDOR, P.M. NORTHBOUND

1) NE 117th St. Overpass to NE 145th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	39	70	59	58	7	49	92.4%	27
Q1/96	33	62	57	54	8	39	83.6%	34
Q2/96	16	64	60	52	15	24	77.1%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	32	62	54	54	8	45	90.0%	23
Q1/97	55	64	59	59	2	56	100.0%	24

2) NE 145th St. Overpass to NE 185th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	29	64	53	49	11	35	60.9%	27
Q1/96	14	62	56	49	13	29	72.5%	33
Q2/96	14	64	48	44	16	20	58.7%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	35	63	58	55	8	44	88.2%	24
Q1/97	57	65	59	59	2	57	100.0%	24

3) NE 185th St. Overpass to SR 104 Interchange (NE 205th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	12	62	21	29	16	16	21.5%	27
Q1/96	5	60	31	33	17	15	25.0%	33
Q2/96	15	67	24	29	14	17	12.8%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	42	66	60	57	6	50	98.2%	24
Q1/97	57	67	60	60	2	58	100.0%	24

4) SR 104 Interchange (NE 205th St.) to 220th St. Overpass

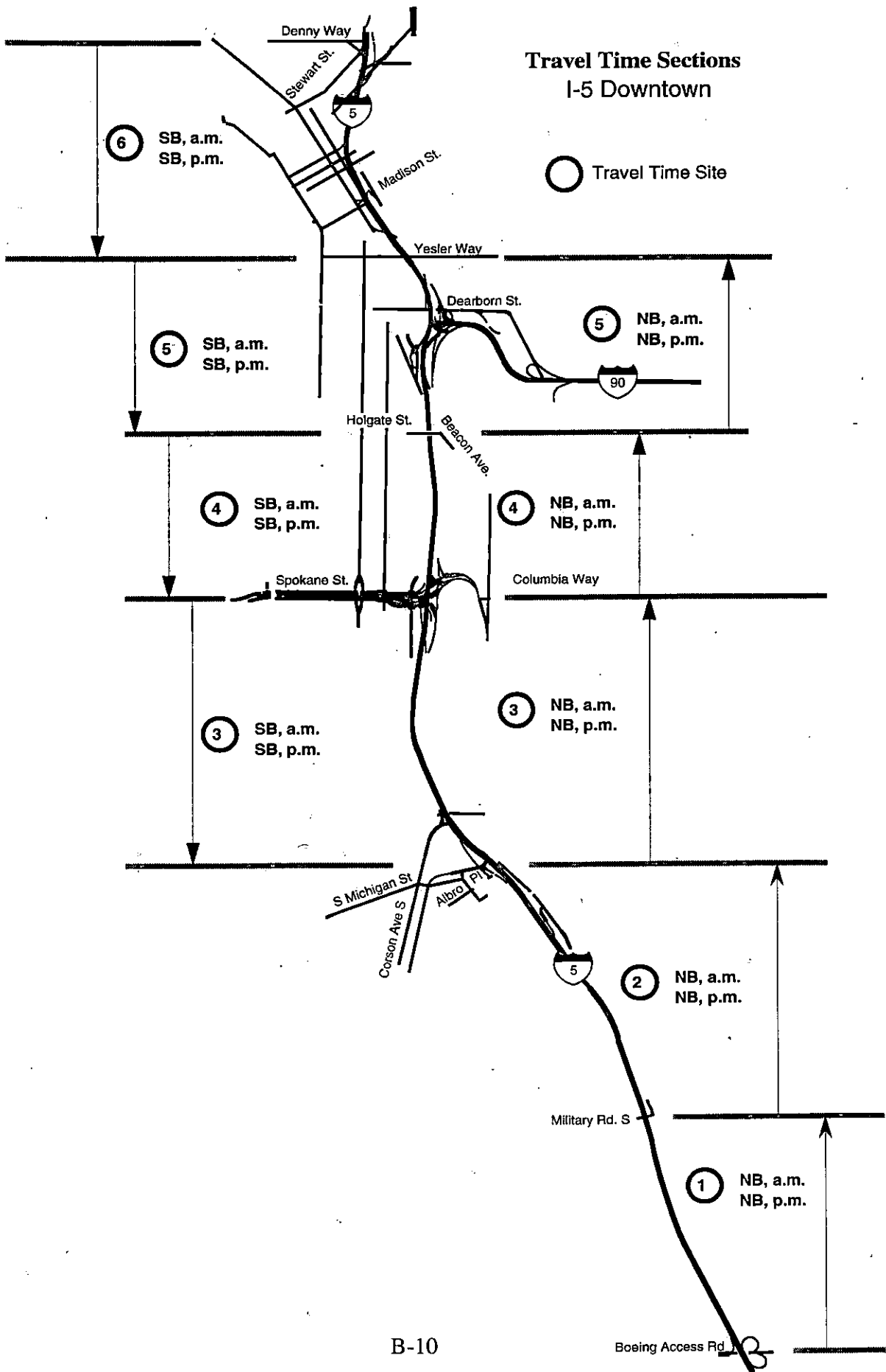
Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	18	63	30	33	13	23	15.1%	27
Q1/96	18	65	29	37	16	22	26.6%	33
Q2/96	20	64	34	36	11	23	15.6%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	58	69	63	63	3	60	100.0%	24
Q1/97	51	66	63	63	3	61	100.0%	24

NORTH I-5 CORRIDOR, P.M. NORTHBOUND
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5) 220th St. SW Overpass to SR 524 Overpass (196th St. SW)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	17	59	44	45	7	39	46.2%	27
Q1/96	16	60	46	46	10	36	54.6%	34
Q2/96	39	59	46	47	6	41	72.5%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	56	64	59	59	2	57	100.0%	24
Q1/97	17	63	59	57	9	54	96.4%	24

Travel Time Sections
I-5 Downtown



DOWNTOWN I-5 CORRIDOR, A.M. SOUTHBOUND

3) Spokane St./Columbia Way Off-Ramp to Albro Place Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	66	62	61	3	57	100.0%	12
Q1/96	53	68	60	60	4	56	100.0%	17
Q2/96	57	66	62	62	2	60	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	63	59	59	3	56	100.0%	5
Q1/97	58	66	62	61	3	59	100.0%	9

4) Holgate St./Beacon Ave. Overpass to Spokane St./Columbia Way Off-Ramp

Quarter	Min.	Max	Median	Avg.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	49	63	58	57	4	52	100.0%	13
Q1/96	49	65	58	58	4	54	100.0%	17
Q2/96	41	63	60	59	5	58	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	45	63	60	57	6	49	100.0%	6
Q1/97	39	63	57	54	9	39	81.0%	9

5) Yesler Way Overpass to Holgate St./Beacon Ave. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	44	64	59	58	5	55	100.0%	14
Q1/96	44	65	59	60	5	57	100.0%	19
Q2/96	59	63	61	61	1	59	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	61	57	58	2	55	100.0%	6
Q1/97	38	64	60	57	8	45	89.3%	9

6) Denny Way Overpass to Yesler Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	69	60	61	4	55	100.0%	13
Q1/96	56	70	59	60	4	57	99.6%	19
Q2/96	59	63	60	61	1	59	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	47	61	59	57	5	49	100.0%	7
Q1/97	36	61	60	53	10	37	75.6%	9

DOWNTOWN I-5 CORRIDOR, P.M. SOUTHBOUND

3) Spokane St./Columbia Way Off-Ramp to Albro Place Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	61	60	59	3	56	100.0%	11
Q1/96	15	62	56	52	11	51	84.9%	13
Q2/96	37	66	61	58	7	52	86.7%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	38	55	43	45	6	39	37.8%	4
Q1/97	52	64	60	59	4	54	100.0%	5

4) Holgate St./Beacon Ave. Overpass to Spokane St./Columbia Way Off-Ramp

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	65	61	60	4	57	100.0%	11
Q1/96	23	60	55	51	12	31	84.9%	13
Q2/96	25	63	58	54	11	39	86.7%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	55	53	53	2	50	100.0%	4
Q1/97	46	58	55	54	4	50	100.0%	5

5) Yesler Way Overpass to Holgate St./Beacon Ave. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	41	64	60	57	6	52	96.4%	11
Q1/96	36	63	59	57	7	49	93.8%	12
Q2/96	33	66	62	59	8	55	95.1%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	59	57	57	1	56	100.0%	4
Q1/97	50	62	61	58	5	53	100.0%	5

6) Denny Way Overpass to Yesler Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	71	59	59	5	53	100.0%	11
Q1/96	42	62	58	56	6	45	89.8%	12
Q2/96	49	63	60	58	4	54	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	52	61	58	57	4	53	100.0%	4
Q1/97	47	58	53	53	4	48	100.0%	5

DOWNTOWN I-5 CORRIDOR, A.M. NORTHBOUND

1) S 107th St. (Boeing Access Rd.) Overpass to Military Rd. S Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	59	64	61	61	2	60	100.0%	10
Q1/96	56	66	63	62	4	57	100.0%	10
Q2/96	60	65	62	62	1	60	100.0%	15
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	69	62	62	3	60	100.0%	7
Q1/97	44	66	59	58	6	54	99.3%	11

2) Military Rd. S Underpass to Albro Place Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	60	63	62	62	1	60	100.0%	10
Q1/96	58	65	63	62	2	59	100.0%	10
Q2/96	52	65	62	62	3	59	100.0%	16
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	54	67	62	61	4	57	100.0%	7
Q1/97	37	65	59	55	9	39	84.1%	11

3) Albro Place Overpass to Spokane St./Columbia Way Off-Ramp

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	63	59	59	3	56	100.0%	10
Q1/96	48	63	58	57	4	53	100.0%	10
Q2/96	53	64	59	59	3	55	100.0%	16
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	28	64	56	52	11	41	86.5%	7
Q1/97	42	62	56	55	6	48	94.5%	11

4) Spokane St./Columbia Way Off-Ramp to Holgate St./Beacon Ave. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	60	66	63	63	2	60	100.0%	10
Q1/96	54	68	64	63	5	55	100.0%	10
Q2/96	53	67	64	63	4	56	100.0%	15
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	32	65	57	54	11	39	82.3%	7
Q1/97	44	68	59	58	7	49	98.5%	11

DOWNTOWN I-5 CORRIDOR, A.M. NORTHBOUND

5) Holgate St./Beacon Ave. Overpass to Yesler Way Overpass

Quarter	Min.	Max	Median	AVG:	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	30	59	56	54	8	50	92.5%	10
Q1/96	29	65	59	54	11	41	76.9%	10
Q2/96	24	64	58	53	10	42	83.7%	15
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	16	59	56	43	17	19	60.1%	7
Q1/97	15	67	31	39	17	16	37.4%	11

