

*Alaska Department of Transportation  
and Public Facilities*



*Southeast Region  
2006 Traffic and Safety Report*

*Prepared February, 2008*

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*and*

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*2/27/08*

## **Introduction**

The Traffic and Safety Section conducts studies of traffic characteristics and investigates the operation and management of roadway facilities in order to provide for the safe, convenient and efficient movement of people and goods. These studies help to determine ways to meet the transportation needs of Southeast Alaska Communities.

Traffic and safety data was collected and analyzed for those roadways that provide a key community link and had significant amounts of vehicular volume. The State of Alaska maintains the majority of these roads and highways. Although this report is for 2006, data from other years is included where appropriate. Traffic and safety information is provided in four sections:

### **I. SAFETY**

- A. Intersection Crash Rate Ranking
- B. Rural Highway Crash Rate Ranking

### **II. QUALITY OF OPERATION**

- A. Quality of Operation at Signalized Intersections
- B. Quality of Operation at Unsignalized Intersections
- C. Quality of Operation at Roundabouts

### **III. VEHICLE CLASSIFICATION**

### **IV. TRAFFIC VOLUME**

- A. Historical Population Growth Rates
- B. Permanent Traffic Recorder Data
- C. Annual Average Daily Traffic Maps

## I. SAFETY SECTION

### A. Intersection Crash Rate Ranking

The intersection crash rate ranking was derived from Highway Analysis System (HAS), the State of Alaska's computerized traffic crash database. This report covers crashes that occurred during a five-year period from January 1<sup>st</sup>, 2002 – December 31<sup>st</sup>, 2006. All crashes within 0.05 miles of the center of an intersection were counted as intersection crashes. Because there are over a thousand intersections in the Southeast Region, this report only analyzes intersections with ten or more crashes in a five year period or five or more crashes if one was a fatal crash. *Note: The Sawmill Creek Road – Baranof intersection was also included because the intersection experienced four crashes, including a fatal crash and a major injury crash.*

When highway improvements are being considered on the basis of crash history, it is prudent to verify and supplement computer generated data, such as the tables contained in this section, with copies of the actual crash reports.

In addition, two types of crash rates were computed, weighted and unweighted. Weighted rates are calculated using crash severity. The weighted rates are used to identify locations with more serious crashes. However, these locations are more likely to change from one year to the next because they can be heavily influenced by random severe crashes, especially on low volume roads typical of this region. Unweighted rates fluctuate less and provide a better indication of crash patterns.

To compute weighted rates, crash weights are taken from the statewide Highway Safety Improvement Program (HSIP). The following weights were assigned to each crash type:

Property damage only (PDO):	<b>1</b>
Minor (non-disabling) injury:	<b>10</b>
Major (disabling) injury:	<b>50</b>
Fatality:	<b>100</b>

Crash rates are computed by crashes (weighted or unweighted) per million vehicles entering an intersection. The formulas used to compute the intersection crash rates are as follows:

Unweighted rate:  $\frac{(\text{Total crashes in five years})}{[(\text{ADT Leg 1} + \text{ADT Leg 2} \dots \text{ADT Leg 4}) \times \text{five years}]} / \text{MV}$

Weighted rate:  $\frac{(\text{Weighted crash number for five years})}{[(\text{ADT Leg 1} + \text{ADT Leg 2} \dots \text{ADT Leg 4}) \times \text{five years}]} / \text{MV}$

Where:

ADT = average daily traffic

MV = million vehicles

Weighted crash number = [(the number of PDO crashes)x**1**]+[(the number of minor crashes)x**10**]+[(the number of major crashes)x**50**]+[(the number of fatal crashes)x**100**]

The basis for determining the crash rate is as follows. Individual ADT's from each leg (either three or four legs) of that intersection is totaled and then divided by two. This accounts for counting each vehicles twice: once when entering the intersection and again when leaving. The entering ADT is then multiplied by one year (365 days) times the reporting period (five years). Crashes are rare events and the calculated crash rate is usually a very small fraction. Therefore, for ease in writing, the rate is multiplied by one million and expressed as crashes per million vehicles.

Unreported crashes are the final factor in crash rate analysis. Policing agencies usually only investigate injury crashes or property damage crashes above a certain dollar amount. Many minor "fender bender" crashes go unreported. Also, many drivers do not want agencies to discover that a crash has occurred for fear that they will lose their license or have their insurance rates increased. Furthermore, when the reportable property damage amount is raised, the apparent effect is a reduction in traffic crashes rather than a change in reporting procedures. Therefore, one should be cautious about the differences between crash rates for different years.

Five tables follow; each ranked by different criteria. **Table 1** ranks the crashes by total number of crashes without regard to traffic volumes. **Tables 2 and 3** rank intersections by an unweighted and a weighted rate. **Tables 4 and 5** are sorted by city, then ranked by an unweighted and a weighted rate.

## **Table 1: Southeast Region Intersection Crashes**

### **Ranked by 5-Year Total Number of Crashes (2002-2006)**

(not including intersections with fewer than 10 crashes or 1 fatality in 5 years)

Rank	City	Major Street (CDS #)	Intersection	Vehicle Crashes				
				PDO	Minor Injuries	Major Injuries	Fatality	Total
1	Juneau	296000	Egan - Salmon Creek	33	30	1	0	64
2	Juneau	296000	Egan - McNugget	34	27	0	0	61
3	Juneau	296000	Egan - Vanderbilt	31	27	1	0	59
4	Juneau	296000	Egan - Loop	32	21	1	0	54
5	Juneau	296000	Egan - Yandukin	23	18	2	0	43
6	Juneau	296400	Loop - Atlin	22	19	1	0	42
7	Juneau	296000	Egan - 10th	27	12	0	0	39
8	Juneau	296000	Egan - Sunny Point	17	17	2	0	36
9	Juneau	296400	Loop - Stephen Richards	11	12	3	2	28
10	Juneau	296000	Egan - Highland	17	10	0	0	27
11	Juneau	296331	Glacier - Old Dairy Rd - Trout	17	8	1	0	26
12	Juneau	296500	Riverside - Vintage	17	4	1	0	22
13	Juneau	296000	Egan - Riverside	16	6	0	0	22
14	Ketchikan	291400	S Tongass - Jefferson	13	4	2	0	19
15	Sitka	295400	Halibut Pt Rd - Lake - Sawmill Cr Rd	16	2	0	0	18
16	Juneau	296331	Glacier - Shell Simmons	11	6	0	0	17
17	Juneau	296331	Glacier - Jordan	8	7	1	0	16
18	Juneau	296000	Egan - Willoughby	6	9	1	0	16
19	Sitka	295505	Lake - Lincoln	13	2	0	0	15
20	Ketchikan	291500	N Tongass - Heckman	9	6	0	0	15
21	Ketchikan	291400	S Tongass - Washington	11	3	1	0	15
22	Juneau	296400	Loop - Mendenhall Blvd - Valley	7	6	1	0	14
23	Juneau	296500	Riverside - Stephen Richards	7	6	1	0	14
24	Juneau	296400	Loop - Nancy	6	8	0	0	14
25	Ketchikan	291400	S Tongass - Grant	9	3	2	0	14
26	Juneau	296000	Egan - Glacier North	9	2	1	0	12
27	Juneau	296000	Egan - Fritz Cove Rd	7	2	2	0	11
28	Juneau	296000	Egan - Industrial	4	6	1	0	11
29	Juneau	296000	Egan - Whittier	8	3	0	0	11
30	Juneau	296000	Egan - Main	8	2	1	0	11
31	Juneau	296000	Egan - 12th	6	5	0	0	11
32	Juneau	296401	Back Loop - Montana Cr Rd	4	4	1	1	10
33	Sitka	295500	Sawmill Cr Rd - Jarvis	9	1	0	0	10
34	Juneau	296229	Glacier - Sunny Point	3	7	0	0	10
35	Juneau	296229	Glacier - Anka	6	2	1	1	10
36	Juneau	296110	Douglas Hwy - N Douglas	8	2	0	0	10
37	Juneau	296110	Douglas Hwy - Cordova	2	3	0	1	6
38	Juneau	296229	Glacier - Walmart	3	2	0	1	6
39	Ketchikan	291400	S Tongass - Madison	4	1	0	1	6
40	Sitka	295500	Sawmill Cr Rd - Baranof	1	1	1	1	4

## Table 2: Southeast Region Intersection Crash Rate Ranking

### Ranked by 5-Year Weighted Crash Rate (2002-2006)

(not including intersections with fewer than 10 crashes or at least 1 fatality in 5 years)

Rank	City	Major Street (CDS #)	Intersection	Vehicle Crashes					Average No. of Crashes	AADT	5 Yr Unwtd Crash Rate	5 Yr Wtd Crash Rate
				PDO	Minor Injuries	Major Injuries	Fatality	Total				
1	Juneau	296401	Back Loop - Montana Cr Rd	4	4	1	1	10	2	4459	1.23	23.84
2	Juneau	296400	Loop - Stephen Richards	11	12	3	2	28	5.6	16563	0.93	15.91
3	Sitka	295500	Sawmill Cr Rd - Baranof	1	1	1	1	4	0.8	8896	0.25	9.92
4	Juneau	296229	Glacier - Anka	6	2	1	1	10	2	12489	0.44	7.72
5	Juneau	296000	Egan - Salmon Creek	33	30	1	0	64	12.8	27344	1.28	7.67
6	Juneau	296000	Egan - Vanderbilt	31	27	1	0	59	11.8	26631	1.21	7.22
7	Juneau	296000	Egan - Sunny Point	17	17	2	0	36	7.2	23058	0.86	6.82
8	Juneau	296110	Douglas Hwy - Cordova	2	3	0	1	6	1.2	11094	0.30	6.52
9	Juneau	296400	Loop - Mendenhall Blvd - Valley	7	6	1	0	14	2.8	9921	0.77	6.46
10	Juneau	296500	Riverside - Stephen Richards	7	6	1	0	14	2.8	10206	0.75	6.28
11	Juneau	296000	Egan - Fritz Cove Rd	7	2	2	0	11	2.2	11373	0.53	6.12
12	Juneau	296000	Egan - Willoughby	6	9	1	0	16	3.2	14603	0.60	5.48
13	Juneau	296000	Egan - Yandukin	23	18	2	0	43	8.6	30895	0.76	5.37
14	Juneau	296400	Loop - Atlin	22	19	1	0	42	8.4	27151	0.85	5.29
15	Juneau	296331	Glacier - Jordan	8	7	1	0	16	3.2	13449	0.65	5.22
16	Juneau	296331	Glacier - Old Dairy Rd - Trout	17	8	1	0	26	5.2	15815	0.90	5.09
17	Juneau	296000	Egan - McNugget	34	27	0	0	61	12.2	33224	1.01	5.01
18	Juneau	296229	Glacier - Walmart	3	2	0	1	6	1.2	13916	0.24	4.84
19	Juneau	296000	Egan - Industrial	4	6	1	0	11	2.2	13500	0.45	4.63
20	Juneau	296000	Egan - Loop	32	21	1	0	54	10.8	35937	0.82	4.45
21	Ketchikan	291400	S Tongass - Grant	9	3	2	0	14	2.8	18533	0.41	4.11
22	Ketchikan	291400	S Tongass - Jefferson	13	4	2	0	19	3.8	21762	0.48	3.85
23	Ketchikan	291400	S Tongass - Madison	4	1	0	1	6	1.2	18252	0.18	3.42
24	Juneau	296229	Glacier - Sunny Point	3	7	0	0	10	2	12145	0.45	3.29
25	Juneau	296500	Riverside - Vintage	17	4	1	0	22	4.4	18933	0.64	3.10
26	Juneau	296000	Egan - Highland	17	10	0	0	27	5.4	21566	0.69	2.97
27	Juneau	296331	Glacier - Shell Simmons	11	6	0	0	17	3.4	13230	0.70	2.94
28	Juneau	296000	Egan - 10th	27	12	0	0	39	7.8	27442	0.78	2.94
29	Ketchikan	291500	N Tongass - Heckman	9	6	0	0	15	3	13209	0.62	2.86
30	Juneau	296000	Egan - Glacier North	9	2	1	0	12	2.4	15645	0.42	2.77
31	Juneau	296000	Egan - Main	8	2	1	0	11	2.2	15818	0.38	2.70
32	Juneau	296400	Loop - Nancy	6	8	0	0	14	2.8	17761	0.43	2.65
33	Ketchikan	291400	S Tongass - Washington	11	3	1	0	15	3	19716	0.42	2.53
34	Juneau	296000	Egan - Riverside	16	6	0	0	22	4.4	20911	0.58	1.99
35	Sitka	295505	Lake - Lincoln	13	2	0	0	15	3	11671	0.70	1.55
36	Juneau	296000	Egan - 12th	6	5	0	0	11	2.2	20952	0.29	1.46
37	Juneau	296000	Egan - Whittier	8	3	0	0	11	2.2	15333	0.39	1.36
38	Sitka	295500	Sawmill Cr Rd - Jarvis	9	1	0	0	10	2	8001	0.68	1.30
39	Sitka	295400	Halibut Pt Rd - Lake - Sawmill Cr Rd	16	2	0	0	18	3.6	15300	0.64	1.29
40	Juneau	296110	Douglas Hwy - N Douglas	8	2	0	0	10	2	14697	0.37	1.04

### **Table 3: Southeast Region Intersection Crash Rate Ranking**

**Ranked by 5-Year Unweighted Crash Rate (2002-2006)**

(not including intersections with fewer than 10 crashes or at least 1 fatality in 5 years)

Rank	City	Major Street (CDS #)	Intersection	Vehicle Crashes					Average No. of Crashes	AADT	5 Yr Unwtd Crash Rate	5 Yr Wtd Crash Rate
				PDO	Minor Injuries	Major Injuries	Fatality	Total				
1	Juneau	296000	Egan - Salmon Creek	33	30	1	0	64	12.8	27344	1.28	7.67
2	Juneau	296401	Back Loop - Montana Cr Rd	4	4	1	1	10	2	4459	1.23	23.84
3	Juneau	296000	Egan - Vanderbilt	31	27	1	0	59	11.8	26631	1.21	7.22
4	Juneau	296000	Egan - McNugget	34	27	0	0	61	12.2	33224	1.01	5.01
5	Juneau	296400	Loop - Stephen Richards	11	12	3	2	28	5.6	16563	0.93	15.91
6	Juneau	296331	Glacier - Old Dairy Rd - Trout	17	8	1	0	26	5.2	15815	0.90	5.09
7	Juneau	296000	Egan - Sunny Point	17	17	2	0	36	7.2	23058	0.86	6.82
8	Juneau	296400	Loop - Atlin	22	19	1	0	42	8.4	27151	0.85	5.29
9	Juneau	296000	Egan - Loop	32	21	1	0	54	10.8	35937	0.82	4.45
10	Juneau	296000	Egan - 10th	27	12	0	0	39	7.8	27442	0.78	2.94
11	Juneau	296400	Loop - Mendenhall Blvd - Valley	7	6	1	0	14	2.8	9921	0.77	6.46
12	Juneau	296000	Egan - Yandukin	23	18	2	0	43	8.6	30895	0.76	5.37
13	Juneau	296500	Riverside - Stephen Richards	7	6	1	0	14	2.8	10206	0.75	6.28
14	Sitka	295505	Lake - Lincoln	13	2	0	0	15	3	11671	0.70	1.55
15	Juneau	296331	Glacier - Shell Simmons	11	6	0	0	17	3.4	13230	0.70	2.94
16	Juneau	296000	Egan - Highland	17	10	0	0	27	5.4	21566	0.69	2.97
17	Sitka	295500	Sawmill Cr Rd - Jarvis	9	1	0	0	10	2	8001	0.68	1.30
18	Juneau	296331	Glacier - Jordan	8	7	1	0	16	3.2	13449	0.65	5.22
19	Sitka	295400	Halibut Pt Rd - Lake - Sawmill Cr Rd	16	2	0	0	18	3.6	15300	0.64	1.29
20	Juneau	296500	Riverside - Vintage	17	4	1	0	22	4.4	18933	0.64	3.10
21	Ketchikan	291500	N Tongass - Heckman	9	6	0	0	15	3	13209	0.62	2.86
22	Juneau	296000	Egan - Willoughby	6	9	1	0	16	3.2	14603	0.60	5.48
23	Juneau	296000	Egan - Riverside	16	6	0	0	22	4.4	20911	0.58	1.99
24	Juneau	296000	Egan - Fritz Cove Rd	7	2	2	0	11	2.2	11373	0.53	6.12
25	Ketchikan	291400	S Tongass - Jefferson	13	4	2	0	19	3.8	21762	0.48	3.85
26	Juneau	296229	Glacier - Sunny Point	3	7	0	0	10	2	12145	0.45	3.29
27	Juneau	296000	Egan - Industrial	4	6	1	0	11	2.2	13500	0.45	4.63
28	Juneau	296229	Glacier - Anka	6	2	1	1	10	2	12489	0.44	7.72
29	Juneau	296400	Loop - Nancy	6	8	0	0	14	2.8	17761	0.43	2.65
30	Juneau	296000	Egan - Glacier North	9	2	1	0	12	2.4	15645	0.42	2.77
31	Ketchikan	291400	S Tongass - Washington	11	3	1	0	15	3	19716	0.42	2.53
32	Ketchikan	291400	S Tongass - Grant	9	3	2	0	14	2.8	18533	0.41	4.11
33	Juneau	296000	Egan - Whittier	8	3	0	0	11	2.2	15333	0.39	1.36
34	Juneau	296000	Egan - Main	8	2	1	0	11	2.2	15818	0.38	2.70
35	Juneau	296110	Douglas Hwy - N Douglas	8	2	0	0	10	2	14697	0.37	1.04
36	Juneau	296110	Douglas Hwy - Cordova	2	3	0	1	6	1.2	11094	0.30	6.52
37	Juneau	296000	Egan - 12th	6	5	0	0	11	2.2	20952	0.29	1.46
38	Sitka	295500	Sawmill Cr Rd - Baranof	1	1	1	1	4	0.8	8896	0.25	9.92
39	Juneau	296229	Glacier - Walmart	3	2	0	1	6	1.2	13916	0.24	4.84
40	Ketchikan	291400	S Tongass - Madison	4	1	0	1	6	1.2	18252	0.18	3.42

## Table 4: Southeast Region Intersection Crash Rate Ranking

**Sorted by City: Ranked by 5-Year Weighted Crash Rate (2002-2006)**

(not including intersections with fewer than 10 crashes or at least 1 fatality in 5 years)

Rank	City	Major Street (CDS #)	Intersection	Vehicle Crashes					Average No. of Crashes	AADT	5 Yr Unwtd Crash Rate	5 Yr Wtd Crash Rate
				PDO	Minor Injuries	Major Injuries	Fatality	Total				
1	Juneau	296401	Back Loop - Montana Cr Rd	4	4	1	1	10	2	4459	1.23	23.84
2	Juneau	296400	Loop - Stephen Richards	11	12	3	2	28	5.6	16563	0.93	15.91
3	Juneau	296229	Glacier - Anka	6	2	1	1	10	2	12489	0.44	7.72
4	Juneau	296000	Egan - Salmon Creek	33	30	1	0	64	12.8	27344	1.28	7.67
5	Juneau	296000	Egan - Vanderbilt	31	27	1	0	59	11.8	26631	1.21	7.22
6	Juneau	296000	Egan - Sunny Point	17	17	2	0	36	7.2	23058	0.86	6.82
7	Juneau	296110	Douglas Hwy - Cordova	2	3	0	1	6	1.2	11094	0.30	6.52
8	Juneau	296400	Loop - Mendenhall Blvd - Valley	7	6	1	0	14	2.8	9921	0.77	6.46
9	Juneau	296500	Riverside - Stephen Richards	7	6	1	0	14	2.8	10206	0.75	6.28
10	Juneau	296000	Egan - Fritz Cove Rd	7	2	2	0	11	2.2	11373	0.53	6.12
11	Juneau	296000	Egan - Willoughby	6	9	1	0	16	3.2	14603	0.60	5.48
12	Juneau	296000	Egan - Yandukin	23	18	2	0	43	8.6	30895	0.76	5.37
13	Juneau	296400	Loop - Atlin	22	19	1	0	42	8.4	27151	0.85	5.29
14	Juneau	296331	Glacier - Jordan	8	7	1	0	16	3.2	13449	0.65	5.22
15	Juneau	296331	Glacier - Old Dairy Rd - Trout	17	8	1	0	26	5.2	15815	0.90	5.09
16	Juneau	296000	Egan - McNugget	34	27	0	0	61	12.2	33224	1.01	5.01
17	Juneau	296229	Glacier - Walmart	3	2	0	1	6	1.2	13916	0.24	4.84
18	Juneau	296000	Egan - Industrial	4	6	1	0	11	2.2	13500	0.45	4.63
19	Juneau	296000	Egan - Loop	32	21	1	0	54	10.8	35937	0.82	4.45
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24	Juneau	296000	Egan - 10th	27	12	0	0	39	7.8	27442	0.78	2.94
25	Juneau	296000	Egan - Glacier North	9	2	1	0	12	2.4	15645	0.42	2.77
26	Juneau	296000	Egan - Main	8	2	1	0	11	2.2	15818	0.38	2.70
27	Juneau	296400	Loop - Nancy	6	8	0	0	14	2.8	17761	0.43	2.65
28	Juneau	296000	Egan - Riverside	16	6	0	0	22	4.4	20911	0.58	1.99
29	Juneau	296000	Egan - 12th	6	5	0	0	11	2.2	20952	0.29	1.46
30	Juneau	296000	Egan - Whittier	8	3	0	0	11	2.2	15333	0.39	1.36
31	Juneau	296110	Douglas Hwy - N Douglas	8	2	0	0	10	2	14697	0.37	1.04
1	Ketchikan	291400	S Tongass - Grant	9	3	2	0	14	2.8	18533	0.41	4.11
2	Ketchikan	291400	S Tongass - Jefferson	13	4	2	0	19	3.8	21762	0.48	3.85
3	Ketchikan	291400	S Tongass - Madison	4	1	0	1	6	1.2	18252	0.18	3.42
4	Ketchikan	291500	N Tongass - Heckman	9	6	0	0	15	3	13209	0.62	2.86
5	Ketchikan	291400	S Tongass - Washington	11	3	1	0	15	3	19716	0.42	2.53
1	Sitka	295500	Sawmill Cr Rd - Baranof	1	1	1	1	4	0.8	8896	0.25	9.92
2	Sitka	295505	Lake - Lincoln	13	2	0	0	15	3	11671	0.70	1.55
3	Sitka	295500	Sawmill Cr Rd - Jarvis	9	1	0	0	10	2	8001	0.68	1.30
4	Sitka	295400	Halibut Pt Rd - Lake - Sawmill Cr Rd	16	2	0	0	18	3.6	15300	0.64	1.29