DOWNTOWN I-5 CORRIDOR, P.M. NORTHBOUND

1) S 107th St. (Boeing Access Rd.) Overpass to Military Rd. S Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	59	68	63	62	2	60	100.0%	10
Q1/96	44	62	62	59	6	53	99.0%	8
Q2/96	60	66	63	63	2	60	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	64	61	59	5	53	100.0%	5
Q1/97	55	66	63	61	4	56	100.0%	6

2) Military Rd. S Underpass to Albro Place Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	68	62	62	4	57	100.0%	10
Q1/96	34	63	60	55	10	40	83.7%	8
Q2/96	58	66	63	62	2	58	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	51	64	55	58	5	53	100.0%	5
Q1/97	55	64	62	61	3	56	100.0%	6

3) Albro Place Overpass to Spokane St./Columbia Way Off-Ramp

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	48	64	56	56	6	50	100.0%	10
Q1/96	16	62	45	41	18	17	50.0%	8
Q2/96	50	66	61	61	4	56	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	42	56	48	49	6	42	62.5%	5
Q1/97	50	62	56	56	4	51	100.0%	6

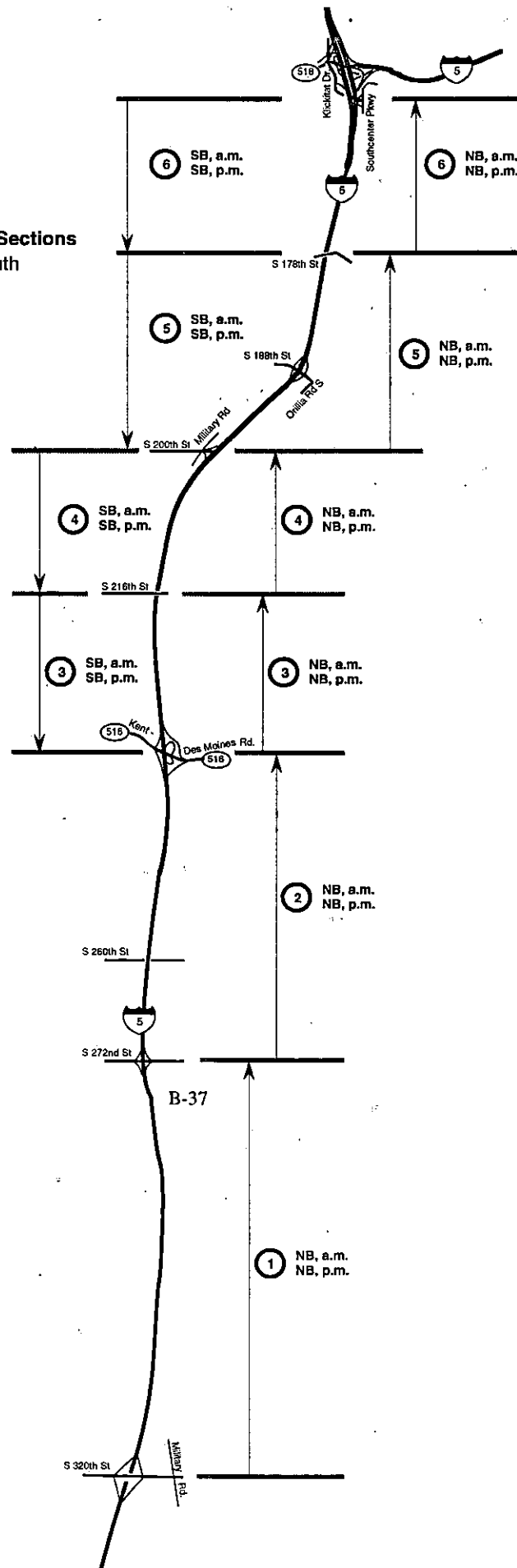
4) Spokane St./Columbia Way Off-Ramp to Holgate St./Beacon Ave. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	33	61	54	51	8	40	77.8%	10
Q1/96	11	67	60	55	17	40	88.5%	8
Q2/96	58	66	63	63	2	60	100.0%	12
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	45	65	48	51	7	46	100.0%	5
Q1/97	58	69	62	63	4	59	100.0%	6

DOWNTOWN I-5 CORRIDOR, P.M. NORTHBOUND**5) Holgate St./Beacon Ave. Overpass to Yesler Way Overpass**

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	10	55	26	29	12	18	8.6%	10
Q1/96	9	65	55	49	16	33	82.2%	8
Q2/96	23	65	57	55	11	53	92.7%	11
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	34	57	40	43	9	35	26.5%	4
Q1/97	12	59	44	41	17	21	48.6%	6

Travel Time Sections I-5 South



SOUTH I-5 CORRIDOR, A.M. SOUTHBOUND

3) S 216th St. Overpass to SR 516 Underpass (Kent-Des Moines Rd.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	68	62	62	3	56	100.0%	25
Q1/96	44	66	60	59	4	56	99.8%	40
Q2/96	19	68	62	62	7	60	98.4%	42
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	32	66	61	60	6	57	97.7%	28
Q1/97	54	66	61	61	4	56	100.0%	26

4) Military Rd. S (S 200th St.) Overpass to S 216th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	71	60	61	3	57	100.0%	25
Q1/96	55	62	59	59	2	57	100.0%	40
Q2/96	58	65	61	61	2	59	100.0%	42
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	47	67	59	59	3	58	100.0%	28
Q1/97	54	65	60	59	3	54	100.0%	26

5) S 178th St. Overpass to Military Rd. S (S 200th St.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	72	63	63	4	58	100.0%	25
Q1/96	58	68	61	62	3	59	100.0%	39
Q2/96	60	68	64	63	2	61	100.0%	42
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	59	65	61	61	1	60	100.0%	22
Q1/97	55	68	62	62	4	56	100.0%	25

6) Klickitat Drive Underpass to S 178th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	49	71	62	62	5	55	100.0%	23
Q1/96	54	66	61	61	3	57	100.0%	40
Q2/96	57	66	63	63	2	60	100.0%	42
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	58	66	61	61	2	59	100.0%	21
Q1/97	55	69	61	61	3	57	100.0%	24

SOUTH I-5 CORRIDOR, P.M. SOUTHBOUND

3) S 216th St. Overpass to SR 516 Underpass (Kent-Des Moines Rd.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	29	75	57	55	9	44	87.1%	32
Q1/96	26	63	46	45	13	29	50.6%	31
Q2/96	26	67	60	55	11	44	86.7%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	23	62	56	49	15	25	68.7%	16
Q1/97	20	66	51	48	13	28	62.9%	24

4) Military Rd. S (S 200th St.) Overpass to S 216th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	28	65	54	51	9	38	74.2%	32
Q1/96	22	62	47	47	11	31	61.7%	31
Q2/96	21	65	59	55	10	47	90.6%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	11	65	54	47	16	22	69.6%	16
Q1/97	15	64	51	47	14	28	62.7%	24

5) S 178th St. Overpass to Military Rd. S (S 200th St.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	14	66	59	53	13	34	78.9%	32
Q1/96	19	64	57	51	12	36	76.7%	31
Q2/96	20	64	61	57	10	51	93.8%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	18	63	56	51	14	25	82.5%	16
Q1/97	21	62	58	52	11	35	76.6%	24

6) Klickitat Drive Underpass to S 178th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	42	65	57	56	7	45	96.8%	32
Q1/96	31	71	51	52	10	39	72.5%	31
Q2/96	42	65	59	56	7	48	97.5%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	16	60	39	38	14	22	30.4%	17
Q1/97	38	61	49	49	6	43	77.4%	24

SOUTH I-5 CORRIDOR, A.M. NORTHBOUND

1) Military Rd. S (S 320th St.) Underpass to S 272nd St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	49	74	66	65	7	57	100.0%	25
Q1/96	53	69	59	60	4	54	100.0%	38
Q2/96	51	68	63	63	3	61	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	45	68	61	59	4	53	100.0%	28
Q1/97	24	68	60	58	10	49	93.8%	26

2) S 272nd St. Underpass to SR 516 Underpass (Kent - Des Moines Rd)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	33	72	57	57	8	50	93.6%	25
Q1/96	24	68	60	58	8	53	95.8%	38
Q2/96	54	66	62	62	2	59	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	40	66	60	58	6	49	97.9%	28
Q1/97	36	67	59	57	9	44	87.5%	26

3) SR 516 Underpass (Kent - Des Moines Rd.) to S 216th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	48	68	60	60	5	53	100.0%	24
Q1/96	43	67	58	57	5	52	97.3%	38
Q2/96	47	65	61	60	3	56	100.0%	34
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	26	62	57	55	8	44	88.1%	28
Q1/97	44	64	59	57	7	47	96.9%	26

4) S 216th St. Overpass to Military Rd. S (S 200th St.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	73	61	60	6	55	100.0%	24
Q1/96	41	67	58	58	5	55	98.7%	38
Q2/96	49	65	61	61	3	57	100.0%	34
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	41	65	61	59	5	50	98.2%	28
Q1/97	32	67	59	56	8	46	92.0%	26

SOUTH I-5 CORRIDOR, A.M. NORTHBOUND
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5) Military Rd. S (S 200th St.) Overpass to S 178th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	72	62	62	4	58	100.0%	24
Q1/96	42	65	60	59	5	55	98.4%	38
Q2/96	46	66	63	62	4	57	100.0%	34
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	45	63	59	58	5	52	98.6%	28
Q1/97	47	67	60	58	6	50	100.0%	26

6) S 178th St. Overpass to Klickitat Drive Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	48	74	60	61	5	57	100.0%	24
Q1/96	47	68	61	59	4	54	100.0%	38
Q2/96	30	67	62	60	8	51	94.2%	34
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	12	67	60	57	10	51	96.5%	28
Q1/97	40	67	59	57	7	46	90.8%	26

SOUTH I-5 CORRIDOR, P.M. NORTHBOUND

1) Military Rd. S (S 320th St.) Underpass to S 272nd St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	48	71	62	62	4	58	100.0%	30
Q1/96	57	68	63	63	3	59	100.0%	30
Q2/96	60	65	62	63	1	61	100.0%	27
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	59	68	61	62	3	60	100.0%	16
Q1/97	57	68	64	63	3	60	100.0%	25

2) S 272nd St. Underpass to SR 516 Underpass (Kent - Des Moines Rd)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	71	63	63	4	58	100.0%	30
Q1/96	57	66	62	62	2	59	100.0%	30
Q2/96	60	66	62	63	2	61	100.0%	29
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	75	62	64	4	60	100.0%	16
Q1/97	57	66	63	62	3	58	100.0%	25

3) SR 516 Underpass (Kent - Des Moines Rd.) to S 216th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	38	66	61	60	5	58	98.6%	30
Q1/96	56	65	61	61	2	58	100.0%	30
Q2/96	59	66	61	62	2	60	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	58	71	61	63	4	59	100.0%	16
Q1/97	54	65	61	61	3	57	100.0%	25

4) S 216th St. Overpass to Military Rd. S (S 200th St.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	73	62	62	4	58	100.0%	30
Q1/96	57	67	60	61	2	57	100.0%	30
Q2/96	58	65	62	62	2	60	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	57	68	61	62	3	59	100.0%	16
Q1/97	55	67	61	61	3	56	100.0%	24

SOUTH I-5 CORRIDOR, P.M. NORTHBOUND
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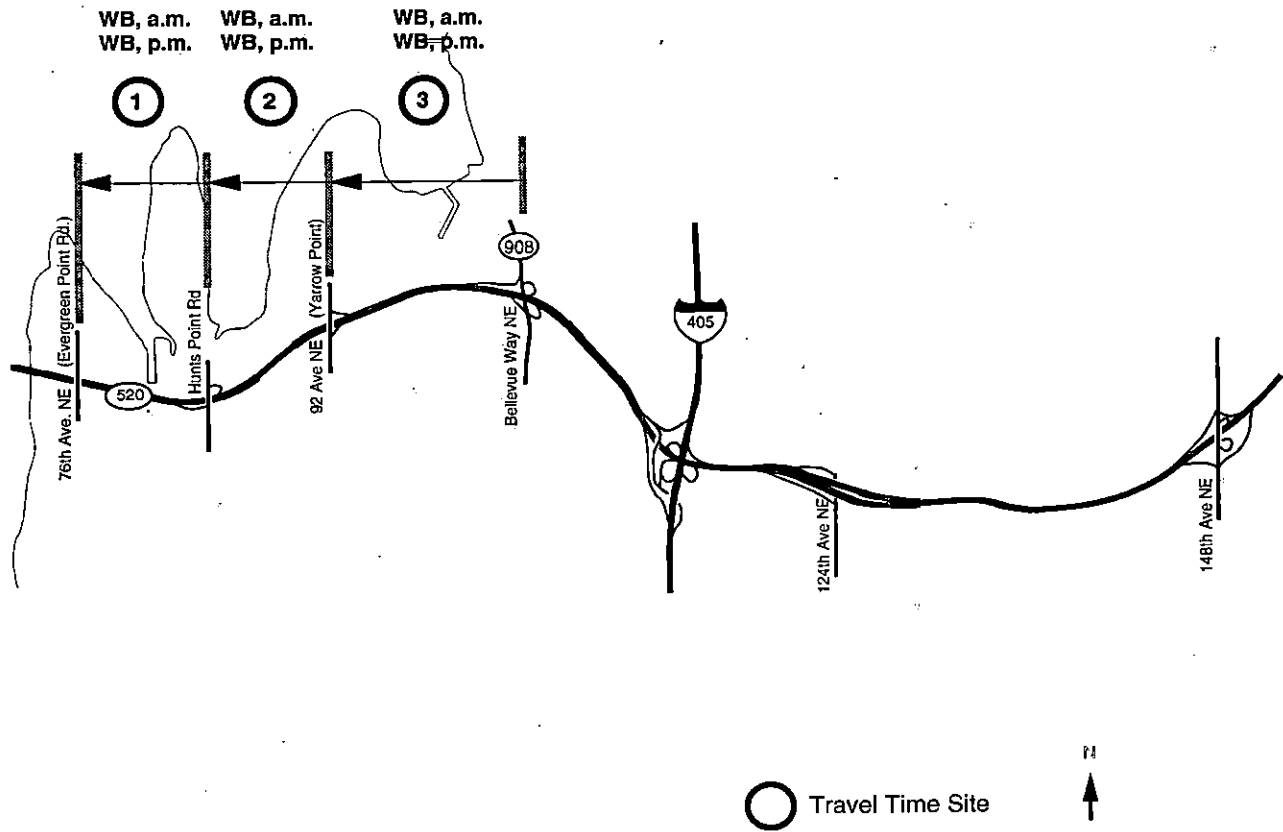
5) Military Rd. S (S 200th St.) Overpass to S 178th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	71	62	62	3	59	100.0%	30
Q1/96	56	67	62	62	3	57	100.0%	30
Q2/96	61	66	63	63	1	61	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	67	62	63	3	60	100.0%	16
Q1/97	55	69	62	62	4	58	100.0%	24

6) S 178th St. Overpass to Klickitat Drive Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	75	63	64	4	59	100.0%	30
Q1/96	33	67	61	59	7	51	94.9%	30
Q2/96	56	65	64	63	2	61	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	32	71	61	59	8	53	95.9%	16
Q1/97	51	65	60	61	3	58	100.0%	24

Travel Time Sections SR 520



52520
SOUTH I-5 CORRIDOR, A.M. WESTBOUND

1) Pedestrian Overpass at Hunts Point to 76th Ave. NE (Evergreen Point Rd.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	21	51	34	33	10	22	9.6%	8
Q1/96	19	55	41	40	12	22	33.4%	10
Q2/96	26	65	37	41	12	32	29.7%	10
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	25	65	34	39	14	27	25.6%	7
Q1/97	7	55	36	33	18	7	31.0%	9

2) 92nd Ave. NE (Yarrow Point) Overpass to Pedestrian Overpass at Hunts Point

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	41	57	44	47	6	42	41.5%	8
Q1/96	42	58	55	53	5	48	95.3%	10
Q2/96	40	60	52	51	7	43	77.8%	10
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	47	60	50	53	5	48	100.0%	7
Q1/97	35	58	46	48	8	35	76.6%	9

3) SR 908 Overpass (Bellevue Way) to 92nd Ave. NE (Yarrow Point) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	38	58	44	47	7	41	41.5%	8
Q1/96	50	58	56	55	2	53	100.0%	10
Q2/96	34	60	52	49	8	39	66.7%	10
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	44	59	55	53	4	48	98.2%	8
Q1/97	36	56	48	47	8	36	59.0%	10

SR 520 CORRIDOR, P.M. WESTBOUND
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1) Pedestrian Overpass at Hunts Point to 76th Ave. NE (Evergreen Point Rd.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	33	55	46	47	7	36	62.5%	9
Q1/96	28	55	41	41	11	30	46.9%	10
Q2/96	27	42	30	31	4	28	0.0%	10
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	21	55	28	31	10	22	6.6%	10
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

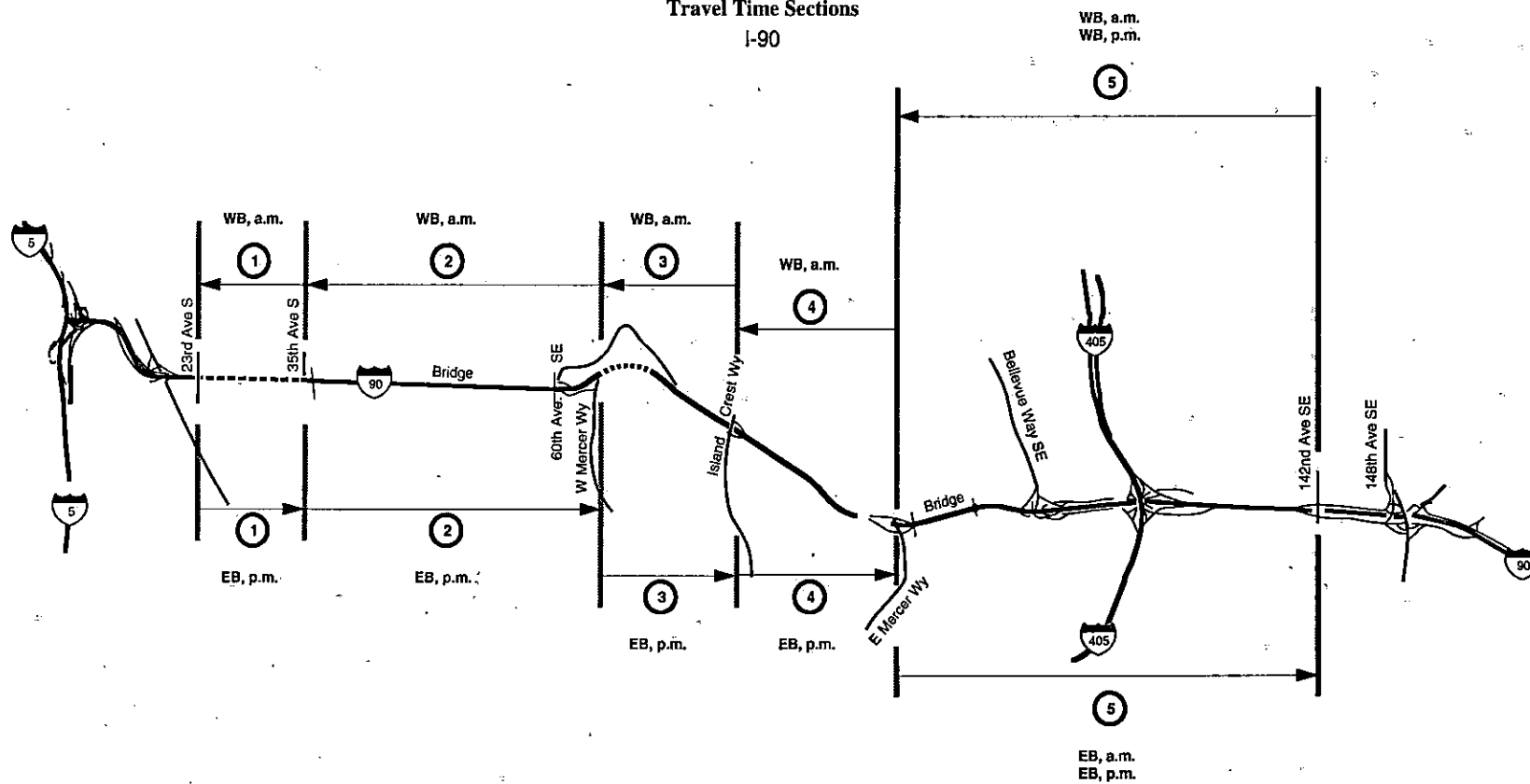
2) 92nd Ave. NE (Yarrow Point) Overpass to Pedestrian Overpass at Hunts Point