## Table 5: Southeast Region Intersection Crash Rate Ranking

**Sorted by City: Ranked by 5-Year Unweighted Crash Rate (2002-2006)**

(not including intersections with fewer than 10 crashes or at least 1 fatality in 5 years)

Rank	City	Major Street (CDS #)	Intersection	Vehicle Crashes					Average No. of Crashes	AADT	5 Yr Unwtd Crash Rate	5 Yr Wtd Crash Rate
				PDO	Minor Injuries	Major Injuries	Fatality	Total				
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3	Juneau	296000	Egan - Vanderbilt	31	27	1	0	59	11.8	26631	1.21	7.22
4	Juneau	296000	Egan - McNugget	34	27	0	0	61	12.2	33224	1.01	5.01
5	Juneau	296400	Loop - Stephen Richards	11	12	3	2	28	5.6	16563	0.93	15.91
6	Juneau	296331	Glacier - Old Dairy Rd - Trout	17	8	1	0	26	5.2	15815	0.90	5.09
7	Juneau	296000	Egan - Sunny Point	17	17	2	0	36	7.2	23058	0.86	6.82
8	Juneau	296400	Loop - Atlin	22	19	1	0	42	8.4	27151	0.85	5.29
9	Juneau	296000	Egan - Loop	32	21	1	0	54	10.8	35937	0.82	4.45
10	Juneau	296000	Egan - 10th	27	12	0	0	39	7.8	27442	0.78	2.94
11	Juneau	296400	Loop - Mendenhall Blvd - Valley	7	6	1	0	14	2.8	9921	0.77	6.46
12	Juneau	296000	Egan - Yandukin	23	18	2	0	43	8.6	30895	0.76	5.37
13	Juneau	296500	Riverside - Stephen Richards	7	6	1	0	14	2.8	10206	0.75	6.28
14	Juneau	296331	Glacier - Shell Simmons	11	6	0	0	17	3.4	13230	0.70	2.94
15	Juneau	296000	Egan - Highland	17	10	0	0	27	5.4	21566	0.69	2.97
16	Juneau	296331	Glacier - Jordan	8	7	1	0	16	3.2	13449	0.65	5.22
17	Juneau	296500	Riverside - Vintage	17	4	1	0	22	4.4	18933	0.64	3.10
18	Juneau	296000	Egan - Willoughby	6	9	1	0	16	3.2	14603	0.60	5.48
19	Juneau	296000	Egan - Riverside	16	6	0	0	22	4.4	20911	0.58	1.99
20	Juneau	296000	Egan - Fritz Cove Rd	7	2	2	0	11	2.2	11373	0.53	6.12
21	Juneau	296229	Glacier - Sunny Point	3	7	0	0	10	2	12145	0.45	3.29
22	Juneau	296000	Egan - Industrial	4	6	1	0	11	2.2	13500	0.45	4.63
23	Juneau	296229	Glacier - Anka	6	2	1	1	10	2	12489	0.44	7.72
24	Juneau	296400	Loop - Nancy	6	8	0	0	14	2.8	17761	0.43	2.65
25	Juneau	296000	Egan - Glacier North	9	2	1	0	12	2.4	15645	0.42	2.77
26	Juneau	296000	Egan - Whittier	8	3	0	0	11	2.2	15333	0.39	1.36
27	Juneau	296000	Egan - Main	8	2	1	0	11	2.2	15818	0.38	2.70
28	Juneau	296110	Douglas Hwy - N Douglas	8	2	0	0	10	2	14697	0.37	1.04
29	Juneau	296110	Douglas Hwy - Cordova	2	3	0	1	6	1.2	11094	0.30	6.52
30	Juneau	296000	Egan - 12th	6	5	0	0	11	2.2	20952	0.29	1.46
31	Juneau	296229	Glacier - Walmart	3	2	0	1	6	1.2	13916	0.24	4.84
1	Ketchikan	291500	N Tongass - Heckman	9	6	0	0	15	3	13209	0.62	2.86
2	Ketchikan	291400	S Tongass - Jefferson	13	4	2	0	19	3.8	21762	0.48	3.85
3	Ketchikan	291400	S Tongass - Washington	11	3	1	0	15	3	19716	0.42	2.53
4	Ketchikan	291400	S Tongass - Grant	9	3	2	0	14	2.8	18533	0.41	4.11
5	Ketchikan	291400	S Tongass - Madison	4	1	0	1	6	1.2	18252	0.18	3.42
1	Sitka	295505	Lake - Lincoln	13	2	0	0	15	3	11671	0.70	1.55
2	Sitka	295500	Sawmill Cr Rd - Jarvis	9	1	0	0	10	2	8001	0.68	1.30
3	Sitka	295400	Halibut Pt Rd - Lake - Sawmill Cr Rd	16	2	0	0	18	3.6	15300	0.64	1.29
4	Sitka	295500	Sawmill Cr Rd - Baranof	1	1	1	1	4	0.8	8896	0.25	9.92

## B. Rural Highway Crash Rate Ranking

Rural highway crash rates reflect the frequency of non-intersection and non-urban highway crashes. Accordingly, only highway segments with few intersections were analyzed. Weighted and unweighted rates were computed for a five-year time period (January 1<sup>st</sup> 2002 through December 31<sup>st</sup> 2006).

Rates are given in crashes per million vehicle miles. Table 6 is ranked by an unweighted rate, and Table 7 is ranked by a weighted rate. The crash weighting factors are the same ones used to compute intersection crash rates.

The formulas used to compute the crash rates are as follows:

Unweighted rate: 
$$\frac{(\text{Total crashes in five years})}{[(\text{ADT} \times \text{miles in highway segment} \times \text{five years})]/\text{MVM}}$$

Weighted rate: 
$$\frac{(\text{Weighted crash number for five years})}{[(\text{ADT} \times \text{miles in highway segment} \times \text{five years})]/\text{MVM}}$$

Where:

ADT = average daily traffic

MVM = million vehicle miles

Weighted crash number = [(the number of PDO crashes)x1]+[(the number of minor crashes)x10]+[(the number of major crashes)x50]+[(the number of fatal crashes)x100]

The same words of caution described in the previous section, *Intersection Crash Rate Ranking*, are also appropriate here. Computer generated data such as these tables should be verified and supplemented by reviewing the actual police crash reports when analyzing specific locations. When researching crashes, one should be cautious about differences between crash rates for different years.

**Table 6: Rural Road Vehicle Crash Rate Ranking**  
**2002-2006**  
*(Ranked by Unweighted Vehicle Crash Rate)*

RANK	Community	Road Name and Segment Description	Total Crashes	Weighted Crash Number	Average ADT	Length in miles	Unweighted Crash Rate *	Weighted Crash Rate **
1	Ketchikan	Revellia Rd (Ward Lake Rd.) - All	21	142	313	9.68	3.80	25.72
2	Ketchikan	N. Tongass. Knudson Cv.- End	9	67	358	3.74	3.68	27.38
3	Prince of Wales	Hydaburg Rd: Jct. to Hydaburg	16	186	112	22.50	3.49	40.61
4	Juneau	Fish Creek Rd. -All	11	38	315	5.89	3.25	11.22
5	Juneau	N. Douglas Rd. Eaglecrest-End	10	55	370	6.07	2.44	13.41
6	Juneau	Glacier Hwy. Herb. R.. - Echo	13	224	269	13.04	2.03	35.00
7	Juneau	Glacier Hwy: Cohen - Herbert R.	11	105	562	6.18	1.73	16.56
8	Prince of Wales	Craig/Kwk/Hollis: Hollis-Hyd.Rd.	7	123	244	10.46	1.50	26.40
9	Juneau	Thane Rd. Rock Dump - End	12	137	1052	4.60	1.36	15.52
10	Skagway	Dyea Rd.: Observ. Pt. - Bridge	3	21	256	5.39	1.19	8.34
11	Haines	Hns Hwy: Airport-Klukwan	22	67	567	17.90	1.19	3.62
12	Prince of Wales	Craig - Port St. Nichols Rd	8	93	710	5.30	1.16	13.54
13	Wrangell	Zimovia Hwy: Mill - End	4	62	285	7.76	0.99	15.38
14	Haines	Hns Hwy: Klukwan-Mosquito	4	13	459	5.72	0.83	2.71
15	Prince of Wales	Craig/Kwk/Hollis: Hyd.Rd.-Kwk.	8	75	465	12.87	0.73	6.87
16	Yakutat	Airport Rd.	4	13	870	3.48	0.72	2.36
17	Haines	Lutak Rd: Ferry Term.- End	4	170	571	5.47	0.70	29.85
18	Haines	Mud Bay Rd. Small Tr- End	5	14	580	7.39	0.64	1.79
19	Prince of Wales	Big Salt Road:Airport - End	7	43	435	14.56	0.61	3.72
20	Prince of Wales	Thorne Bay Road: All	7	34	363	17.48	0.60	2.94
21	Prince of Wales	Craig/Kwk/Hollis: Kwk.- Craig	10	171	1889	5.72	0.51	8.67
22	Skagway	Klondike Hwy. Dyea Rd-Bord.	4	71	421	12.38	0.42	7.46
23	Prince of Wales	Kasaan Road - All	1	1	74	17.87	0.41	0.41
24	Yakutat	Lost River Rd	1	100	205	8.25	0.32	32.38
25	Ketchikan	S. Tongass Herring Cv. - End	3	3	1065	4.80	0.32	0.32
26	Haines	Haines/Lutak Rd: Haines - Ferry Term	2	20	940	3.65	0.32	3.19
27	Haines	Hns Hwy: Mosquito-Border	2	20	287	13.02	0.29	2.93
28	Petersburg	Mitkof Hwy: Papke Ld. - End	1	1	145	22.39	0.17	0.17
29	Prince of Wales	North Prince of Wales Road	4	112	209	64.43	0.16	4.55
30	Prince of Wales	North Prince of Wales Hwy	1	10	241	15.53	0.15	1.46
31	Yakutat	Dangerous River Rd.: All	0	0	74	29.47	0.00	0.00

\* Crashes / Million Vehicle Miles

\*\* Weighted Crash Number / Million Vehicle Miles

**Table 7: Rural Road Vehicle Crash Rate Ranking  
2002-2006  
(Ranked by Weighted Vehicle Crash Rate)**

RANK	Community	Road Name and Segment Description	Total Crashes	Weighted Crash Number	Average ADT	Length in miles	Unweighted Crash Rate *	Weighted Crash Rate **
1	Prince of Wales	Hydaburg Rd: Jct. to Hydaburg	16	186	112	22.50	3.49	40.61
2	Juneau	Glacier Hwy. Herb. R.. - Echo	13	224	269	13.04	2.03	35.00
3	Yakutat	Lost River Rd	1	100	205	8.25	0.32	32.38
4	Haines	Lutak Rd: Ferry Term.- End	4	170	571	5.47	0.70	29.85
5	Ketchikan	N. Tongass. Knudson Cv.- End	9	67	358	3.74	3.68	27.38
6	Prince of Wales	Craig/Kwk/Hollis: Hollis-Hyd.Rd.	7	123	244	10.46	1.50	26.40
7	Ketchikan	Revellia Rd (Ward Lake Rd.) - All	21	142	313	9.68	3.80	25.72
8	Juneau	Glacier Hwy: Cohen - Herbert R.	11	105	562	6.18	1.73	16.56
9	Juneau	Thane Rd. Rock Dump - End	12	137	1052	4.60	1.36	15.52
10	Wrangell	Zimovia Hwy: Mill - End	4	62	285	7.76	0.99	15.38
11	Prince of Wales	Craig - Port St. Nichols Rd	8	93	710	5.30	1.16	13.54
12	Juneau	N. Douglas Rd. Eaglecrest-End	10	55	370	6.07	2.44	13.41
13	Juneau	Fish Creek Rd. -All	11	38	315	5.89	3.25	11.22
14	Prince of Wales	Craig/Kwk/Hollis: Kwk.- Craig	10	171	1889	5.72	0.51	8.67
15	Skagway	Dyea Rd.: Observ. Pt. - Bridge	3	21	256	5.39	1.19	8.34
16	Skagway	Klondike Hwy. Dyea Rd-Bord.	4	71	421	12.38	0.42	7.46
17	Prince of Wales	Craig/Kwk/Hollis: Hyd.Rd.-Kwk.	8	75	465	12.87	0.73	6.87
18	Prince of Wales	North Prince of Wales Road	4	112	209	64.43	0.16	4.55
19	Prince of Wales	Big Salt Road:Airport - End	7	43	435	14.56	0.61	3.72
20	Haines	Hns Hwy: Airport-Klukwan	22	67	567	17.90	1.19	3.62
21	Haines	Haines/Lutak Rd: Haines - Ferry Term	2	20	940	3.65	0.32	3.19
22	Prince of Wales	Thorne Bay Road: All	7	34	363	17.48	0.60	2.94
23	Haines	Hns Hwy: Mosquito-Border	2	20	287	13.02	0.29	2.93
24	Haines	Hns Hwy: Klukwan-Mosquito	4	13	459	5.72	0.83	2.71
25	Yakutat	Airport Rd.	4	13	870	3.48	0.72	2.36
26	Haines	Mud Bay Rd. Small Tr- End	5	14	580	7.39	0.64	1.79
27	Prince of Wales	North Prince of Wales Hwy	1	10	241	15.53	0.15	1.46
28	Prince of Wales	Kasaan Road - All	1	1	74	17.87	0.41	0.41
29	Ketchikan	S. Tongass Herring Cv. - End	3	3	1065	4.80	0.32	0.32
30	Petersburg	Mitkof Hwy: Papke Ld. - End	1	1	145	22.39	0.17	0.17
31	Yakutat	Dangerous River Rd.: All	0	0	74	29.47	0.00	0.00

\* Accidents / Million Vehicle Miles

\*\* Weighted Crash Number / Million Vehicle Miles

## II. QUALITY OF OPERATION SECTION

### **A. Quality of Operation at Signalized Intersections**

Although it is desirable to analyze the quality of operation of all several hundred intersections within the region, DOT is unable to due to limited resources. Traffic signals generally control the busiest intersections. Therefore, monitoring signalized intersections provides a good measure of the effectiveness of the most important nodes in the region's highway network.

The quality of operation at signalized intersections is measured by determining the Level of Service (LOS) at each intersection. LOS is determined by counting the number of vehicles at an intersection during peak traffic hours and estimating delay using the signalized intersection analysis process as described in the 2000 federal standard, "*Highway Capacity Manual*" (a publication of the Transportation Research Board).

Six LOS are defined and are given letter designations, from A to F, with LOS A representing the best and LOS F the worst.

LOS is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS ratings are defined as follows for signalized intersections:

<i>Level of Service (LOS)</i>	<i>Average stopped delay per vehicle (seconds)</i>	<i>Effect</i>
A	$\leq 10.0$	Most vehicles aren't stopped
B	10.1 to 20.0	Low delay
C	20.1 to 35.0	Significant number of stopped vehicles
D	35.1 to 55.0	Noticeable congestion - occasional cycle failure
E	55.1 to 80.0	Limit of acceptable delay - frequent cycle failure
F	$> 80.0$	Unacceptable delay

**Table 8: Quality of Operation at Signalized Intersections**

City	Intersection	Date of most recent count	Intersection						Comments	
			AM Peak			PM Peak				
			Traffic Volume	Level of Service	Delay (Sec.)	Traffic Volume	Level of Service	Delay (Sec.)		
Juneau	Egan Drive/10th St	9/26/2006	2415	E	57.6	2948	D	49.4		
	Egan Drive/Loop Rd	8/1/2005	2808	D	55.0	3967	E	64.5		
	Egan Drive/Main St	11/13/2006	926	A	9.1	1263	B	12.2		
	Egan Drive/McNugget	6/26/2000	2824	E	55.3	3788	D	40.5		
	Egan Drive/Riverside	7/18/2003	1557	B	18.6	2227	B	17.8		
	Egan Drive/Salmon Ck	7/15/2003	2669	D	35.5	3369	C	26.9		
	Egan Drive/Vanderbilt	11/2/2007	2387	B	16.3	2543	C	23.4		
	Glacier Hwy/Jordan	7/25/2005	934	A	5.1	1241	A	9.5		
	Glacier Hwy/Shell Simmons	7/25/2005	914	A	6.1	1428	B	12.6		
	Lemon Rd/Anka	6/18/2003	897	B	10.2	1425	B	12.7		
	Lemon Rd/Walmart	10/13/2000	X	X	X	X	X	X	X	Signal reactivated 7/22/07. New counts not available
	Loop Rd/Atlin	5/27/2004	1913	B	15.1	2540	C	23.3		
	Loop Rd/Mendenhall Blvd	7/19/2005	989	B	17.8	1446	B	16.2		
	Loop Rd/Stephen Richards	8/8/2005	1172	C	24.8	2091	C	27.5		
Riverside Dr/Vintage	7/2/2003	1133	B	18.1	1848	C	23.7			
Ketchikan	Carlanna Lake Rd./Tongass	6/19/2000	1163	B	16.8	1661	C	24.6		
	Front St/Dock	6/11/2003	979	A	6.6	1341	B	15.7		
	Tongass/Jefferson St	5/17/2007	1269	B	17.6	1732	C	22.8		
	Tongass/Walmart	5/20/2004	762	A	7.4	971	B	10.5		
	Tongass/Washington St	5/17/2007	1102	A	9.1	1546	B	12.8		
Sitka	Halibut Pt. Road/Katlian	6/19/2003	954	B	11.9	1436	C	20.7		
	Lake/Lincoln	6/7/2006	822	B	17.1	1092	B	14.5		

Note: Delay and Level of Service (LOS) were determined according to the 2000 Highway Capacity Manual.

## B. Quality Of Operation at Unsignalized Intersections

There are different ways to measure quality of operation at unsignalized intersections, including direct delay measurement, capacity analysis, and signal warrant analysis. Signal warrant analysis has been used in this report because the data is readily available and it bears directly on the most common question asked about busy unsignalized intersections, “would that intersection work better with a signal?” The extent to which an intersection meets signal warrants is also indicative of its Level of Service. This section analyzes the region's busiest unsignalized and other selected principle intersections. This section includes stop and yield controlled intersections but does not include intersections with roundabouts, which is covered in Section C.

Determining whether intersections should be signalized is a two step process according to the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration. Intersections are first analyzed to see whether they meet any of the eight signal warrants defined in the MUTCD. If one or more of the warrants are met, an engineering study is performed to determine whether signalization will improve the overall intersection safety and/or operation. The MUTCD allows signals to be installed only if both steps yield positive results. Just because an intersection meets warrants does not mean it is the best treatment for an intersection.

Step one calculates signal warrants that are based on traffic volume, pedestrian volume, school crossings, crashes, signal coordination, or a combination of these warrants. Step one, determining whether warrants are met, is almost entirely a numerical process.

Step two is less determinate. Signals have both good and bad effects - as a general rule, they:

- Decrease peak hour side street delay
- Make peak hour entry from the side street less stressful
- Increase delay for main street traffic all day long
- Increase off-peak side street delay
- Facilitate pedestrian movement
- May have either a positive or negative effect on the number of crashes

The magnitude of these impacts depends to a large extent on traffic volume. The benefits of signalization are greater at higher traffic volumes while negative impacts are magnified at lower volumes. External factors such as spacing between adjacent intersections are also important to consider. All of these factors are weighed in determining whether a signal will improve intersection safety and operation.

This analysis is based on either two-hour or twelve hour volume counts. Warrants 1a, 1b, & 2 are analyzed with twelve hour data while warrant 3, the **peak hour** volume warrant, is analyzed with two hour data. The signal warrants analyzed in this report are those that are most commonly met. If other warrants are pertinent at a particular intersection, relevant information is included in the comments column.