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	31	58	50	47	10	32	63.9%	9
Q1/96	31	57	50	47	9	36	59.3%	10
Q2/96	32	57	44	44	8	32	37.5%	9
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	29	60	46	45	9	33	56.0%	10
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

3) SR 908 Overpass (Bellevue Way) to 92nd Ave. NE (Yarrow Point) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	23	60	52	42	16	23	54.0%	9
Q1/96	31	56	53	49	9	36	73.2%	10
Q2/96	37	56	48	47	7	38	60.8%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	37	58	51	49	6	41	79.6%	10
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

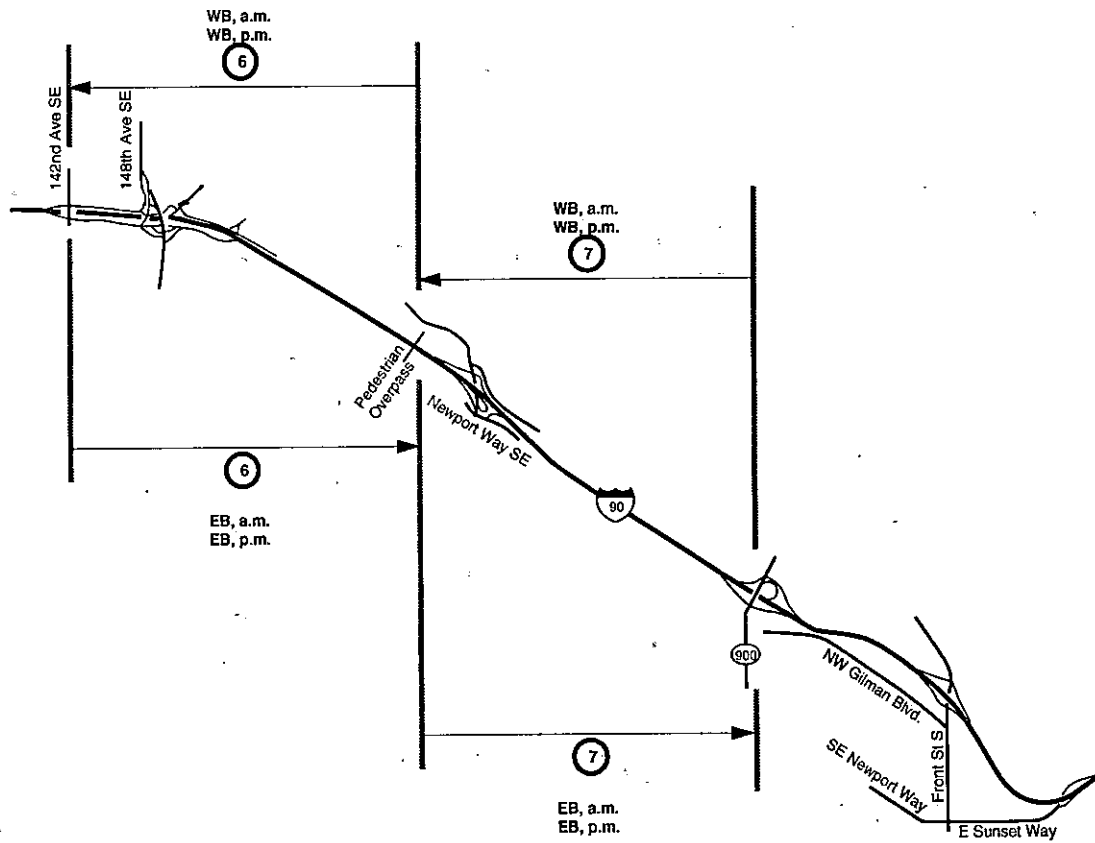
Travel Time Sections I-90



○ Travel Time Site



Travel Time Sections I-90



○ Travel Time Site



I-90 CORRIDOR, A.M. WESTBOUND

1) East Side of Mt. Baker Tunnel to the West Side of Mt. Baker Lid

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	62	58	58	2	56	100.0%	9
Q1/96	50	60	54	55	3	52	100.0%	8
Q2/96	43	63	60	58	6	52	97.9%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	48	60	54	54	6	48	100.0%	4
Q1/97	50	57	52	52	2	50	100.0%	12

2) West Side of the Mercer Lid to the East Side of the Mt. Baker Tunnel

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	66	61	61	2	59	100.0%	10
Q1/96	55	70	59	60	5	56	100.0%	8
Q2/96	59	64	61	61	1	60	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	56	58	58	57	1	56	100.0%	4
Q1/97	55	66	57	58	3	56	100.0%	12

3) Island Crest Way Overpass to West Side of the Mercer Lid

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	69	60	61	4	58	100.0%	10
Q1/96	55	67	60	60	3	57	100.0%	9
Q2/96	60	63	62	62	1	61	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	62	61	61	1	60	100.0%	4
Q1/97	48	68	54	55	5	51	100.0%	12

4) East Mercer Way Overpass to Island Crest Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	73	61	63	6	57	100.0%	9
Q1/96	55	67	61	61	3	59	100.0%	9
Q2/96	51	65	62	61	4	57	100.0%	7
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	65	62	61	5	56	100.0%	7
Q1/97	47	60	56	55	3	51	100.0%	12

I-90 CORRIDOR, A.M. WESTBOUND

5) 142nd Ave. SE Overpass to East Mercer Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	63	59	59	3	56	100.0%	12
Q1/96	49	65	62	60	4	56	100.0%	12
Q2/96	55	62	61	59	3	55	100.0%	9
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	62	64	63	63	1	62	100.0%	4
Q1/97	53	57	56	56	1	55	100.0%	9

6) Newport Way Pedestrian Overpass to 142nd Ave. SE Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	65	61	60	3	57	100.0%	13
Q1/96	51	64	61	59	4	52	100.0%	12
Q2/96	54	62	60	59	3	55	100.0%	9
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	61	63	63	63	1	62	100.0%	4
Q1/97	55	58	56	56	1	55	100.0%	9

7) SR 900 Overpass to Newport Way Pedestrian Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	64	61	60	3	56	100.0%	13
Q1/96	54	65	63	61	4	54	100.0%	12
Q2/96	58	61	60	60	1	59	100.0%	9
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	61	63	62	62	1	61	100.0%	4
Q1/97	54	56	55	55	1	54	100.0%	9

I-90 CORRIDOR, P.M. WESTBOUND

5) 142nd Ave. SE Overpass to East Mercer Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	61	60	59	2	57	100.0%	8
Q1/96	33	61	60	55	9	45	89.8%	10
Q2/96	39	64	61	56	10	40	81.8%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	44	61	58	56	7	48	98.5%	4
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

6) Newport Way Pedestrian Overpass to 142nd Ave. SE Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	66	59	59	3	55	100.0%	8
Q1/96	46	62	61	59	4	57	100.0%	10
Q2/96	61	63	62	62	1	61	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	62	61	61	1	60	100.0%	5
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

7) SR 900 Overpass to Newport Way Pedestrian Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	62	59	59	1	58	100.0%	8
Q1/96	57	60	59	59	1	58	100.0%	10
Q2/96	61	63	62	62	1	61	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	60	61	61	61	1	60	100.0%	5
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

I-90 CORRIDOR, A.M. EASTBOUND

5) East Mercer Way Overpass to 142nd Ave. SE Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	65	62	61	3	58	100.0%	10
Q1/96	57	71	62	61	4	57	100.0%	11
Q2/96	59	66	61	61	2	60	100.0%	11
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	58	65	59	61	3	58	100.0%	3
Q1/97	55	56	55	56	0	55	100.0%	9

6) 142nd Ave. SE Overpass to Newport Way Pedestrian Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	66	61	61	4	57	100.0%	12
Q1/96	55	66	62	61	3	57	100.0%	12
Q2/96	53	62	60	60	2	60	100.0%	11
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	63	65	63	64	1	63	100.0%	3
Q1/97	49	57	56	55	2	52	100.0%	9

7) Newport Way Pedestrian Overpass to SR 900 Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	67	59	61	5	56	100.0%	12
Q1/96	51	63	62	60	4	54	100.0%	12
Q2/96	59	65	61	61	2	60	100.0%	11
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	61	63	63	62	1	61	100.0%	3
Q1/97	55	61	56	57	2	55	100.0%	9

I-90 CORRIDOR, P.M. EASTBOUND

1) West Side of Mt. Baker Lid to East Side of Mt. Baker Tunnel

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	62	57	56	3	53	100.0%	10
Q1/96	46	62	57	56	4	50	100.0%	16
Q2/96	52	62	58	58	2	54	100.0%	17
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	38	60	56	54	6	51	95.1%	12
Q1/97	48	60	56	55	4	51	100.0%	10

2) East Side of the Mt. Baker Tunnel to West Side of the Mercer Lid

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	56	64	62	61	2	58	100.0%	10
Q1/96	57	66	61	61	3	58	100.0%	16
Q2/96	59	65	61	62	2	60	100.0%	17
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	53	66	63	62	3	60	100.0%	12
Q1/97	57	63	61	61	2	57	100.0%	10

3) West Side of the Mercer Lid to Island Crest Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	71	61	62	4	56	100.0%	11
Q1/96	55	66	61	60	3	56	100.0%	16
Q2/96	58	64	61	61	2	60	100.0%	17
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	56	70	60	61	4	57	100.0%	12
Q1/97	55	61	59	59	2	57	100.0%	10

4) Island Crest Way Overpass to East Mercer Way Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	69	60	60	4	56	100.0%	10
Q1/96	54	63	59	58	3	55	100.0%	16
Q2/96	56	64	60	60	2	58	100.0%	17
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	63	58	58	4	52	100.0%	12
Q1/97	56	62	59	59	2	56	100.0%	10

I-90 CORRIDOR, P.M. EASTBOUND

5) East Mercer Way Overpass to 142nd Ave. SE Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	55	60	58	58	2	56	100.0%	7
Q1/96	54	63	58	58	3	56	100.0%	10
Q2/96	55	63	62	61	2	59	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	57	60	58	58	1	57	100.0%	5
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