The 8 signal warrants relate to the following issues:

- Warrant 1: Eight hour vehicular volume
- Warrant 2: Four hour vehicular volume
- Warrant 3: Peak hour volume
- Warrant 4: Pedestrian volume
- Warrant 5: School crossing
- Warrant 6: Coordinated signal system
- Warrant 7: Crash experience
- Warrant 8: Roadway Network (intersections of two or more major routes)

**Of all the information in this report, signal warrant data is the easiest to misinterpret. It is important not to take the results of step one at face value without considering the practical questions raised by step two.**

**Table 9: Quality of Operation at Unsignalized Intersections**

Intersection	Most recent count	Total Entering Volume Pk. Hour	MUTCD Signal Warrants				Comments
			(% of attainment)				
			W1A	W1B	W2	W3	
<b>Juneau</b>							
Douglas/Cordova PM	4/16/2004	1056				38%	Poor signal location due to proximity to roundabout
Egan/12th (12 hr)	7/16/2002	2180		63%	25%	113%	Poor signal location, also entrance to Harris Harbor
Egan/8th Ave. PM	8/29/2000	1813				120%	Poor signal location due to alignment
Egan/9th Ave. PM	8/30/2000	1672				3%	
Egan/Aurora Harbor Entrance AM	8/19/2003	2186				21%	
Egan/Glacier Ave. Spur PM	9/11/2000	1220				13%	
Egan/Harbor Masters Entrance (12 hr)	4/4/2002	2369		13%		27%	Also entrance to the UAS Marine Tech Bldg.
Egan/Highland Dr. AM	5/31/2002	2703				60%	
Egan/Sunny Drive PM	9/29/2000	3060				685%	Interchange under construction
Egan/Vintage PM	8/21/2000	1676				177%	Poor signal location due to alignment
Egan/Whittier PM	10/31/2007	1420				64%	Signal to be installed
Egan/Willoughby PM	11/8/2006	1261				208%	Poor signal location due to alignment
Egan/Yandukin PM	9/28/2000	3426				449%	Operation okay without signal. Traffic not delayed.
Glacier Ave /10th Ave PM	7/3/2003	1024				36%	
Glacier Ave/12th AM	9/1/2000	622				65%	
Glacier Ave/Highland AM	5/28/2002	680				33%	
Glacier Ave/Whittier PM	4/4/2002	528				18%	
Glacier/Fritz Cove PM	7/20/2005	1168				27%	
Glacier/Glacier Hwy. North PM	8/12/2003	1169				64%	
Glacier/Industrial PM	7/21/2005	1593				389%	Operation okay without signal.
Glacier/Hospital PM	10/17/2001	611				69%	
Glacier/Old Dairy/Trout PM	7/22/2005	1664				88%	Poor signal location
Lemon Rd. (Glacier)/Davis PM	8/2/2005	1213				37%	
Lemon Rd. (Glacier)/Lemon Spur PM	12/18/2001	1016				59%	Road behind Fred Meyers, goes to Alaska USA
Lemon Rd. (Glacier)/Renninger PM	10/6/2000	1312				51%	Access road to DZ School
Lemon Rd. (Glacier)/Sunny Dr. PM	6/25/2003	1137				159%	Interchange under construction
Loop/Back Loop PM	4/21/2004	772				55%	Good roundabout location
Loop/Cinema PM	4/26/2004	1897				39%	
Loop/Dudley PM	5/25/2004	1550				15%	
Loop/Floyd Dryden AM	5/28/2003	1127				51%	Controlled by x-ing guards. Operation OK w/o signal.
Loop/Floyd Dryden 3PM	9/27/2005	1054				36%	Controlled by x-ing guards. Operation OK w/o signal.
Loop/Grant AM	4/22/2004	508				24%	
Loop/James AM	7/21/2004	1475				40%	
Loop/Kimberly AM	11/18/2004	612				13%	
Loop/McGinnus PM	4/26/2004	1453				38%	

Intersection	Most recent count	Total Entering Volume Pk. Hour	MUTCD Signal Warrants				Comments
			(% of attainment)				
			W1A	W1B	W2	W3	
<b>Juneau (cont.)</b>							
Loop/Nancy AM	5/26/2004	1613				84%	Operation okay without signal, poor alignment Operation okay without signal, poor alignment
Loop/Nancy PM	5/26/2004	2071				24%	
Loop/Taku AM	4/23/2004	673				46%	
Loop/Thunder Mtn. AM	11/19/2004	839				20%	
Loop/Tongass PM	4/28/2004	1465				20%	
Riverside/Stephan Richards PM	7/26/2005	1180				82%	
Yandukin/Crest PM	12/20/2001	220				0%	
Yandukin/Old Dairy PM	12/21/2001	317				0%	
<b>Ketchikan</b>							
Front/Mission (12 hr)	6/10/2003	1298				0%	W4 (Pedestrian) met in summer
Mill (S. Tong.)/Bawden PM	6/5/2003	973				42%	
Mill (S. Tong.)/Main PM	6/13/2003	1076				62%	W4 (Pedestrian) met in summer Includes AMHS Ferry Terminal traffic
N. Tongass/Bryant+FT PM	6/12/2003	1403				37%	
N. Tongass/Post Office PM	6/2/2003	1428				65%	Good signal location
Tongass/3rd Ave. PM	5/13/2002	1584				25%	
Tongass/Deermount PM	6/3/2003	885				40%	
Tongass/Schoenbar PM	6/3/2003	1831				77%	
Tongass/Totem Row AM	5/2/2006	416				10%	
<b>Petersburg</b>							
Main/Haugen Drive (12 hr)	6/6/2002	760	63%			49%	
Nordic / Gjoa	6/5/2002	674				25%	
<b>Sitka</b>							
HPR/Cascade/Seamart PM	6/19/2003	872				21%	Roundabout in design
Lake/Sawmill/HPR PM	7/19/2001	1479				113%	
Sawmill Crk Rd/Indian River PM	7/18/2001	927				18%	

The quality of operation at unsignalized intersections can also be measured by determining the Level of Service (LOS) at each intersection. LOS is determined by counting the number of vehicles at an intersection during peak traffic hours and estimating delay using the unsignalized intersection analysis process as described in the 2000 *Highway Capacity Manual*.

Unlike signalized intersections, average delay at unsignalized intersections is not indicative of the overall intersection operation. The major street never has to stop for through or right movements, and often only briefly for left turns. Therefore the LOS from the side street critical movement is used to determine the quality of operation for the intersection.

The LOS also deteriorates faster as delay increases for unsignalized intersections than for signalized intersections. This is because a driver at a signalized intersection inherently knows that he or she will eventually get a green light. A motorist at a stop controlled intersection must find an acceptable gap in traffic and is more likely to become nervous or frustrated after a long wait.

LOS is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS ratings are defined as follows for unsignalized intersections:

<i>Level of Service (LOS)</i>	<i>Average stopped delay per vehicle (seconds)</i>	<i>Effect</i>
A	<=10.0	Most vehicles aren't stopped
B	10.1 to 15.0	Low delay
C	15.1 to 25.0	Significant number of stopped vehicles
D	25.1 to 35.0	Noticeable congestion
E	35.1 to 50.0	Limit of acceptable delay
F	> 50.0	Unacceptable delay

Level of Service F is the point where traffic breaks down with more vehicles arriving than departing. Once an intersection reaches LOS F, delay is difficult to accurately calculate and depends on the traffic patterns before and after the analysis. For this reason, delay calculated above 100 seconds will be denoted with an asterisk (\*).

**Table 9A: Level of Service (LOS) at Unsignalized Intersections**

(Unless otherwise noted, information refers to the PM peak hour)

City	Intersection	Date of most recent count	Intersection						Comments
			AM Peak			PM Peak			
			Traffic Volume	Level of Service	Delay (Sec.)	Traffic Volume	Level of Service	Delay (Sec.)	
Juneau	Douglas/Cordova	04/16/2004	826	C	22.5	1056	D	26.6	
	Egan/12th Ave.	07/16/2002	2180	F	*	2138	F	*	10th / Egan provides main access
	Egan/8th Ave.	08/29/2000	1554	E	38.7	1813	E	45.0	
	Egan/9th Ave.	08/30/2000	1536	A	0.0	1672	A	9.8	No vehicles exiting during AM peak.
	Egan/Aurora Harbor Entrance	08/19/2003	2186	E	40.9	2710	D	33.0	
	Egan/Glacier Ave. Spur	09/11/2000	1252	A	9.4	1220	C	15.5	
	Egan/Harbor Master's Entrance	04/04/2002	2210	D	29.4	2369	F	63.8	
	Egan/Highland Dr	05/31/2002	2703	C	24.9				PM counts unavailable
	Egan/Sunny Drive	09/29/2000	2622	C	18.9	3060	F	*	Interchange under construction
	Egan/Vintage	08/21/2000	1101	D	33.7	1676	F	*	Operation OK w/ Rt Turns Only
	Egan/Whittier	10/31/2007	1096	D	31.5	1420	F	50.1	Signal to be installed.
	Egan/Willoughby	11/08/2006	1034	D	26.9	1261	C	22.3	
	Egan/Yandukin	09/28/2000	2589	D	32.6	3426	E	39.8	Lt turns delay listed only, Rt turns yield to Egan thru traffic
	Glacier Ave/10th	07/03/2003	576	C	16.4	1024	F	69.8	
	Glacier Ave/12th	09/01/2000	824	E	39.0	622	B	10.1	
	Glacier Ave/Highland	05/28/2002	680	C	20.1				PM counts unavailable
	Glacier Ave/Whittier	04/04/2002	430	B	10.9	528	C	16.4	
	Glacier/Fritz Cove	07/20/2005	805	C	18.0	1168	E	38.7	
	Glacier/Glacier Hwy N.	08/12/2003	713	D	27.1	1169	C	16.2	
	Glacier/Hospital Dr	10/17/2007	611	C	19.0	669	C	18.9	
	Glacier/Industrial	07/21/2005	1194	E	49.8	1593	F	*	Major delay is for vehicles turning left from trail parking lot. Vehicles can turn Rt, turn around at Job Ctr & turn Rt again.
	Glacier/Old Dairy/Trout	07/22/2005	1128	F	*	1664	F	*	
	Lemon Rd. (Glacier)/Davis	08/02/2005	791	D	25.2	1213	D	31.9	
	Lemon Rd. (Glacier)/Lemon Spur	12/18/2001	507	B	12.4	1016	E	36.5	
	Lemon Rd. (Glacier)/Renninger	10/06/2000	869	C	20.3	1312	D	32.9	Dzantik'i Heeni Entrance
	Lemon Rd. (Glacier)/Sunny Dr.	06/25/2003	768	C	23.3	1137	E	41.2	Road closed until Sunny Point interchange constructed
	Loop/Back Loop	04/21/2004	528	B	11.3	772	C	16.9	
	Loop/Cinema	04/26/2004	1436	D	26.7	1897	E	39.5	
	Loop/Dudley	05/25/2004	1144	B	13.9	1550	D	27.1	
	Loop/Floyd Dryden	05/28/2003	1315	F	*	1054	D	31.5	X-ing Guards help move traffic
	Loop/Grant	04/22/2004	508	B	12.7	713	B	13.8	
	Loop/James	07/21/2004	1475	C	20.3	2221	C	22.2	
	Loop/Kimberly	11/18/2004	612	B	12.9	769	B	12.1	
Loop/McGinnis	04/26/2004	1143	C	18.1	1453	C	18.7		
Loop/Nancy	05/26/2004	1613	E	38.2	2071	D	27.4	Lane configuration helps facilitate Lt turns from Nancy	
Loop/Taku	04/23/2004	673	B	13.9	732	B	13.5		
Loop/Thunder Mtn.	11/19/2004	551	B	12.1	839	C	16.4		
Loop/Tongass	04/28/2004	1139	B	11.8	1465	C	24.1		

City	Intersection	Date of most recent count	Intersection						Comments
			AM Peak			PM Peak			
			Traffic Volume	Level of Service	Delay (Sec.)	Traffic Volume	Level of Service	Delay (Sec.)	
<b>Juneau (Cont)</b>	Riverside/Stephen Richards	07/26/2005	694	C	20.2	1180	F	55.1	
	Yandukin / Crest	12/20/2001	191	A	9.8	220	A	9.9	
	Yandukin / Old Dairy	12/21/2001	181	A	9.8	256	B	10.2	
<b>Ketchikan</b>	Front / Mission	06/10/2003	912, 66 peds	A	5.9	1040, 307 peds	A	5.0	
	Mill / Bawden	06/13/2003	674, 59 peds	C	18.2	937, 60 peds	E	50.0	
	Main / Mill	06/05/2003	739, 312 peds	F	*	1076, 78 peds	E	49.5	Major delay occurs during summer. LOS D with low #s of Peds.
	Main / Mill	05/25/2001	908, 1093 peds	F	*				Mid-Day Count
	N. Tongass / Bryant / FT	06/12/2003	1116	E	44.2	1403	F	66.7	
	N. Tongass / Post Office	06/02/2003	975	C	17.0	1428	F	71.8	
	Tongass / 3rd Ave	05/13/2002	1394	C	19.3	1584	D	31.1	
	Tongass / Deermount	06/03/2003	624	B	14.6	885	C	17.3	
	Tongass / Schoenbar	06/03/2003	1208	F	*	1831	F	*	Monitoring situation. Will make changes as deemed feasible.
	S. Tongass / Totem Row	05/02/2006	416	B	10.6	424	A	9.8	
<b>Petersburg</b>	Nordic / Haugen Dr.	06/05/2002	553	B	12.4	760	C	17.8	
	Nordic / Gjoa	06/06/2002				674	B	12.7	AM counts unavailable
<b>Sitka</b>	HPR / Cascade / Seamart	06/19/2003	535	C	17.8	872	D	26.2	
	Lake / Sawmill / HPR	07/23/2001	1040	C	16.9	1479	F	70.1	Roundabout in Design
	Sawmill Crk / Indian River	07/18/2001	638	B	11.9	927	B	12.8	

Note: Delay and Level of Service (LOS) were determined according to the 2000 Highway Capacity Manual.

\* denotes a delay greater than 100 seconds for the critical movement

## C. Quality Of Operation at Roundabouts

For congested intersections, roundabouts are an alternative form of traffic control to signals and stop signs. Roundabouts are able to accommodate moderate to large traffic volumes with minimal delay. Furthermore, traffic operates much more efficiently than traffic signals at off-peak hours because traffic is not unnecessarily delayed while waiting for a red light to change. At present there is only one roundabout in Southeast Alaska, though roundabouts are being evaluated at several intersections throughout the region.

The quality of operation at roundabout intersections is measured by determining the Level of Service (LOS) at each intersection. LOS is determined by counting the number of vehicles at an intersection during peak traffic hours and estimating delay using the signalized intersection analysis process as described in the *NCHRP Report 572, "Roundabouts in the United States"*, (2007).

Six LOS are defined and are given letter designations, from A to F, with LOS A representing the best and LOS F the worst.

LOS is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Delay times relate to Level of Service similar to stop controlled intersections. LOS ratings are defined as follows for intersections with roundabouts:

<i>Level of Service (LOS)</i>	<i>Average control delay per vehicle (seconds)</i>	<i>Effect</i>
A	$\leq 10.0$	Most vehicles do not have to wait
B	10.1 to 15.0	Low delay
C	15.1 to 25.0	Significant wait before entering roundabout
D	25.1 to 35.0	Noticeable congestion
E	35.1 to 50.0	Limit of acceptable delay
F	$> 50.0$	Unacceptable delay

***Table 10: Quality of Operation at Roundabouts***

City	Intersection	Date of most recent count	Intersection						Comments
			AM Peak			PM Peak			
			Traffic Volume	Level of Service	Delay (Sec.)	Traffic Volume	Level of Service	Delay (Sec.)	
<b>Juneau</b>	Douglas Hwy/N. Douglas	6/27/2007	1276	B	14.0	1585	A	9.6	

### **III. Vehicle Classification Section**

Vehicle classification is the process by which the mix of traffic (percentage of trucks, cars, and other vehicles) is determined. There are 13 federal vehicle classifications, of which nine deal with trucks exclusively. For the purpose of this report, only the four most common classes (motorcycles, cars, pickups, and trucks) are listed in Table 11. Written descriptions of the Federal Highway Administration (FHWA) vehicle classifications and a graphical drawing are also included in this section.

Although familiar class names such as a car or pickup readily recall familiar vehicle types to one's mind, the reader should be aware that vehicle classification is based on the number of axles and the spacing between axles, not vehicle appearance. Consequently, class names sometimes do not match all vehicles included in the class. For example, errors occur when long, full-size cars are classified as pickups and short pickups are classified as compact cars. However, axle-based classification provides the information most important to highway designers and is the agreed upon standard.

Several one-week classification studies are conducted annually in this region. The studies are made with electronic counting equipment connected to rubber road tubes fastened across the roadway. Every year the FHWA directs the Traffic Section to conduct class studies at specific locations, usually on major thoroughfares. Many classification sites may be counted once, then not recounted because FHWA chooses a preferable or more representative class count location.

Seasonal fluctuations in traffic volumes can be substantial in Alaska and are an important factor in vehicle classification. Due to snowplowing operations and cold winter temperatures, the Traffic Section does not conduct rubber road tube classifications during the winter months. Typically the vehicle classification studies are done between May and October. Therefore, class counts reflect peak traffic and tourist volumes during the spring to fall conditions only. To correct for seasonal fluctuations, one needs to review permanent traffic recorder data. See the *Permanent Traffic Recorder Data* section.

2007 classification counts showed a substantial increase in truck traffic across Southeast Alaska. This is largely due to the recent increase in pickup and SUV size. Vehicles such as the Chevy Suburban and the Ford F350 (sometimes even an F250) register as a heavy truck, as opposed to a regular pickup.

## FHWA VEHICLE TYPES

The vehicle types of interest to FHWA are described below. The classification scheme is separated into categories depending on whether the vehicle carries passengers or commodities. Non-passenger vehicles are further subdivided by number of axles and number of units including both power and trailer units.

### *A. FHWA VEHICLE CLASS DEFINITIONS*

#### **Type Name and Description:**

1. **Motorcycles** (Optional) - All two-or three-wheeled motorized vehicles. Typical vehicles in this category have saddle type seats and are steered by handlebars rather than wheels. This category includes motorcycles, motor scooters, mopeds, motor-powered bicycles, and three-wheel motorcycles. This vehicle type may be reported at the option of the State.
2. **Passenger Cars** - All sedans, coupes, and station wagons manufactured primarily for the purpose of carrying passengers and including those passenger cars pulling recreational or other light trailers.
3. **Other Two-Axle, Four-Tire Single Unit Vehicles** - All two-axel, four-tire vehicles, other than passenger cars. Included in this classification are pickups, panels, vans, and other vehicles such as campers, motor homes, ambulances, hearses, and carryalls. Other two-axle, four-tire single unit vehicles pulling recreational or other light trailers are included in this classification.
4. **Buses** - All vehicles manufactured as traditional passenger-carrying buses with two axles and six tires or three or more axles. This category includes only traditional buses (including school buses) functioning as passenger-carrying vehicles. Modified buses should be considered as trucks and be appropriately classified.

NOTE: In reporting information on trucks the following criteria should be used:

- a. Truck tractor units traveling without a trailer will be considered single unit trucks.
  - b. A truck tractor unit pulling other such units in a "saddle mount" configuration will be considered as a one single unit truck and will be defined only by the axles on the pulling unit.
  - c. Vehicles shall be defined by the number of axles in contact with the roadway. Therefore, "floating" axles are counted only when in the down position.
  - d. The term "trailer" includes both semi-and full trailers.
5. **Two-Axle, Six-Tire, Single Unit Trucks** - All vehicles on a single frame, including trucks, camping and recreational vehicles, motor homes, etc., having two axles and dual rear wheels

6. **Three-Axle Single Unit Trucks** - All vehicles on a single frame, including trucks, camping and recreational vehicles, motor homes etc., having three axles.
7. **Four or More Axle Single Unit Trucks** - All trucks on a single frame with four or more axles.
8. **Four or Less Axle Single Trailer Trucks** - All vehicles with four or less axles consisting of two units, one of which is a tractor or straight truck power unit.
9. **Five-Axle Single Trailer Trucks** - All five-axle vehicles consisting of two units, one of which is a tractor or straight truck power unit.
10. **Six or More Axle Single Trailer Trucks** - All vehicles with six or more axles consisting of two units, one of which is a tractor or straight truck power unit.
11. **Five or Less Axle Multitrailer Trucks** - All vehicles with five or less axles consisting of three or more units, one of which is a tractor or straight truck power unit.
12. **Six-Axle Multitrailer Trucks** - All six-axle vehicles consisting of three or more units, one of which is a tractor or straight truck power unit.
13. **Seven or More Axle Multitrailer Trucks** - All vehicles with seven or more axles consisting of three or more units, one of which is a tractor or straight truck power unit.

**Table 11: Vehicle Classification 1998 - 2007**

City	Road Name	Study Date	Mile	Location	Motor-cycles	Cars	Pick-ups	Trucks
Haines	Haines Hwy.	2007	0.92	Mud Bay Rd - Sawmill Rd	2.0%	52.5%	31.3%	14.2%
Haines	Haines Hwy.	2007	1.287	Sawmill Rd - Airport	0.6%	50.1%	34.4%	14.8%
Haines	Haines Hwy.	2007	15.199	Milepost 12 - Kluckwan	0.5%	56.9%	27.8%	14.7%
Haines	Haines Hwy.	2003	23.343	Kluckwan - Misquito Lake Rd.	0.1%	54.6%	36.8%	8.5%
Haines	Haines Hwy.	2005	28.324	Mosquito Lake - Big Boulder Cr	0.9%	56.1%	36.5%	6.5%
Haines	Haines Lutak Rd	2007	4.016	Ferry - Front St.	2.4%	43.7%	29.2%	24.8%
Haines	Old Haines Hwy.	2003	0.238	Haines Hwy - Beach Rd.	1.0%	58.1%	32.8%	8.1%
Hoonah	Hoonah Airport Rd	2007	0.25	Ferry - Seaplane Float	1.0%	42.1%	36.1%	20.8%
Hyder	Salmon River Rd	2007	0.1	Hyder - Canadian Customs	2.8%	46.8%	25.2%	25.2%
Hyder	Salmon River Rd	2007	10.68	North City Limits	3.9%	50.0%	26.1%	29.1%
Juneau	Back Loop Rd.	2007	0.037	Glacier Spur - Tournere	0.4%	73.3%	18.9%	7.4%
Juneau	Egan Drive	2001	2.579	3 Mile Egan Drive	0.3%	77.2%	17.9%	4.6%
Juneau	Egan Drive	2003	5.87	Sunny Pt - Vanderbilt	0.3%	75.4%	20.1%	4.2%
Juneau	Egan Drive	2004	6.527	Sunny Pt - Yandukin	0.4%	73.9%	20.0%	5.7%
Juneau	Egan Drive	2004	7.961	McNugget - Yandukin	0.0%	77.1%	19.2%	3.7%
Juneau	Glacier Highway - Egan	2007	9.256	Engineers Cutoff - Glacier Hwy North	0.4%	64.2%	23.1%	12.3%
Juneau	Glacier Highway - Egan	2007	10.977	Fritz Cove Rd. - Back Loop Rd.	0.5%	75.2%	18.7%	5.7%
Juneau	Glacier Highway - Egan	2007	11.672	Waydelich Cr Br - N Jct Mend. Loop	0.6%	61.8%	25.9%	11.7%
Juneau	Glacier Highway - Egan	2007	21.781	Dotson's Landing - .1 Mi. N. of Shrine	0.2%	68.1%	23.2%	8.5%
Juneau	Glacier Highway - Will	1999	1.256	Ross Way - Highland Dr	1.4%	77.9%	14.2%	6.6%
Juneau	Industrial Blvd.	2007	0.063	Glacier Hwy - Bentwood	0.4%	49.7%	28.3%	21.6%
Juneau	Lemon Road (Glacier)	2007	1.179	Lemon Spur - DOT Access	0.6%	69.3%	16.5%	13.6%
Juneau	Lemon Road (Glacier)	2007	1.334	DOT - Sunny Dr	0.1%	69.8%	14.3%	15.8%
Juneau	Lemon Road (Glacier)	2007	1.509	Sunny Dr - Walmart	1.2%	68.2%	20.4%	10.2%
Juneau	Lemon Road (Glacier)	2007	1.88	Walmart - Davis Ave.	0.3%	66.2%	21.5%	12.0%
Juneau	Lemon Road (Glacier)	2007	2.305	Davis St. - Twin Lakes Dr.	0.3%	72.0%	19.0%	8.6%
Juneau	Lemon Road (Glacier)	2007	3.311	Twin Lakes Dr. - Egan	0.2%	67.3%	23.0%	9.5%
Juneau	Mendenhall Blvd.	2007	0.365	Mendenhall Loop - End	0.4%	71.0%	19.5%	9.1%
Juneau	Mendenhall Loop Rd.	2007	0.648	James - Stephen Richards	0.2%	70.7%	21.0%	8.0%
Juneau	Mendenhall Loop Rd.	2002	1.397	S Richards - Floyd Dryden	0.4%	74.6%	20.2%	4.8%
Juneau	Montana Creek Rd.	2007	0.196	Mendenhall Loop - Skaters Cabin	0.3%	67.7%	23.0%	9.0%
Juneau	N. Douglas Hwy	2007	0.014	J/D Bridge - M.P. 2	0.9%	68.0%	20.6%	10.6%
Juneau	N. Douglas Hwy	2007	2.104	Eaglecrest - Heliport	0.7%	70.3%	20.4%	8.6%
Juneau	N. Douglas Hwy	2007	8.034	Fish Creek Bridge - Boat Ramp	1.4%	63.0%	16.3%	19.2%
Juneau	Old Dairy Rd.	2002	0.337	Crest - Yandukin	0.2%	68.4%	24.1%	7.3%
Juneau	Riverside Dr.	2007	0.286	Vintage - James	1.0%	70.8%	20.9%	7.3%
Juneau	Twin Lakes Dr.	2007	0.779	Craig - Blackerby	6.3%	68.3%	18.0%	7.4%
Kake	Kake - Keku Rd	2007	1.19	Little Gunnuk Creek - Big Gunnuk Creek	1.1%	54.0%	39.0%	5.9%
Ketchikan	N. Tongass Hwy	2007	1.334	Rose's Caboose	0.2%	65.3%	28.5%	6.0%
Ketchikan	N. Tongass Hwy	2000	1.734	North Shoreline Dr - South Shoreline Dr	0.2%	66.5%	25.7%	7.6%
Ketchikan	N. Tongass Hwy	2004	4.625	Ward Lake Rd - Mill Entrance	0.8%	64.1%	27.9%	7.3%
Ketchikan	N. Tongass Hwy	2007	8.985	Beechwood Dr. - Pond Reef Rd.	1.4%	58.5%	27.0%	13.1%
Ketchikan	N. Tongass Hwy	2007	11.271	N. Point Higgins - Big Turnout	2.6%	59.4%	28.5%	9.5%
Ketchikan	N. Tongass Hwy	2007	14.403	1st waterfall Cr. - End	4.5%	57.5%	18.6%	19.3%
Ketchikan	Revilla Rd.	2007	7.478	White River Spur - Harriet Hunt Lake	2.2%	53.4%	30.0%	14.5%
Ketchikan	Roosevelt Dr.	2007	1.2	Franklin - Jct. w/ S. Tongass	0.9%	49.5%	22.0%	27.6%
Ketchikan	S. Tongass Hwy	2001	1.651	Shoenbar - Water St	0.4%	72.5%	21.9%	5.1%
Ketchikan	S. Tongass Hwy	1999	2.023	Grant St. - Mission St.	0.5%	72.1%	20.9%	6.6%
Ketchikan	S. Tongass Hwy	2002	2.371	Barney Way - Deermont	0.4%	69.2%	23.7%	6.7%
Ketchikan	S. Tongass Hwy	1998	2.977	Deermont - USCG	1.4%	71.2%	25.7%	1.7%
Ketchikan	S. Tongass Hwy	2002	4.44	Gunner St. - Totem P. Row	0.1%	71.1%	22.6%	6.2%
Ketchikan	Schoenbar	2007	0.02	Park Ave. - Forest	1.1%	69.0%	21.6%	8.4%
P.O.W.	Big Salt Lake Road	2001	0.002	Craig/Klawock Hwy - Bennet Creek Br	0.5%	48.9%	37.8%	12.7%
P.O.W.	Big Salt Lake Road	1999	3.324	Airport Rd - Duke Creek Bridge	0.2%	36.4%	46.2%	17.2%
P.O.W.	Craig to Hollis Hwy	2005	0.698	Craig City Limits - MP 6 Klawock	0.7%	57.3%	32.4%	9.5%
P.O.W.	Craig to Hollis Hwy	1998	8.198	Big Salt Rd - Hatchery	0.2%	49.8%	45.9%	4.1%

**Table 11: Vehicle Classification 1998 - 2007**

City	Road Name	Study Date	Mile	Location	Motor-cycles	Cars	Pick-ups	Trucks
P.O.W.	Craig to Hollis Hwy	2004	8.931	Hatchery - Hydaburg Rd	0.1%	48.2%	31.3%	20.4%
P.O.W.	Craig to Hollis Hwy	1998	20.297	Hydaburg Jct. - End of Route	0.1%	55.0%	41.9%	3.1%
P.O.W.	Thorne Bay Road	1998	0.548	Big Salt Rd - Thorne Bay	1.6%	31.2%	45.1%	22.1%
Petersburg	Haugen Dr.	2007	0.003	Mitkof Hwy - 6th Street	2.0%	63.6%	23.2%	11.1%
Petersburg	Haugen Dr.	2007	0.395	6th St - Hammer	0.6%	60.0%	31.6%	7.9%
Petersburg	Haugen Dr.	2007	1.378	Airport - Sandy Beach	1.1%	59.5%	23.9%	15.5%
Petersburg	Mitkof Hwy.	2007	8.866	Twin Creek Trailer Park - Falls Creek Br.	0.3%	45.6%	37.3%	16.7%
Petersburg	Mitkof Hwy.	2007	15.446	Swan Observatory - Crystal Lake Hatch	2.4%	47.4%	31.9%	18.3%
Petersburg	Nordic Dr.	2007	0.28	Middleton - Harder Street	0.4%	58.1%	30.6%	10.9%
Petersburg	Nordic Dr.	2007	1.194	Sing Lee Alley - Ferry Term	1.5%	64.7%	18.7%	15.1%
Sitka	Halibut Pt. Road	2007	2.022	Harbor Mt. Rd - Cascade Cr. Rd.	0.7%	60.3%	25.7%	13.3%
Sitka	Halibut Pt. Road	2003	4.251	Granite Creek. - Harbor Mountain Rd	0.3%	60.5%	31.2%	8.0%
Sitka	Kaltian Ave.	2007	0.074	H.P.R. - Thompson Harbor	1.5%	64.1%	25.3%	9.1%
Sitka	Katljan Ave.	2003	0.247	Thompson Harbor - Cold Storage	1.1%	68.7%	25.2%	5.0%
Sitka	Lake St.	2004	0.371	Lake Street	1.1%	66.3%	28.6%	4.0%
Sitka	Rodman Bay Rd.	2002	6.646	At Starrigavan Creek Bridge	1.2%	69.4%	25.0%	4.4%
Sitka	Sawmill Ck. Road	2007	0.166	Lake - Jeff Davis	1.0%	61.4%	25.9%	11.8%
Sitka	Sawmill Ck. Road	2007	1.21	USPS - Rookies Night Club	1.7%	70.8%	17.6%	10.0%
Sitka	Sawmill Ck. Road	2007	4.276	Thimbleberry Creek - Mill	3.3%	59.6%	27.8%	9.3%
Skagway	Dyea Road	2004	5.576	Observation Pt - Taiya River Bridge	1.3%	54.5%	32.3%	11.9%
Skagway	Klondike Hwy	2004	1.696	22nd - Dyea Rd.	0.9%	46.7%	29.9%	22.4%
Skagway	Klondike Hwy	2007	2.584	Dyea Rd. - Sanitarium Rd.	1.0%	42.1%	32.4%	24.5%
Skagway	Klondike Hwy	2005	11.669	Sanitarium Rd. - U.S. Customs	1.3%	48.1%	25.3%	25.3%
Wrangell	Airport Rd.	2007	0.71	East Rd. - Airport	0.4%	57.4%	32.5%	9.7%
Wrangell	Bennet	2007	0.003	Zimovia - East Rd	1.1%	56.2%	33.0%	9.7%
Wrangell	Spear (Wrangell East)	2007	0.911	Near Shooting Range	2.2%	54.2%	32.1%	11.5%
Wrangell	Stikine / Evergreen	2007	0.24	Ferry Terminal - Landfill	1.1%	61.0%	32.6%	5.4%
Wrangell	Zimovia Hwy.	2007	1.294	Case Ave - MP 2	0.8%	57.4%	32.4%	9.4%
Wrangell	Zimovia Hwy.	2007	2.231	MP 2 - Wrangell Inst.	0.7%	58.1%	32.0%	9.3%
Wrangell	Zimovia Hwy.	2007	4.524	Wrangell Institute - Shoemaker Rd.	0.5%	57.0%	26.2%	16.4%
Wrangell	Zimovia Hwy.	2007	10.195	Pat Creek - End	0.0%	20.3%	21.9%	57.8%

Note: 2006 vehicle classification counts were not included because collected data was corrupt.

## **IV. TRAFFIC VOLUME SECTION**

### **A. Historical Population Growth Rates**

This section shows historic population growth rates. Table 12 includes population estimates from 1980 through 2006 that were calculated by the Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

One of the most important factors in planning future road systems is determining the annual rate of traffic volume, or ADT, growth. Although historical population growth does not necessarily predict future trips, it is a simple indicator of the combined effect of the many complex state, local, societal, and economic factors which impact traffic volume growth. It is important to note that there is no direct relationship between population changes and traffic volume changes. Even so, population change is an important indicator of changing traffic volumes. Where no actual traffic counts have been done it is often the only means of projecting future traffic volumes. Where counts have been done it helps to verify volumes which might otherwise be in question.

Table 12 contains some known weaknesses. Several of the smaller cities had data gaps. Also there are several years with missing data (1981, 1987, & 1989). For those years we performed a straight-line interpolation. For the most recent years (1991-2006), however, the data is complete. The table gives a good overview of long term trends of these southeast communities.

**Table 12: Southeast Region Population Estimates**

2000-2005								%*	
Area Name	2000	2001	2002	2003	2004	2005	2006	Change	
Haines Borough	2,392	2,368	2,357	2,319	2,245	2,207	2,241	-1.1%	
Juneau/ City and Borough	30,711	30,371	30,899	31,656	31,142	31,193	30,650	0.0%	
Ketchikan Gateway Borough	14,059	13,742	13,676	13,533	13,030	13,125	13,174	-1.1%	
Prince of Wales Borough	6,157	5,814	5,680	5,594	5,548	5,497	5,477	-1.9%	
Sitka City/Borough	8,835	8,724	8,799	8,897	8,805	8,947	8,833	0.0%	
City Name	2000	2001	2002	2003	2004	2005	2006	Change	
Angoon	572	559	544	507	481	497	482	-2.8%	
Gustavus	429	418	421	438	473	459	441	0.5%	
Hoonah	860	875	877	850	841	861	829	-0.6%	
Kake	710	697	701	683	663	598	536	-4.6%	
Metlakatla	1,447	1,416	1,418	1,397	1,302	1,397	1,377	-0.8%	
Petersburg	3,224	3,218	3,148	3,079	3,123	3,155	3,129	-0.5%	
Skagway	862	837	843	844	870	834	854	-0.2%	
Wrangell	2,308	2,220	2,175	2,123	2,023	1,974	1,911	-3.1%	
Yakutat	680	641	664	635	619	618	609	-1.8%	

1990-1999											%**	
Area Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Change	
Haines Borough	2,117	2,242	2,230	2,293	2,331	2,280	2,352	2,404	2,461	2,475	1.2%	
Juneau/ City and Borough	26,751	27,579	28,253	28,448	28,454	28,700	29,230	29,713	30,021	30,189	1.4%	
Ketchikan Gateway Borough	13,828	14,255	14,636	14,716	14,751	14,764	14,654	14,500	14,143	13,961	0.2%	
Prince of Wales Borough	6,278	6,551	6,608	6,797	6,774	6,734	6,996	6,873	6,830	6,589	-0.2%	
Sitka City/Borough	8,588	8,878	9,059	9,083	8,941	8,868	8,650	8,708	8,722	8,681	0.3%	
City Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Change	
Angoon	638	665	636	636	610	601	605	570	586	576	-1.1%	
Gustavus	258	256	279	288	314	319	344	340	371	377	5.2%	
Hoonah	795	796	843	871	885	877	902	890	892	877	0.8%	
Kake	700	711	727	725	695	703	727	756	775	745	0.1%	
Metlakatla	1,407	1,489	1,531	1,518	1,520	1,522	1,563	1,523	1,502	1,472	0.3%	
Petersburg	3,207	3,282	3,314	3,307	3,261	3,310	3,388	3,410	3,399	3,415	0.1%	
Skagway	692	726	758	786	798	775	778	815	811	825	2.2%	
Wrangell	2,479	2,590	2,716	2,691	2,754	2,698	2,618	2,541	2,560	2,549	-0.7%	
Yakutat	705	722	680	707	727	770	799	822	775	729	-0.4%	

1980-1989											%***	
Area Name	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Change	
Haines Borough	1,680	1,803	1,886	1,950	2,051	2,034	2,036	1,971	1,956	2,058	2.3%	
Juneau/ City and Borough	19,528	21,329	22,451	24,007	25,268	26,037	25,998	24,966	24,655	25,100	3.2%	
Ketchikan Gateway Borough	11,316	12,042	12,268	12,459	12,438	12,623	12,729	12,793	12,594	13,259	2.0%	
Prince of Wales Borough	3,822	4,204	4,439	4,822	4,993	5,143	5,225	5,392	5,770	5,876	5.1%	
Sitka City/Borough	7,803	8,116	7,947	8,028	7,956	8,110	8,128	8,252	8,294	8,283	1.0%	
City Name	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Change	
Angoon	465	514	562	512	574	588	597	605	624	645	3.2%	
Gustavus	98	128	158	188	218	217	214	211	219	238	10.2%	
Hoonah	680	772	864	865	894	917	906	895	894	845	1.6%	
Kake	555	593	631	674	635	634	650	665	678	695	2.3%	
Metlakatla	1,056	1,098	1,141	1,183	1,225	1,270	1,318	1,365	1,386	1,438	2.9%	
Petersburg	2,821	2,931	3,040	3,046	3,112	3,145	3,182	3,180	3,178	3,230	1.3%	
Skagway	814	802	790	782	652	610	662	714	704	715	-1.6%	
Wrangell	2,184	2,280	2,376	2,468	2,336	2,387	2,402	2,409	2,416	2,503	1.3%	
Yakutat	449	456	462	469	470	456	466	476	527	625	4.6%	

\* Compounded rate of growth 2000-2005  
 \*\* Compounded rate of growth 1990-2000  
 \*\*\* Compounded rate of growth 1980-1990

## **B. Permanent Traffic Recorder Data**

Permanent Traffic Recorders (PTRs) consist of electronic counting devices connected to inductive loops buried in the roadway. As vehicles pass over the loops, a cumulative total is compiled for selected periods of time and reported to a mainframe database for analysis. PTRs are installed to collect the number of vehicles that travel over a particular road classification. PTRs are located on select roadways that are representative for a community. There are twelve PTRs in the region, and the oldest one has been in operation since 1959. The twelve PTRs and their locations are as follows:

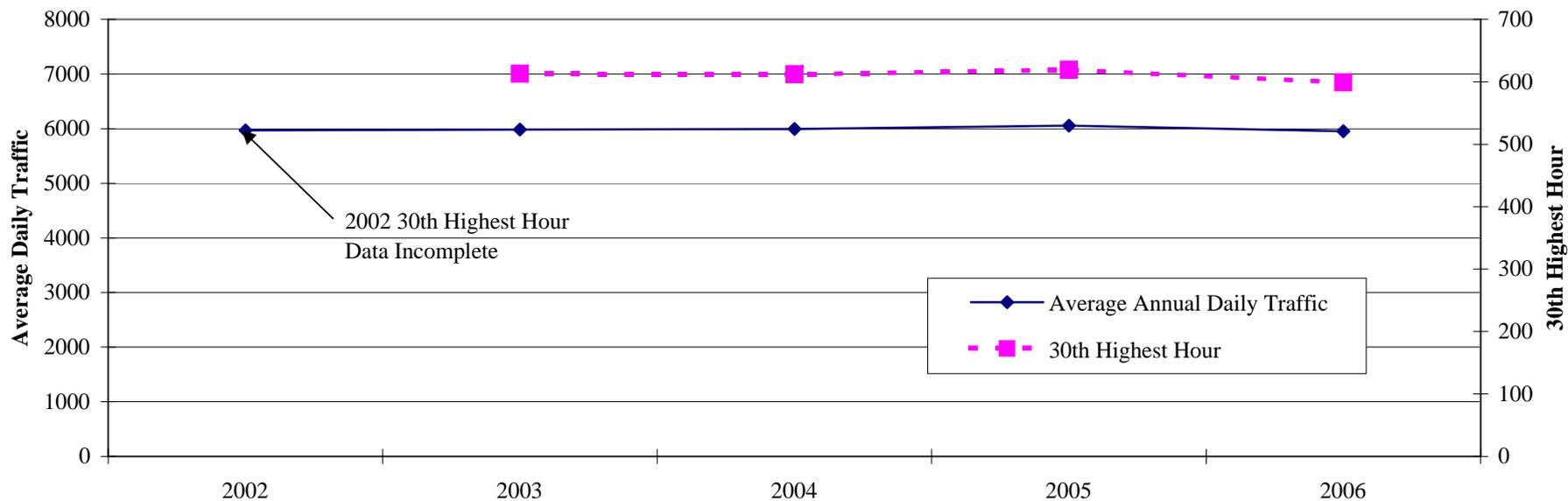
1. Ketchikan – North Tongass Highway (CDS Mile Pt 1.33)
2. Ketchikan – South Tongass Highway (CDS Mile Pt. 3.07)
3. Sitka – Sawmill Creek Road (CDS Mile Pt. 0.73)
4. Sitka – Halibut Point Road (CDS Mile Pt. 0.53)
5. Prince of Wales – Craig / Klawock / Hollis Highway (CDS Mile Pt. 6.71)
6. Wrangell – Zimovia Highway (CDS Mile Pt. 0.71)
7. Petersburg – Mitkof Highway (CDS Mile Pt. 2.55)
8. Juneau – Egan Drive (CDS Mile Pt. 2.58)
9. Juneau – Riverside Drive (CDS Mile Pt. 1.47)
10. Juneau – Glacier Highway (CDS Mile Pt. 14.07)
11. Haines – Haines Highway (CDS Mile Pt. 1.29)
12. Skagway – Klondike Highway (CDS Mile Pt. 2.55)

PTR data is presented in several different ways. The graphs depict annual average daily traffic (AADT) and 30<sup>th</sup> highest hour volumes for each year the PTRs have been in operation as well as AADT for each day of the week, and the annual average hourly traffic for weekdays (weekends and holidays excluded) for 2006. The numerical matrices provide the most detailed and comprehensive data.