6) 142nd Ave. SE Overpass to Newport Way Pedestrian Overpass

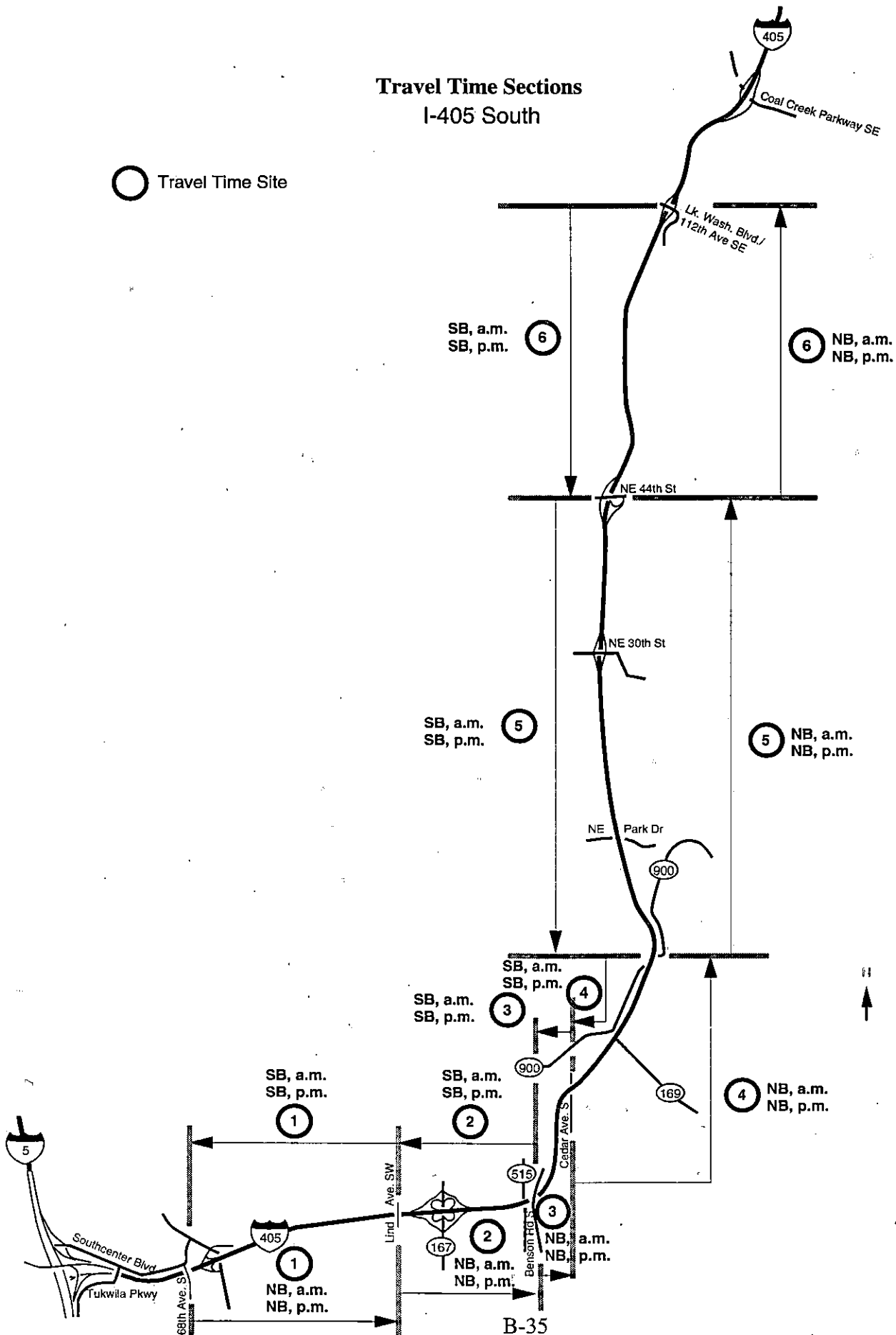
Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	62	60	60	1	58	100.0%	8
Q1/96	57	63	62	61	2	58	100.0%	10
Q2/96	55	63	62	61	2	59	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	57	61	59	59	2	57	100.0%	5
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

7) Newport Way Pedestrian Overpass to SR 900 Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	58	68	59	61	3	58	100.0%	8
Q1/96	56	63	60	60	2	57	100.0%	10
Q2/96	57	63	61	61	2	60	100.0%	8
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	58	63	60	60	2	58	100.0%	5
Q1/97	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Travel Time Sections I-405 South

○ Travel Time Site



SOUTH I-405 CORRIDOR, A.M. SOUTHBOUND

1) Lind Ave. SW Overpass to 68h Ave. S Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	43	64	59	57	4	53	99.0%	32
Q1/96	50	65	58	58	4	54	100.0%	39
Q2/96	53	64	60	60	3	57	100.0%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	46	64	57	57	5	50	100.0%	25
Q1/97	53	62	56	56	2	55	100.0%	30

2) Benson Rd. Overpass to Lind Ave. SW Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	67	60	60	3	56	100.0%	32
Q1/96	48	67	59	59	4	55	100.0%	39
Q2/96	58	64	61	61	2	59	100.0%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	49	64	60	59	4	54	100.0%	25
Q1/97	49	63	56	57	3	54	100.0%	30

3) S-curve Overpasses @ Renton Ave. S to Benson Rd. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	32	76	38	40	8	34	7.6%	32
Q1/96	28	55	38	39	5	33	5.0%	39
Q2/96	33	57	41	41	4	36	2.6%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	46	63	54	54	5	47	100.0%	25
Q1/97	43	60	54	53	4	49	95.5%	30

4) SR 900 Underpass (NE Park Drive) to S-curve Overpasses @ Renton Ave. S

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	17	72	54	55	14	39	77.5%	32
Q1/96	25	75	60	57	12	42	81.6%	39
Q2/96	29	75	65	62	10	51	95.7%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	31	63	51	48	11	32	61.1%	25
Q1/97	45	60	56	56	3	51	100.0%	30

SOUTH I-405 CORRIDOR, A.M. SOUTHBOUND
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5) NE 44th St. Overpass to SR 900 Underpass (NE Park Drive)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	37	70	57	54	8	45	90.4%	32
Q1/96	36	62	55	54	6	47	95.2%	39
Q2/96	39	63	56	55	6	48	91.7%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	34	60	47	49	7	42	71.7%	25
Q1/97	42	64	55	55	4	50	97.6%	30

6) 112th Ave. SE (Lake Washington Blvd.) Overpass to NE 44th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	41	63	58	56	5	49	95.2%	32
Q1/96	50	63	58	58	2	55	100.0%	32
Q2/96	38	66	60	57	7	44	89.6%	37
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	37	63	58	55	6	46	90.6%	25
Q1/97	47	64	55	56	4	52	100.0%	30

SOUTH I-405 CORRIDOR, P.M. SOUTHBOUND

1) Lind Ave. SW Overpass to 68h Ave. S Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	31	68	60	57	8	49	92.6%	36
Q1/96	30	62	58	54	8	44	87.8%	20
Q2/96	36	64	61	58	7	48	95.2%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	12	63	46	44	14	28	54.7%	13
Q1/97	28	63	55	51	10	36	75.7%	24

2) Benson Rd. Overpass to Lind Ave. SW Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	31	69	60	59	7	55	96.0%	36
Q1/96	50	64	58	58	3	55	100.0%	21
Q2/96	55	64	61	60	2	57	100.0%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	51	61	56	57	3	54	100.0%	13
Q1/97	31	65	60	57	7	49	96.5%	24

3) S-curve Overpasses @ Renton Ave. S to Benson Rd. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	27	64	40	40	7	32	14.3%	36
Q1/96	25	42	38	36	5	31	0.0%	20
Q2/96	30	45	42	41	4	35	3.4%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	44	61	49	51	6	45	89.9%	14
Q1/97	35	64	56	54	8	39	83.4%	25

4) SR 900 Underpass (NE Park Drive) to S-curve Overpasses @ Renton Ave. S

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	26	75	67	61	13	40	83.8%	38
Q1/96	18	69	58	51	16	25	67.2%	20
Q2/96	27	75	69	64	14	37	87.8%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	18	59	41	42	11	32	46.3%	14
Q1/97	42	64	59	57	6	48	94.4%	25

SOUTH I-405 CORRIDOR, P.M. SOUTHBOUND
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5) NE 44th St. Overpass to SR 900 Underpass (NE Park Drive)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	25	60	53	50	8	39	81.1%	38
Q1/96	34	60	48	47	7	36	65.0%	21
Q2/96	29	62	56	54	7	48	91.6%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	24	54	45	44	8	34	52.4%	14
Q1/97	31	64	55	51	9	40	77.3%	25

6) 112th Ave. SE (Lake Washington Blvd.) Overpass to NE 44th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	43	67	57	56	5	47	93.3%	38
Q1/96	32	64	54	52	8	42	86.3%	21
Q2/96	47	66	60	60	4	56	100.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	25	57	50	48	9	36	79.1%	14
Q1/97	34	62	57	55	6	49	96.5%	25

SOUTH I-405 CORRIDOR, A.M. NORTHBOUND

1) 68h Ave. S Overpass to Lind Ave. SW Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	66	60	60	3	57	100.0%	32
Q1/96	45	64	60	59	3	57	100.0%	43
Q2/96	58	64	61	62	1	60	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	51	67	60	60	4	56	100.0%	23
Q1/97	54	65	56	57	3	55	100.0%	28

2) Lind Ave. SW Overpass to Benson Rd. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	45	65	60	58	5	51	100.0%	32
Q1/96	53	63	59	59	2	56	100.0%	42
Q2/96	58	65	61	62	2	59	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	70	60	59	5	52	100.0%	23
Q1/97	51	64	55	56	3	53	100.0%	28

3) Benson Rd. Overpass to S-curve Overpasses @ Cedar Ave.

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	24	65	44	42	9	31	46.9%	33
Q1/96	28	50	43	42	4	36	19.6%	42
Q2/96	35	49	45	45	3	41	71.5%	36
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	42	65	60	57	7	45	90.1%	23
Q1/97	37	62	56	55	5	51	95.6%	28

4) S-curve Overpasses @ Cedar Ave. S to SR 900 Underpass (NE Park Drive)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	28	66	48	48	13	31	56.3%	33
Q1/96	32	70	50	50	10	36	67.1%	42
Q2/96	19	72	62	59	11	45	90.0%	36
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	15	64	39	40	13	23	29.3%	24
Q1/97	14	61	47	45	10	31	56.8%	28

SOUTH I-405 CORRIDOR, A.M. NORTHBOUND
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5) SR 900 Underpass (NE Park Drive) to NE 44th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	38	67	52	52	8	42	81.3%	33
Q1/96	40	63	52	51	5	44	87.9%	42
Q2/96	40	64	55	54	6	46	91.5%	36
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	14	64	40	40	14	20	35.4%	24
Q1/97	41	57	49	49	4	43	80.1%	28

6) NE 44th St. Overpass to 112th Ave. SE (Lake Washington Blvd.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	29	64	53	52	8	42	84.4%	33
Q1/96	47	67	55	55	4	50	100.0%	37
Q2/96	45	63	58	56	5	50	100.0%	36
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	31	63	51	50	7	43	80.1%	24
Q1/97	33	58	53	51	5	45	90.3%	27

SOUTH I-405 CORRIDOR, P.M. NORTHBOUND

1) 68h Ave. S Overpass to Lind Ave. SW Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	45	63	56	55	5	47	100.0%	38
Q1/96	47	62	55	55	3	52	100.0%	21
Q2/96	46	63	60	58	4	54	100.0%	29
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	62	54	55	3	51	100.0%	12
Q1/97	38	62	54	54	6	48	96.1%	26

2) Lind Ave. SW Overpass to Benson Rd. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	47	63	56	56	5	51	100.0%	38
Q1/96	49	64	58	57	4	53	100.0%	21
Q2/96	51	64	60	60	3	58	100.0%	29
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	43	61	53	52	5	44	88.9%	12
Q1/97	51	67	60	58	4	52	100.0%	26

3) Benson Rd. Overpass to S-curve Overpasses @ Cedar Ave.