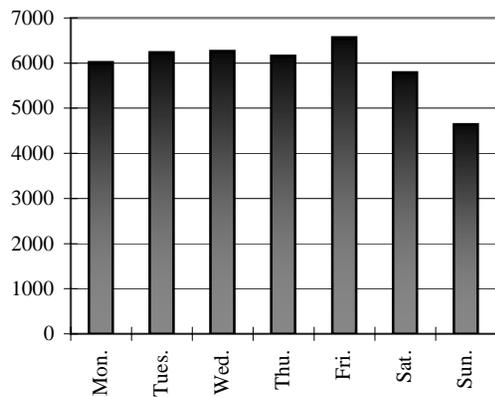
The 30<sup>th</sup> highest hour volumes, also called the Design Hourly Volume (DHV), are shown because highway projects are usually designed to accommodate this volume in the design year.

PTR data is very important to traffic engineers because they record hourly traffic volumes in both directions 24 hours per day, 365 days per year. Unlike rubber road tube counts, the PTRs collect traffic volumes year round and show seasonally adjusted traffic volumes. These seasonal factors can then be used to adjust other traffic volume counts taken by road tubes.

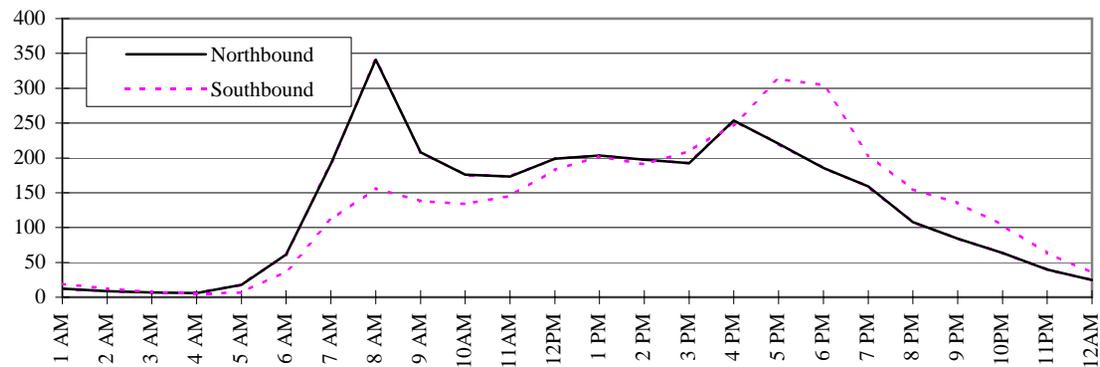
# Permanent Traffic Recorder At South Tongass Hwy (CDS Mi 3.07)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

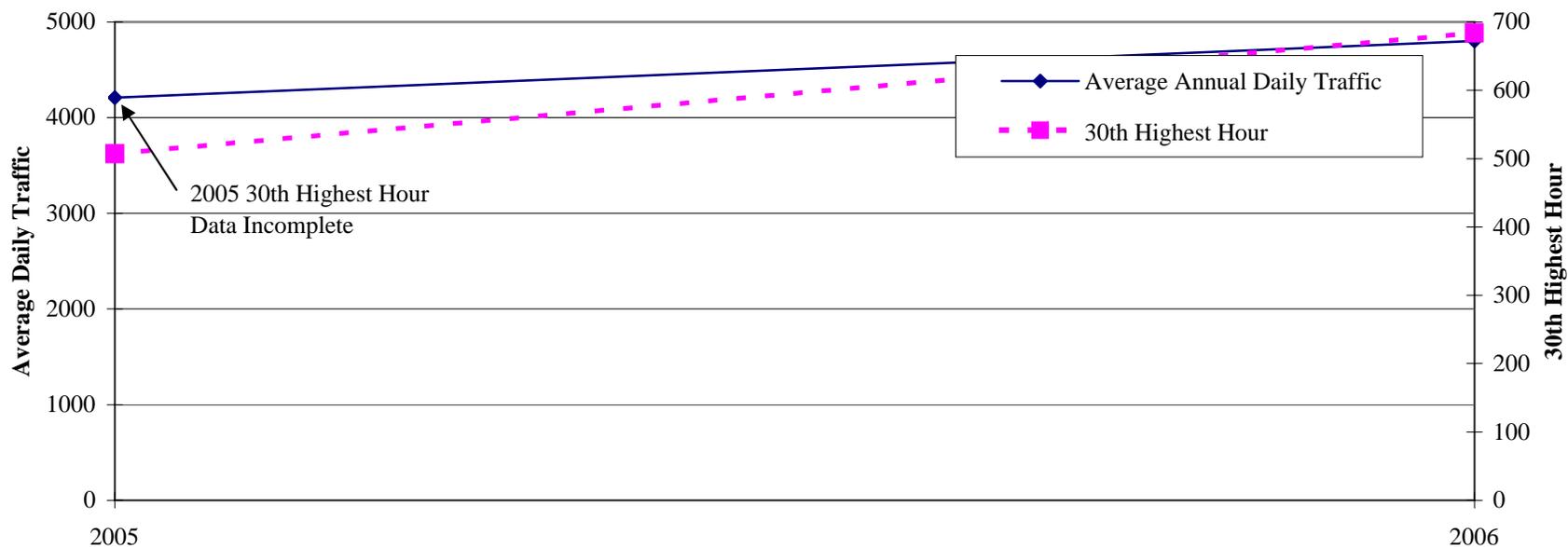
TRAFFIC STUDIES FOR ROUTES IN: Ketchikan

FIXED RECORDER SUMMARY: 2006

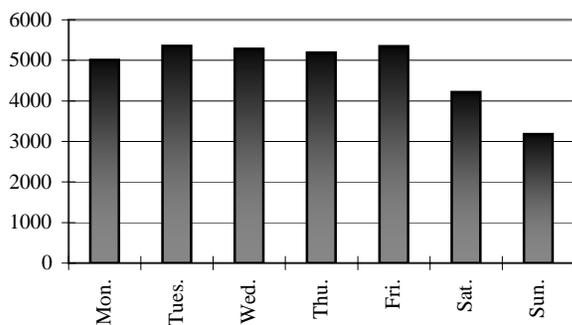
RECORDER NUMBER 60025100 9 (Combined North and South)

SOUTH TONGASS @ CEMETERY ROAD TO USCG BASE - TOTAL PTR ON 291400													AT MILEPOINT		3.070		HISTORICAL DATA						
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN											
JAN	5518	92.7	94.1	5.9	94.8	108.2	109.0	106.7	111.7	106.1	97.4	72.1											
FEB	5769	96.9	94.6	5.4	99.7	105.1	106.6	103.5	111.0	105.2	100.1	74.0											
MAR	5511	92.5	94.3	5.7	101.0	100.1	106.0	103.0	111.0	104.2	99.7	79.2											
APR	6067	101.9	94.2	5.8	103.8	105.1	103.1	102.3	108.7	104.6	97.3	79.8											
MAY	6558	110.1	93.7	6.3	98.5	101.7	105.0	101.2	113.7	104.0	99.9	80.0											
JUN	6630	111.3	92.0	8.0	102.3	102.4	103.1	105.2	109.2	104.4	93.7	84.1											
JUL	6622	111.2	92.0	8.0	103.7	103.5	102.8	103.3	109.4	104.5	96.3	81.0											
AUG	6465	108.6	93.2	6.8	102.4	103.0	104.7	106.2	108.4	104.9	95.3	80.0											
SEP	6152	103.3	93.8	6.2	99.4	106.0	106.1	105.6	110.1	105.4	96.7	76.0											
OCT	5710	95.9	94.0	6.0	103.0	105.3	102.4	104.6	109.8	105.0	98.4	76.5											
NOV	5270	88.5	94.1	5.9	107.7	110.1	106.1	96.4	108.6	105.8	96.3	74.9											
DEC	5182	87.0	92.9	7.1	97.4	106.2	107.2	103.0	111.9	105.1	96.2	78.0											
ANN	5955		93.6	6.4	101.1	104.7	105.2	103.4	110.3	104.9	97.3	78.0											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH							AVG							
7979	7814	7695	7489	7438	7422	7389	7383	7306	7287							7520							
05/12	06/30	05/26	07/03	08/03	07/28	06/09	08/04	06/02	07/11														
134.0	131.2	129.2	125.8	124.9	124.6	124.1	124.0	122.7	122.4							126.3							
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
659	642	641	639	632	629	625	623	621	621	606	599	591	588	633									
17	17	17	17	17	8	18	17	17	8	17	17	8	18										
05/01	05/12	05/10	09/14	05/31	02/21	05/12	09/11	09/27	05/16	06/06	02/21	05/18	01/25										
11.1	10.8	10.8	10.7	10.6	10.6	10.5	10.5	10.4	10.4	10.2	10.1	9.9	9.9	10.6									
<b>AM PERCENT BY HOUR PM</b>																							
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.7	0.5	0.4	0.2	0.4	1.4	4.1	6.7	5.3	5.3	5.5	6.3	6.8	6.6	6.8	7.9	8.2	7.6	5.8	4.3	3.6	2.8	1.8	1.1

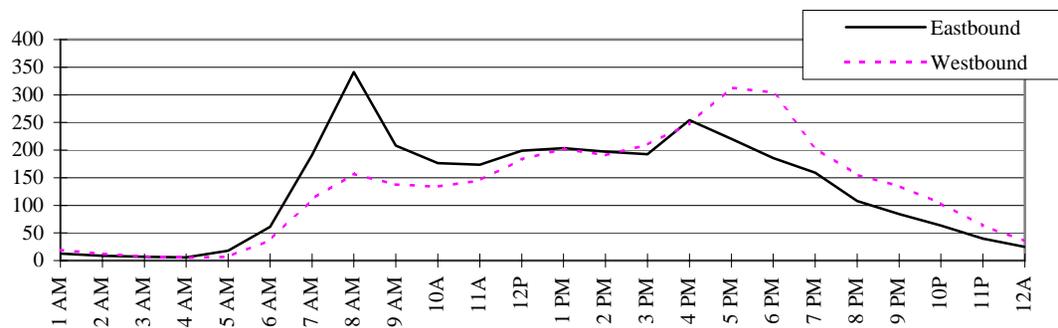
## Permanent Traffic Recorder At 3rd Avenue (CDS Mi 0.508)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**

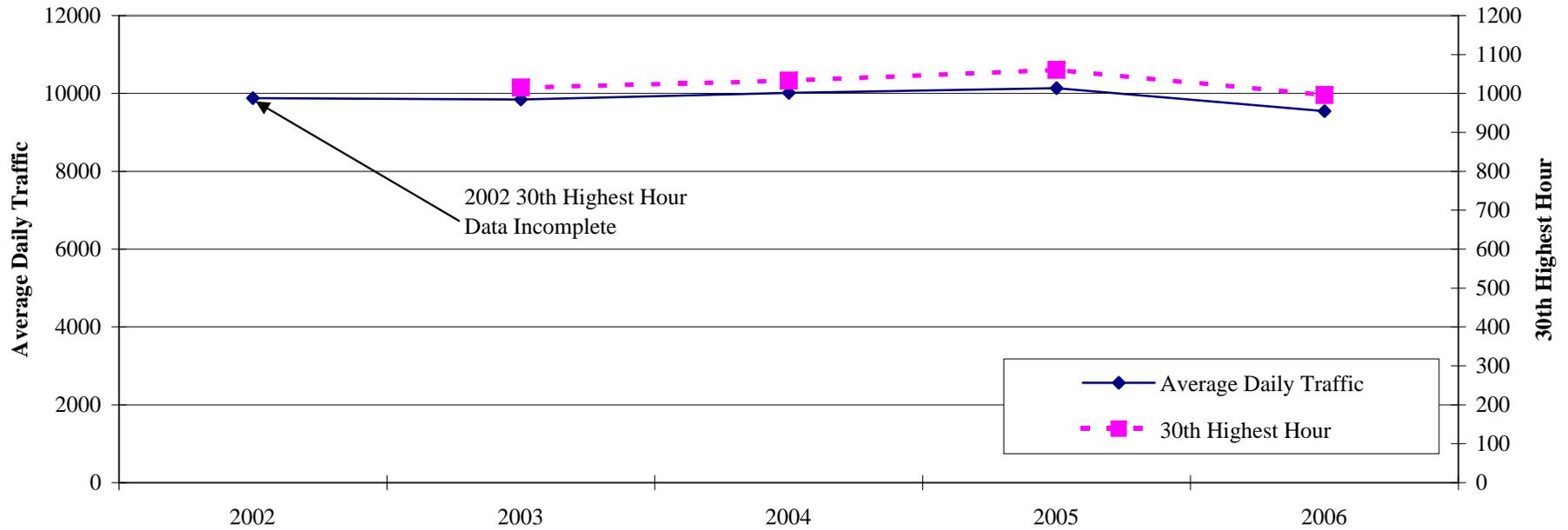


ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Ketchikan  
 FIXED RECORDER SUMMARY: 2006

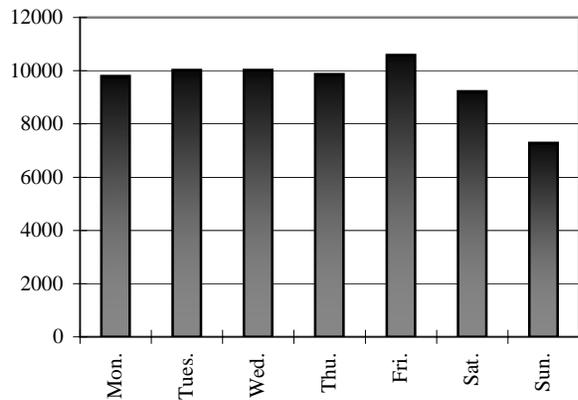
RECORDER NUMBER 60012500 0 (Combined East and West)

THIRD AVENUE EXTENSION				ON 291433										AT MILEPOINT	0.508		HISTORICAL DATA						
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN			2006	4800							
JAN	3823	79.6	94.4	5.6	89.7	113.6	114.9	117.1	112.4	109.5	87.9	64.4			2005	4208							
FEB	4214	87.8	94.9	5.1	103.2	109.6	109.1	109.0	113.5	108.9	89.4	66.2											
MAR	3770	78.5	94.3	5.7	104.4	102.0	113.5	110.1	110.8	108.2	89.2	70.0											
APR	4703	98.0	94.9	5.1	108.3	112.5	110.9	107.7	109.2	109.7	87.7	63.8											
MAY	5480	114.2	94.8	5.2	101.5	111.1	111.5	109.2	116.8	110.0	85.5	64.3											
JUN	7471	155.6	93.6	6.4	115.8	113.4	105.9	102.6	104.2	108.4	87.0	71.3											
JUL	6308	131.4	93.2	6.8	104.2	111.4	107.1	109.7	113.5	109.2	86.1	68.0											
AUG	4678	97.5	94.1	5.9	104.4	109.1	108.7	110.3	112.0	108.9	88.0	67.3											
SEP	5114	106.5	95.1	4.9	99.2	116.3	109.9	112.0	115.2	110.5	86.6	60.6											
OCT	4580	95.4	95.1	4.9	106.3	112.0	108.8	109.9	110.1	109.4	89.4	63.5											
NOV	3766	78.5	94.8	5.2	117.4	118.5	108.1	92.2	109.2	109.1	87.5	67.1											
DEC	3687	76.8	93.3	6.7	98.9	110.1	113.1	108.6	110.9	108.3	90.2	68.0											
ANN	4800		94.4	5.6	104.4	111.6	110.1	108.2	111.5	109.2	87.9	66.2											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH					AVG									
11048	10152	9048	8984	8812	8237	8222	8191	8108	8101					8890									
06/05	06/06	06/07	06/08	06/09	06/30	06/12	06/20	06/13	09/15														
230.2	211.5	188.5	187.2	183.6	171.6	171.3	170.6	168.9	168.8					185.2									
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
1134	1076	870	868	866	848	822	807	774	762	704	684	664	648	883									
17	18	13	16	17	17	18	13	16	18	15	12	18	8										
06/05	06/05	06/06	06/05	06/06	09/15	06/06	06/05	09/15	06/07	06/05	06/06	06/26	06/05										
23.6	22.4	18.1	18.1	18.0	17.7	17.1	16.8	16.1	15.9	14.7	14.3	13.8	13.5	18.4									
<b>PERCENT BY HOUR</b>																							
			AM											PM									
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.7	0.4	0.3	0.2	0.3	0.9	2.5	6.0	5.4	5.3	5.4	6.1	7.7	7.0	7.3	8.0	8.2	8.1	6.0	4.6	3.6	2.9	1.8	1.1

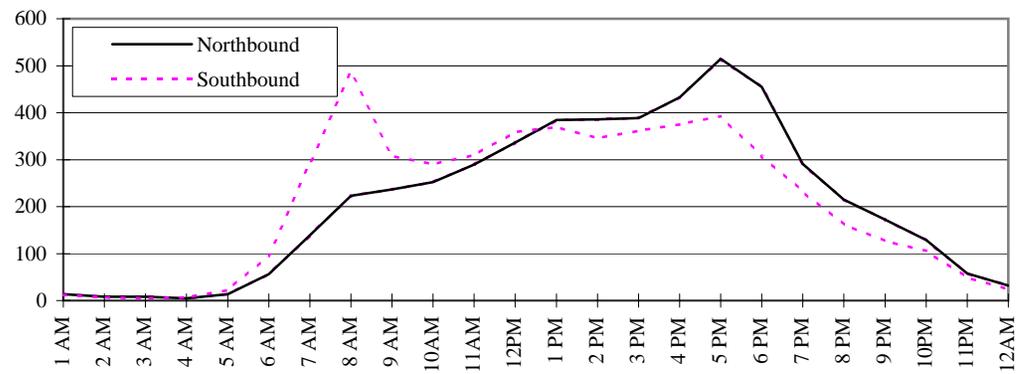
# Permanent Traffic Recorder At N. Tongass Hwy (CDS Mi 1.33)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**

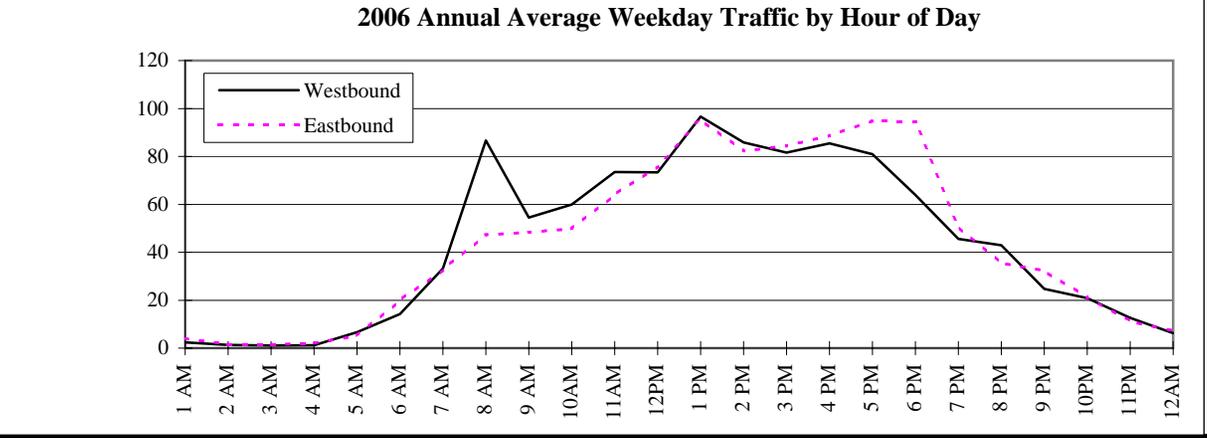
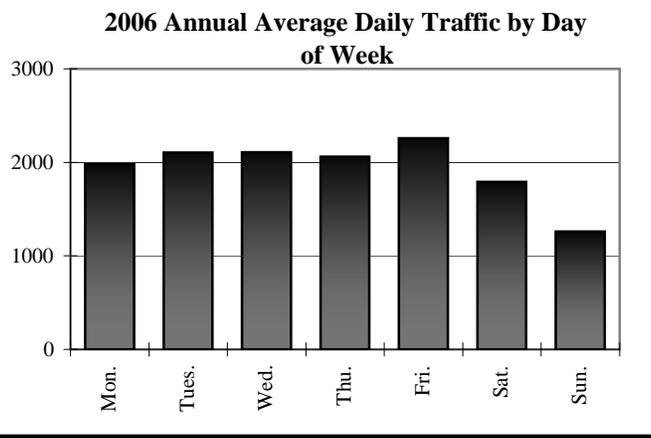
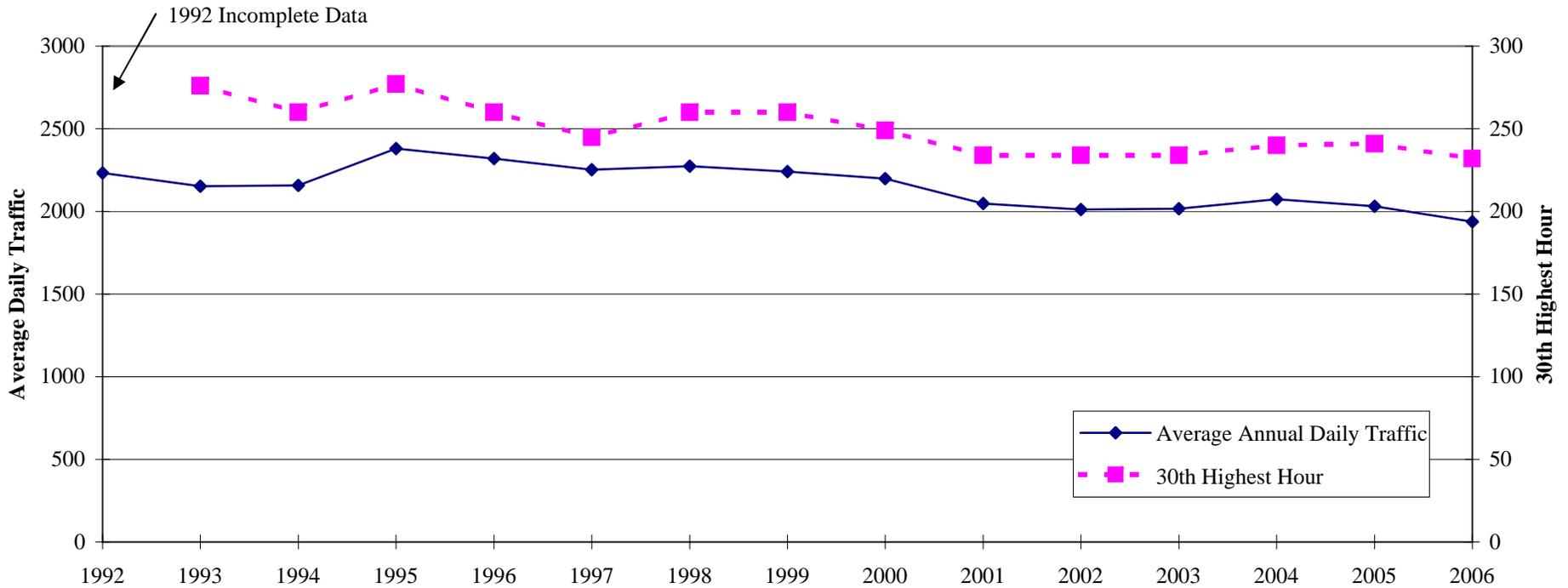


ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Ketchikan  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60087100 9 (Combined North and South)

NORTH TONGASS PTR @ ROSES CABOOSE													ON 291500		AT MILEPOINT		1.334						
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN	HISTORICAL DATA										
JAN	8662	90.7	95.8	4.2	98.8	108.3	07.4	108.0	110.9	106.7	94.8	71.9	2006 9545										
FEB	9374	98.2	96.1	3.9	102.8	104.0	105.1	104.0	111.1	105.4	99.1	73.9	2005 10135										
MAR	9158	95.9	96.0	4.0	103.5	99.6	105.1	104.1	111.8	104.8	98.5	77.4	2004 10018										
APR	10012	104.9	96.3	3.7	105.6	105.4	103.7	101.9	108.2	105.0	98.4	76.7	2003 9847										
MAY	10435	109.3	95.6	4.4	101.0	103.8	105.0	102.7	111.1	104.7	97.2	79.2	2002 9883										
JUN	10561	110.6	94.6	5.4	105.0	105.6	102.5	104.4	110.0	105.5	93.1	79.2											
JUL	10292	107.8	94.3	5.7	106.3	99.4	104.6	103.3	109.7	104.7	96.6	80.1											
AUG	10224	107.1	95.0	5.0	103.0	105.8	104.5	103.6	108.9	105.2	94.8	79.5											
SEP	9588	100.5	95.7	4.3	99.9	107.3	107.1	104.6	109.9	105.8	96.1	75.1											
OCT	9219	96.6	96.2	3.8	103.0	105.0	102.4	106.1	109.8	105.3	97.3	76.4											
NOV	8363	87.6	96.0	4.0	110.5	109.7	104.5	91.0	115.1	106.2	95.0	74.1											
DEC	8651	90.6	95.8	4.2	92.5	106.8	107.9	106.9	114.2	105.7	99.0	72.6											
ANN	9545		95.6	4.4	102.7	105.1	105.0	103.4	110.9	105.4	96.7	76.3											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG													
12573	12112	11835	11816	11595	11542	11539	11534	11512	11494	11755													
XXXXX DATE																							
131.7	126.9	124.0	123.8	121.5	120.9	120.9	120.8	120.6	120.4	123.2													
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
1082	1075	1061	1055	1053	1047	1046	1044	1042	1034	1011	996	988	979	1054									
17	17	17	17	17	17	17	17	17	17	17	17	17	17										
XXXXX DATE																							
11.3	11.3	11.1	11.1	11.0	11.0	11.0	10.9	10.9	10.8	10.6	10.4	10.4	10.3	11.0									
<b>PERCENT BY HOUR</b>																							
AM						PERCENT BY HOUR						PM											
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.4	0.2	0.2	0.1	0.3	1.3	3.6	6.0	5.1	5.6	6.3	7.3	8.0	7.7	7.8	8.0	8.5	7.3	5.2	3.8	3.0	2.4	1.2	0.6

# Permanent Traffic Recorder At Craig/Klawock/Hollis Hwy (CDS Mi 6.71)



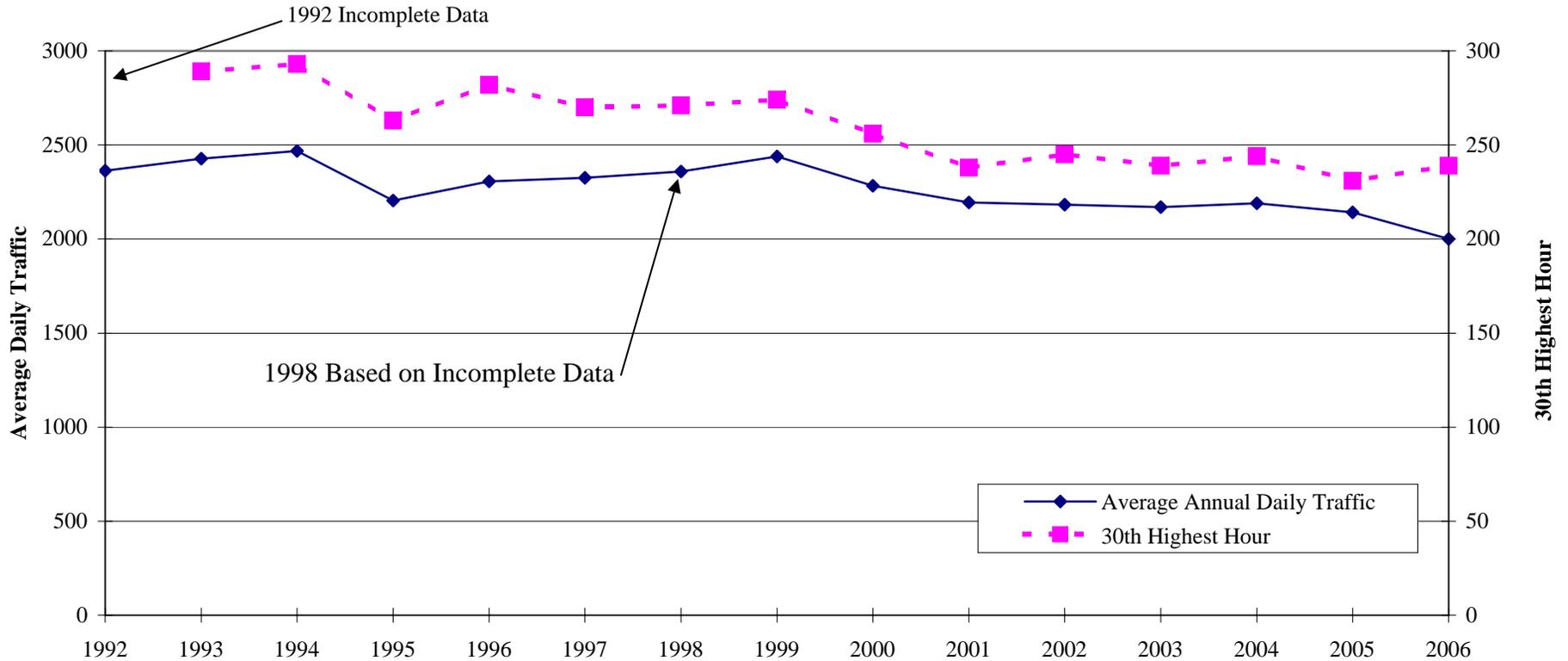
ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Prince of Wales Island (POW)

FIXED RECORDER SUMMARY: 2006

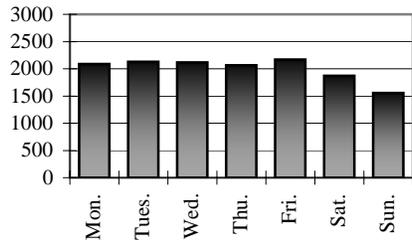
RECORDER NUMBER 60148000 0 (Combined East and West)

CRAIG/KLAWOCK/HOLLIS BTW KLAWOCK R. BR. & BAYVIEW, KLAW ON 292000													AT MILEPOINT 6.709		HISTORICAL DATA								
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN											
JAN	1689	87.2	95.6	4.4	95.0	113.1	110.2	110.4	119.4	109.6	92.6	59.3											
FEB	1737	89.7	96.0	4.0	100.1	115.2	105.1	107.9	117.2	109.1	93.1	61.2											
MAR	1821	94.0	95.6	4.4	103.7	106.9	106.9	110.2	118.7	109.3	91.3	62.2											
APR	2100	108.4	94.9	5.1	104.1	107.2	106.6	104.6	112.4	107.0	96.3	68.7											
MAY	2180	112.5	94.5	5.5	96.2	104.5	107.8	106.5	117.9	106.6	100.8	66.2											
JUN	2178	112.4	93.1	6.9	103.0	108.8	109.1	106.7	117.1	108.9	88.6	66.6											
JUL	2284	117.9	92.3	7.7	109.6	100.0	107.5	107.0	115.2	107.9	91.0	69.6											
AUG	2142	110.6	93.6	6.4	105.4	109.5	107.8	106.4	115.3	108.9	88.2	67.6											
SEP	1982	102.3	95.1	4.9	97.5	105.9	109.6	107.8	120.6	108.3	92.6	65.9											
OCT	1920	99.1	95.7	4.3	104.4	107.5	106.5	107.0	115.8	108.2	92.5	66.3											
NOV	1614	83.3	95.2	4.8	109.1	111.2	114.0	96.2	113.5	108.8	92.6	63.6											
DEC	1594	82.3	95.3	4.7	97.8	113.3	115.3	105.4	115.8	109.5	89.8	62.4											
ANN	1937		94.7	5.3	102.2	108.6	108.9	106.3	116.6	108.5	92.5	65.0											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH						AVG								
2759	2755	2735	2623	2619	2612	2602	2592	2578	2568						2644								
07/03	06/30	07/14	07/07	05/26	05/05	06/23	07/28	07/21	07/05														
142.4	142.2	141.2	135.4	135.2	134.8	134.3	133.8	133.1	132.6						136.5								
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
255	255	252	252	250	247	247	246	245	245	238	232	227	225	249									
13	13	13	17	13	13	15	13	13	17	13	18	17	16										
07/05	06/23	06/26	04/28	08/18	08/25	07/03	07/28	07/07	05/26	08/22	05/05	07/05	04/25										
13.2	13.2	13.0	13.0	12.9	12.8	12.8	12.7	12.6	12.6	12.3	12.0	11.7	11.6	12.9									
<b>PERCENT BY HOUR</b>																							
					<b>AM</b>					<b>PM</b>													
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.5	0.3	0.2	0.2	0.6	1.6	3.0	5.6	4.7	5.3	6.5	7.2	9.0	8.2	8.1	8.2	8.1	7.3	4.7	3.9	2.9	2.1	1.3	0.8

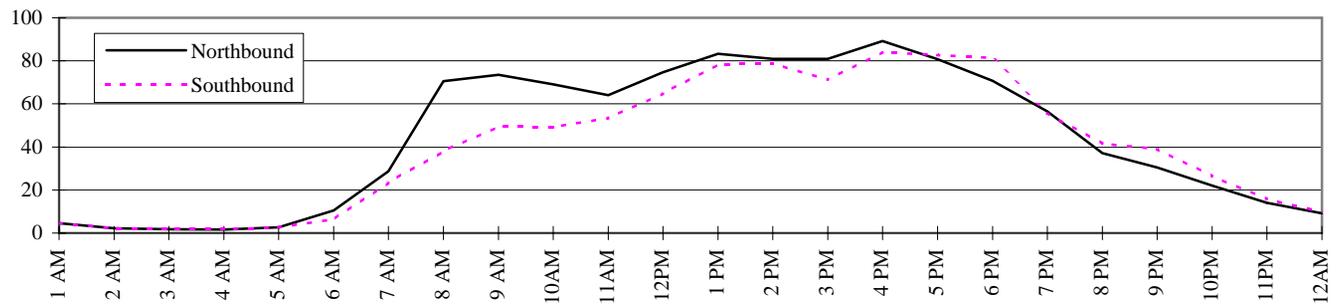
# Permanent Traffic Recorder At Zimovia Hwy (CDS Mi 0.71)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Wrangell  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60169159 9 (Combined North and South)

ZIMOVIA HWY BTW BENNET & CASE WRANGELL ON 293300 AT MILEPOINT 0.707

MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN	HISTORICAL DATA	
JAN	1603	80.2	95.6	4.4	104.1	117.1	115.5	105.8	89.1	106.3	88.7	79.3	2006	2000
FEB	1724	86.2	95.4	4.6	100.8	108.4	101.7	111.4	106.6	105.8	97.7	73.2	2005	2142
MAR	1869	93.5	95.9	4.1	103.5	105.8	104.5	105.4	111.5	106.1	92.8	76.4	2004	2190
APR	2101	105.1	95.3	4.7	111.6	106.1	102.9	99.5	108.5	105.7	94.6	76.8	2003	2170
MAY	2288	114.4	95.0	5.0	101.9	102.2	104.0	102.1	114.1	104.9	96.9	78.7	2002	2182
JUN	2520	126.0	93.6	6.4	107.6	105.0	100.8	100.1	109.9	104.7	95.6	81.0	2001	2194
JUL	2328	116.4	93.0	7.0	107.6	97.0	106.9	99.8	110.8	104.4	95.7	82.2	2000	2283
AUG	2178	108.9	94.9	5.1	104.4	105.7	104.7	103.5	109.9	105.6	92.5	79.4	1999	2439
SEP	2012	100.6	96.1	3.9	98.9	104.8	107.9	105.8	114.1	106.3	96.4	72.1	1998	2359
OCT	1946	97.3	95.9	4.1	103.1	108.6	102.2	103.9	109.1	105.4	92.2	80.9	1997	2326
NOV	1703	85.2	95.5	4.5	110.5	109.2	109.4	97.8	107.9	107.0	89.7	75.3	1996	2306
DEC	1730	86.5	94.4	5.6	97.4	106.3	110.5	103.6	111.5	105.9	92.1	78.6	1995	2204
ANN	2000		95.1	5.0	104.3	106.4	105.9	103.2	108.6	105.7	93.7	77.8	1994	2468
													1993	2428

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
3645	3586	3126	3107	2948	2831	2792	2791	2772	2766	3036
06/12	06/09	06/10	06/13	07/03	06/30	04/03	05/26	05/15	06/08	
182.3	179.3	156.3	155.4	147.4	141.6	139.6	139.6	138.6	138.3	151.8

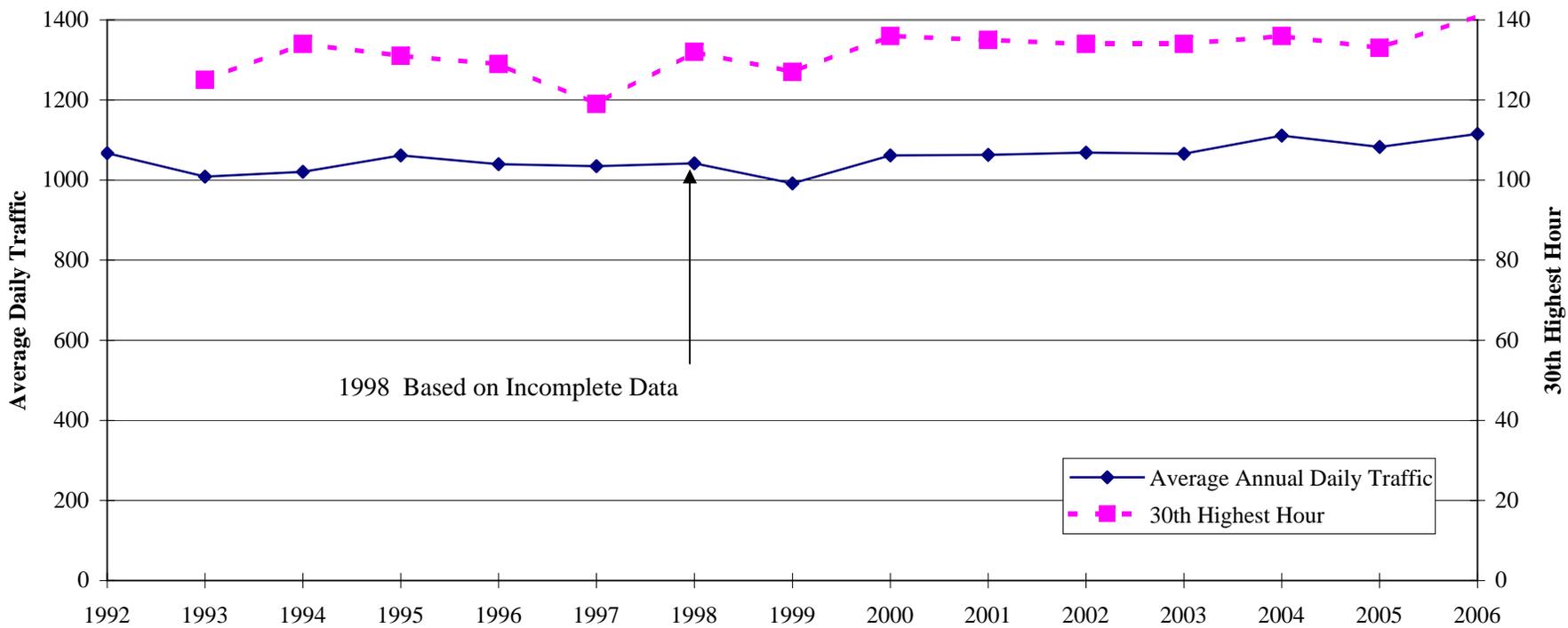
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
327	323	321	310	302	295	294	293	288	286	252	239	230	229	304
17	17	16	15	14	18	13	13	16	15	18	14	17	17	
06/12	06/09	06/09	06/09	06/09	06/09	06/12	06/10	04/03	06/12	05/15	06/13	06/30	05/15	
16.4	16.2	16.1	15.5	15.1	14.8	14.7	14.7	14.4	14.3	12.6	12.0	11.5	11.5	15.2

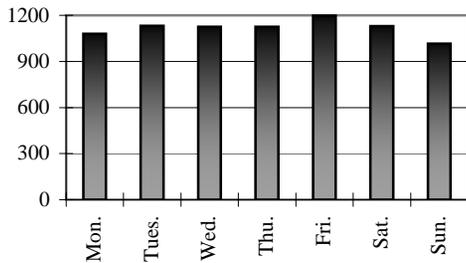
AM PERCENT BY HOUR PM

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.6	0.3	0.2	0.2	0.3	0.8	2.3	4.6	5.6	6.0	6.1	7.0	8.2	8.1	7.7	8.4	7.9	7.3	5.7	4.0	3.5	2.6	1.6	1.0

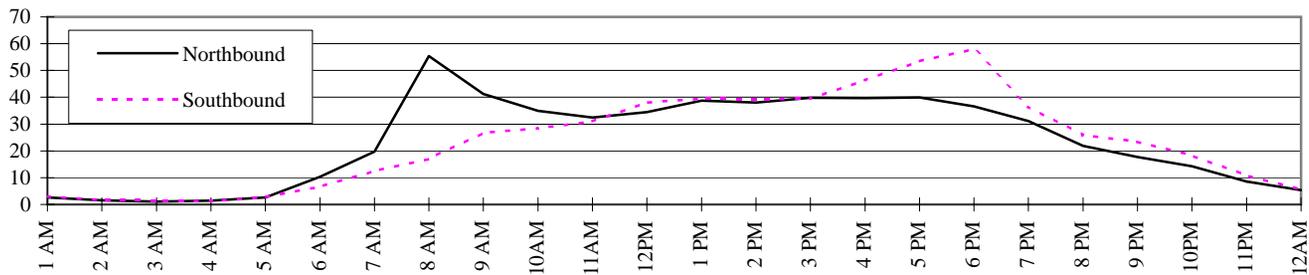
# Permanent Traffic Recorder At Mitkof Hwy (CDS Mi 2.55)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Petersburg  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60202000 9 (Combined North and South)

MITKOF HWY, S JCT SCOW BAY LOOP - USFS WAREHOUSE, PETER ON 294000													AT MILEPOINT 2.550		HISTORICAL DATA	
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN				
JAN	834	74.8	94.4	5.6	96.7	98.8	104.7	101.3	108.0	101.9	98.8	91.3			2006	1115
FEB	857	76.9	95.1	4.9	99.6	103.7	101.4	100.6	103.3	101.7	100.9	90.2			2005	1083
MAR	935	83.9	94.8	5.2	95.6	97.5	99.0	102.1	107.4	100.3	103.0	95.6			2004	1111
APR	1122	100.6	95.1	4.9	98.2	103.5	105.0	98.6	104.1	101.9	94.8	95.9			2003	1066
MAY	1412	126.6	93.4	6.6	93.8	101.4	101.1	100.2	107.3	100.8	102.6	93.4			2002	1069
JUN	1581	141.8	92.0	8.0	101.3	101.5	98.9	101.6	108.4	102.3	100.0	88.1			2001	1063
JUL	1408	126.3	91.7	8.3	101.1	100.4	102.1	97.5	110.3	102.3	103.2	85.2			2000	1062
AUG	1319	118.3	92.9	7.1	96.1	104.3	99.4	100.8	108.2	101.8	101.7	89.7			1999	992
SEP	1201	107.7	95.0	5.0	94.0	102.9	99.7	104.0	108.8	101.9	101.1	89.8			1998	1042
OCT	1114	99.9	95.5	4.5	96.7	102.8	92.5	101.4	104.5	99.6	103.7	98.3			1997	1035
NOV	800	71.7	95.0	5.0	97.5	96.2	99.0	100.3	113.8	101.4	108.9	84.4			1996	1040
DEC	802	71.9	94.2	5.8	90.6	104.8	107.7	103.6	105.8	102.5	97.1	90.4			1995	1062
ANN	1115		94.1	5.9	96.8	101.5	100.9	101.0	107.5	101.5	101.3	91.0			1994	1021
															1993	1009