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	34	64	43	43	6	35	27.1%	38
Q1/96	34	48	43	42	4	36	15.0%	21
Q2/96	37	53	45	44	3	41	48.3%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	33	59	49	47	7	38	69.7%	12
Q1/97	42	65	60	58	6	48	95.3%	26

4) S-curve Overpasses @ Cedar Ave. S to SR 900 Underpass (NE Park Drive)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	31	67	61	56	10	43	83.4%	37
Q1/96	30	69	63	56	13	34	81.3%	21
Q2/96	42	71	64	60	9	45	89.7%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	27	43	35	36	5	30	0.0%	12
Q1/97	42	62	58	56	5	48	93.7%	26

SOUTH I-405 CORRIDOR, P.M. NORTHBOUND
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5) SR 900 Underpass (NE Park Drive) to NE 44th St. Overpass

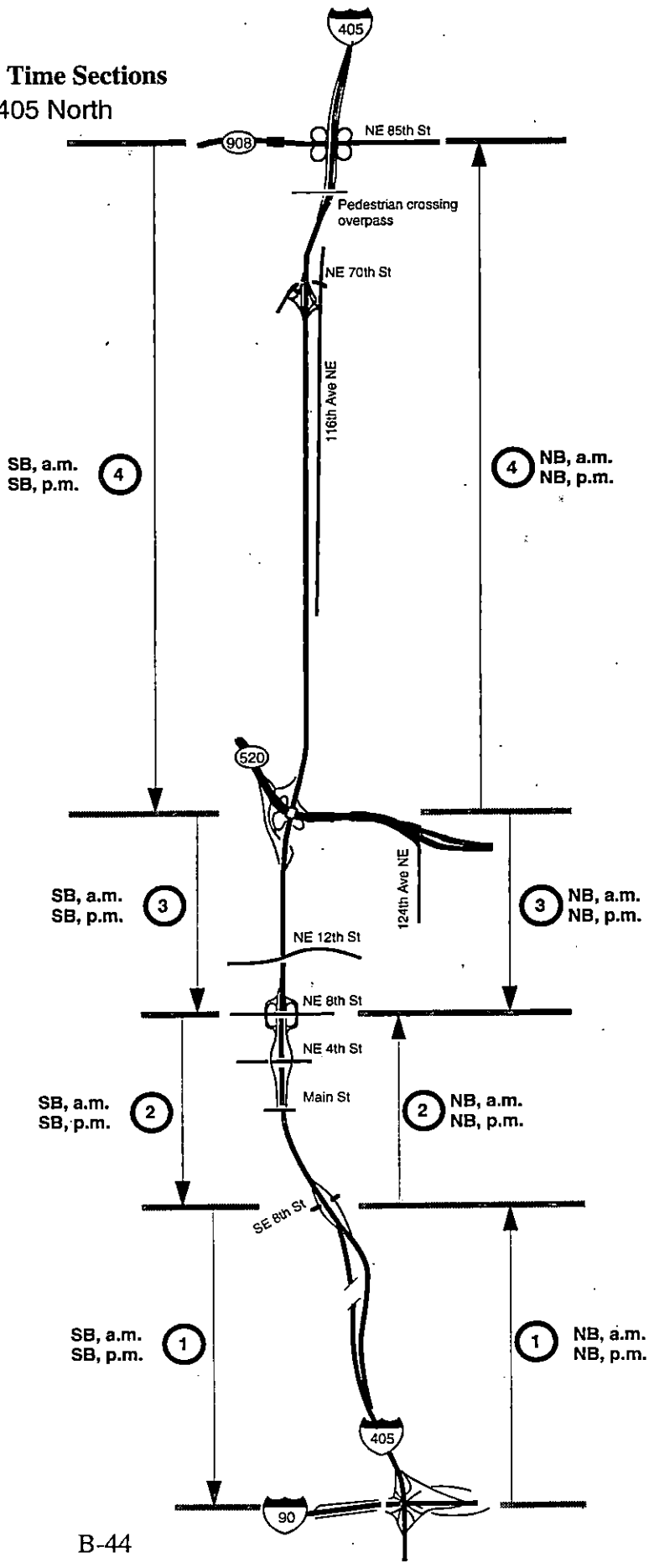
Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	37	76	54	53	7	46	94.5%	37
Q1/96	40	62	53	52	7	42	78.4%	21
Q2/96	47	64	56	55	5	49	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	37	49	47	45	4	41	61.1%	12
Q1/97	44	64	58	56	6	47	98.2%	26

6) NE 44th St. Overpass to 112th Ave. SE (Lake Washington Blvd.) Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	51	63	58	57	3	54	100.0%	37
Q1/96	46	63	57	55	5	48	100.0%	21
Q2/96	50	64	60	60	3	58	100.0%	30
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	46	59	54	54	3	52	100.0%	12
Q1/97	33	58	53	51	5	45	90.3%	27

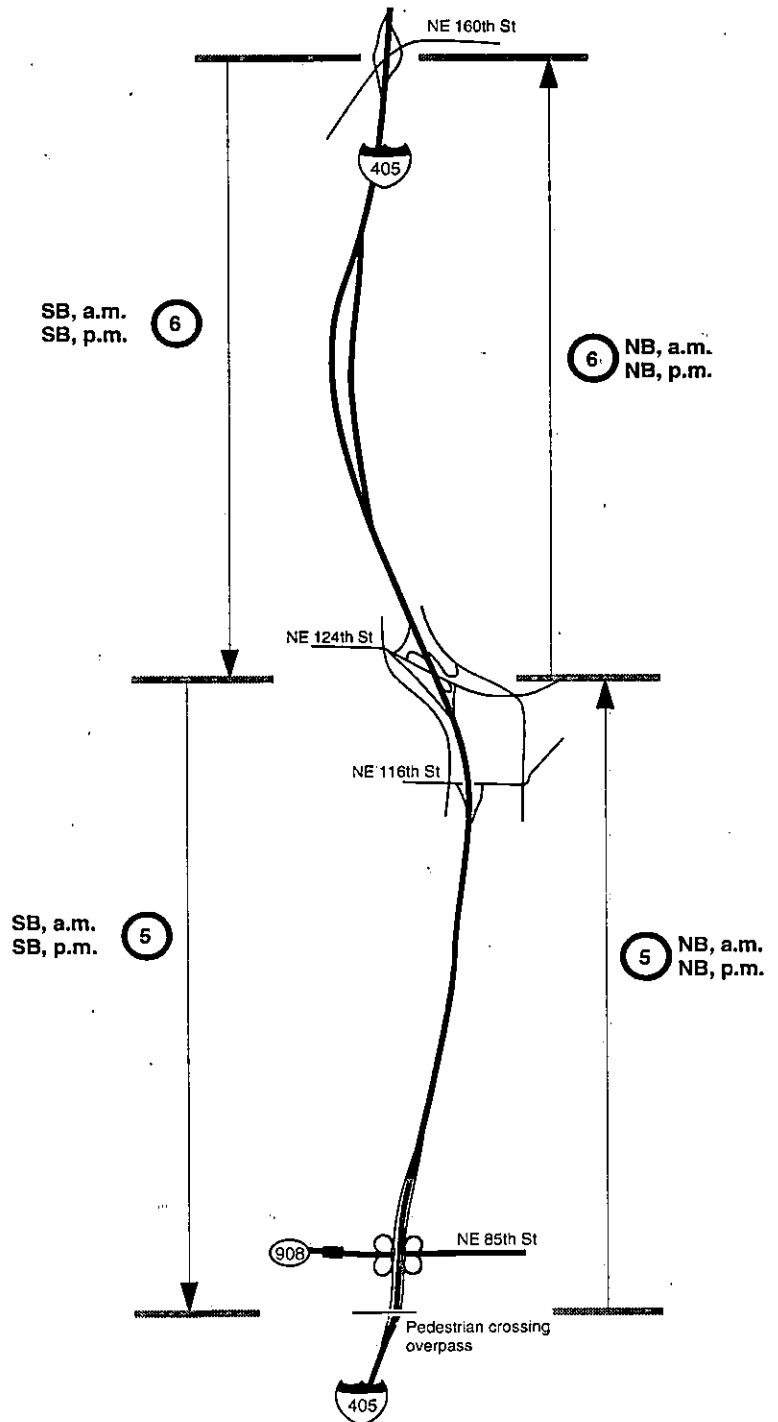
Travel Time Sections
I-405 North

○ Travel Time Site



Travel Time Sections I-405 North

○ Travel Time Site



NORTH I-405 CORRIDOR, A.M. SOUTHBOUND

1) SE 8th St. Underpass to I-90 Interchange Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	37	67	58	56	7	48	92.3%	32
Q1/96	28	61	57	55	6	51	94.9%	40
Q2/96	38	63	60	58	5	55	97.7%	31
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	51	69	60	59	4	54	100.0%	26
Q1/97	16	63	57	50	14	26	77.3%	28

2) NE 8th St. Overpass to SE 8th St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	24	73	58	57	8	48	95.7%	32
Q1/96	54	61	58	58	2	55	100.0%	35
Q2/96	46	64	60	59	3	56	100.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	45	63	58	58	4	56	100.0%	26
Q1/97	37	61	56	55	5	51	97.3%	28

3) SR 520 E-N Ramp (Fly-over) to NE 8th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	34	62	54	54	5	49	97.5%	32
Q1/96	47	68	56	56	4	52	100.0%	35
Q2/96	43	69	57	57	5	51	98.8%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	38	62	56	56	5	52	97.8%	26
Q1/97	48	59	54	53	3	50	100.0%	28

4) Pedestrian Overpass @ SR 908 (NE 85th St.) to SR 520 E-N Ramp (Fly-over)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	47	62	56	55	4	50	100.0%	33
Q1/96	44	67	57	56	5	49	97.1%	35
Q2/96	44	63	56	55	5	48	96.8%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	49	65	57	56	3	51	100.0%	26
Q1/97	44	62	53	52	5	45	90.2%	28

NORTH I-405 CORRIDOR, A.M. SOUTHBOUND
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5) NE 124th St. Overpass to Pedestrian Overpass @ SR 908 (NE 85th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	27	62	53	50	11	34	68.8%	33
Q1/96	31	60	51	51	8	43	79.5%	35
Q2/96	27	65	50	49	11	36	63.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	37	61	53	51	7	42	81.8%	26
Q1/97	18	60	41	43	9	34	29.2%	28

6) NE 160th St. Overpass (Juanita - Woodinville Way) to NE 124th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	44	68	59	59	5	51	97.0%	34
Q1/96	50	67	60	60	3	56	100.0%	35
Q2/96	53	65	61	60	3	56	100.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	52	65	59	59	3	54	100.0%	26
Q1/97	25	63	53	53	8	47	93.2%	28

NORTH I-405 CORRIDOR, P.M. SOUTHBOUND

1) SE 8th St. Underpass to I-90 Interchange Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	35	58	44	47	8	37	46.5%	20
Q1/96	20	63	47	44	10	31	52.6%	27
Q2/96	13	62	51	48	11	36	63.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	28	60	39	41	11	29	25.3%	12
Q1/97	15	62	39	41	15	23	41.3%	22

2) NE 8th St. Overpass to SE 8th St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	20	58	53	49	10	34	75.8%	20
Q1/96	9	62	54	45	15	22	65.4%	27
Q2/96	15	64	56	48	17	19	71.0%	32
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	16	59	39	36	14	19	33.8%	13
Q1/97	9	60	49	44	15	23	52.1%	24

3) SR 520 E-N Ramp (Fly-over) to NE 8th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	24	63	56	53	9	42	82.9%	20
Q1/96	40	64	54	52	6	41	85.4%	27
Q2/96	25	65	60	59	7	56	96.2%	33
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	36	57	51	49	7	38	73.9%	14
Q1/97	27	60	53	50	9	34	87.2%	24

4) Pedestrian Overpass @ SR 908 (NE 85th St.) to SR 520 E-N Ramp (Fly-over)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	63	59	58	3	56	100.0%	20
Q1/96	47	61	58	57	4	53	100.0%	27
Q2/96	52	65	61	61	3	57	100.0%	33
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	49	69	56	58	6	53	100.0%	14
Q1/97	44	60	56	55	5	46	91.2%	24

NORTH I-405 CORRIDOR, P.M. SOUTHBOUND

5) NE 124th St. Overpass to Pedestrian Overpass @ SR 908 (NE 85th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	51	60	59	58	3	55	100.0%	20
Q1/96	52	60	57	57	2	55	100.0%	27
Q2/96	55	65	61	61	2	59	100.0%	33
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	54	64	58	58	3	54	100.0%	14
Q1/97	32	60	58	54	8	42	88.9%	24

6) NE 160th St. Overpass (Juanita - Woodinville Way) to NE 124th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	54	65	61	61	3	57	100.0%	20
Q1/96	56	71	60	60	4	57	100.0%	27
Q2/96	59	70	63	64	3	61	100.0%	33
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	65	61	61	3	58	100.0%	14
Q1/97	51	68	60	60	3	57	100.0%	24

NORTH I-405 CORRIDOR, A.M. NORTHBOUND

1) I-90 Interchange Underpass to SE 8th St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	39	63	56	53	7	42	81.3%	33
Q1/96	36	65	54	53	7	46	91.5%	36
Q2/96	37	65	60	56	8	44	89.3%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	41	64	60	57	7	42	86.3%	29
Q1/97	45	67	54	55	6	49	99.7%	29

2) SE 8th St. Underpass to NE 8th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	49	67	56	56	4	52	100.0%	33
Q1/96	24	62	56	55	8	50	94.3%	36
Q2/96	50	63	57	58	3	55	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	29	63	58	57	6	54	97.2%	29
Q1/97	14	68	56	55	9	53	95.0%	29

3) NE 8th St. Overpass to SR 520 E-N Ramp (Fly-over)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	45	71	56	56	6	48	100.0%	35
Q1/96	18	60	56	55	7	52	96.5%	36
Q2/96	48	65	58	58	3	54	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	41	60	55	55	4	50	98.1%	29
Q1/97	44	68	55	54	5	46	93.6%	29

4) SR 520 E-N Ramp (Fly-over) to Pedestrian Overpass @ SR 908 (NE 85th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	25	69	60	59	8	55	95.6%	35
Q1/96	55	67	59	60	3	56	100.0%	36
Q2/96	57	65	61	61	2	59	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	62	60	60	2	59	100.0%	29
Q1/97	54	64	57	59	4	54	100.0%	29

NORTH I-405 CORRIDOR, A.M. NORTHBOUND**5) Pedestrian Overpass @ SR 908 (NE 85th St.) to NE 124th St. Overpass**

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	21	74	61	59	10	56	94.7%	35
Q1/96	56	63	60	60	2	57	100.0%	36
Q2/96	55	72	62	62	2	60	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	54	64	59	59	3	55	100.0%	29
Q1/97	50	63	56	58	3	55	100.0%	29

6) NE 124th St. Overpass to NE 160th St. Overpass (Juanita - Woodinville Way)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	27	68	61	58	9	55	92.5%	35
Q1/96	54	64	59	59	3	55	100.0%	31
Q2/96	55	65	62	62	2	59	100.0%	34
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	43	67	60	60	4	57	99.4%	29
Q1/97	42	63	57	57	4	53	98.2%	29

NORTH I-405 CORRIDOR, P.M. NORTHBOUND

1) I-90 Interchange Underpass to SE 8th St. Underpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	44	63	58	57	5	49	98.5%	23
Q1/96	28	60	57	55	8	53	93.7%	28
Q2/96	53	64	60	60	3	56	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	43	60	55	55	5	49	97.2%	15
Q1/97	42	67	58	57	5	53	98.1%	25

2) SE 8th St. Underpass to NE 8th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	9	61	56	51	13	33	81.2%	23
Q1/96	21	64	55	50	11	33	74.2%	29
Q2/96	38	66	59	58	5	53	97.5%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	34	56	48	47	8	36	72.3%	15
Q1/97	29	60	55	54	6	49	96.4%	25

3) NE 8th St. Overpass to SR 520 E-N Ramp (Fly-over)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	18	59	51	50	8	43	86.4%	23
Q1/96	28	59	51	48	8	38	71.5%	29
Q2/96	50	60	57	56	3	51	100.0%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	12	56	44	43	11	30	45.9%	15
Q1/97	41	59	52	51	5	44	87.3%	24

4) SR 520 E-N Ramp (Fly-over) to Pedestrian Overpass @ SR 908 (NE 85th St.)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	18	66	56	53	12	34	83.7%	23
Q1/96	38	63	57	55	7	43	88.1%	29
Q2/96	21	65	59	56	9	43	86.8%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	18	62	51	46	14	22	65.8%	16
Q1/97	32	62	59	56	7	55	93.3%	24

NORTH I-405 CORRIDOR, P.M. NORTHBOUND

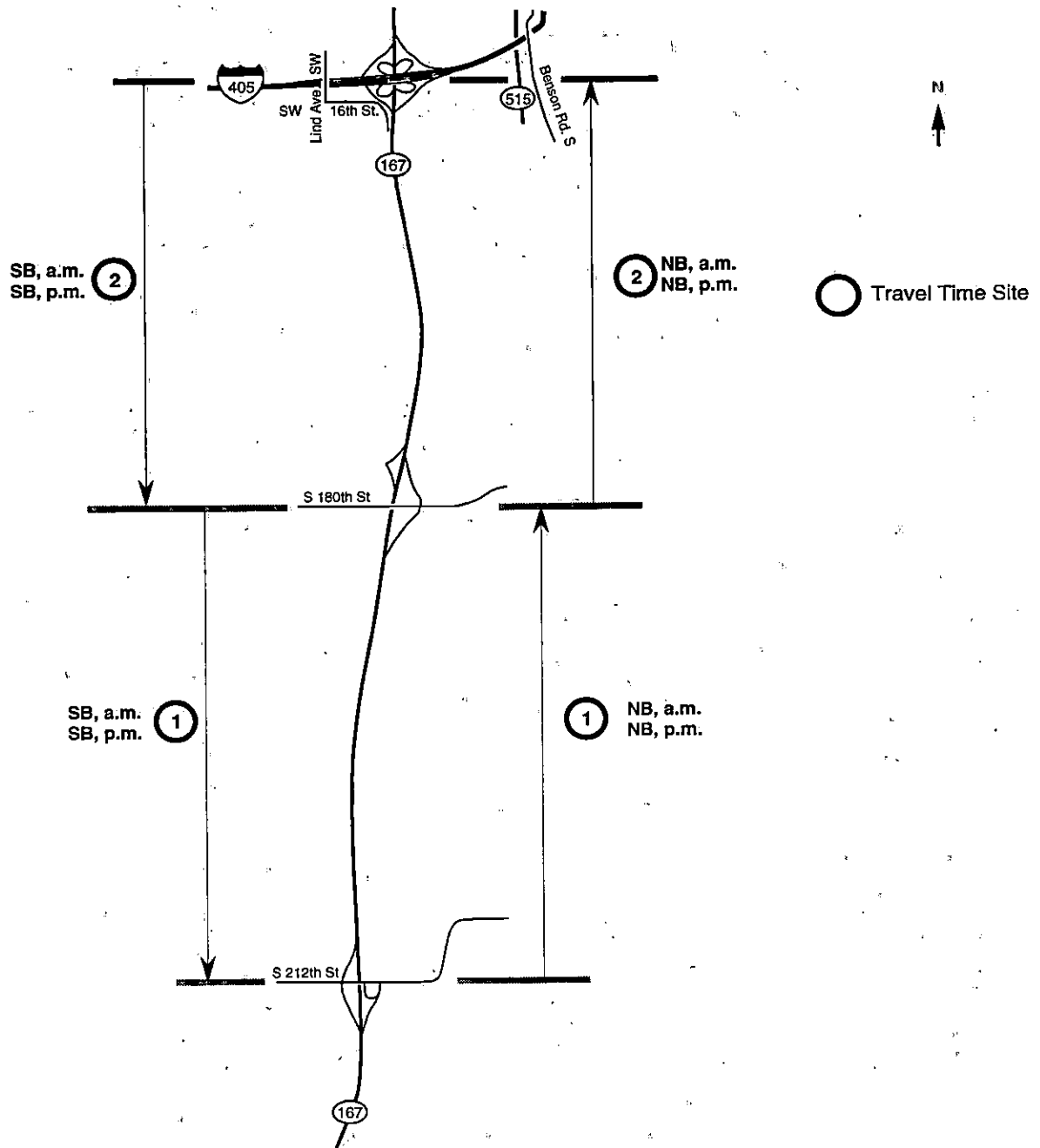
5) Pedestrian Overpass @ SR 908 (NE 85th St.) to NE 124th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	29	64	56	50	12	33	69.7%	23
Q1/96	26	62	54	49	10	34	64.3%	29
Q2/96	23	66	54	51	10	37	71.6%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	11	63	45	43	15	25	53.5%	16
Q1/97	35	65	59	56	7	45	90.2%	24