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
2051	1908	1892	1847	1833	1738	1712	1703	1701	1674	1806
06/09	06/10	06/12	06/30	06/13	06/07	05/24	05/13	06/08	05/12	
183.9	171.1	169.7	165.7	164.4	155.9	153.5	152.7	152.6	150.1	162.0

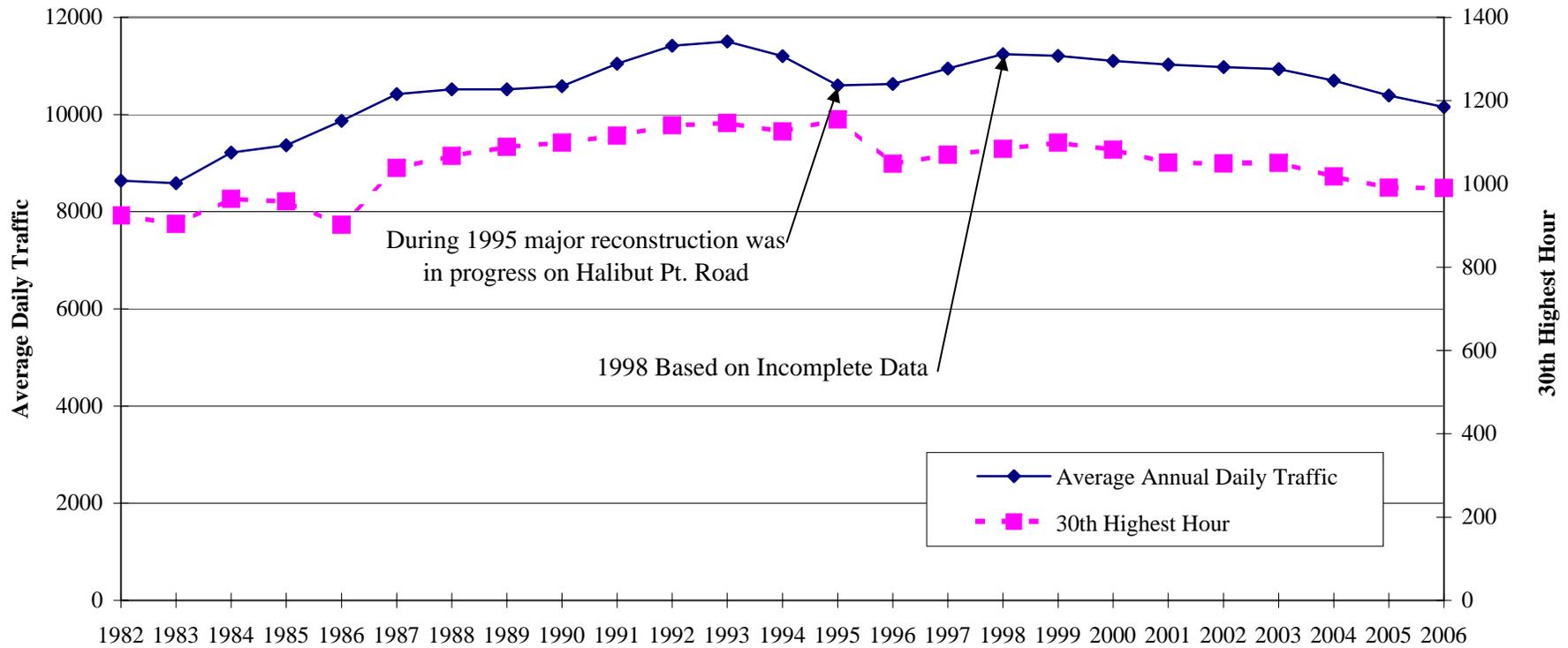
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
163	161	160	155	155	153	151	151	150	149	143	141	139	137	155
17	17	18	18	15	17	18	15	18	18	18	17	18	17	
06/07	06/12	06/09	06/30	06/10	06/09	06/13	06/09	05/24	07/11	08/03	05/17	05/18	05/12	
14.6	14.4	14.3	13.9	13.9	13.7	13.5	13.5	13.5	13.4	12.8	12.6	12.5	12.3	13.9

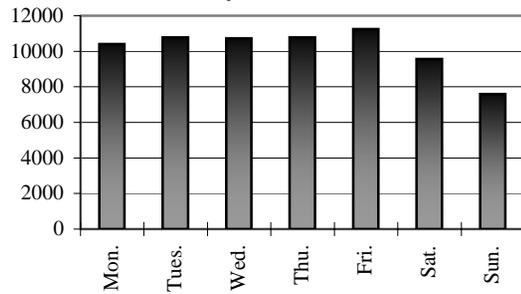
AM PERCENT BY HOUR PM

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.6	0.4	0.3	0.3	0.5	1.3	2.6	5.3	5.4	5.6	5.9	6.6	7.3	7.4	7.4	7.8	8.1	7.9	5.8	4.2	3.6	2.9	1.7	1.1

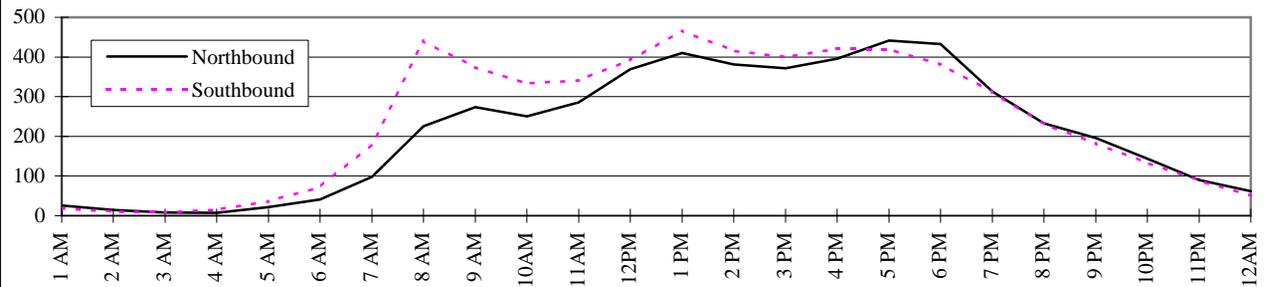
# Permanent Traffic Recorder At 1 Mi. Halibut Pt. Road (CDS MP 0.53)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Sitka  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60561000 9 (Combined North and South)

HALIBUT PT RD BTW KATLIAN & MARINE ST, SITKA													ON 295400	AT MILEPOINT	0.533	HISTORICAL DATA	
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN					
JAN	9026	88.9	94.4	5.6	102.2	107.4	108.8	110.6	112.2	108.2	89.7	69.0					
FEB	9522	93.8	94.8	5.2	101.8	109.2	107.5	107.4	111.4	107.5	94.5	68.2					
MAR	10130	99.7	94.9	5.1	103.0	104.5	104.9	107.0	112.0	106.3	93.5	75.1					
APR	10765	106.0	94.7	5.3	105.3	105.3	104.3	104.4	111.7	106.2	97.0	71.9					
MAY	11193	110.2	94.1	5.9	100.6	105.0	104.0	106.9	111.3	105.6	94.8	77.4					
JUN	11429	112.5	93.1	6.9	105.1	106.8	104.4	106.8	107.4	106.1	92.2	77.2					
JUL	11017	108.5	92.6	7.4	106.3	99.6	104.9	105.2	110.0	105.2	95.0	79.1					
AUG	10824	106.6	93.7	6.3	104.7	105.3	104.4	105.8	109.0	105.8	93.5	77.4					
SEP	10205	100.5	94.7	5.3	99.0	106.8	105.9	106.3	112.8	106.2	95.3	73.8					
OCT	9954	98.0	95.0	5.0	103.6	108.1	102.3	108.2	109.6	106.4	92.9	75.4					
NOV	8875	87.4	94.6	5.4	104.4	107.8	106.1	98.3	111.2	105.6	97.0	75.2					
DEC	8936	88.0	94.2	5.8	93.7	106.8	109.3	107.0	111.1	105.6	94.4	77.5					
ANN	10156		94.2	5.8	102.5	106.1	105.6	106.2	110.8	106.2	94.2	74.8					

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
13305	12685	12578	12574	12561	12546	12540	12470	12423	12416	12610
05/26	06/09	05/12	06/30	06/08	05/19	04/14	06/27	06/16	05/25	
131.0	124.9	123.8	123.8	123.7	123.5	123.5	122.8	122.3	122.3	124.2

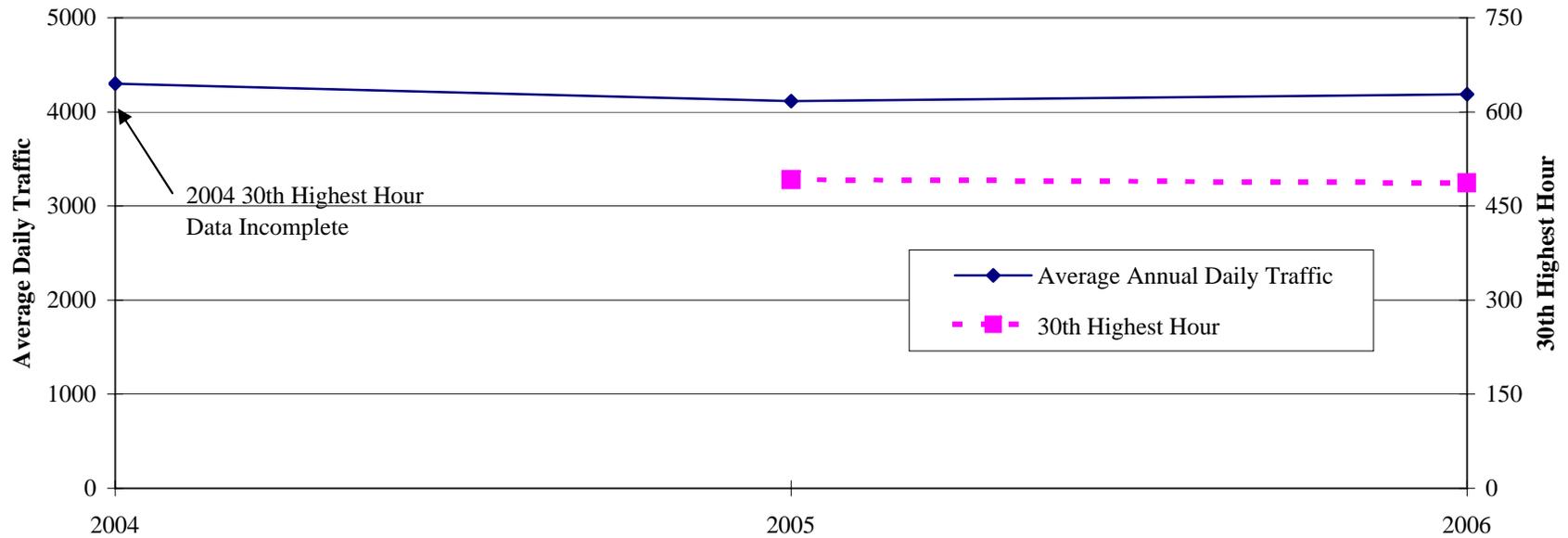
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
1057	1053	1046	1036	1019	1017	1015	1011	1011	1011	1000	990	981	971	1028
14	13	13	13	13	13	17	13	13	17	17	17	13	18	
05/26	08/21	05/26	04/14	06/12	10/18	06/08	07/10	06/19	06/13	05/17	06/07	04/21	08/03	
10.4	10.4	10.3	10.2	10.0	10.0	10.0	10.0	10.0	10.0	9.8	9.7	9.7	9.6	10.1

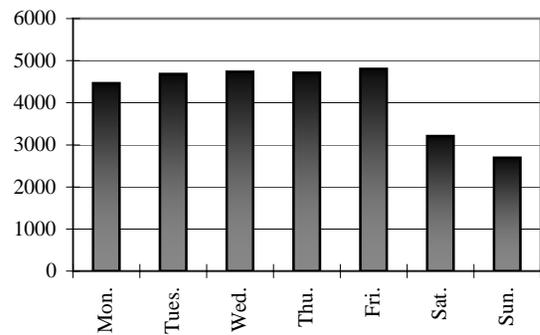
AM PERCENT BY HOUR PM

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.5	0.3	0.2	0.2	0.6	1.0	2.3	5.3	5.5	5.5	6.1	7.1	8.3	7.7	7.4	7.6	7.8	7.3	5.8	4.4	3.5	2.7	1.8	1.1

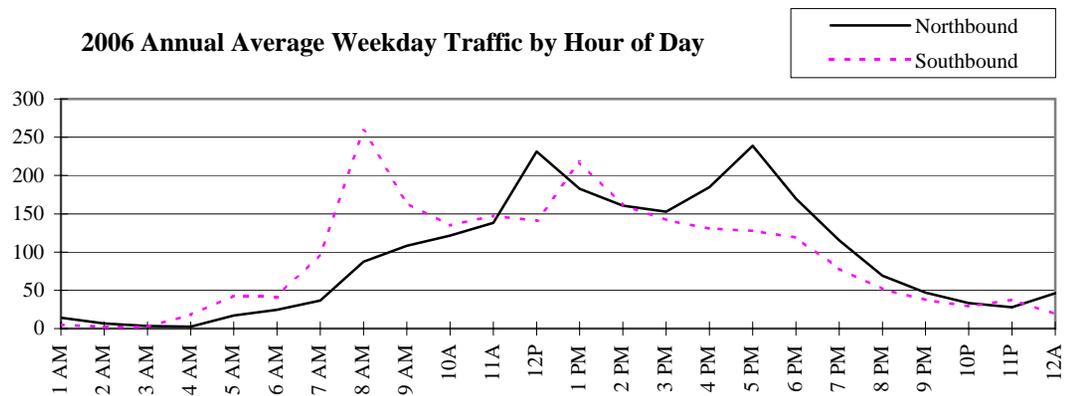
# Permanent Traffic Recorder At Harbor Drive (CDS Mi 0.75)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Sitka  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60568000 9 (Combined North and South)

HARBOR DRIVE BTW SEWARD AVE & TONGASS DR	**PTR**	TOTAL ON											AT MILEPOINT	0.750		HISTORICAL DATA		
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN						
JAN	3669	87.6	92.5	7.5	100.1	116.3	120.1	118.4	117.3	114.4	70.2	57.6					2006	4187
FEB	3813	91.1	92.9	7.1	109.0	117.6	116.8	110.7	116.2	114.1	72.8	56.8					2005	4114
MAR	4197	100.2	93.0	7.0	108.4	110.9	111.5	115.2	112.9	111.8	74.8	66.3					2004	4301
APR	4304	102.8	93.1	6.9	106.9	110.4	113.1	113.4	116.4	112.0	79.8	60.0						
MAY	4523	108.0	92.3	7.7	102.3	110.5	112.4	113.2	115.8	110.8	81.8	63.8						
JUN	4475	106.9	91.0	9.0	106.0	104.8	107.8	112.9	113.1	108.9	81.4	73.9						
JUL	4427	105.7	90.8	9.2	112.3	97.6	111.0	104.0	115.8	108.1	84.5	74.7						
AUG	4843	115.7	92.2	7.8	110.0	110.1	111.3	112.5	109.5	110.7	78.1	68.6						
SEP	4317	103.1	92.8	7.2	101.4	115.2	115.8	114.8	118.6	113.2	72.7	61.6						
OCT	4150	99.1	92.9	7.1	108.7	112.9	102.9	114.3	113.8	110.5	80.9	66.5						
NOV	3801	90.8	92.3	7.7	117.3	118.7	114.8	103.9	111.0	113.1	70.6	63.7						
DEC	3724	88.9	92.5	7.5	97.6	117.3	119.4	116.6	116.6	113.5	72.7	59.7						
ANN	4187		92.4	7.6	106.7	111.9	113.1	112.5	114.8	111.8	76.7	64.4						

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
5766	5728	5718	5579	5562	5560	5558	5537	5524	5522	5605
08/09	05/26	08/03	07/19	07/28	07/14	08/14	06/27	06/07	08/04	
137.7	136.8	136.6	133.2	132.8	132.8	132.7	132.2	131.9	131.9	133.9

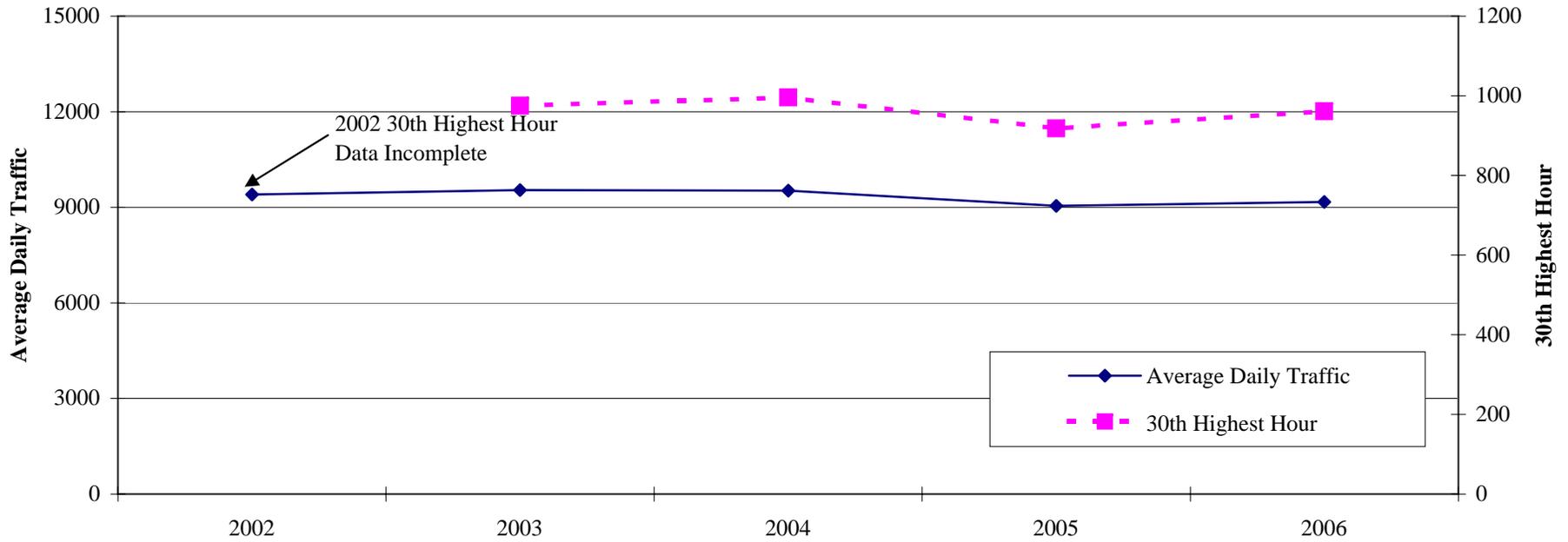
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
566	545	532	523	522	521	520	520	516	516	499	487	482	475	528
13	13	13	13	13	13	13	13	13	13	13	13	8	12	
08/31	09/05	08/22	08/29	08/07	06/29	10/04	08/03	08/10	07/31	06/08	08/11	09/07	10/03	
13.5	13.0	12.7	12.5	12.5	12.4	12.4	12.4	12.3	12.3	11.9	11.6	11.5	11.3	12.6

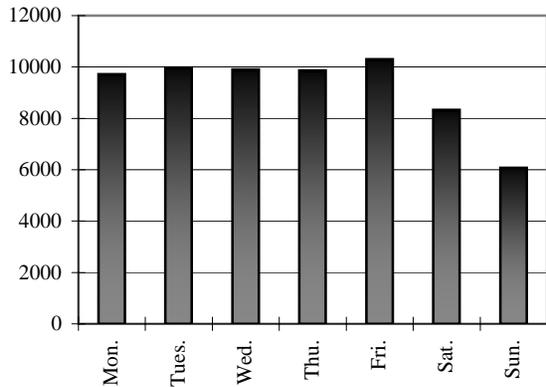
AM PERCENT BY HOUR PM

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.5	0.3	0.2	0.5	1.5	1.5	2.8	6.9	5.9	5.9	6.7	8.3	8.9	7.4	6.7	7.0	7.9	6.6	4.7	2.9	2.0	1.5	1.7	1.6