6) NE 124th St. Overpass to NE 160th St. Overpass (Juanita - Woodinville Way)

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	23	60	50	45	13	25	56.2%	23
Q1/96	24	60	53	49	10	33	71.7%	28
Q2/96	22	63	56	51	12	31	70.6%	35
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	19	62	44	44	14	23	45.3%	16
Q1/97	24	64	55	50	12	32	65.2%	24

Travel Time Sections SR-167



SR-167 CORRIDOR, A.M. SOUTHBOUND**1) S 180th St. Overpass to S 212th St. Overpass**

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	71	61	61	3	58	100.0%	38
Q1/96	52	67	57	58	4	53	100.0%	40
Q2/96	61	66	62	63	1	61	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	47	67	62	60	4	55	100.0%	22
Q1/97	56	62	59	59	2	57	100.0%	18

2) I-405 Interchange to S 180th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	44	71	57	56	4	53	97.3%	38
Q1/96	50	60	56	56	2	53	100.0%	40
Q2/96	55	64	59	59	2	56	100.0%	28
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	47	65	55	56	4	53	100.0%	22
Q1/97	52	68	55	56	3	53	100.0%	18

SR-167 CORRIDOR, P.M. SOUTHBOUND

1) S 180th St. Overpass to S 212th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	37	64	61	59	5	54	98.2%	30
Q1/96	44	62	57	57	3	53	99.7%	35
Q2/96	23	66	61	57	11	37	87.8%	39
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	35	61	54	53	7	41	86.4%	28
Q1/97	45	63	61	58	6	49	100.0%	25

2) I-405 Interchange to S 180th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	53	68	57	57	3	55	100.0%	30
Q1/96	36	61	53	51	6	43	83.9%	35
Q2/96	42	68	57	57	5	51	97.4%	39
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	50	64	54	54	3	50	100.0%	28
Q1/97	46	59	56	55	3	53	100.0%	25

SR-167 CORRIDOR, A.M. NORTHBOUND

1) S 212th St. Overpass to S 180th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	75	60	61	4	59	100.0%	38
Q1/96	51	64	58	59	3	56	100.0%	40
Q2/96	61	66	62	63	2	62	100.0%	29
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	53	66	62	61	3	57	100.0%	19
Q1/97	57	61	59	59	1	57	100.0%	18

2) S 180th St. Overpass to I-405 Interchange

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	13	61	50	48	12	30	74.4%	38
Q1/96	33	63	57	56	6	51	94.4%	40
Q2/96	28	68	62	60	7	57	96.7%	29
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	38	65	61	56	8	45	90.2%	19
Q1/97	43	61	56	56	4	53	99.0%	18

SR-167 CORRIDOR, P.M. NORTHBOUND

1) S 212th St. Overpass to S 180th St. Overpass

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	57	66	62	61	2	58	100.0%	31
Q1/96	55	64	58	58	2	56	100.0%	35
Q2/96	58	65	62	62	2	60	100.0%	38
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	55	62	60	60	2	59	100.0%	28
Q1/97	57	68	62	61	2	58	100.0%	25

2) S 180th St. Overpass to I-405 Interchange

Quarter	Min.	Max	Median	AVG.	SD	Speed (mph) >90%	Percent >45 mph	Number of Data Points
Q4/95	52	67	61	61	3	58	100.0%	31
Q1/96	18	66	57	54	10	51	91.8%	35
Q2/96	43	64	59	58	5	48	98.2%	38
Q3/96	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Q4/96	34	66	57	54	8	45	89.9%	28
Q1/97	34	63	60	56	8	44	89.7%	25

Appendix C

Differences Between HOV and GP Lane Speeds by Corridor Segment

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-5 North (Southbound AM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	49	50	50	56	56
SOV Average	51	48	48	53	55
Speed Differential	-2	2	2	3	1

I-5 North (Northbound AM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	59	60	60	63	58
SOV Average	57	56	57	58	55
Speed Differential	2	4	3	6	3

I-5 North (Southbound PM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	59	60	61	63	59
SOV Average	55	59	59	61	55
Speed Differential	4	1	2	2	3

I-5 North (Northbound PM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	59	59	60	63	57
SOV Average	51	49	54	60	57
Speed Differential	8	11	7	3	-1

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-5 Downtown (Southbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average			61	54	57	53
SOV Average			57	55	54	57
Speed Differential			4	-1	4	-4

I-5 Downtown (Northbound AM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	58	55	55	58	39
SOV Average	56	55	44	50	34
Speed Differential	2	0	11	9	5

I-5 Downtown (Southbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average			59	54	58	53
SOV Average			57	46	45	42
Speed Differential			3	9	13	11

I-5 Downtown (Northbound PM) 1st Quarter 1997

	1	2	3	4	5
HOV Average	61	61	56	63	41
SOV Average	60	58	51	54	41
Speed Differential	1	3	5	9	0

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-5 South (Southbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average			61	59	62	61
SOV Average			55	56	57	59
Speed Differential			6	3	5	1

I-5 South (Northbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	58	57	57	56	58	57
SOV Average	52	54	48	55	55	49
Speed Differential	6	3	9	1	4	9

I-5 South (Southbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average			48	47	52	49
SOV Average			35	31	46	31
Speed Differential			12	16	6	19

I-5 South (Northbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	63	62	61	61	62	61
SOV Average	59	60	57	60	60	60
Speed Differential	4	2	4	1	3	1

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

SR 520 (Westbound AM) 1st Quarter 1997

	1	2	3
HOV Average	33	48	47
SOV Average	35	31	42
Speed Differential	-2	17	5

SR 520 (Eastbound AM) 1st Quarter 1997

	1	2	3
HOV Average	0	0	0
SOV Average	53	54	53
Speed Differential	No Data	No Data	No Data

SR 520 (Westbound PM) 1st Quarter 1997

	1	2	3
HOV Average	No Data	No Data	No Data
SOV Average	No Data	No Data	No Data
Speed Differential	No Data	No Data	No Data

SR 520 (Eastbound PM) 1st Quarter 1997

	1	2	3
HOV Average	No Data	No Data	No Data
SOV Average	48	51	50
Speed Differential	No Data	No Data	No Data

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-90 (Westbound AM) 1st Quarter 1997

	1	2	3	4	5	6	7
HOV Average	52	58	55	55	56	56	55
SOV Average	50	59	52	55	No Data	No Data	No Data
Speed Differential	3	-1	3	0	No Data	No Data	No Data

I-90 (Eastbound AM) 1st Quarter 1997

	1	2	3	4	5	6	7
HOV Average	No Data	No Data	No Data	No Data	56	55	57
SOV Average	53	53	53	53	55	56	55
Speed Differential	No Data	No Data	No Data	No Data	1	-1	1

I-90 (Westbound PM) 1st Quarter 1997

	1	2	3	4	5	6	7
HOV Average	No Data	No Data	No Data	No Data	No Data	No Data	No Data
SOV Average	46	48	44	46	56	56	56
Speed Differential	No Data	No Data	No Data	No Data	No Data	No Data	No Data

I-90 (Eastbound PM) 1st Quarter 1997

	1	2	3	4	5	6	7
HOV Average	55	61	59	59	No Data	No Data	No Data
SOV Average	51	65	62	62	No Data	57	58
Speed Differential	5	-5	-3	-3	No Data	No Data	No Data

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-405 South (Southbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	56	57	53	56	55	56
SOV Average	48	54	35	38	42	39
Speed Differential	9	2	19	17	13	17

I-405 South (Northbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	57	56	55	45	49	51
SOV Average	55	43	20	14	22	30
Speed Differential	2	13	35	31	27	21

I-405 South (Southbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	51	57	54	57	51	55
SOV Average	35	55	42	38	40	40
Speed Differential	17	2	12	19	11	15

I-405 South (Northbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	54	58	58	56	56	57
SOV Average	38	57	56	46	49	54
Speed Differential	16	2	2	10	6	3

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

I-405 North (Southbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	50	55	53	52	43	53
SOV Average	60	57	53	51	40	45
Speed Differential	-10	-1	0	1	2	8

I-405 North (Northbound AM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	55	55	54	59	58	57
SOV Average	59	59	61	61	65	60
Speed Differential	-3	-5	-7	-3	-7	-3

I-405 North (Southbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	41	44	50	55	54	60
SOV Average	33	36	46	54	58	58
Speed Differential	8	8	4	1	-3	2

I-405 North (Northbound PM) 1st Quarter 1997

	1	2	3	4	5	6
HOV Average	57	54	51	56	56	50
SOV Average	56	49	51	49	33	19
Speed Differential	1	5	0	7	23	31

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.

Differences in Average Speed* Between HOV and GP Lanes by Corridor Segment

SR 167 (Southbound AM) 1st Quarter 1997

	1	2
HOV Average	59	56
SOV Average	57	52
Speed Differential	2	4

SR 167 (Northbound AM) 1st Quarter 1997

	1	2
HOV Average	59	56
SOV Average	55	48
Speed Differential	4	8

SR 167 (Southbound PM) 1st Quarter 1997

	1	2
HOV Average	58	55
SOV Average	55	49
Speed Differential	3	6

SR 167 (Northbound PM) 1st Quarter 1997

	1	2
HOV Average	61	56
SOV Average	59	59
Speed Differential	2	-3

* Speeds are given in MPH and should be considered only as spot checks of the HOV system. Due to the limited number of data points collected for each lane segment, the speeds shown can not be considered statistically significant. See Appendix B for segment descriptions.