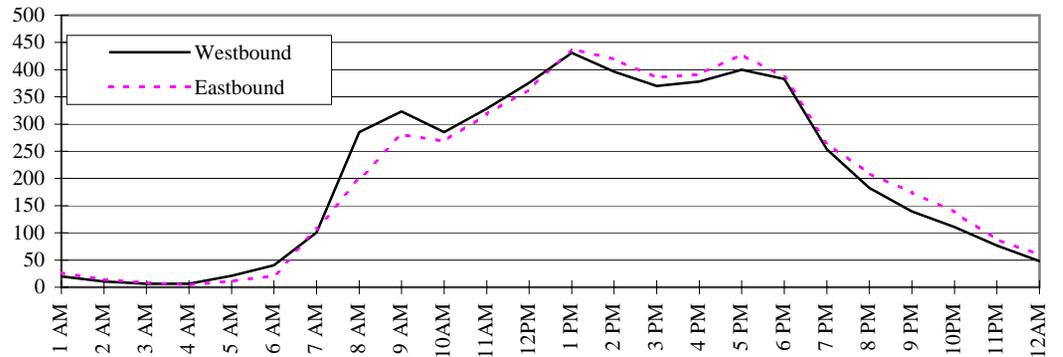
# Permanent Traffic Recorder At Sawmill Creek Rd (CDS Mi 0.73)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**

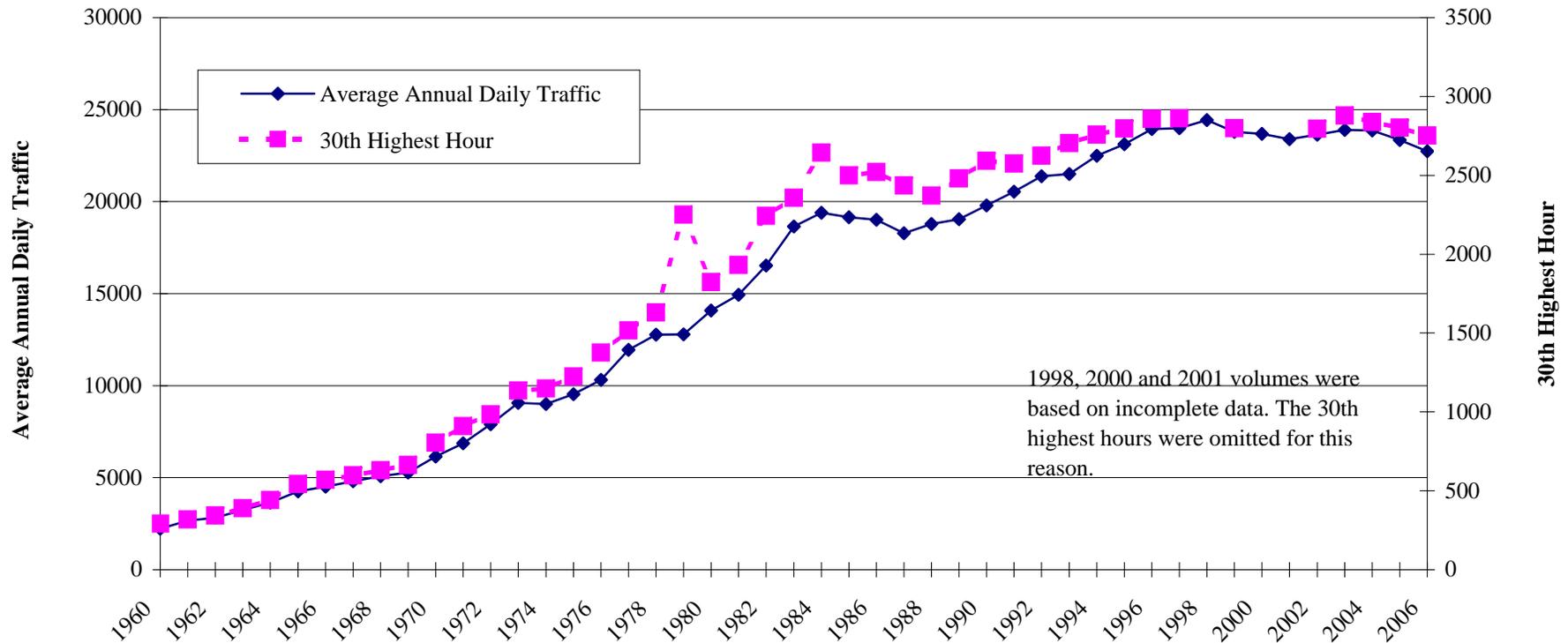


ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Sitka  
 FIXED RECORDER SUMMARY: 2006

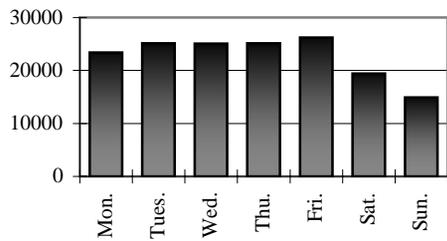
RECORDER NUMBER 60053100 0 (Combined East and West)

SAWMILL CREEK RD @ INDIAN RIVER BRIDGE PTR - TOTAL													SI ON 295500		AT MILEPOINT		0.730		HISTORICAL DATA				
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN											
JAN	8038	87.7	94.6	5.4	102.9	110.8	110.8	110.8	114.9	110.0	88.9	60.9			2006	9168							
FEB	8471	92.4	95.1	4.9	104.5	112.5	108.5	108.4	113.2	109.4	91.7	61.2			2005	9049							
MAR	9018	98.4	95.3	4.7	109.4	108.4	107.0	107.9	111.1	108.8	89.7	66.5			2004	9525							
APR	9759	106.4	95.1	4.9	109.8	107.3	106.4	105.1	114.4	108.6	92.4	64.8			2003	9543							
MAY	10081	110.0	94.4	5.6	103.0	109.3	106.9	108.4	112.2	108.0	92.1	68.1			2002	9398							
JUN	10286	112.2	93.4	6.6	108.7	107.9	106.2	108.3	109.8	108.2	90.4	68.8											
JUL	9787	106.8	92.8	7.2	110.1	98.8	109.3	109.3	112.4	108.0	89.9	70.1											
AUG	9740	106.2	94.0	6.0	107.6	108.3	108.6	107.5	109.6	108.3	90.5	67.8											
SEP	9295	101.4	94.8	5.2	99.0	111.1	110.8	107.7	113.4	108.4	92.1	66.0											
OCT	9098	99.2	95.1	4.9	107.0	110.7	102.3	109.7	111.8	108.3	90.2	68.3											
NOV	8155	89.0	94.8	5.2	110.4	110.0	108.0	99.2	113.0	108.1	93.3	66.0											
DEC	8285	90.4	94.3	5.7	99.2	110.3	112.1	109.5	112.6	108.7	88.9	67.3											
ANN	9168		94.5	5.5	106.0	108.8	108.1	107.7	112.4	108.6	90.8	66.3											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH					AVG									
11928	11809	11653	11628	11521	11470	11467	11385	11358	11357					11558									
05/30	05/26	06/09	04/28	05/15	05/25	06/08	06/30	06/16	05/12														
130.1	128.8	127.1	126.8	125.7	125.1	125.1	124.2	123.9	123.9					126.1									
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
1026	1013	1010	1009	1008	1004	1002	993	992	991	971	961	953	945	1005									
13	13	13	13	17	13	17	13	17	17	13	13	14	13										
12/11	06/12	06/27	05/30	05/30	06/01	06/09	08/14	05/31	06/08	09/11	05/22	05/26	04/21										
11.2	11.0	11.0	11.0	11.0	11.0	10.9	10.8	10.8	10.8	10.6	10.5	10.4	10.3	11.0									
<b>AM PERCENT BY HOUR PM</b>																							
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.7	0.4	0.3	0.2	0.4	0.6	1.8	4.2	5.5	5.5	6.6	7.5	8.7	8.3	7.8	7.8	8.1	7.4	5.3	4.1	3.3	2.6	1.8	1.2

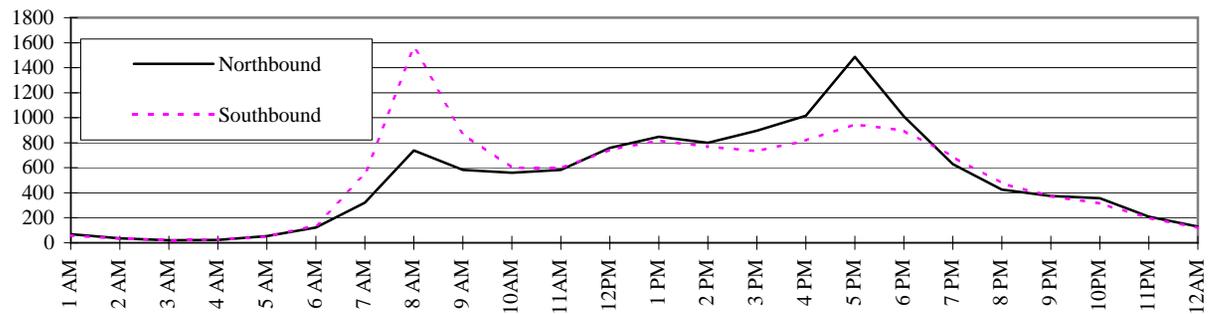
# Permanent Traffic Recorder At 3 Mi. Egan Dr. (CDS MP 2.58)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



TRAFFIC STUDIES FOR ROUTES IN: Juneau

FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60333000 9 (Combined North and South)

EGAN BTW TWIN LKS DR & GLACIER AVE @ 3 MILEPOST EGAN ON 296000 AT MILEPOINT 2.579													HISTORICAL DATA	
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN		
JAN	20567	90.4	93.7	6.3	95.5	111.8	112.9	113.8	121.3	111.1	83.8	60.9	2006	22744
FEB	21771	95.7	94.2	5.8	100.9	112.5	110.4	112.3	117.5	110.7	85.7	60.8	2005	23341
MAR	22234	97.8	94.0	6.0	102.0	109.1	110.7	111.6	116.3	109.9	86.1	64.2	2004	23863
APR	23684	104.1	94.0	6.0	106.1	109.3	110.0	110.1	116.6	110.4	85.1	62.9	2003	23902
MAY	24702	108.6	94.0	6.0	101.4	110.6	111.9	107.6	114.7	109.2	85.5	68.3	2002	23637
JUN	25830	113.6	93.0	7.0	105.3	108.2	108.0	111.5	112.2	109.0	85.1	69.7	2001	23514
JUL	24897	109.5	92.1	7.9	108.6	106.9	110.5	108.9	109.8	108.9	84.8	70.5	2000	23681
AUG	24640	108.3	93.5	6.5	107.7	110.9	110.1	109.6	111.2	109.9	82.0	68.5	1999	23785
SEP	23660	104.0	93.9	6.1	98.3	112.0	110.8	112.3	115.4	109.8	85.3	65.9	1998	24433
OCT	21816	95.9	94.0	6.0	106.7	112.1	105.3	110.7	114.7	109.9	85.9	64.5	1997	23992
NOV	19199	84.4	93.8	6.2	107.3	111.4	108.3	103.7	114.3	109.0	90.3	64.7	1996	23947
DEC	19924	87.6	93.0	7.0	94.1	109.9	115.0	113.5	118.5	110.2	83.6	65.3	1995	23124
ANN	22744		93.6	6.4	102.8	110.4	110.3	110.5	115.2	109.8	85.3	65.5	1994	22496

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
32110	30984	30238	30171	29377	29147	29129	28896	28869	28569	29749
06/01	05/31	06/02	05/30	06/30	05/26	07/03	05/12	06/29	05/24	
141.2	136.2	132.9	132.7	129.2	128.2	128.1	127.0	126.9	125.6	130.8

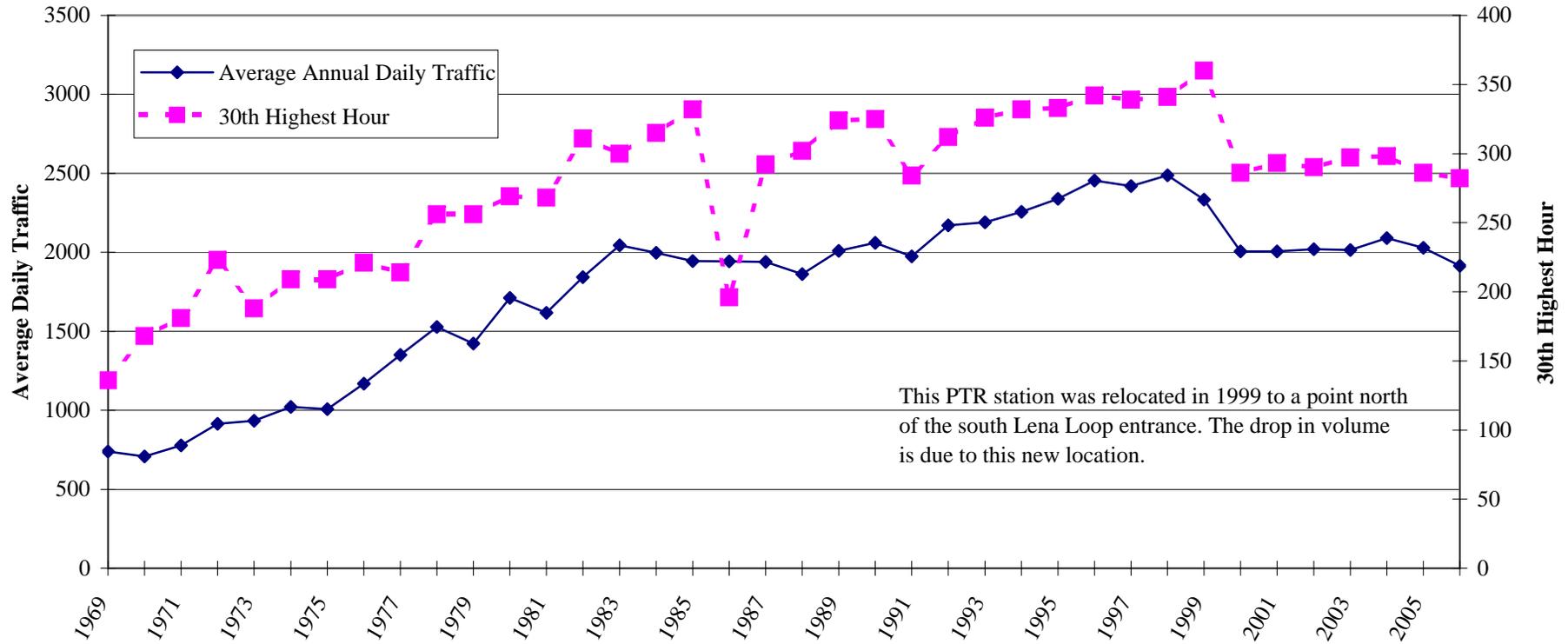
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
2931	2904	2895	2864	2847	2846	2845	2841	2831	2830	2791	2752	2738	2727	2863
17	17	8	17	17	8	17	17	8	8	17	8	17	17	
05/31	06/26	06/01	06/07	06/21	08/23	06/20	06/01	08/24	05/30	05/24	09/07	06/30	08/01	
12.9	12.8	12.7	12.6	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.1	12.0	12.0	12.6

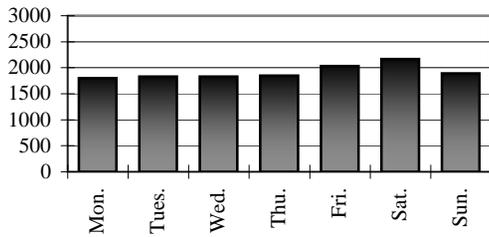
AM PERCENT BY HOUR PM

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.8	0.5	0.3	0.3	0.4	1.0	3.0	7.8	5.4	4.8	5.1	6.3	7.1	6.8	6.9	7.6	9.4	7.6	5.6	3.9	3.2	3.0	1.9	1.2

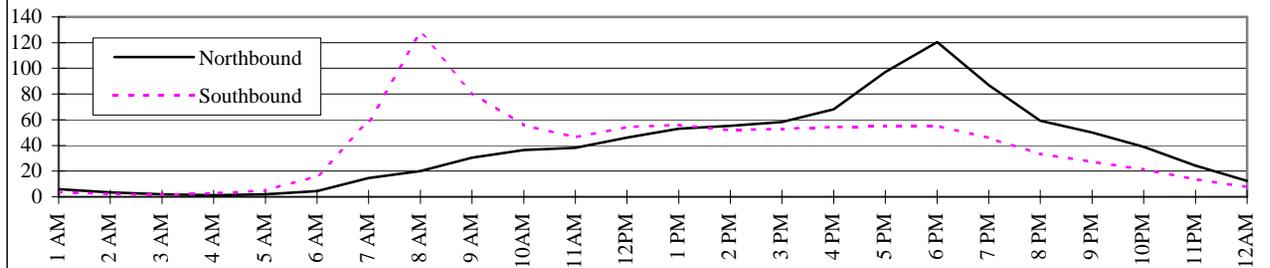
# Permanent Traffic Recorder At 16 Mile Glacier Hwy. (CDS MP 14.07)



2006 Annual Average Daily Traffic by Day of Week



2006 Annual Average Weekday Traffic by Hour of Day



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Juneau  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60311000 9 (Combined North and South)

AT MILEPOINT 14.072

MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN	HISTORICAL DATA	
JAN	1485	77.6	93.8	6.2	97.6	99.6	98.8	99.2	108.5	100.7	107.2	89.1	2006	1914
FEB	1575	82.3	94.8	5.2	94.3	100.4	96.8	99.4	104.9	99.2	113.0	91.2	2005	2028
MAR	1692	88.4	95.0	5.0	94.1	95.0	95.6	103.0	109.7	99.5	108.1	94.6	2004	2089
APR	1988	103.9	94.5	5.5	89.6	92.6	92.9	94.3	110.7	96.0	121.7	98.2	2003	2015
MAY	2411	126.0	93.5	6.5	96.2	86.7	89.1	90.1	108.8	94.2	126.2	102.7	2002	2019
JUN	2453	128.2	92.4	7.6	90.2	92.1	94.8	96.5	107.5	96.2	116.4	102.3	2001	2007
JUL	2547	133.1	92.4	7.6	94.0	96.3	95.7	89.2	99.6	95.0	117.9	107.1	2000	2005
AUG	2233	116.7	93.9	6.1	105.9	93.4	93.3	92.8	100.6	97.2	109.3	104.6	1999	2333
SEP	2075	108.4	94.5	5.5	91.0	90.0	93.3	94.4	104.7	94.7	120.3	106.2	1998	2487
OCT	1750	91.4	94.6	5.4	92.7	97.1	94.2	95.2	101.7	96.2	110.1	109.0	1997	2419
NOV	1377	71.9	94.2	5.8	91.4	97.0	99.0	99.2	110.2	99.4	110.5	92.8	1996	2454
DEC	1380	72.1	92.9	7.1	93.1	105.8	104.9	104.3	105.7	102.8	96.1	90.0	1995	2339
ANN	1914		93.9	6.1	94.2	95.5	95.7	96.5	106.1	97.6	113.1	99.0	1994	2256

**HIGHEST DAYS**

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
3844	3831	3734	3535	3455	3451	3224	3156	3139	3107	3448
06/10	07/02	07/29	06/11	05/20	05/27	05/26	09/03	07/28	06/09	
200.8	200.2	195.1	184.7	180.5	180.3	168.4	164.9	164.0	162.3	180.1

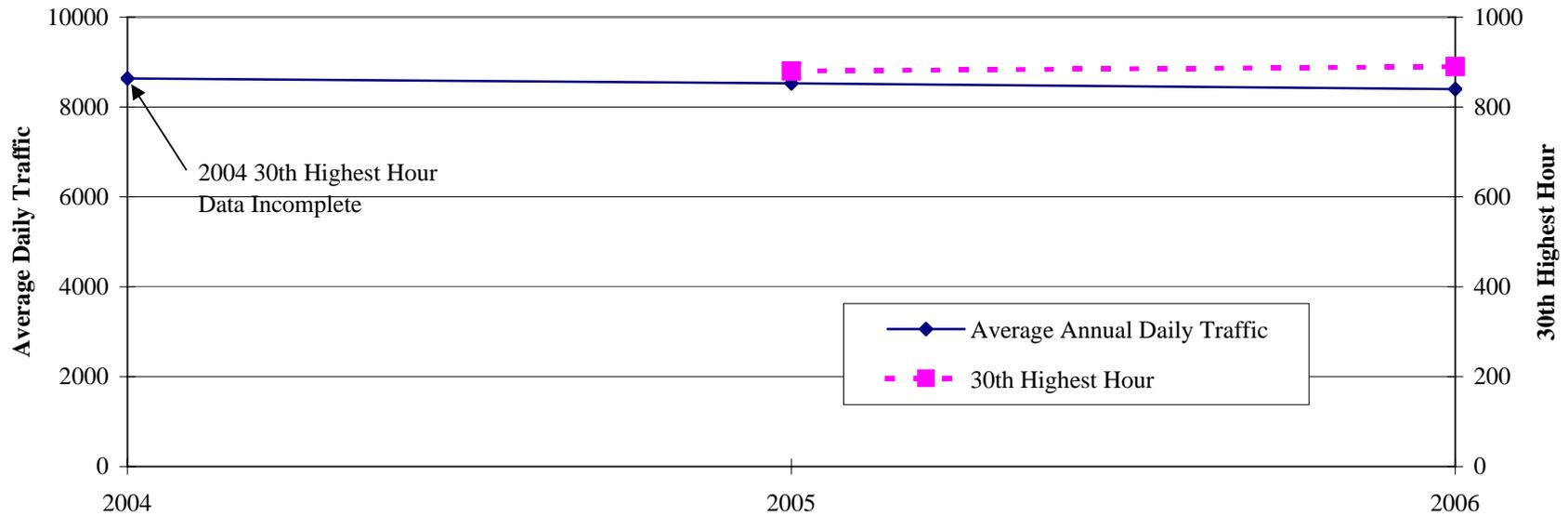
**HIGHEST HOURS**

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
343	329	328	327	326	324	324	321	318	313	296	282	269	263	325
16	14	15	14	16	18	17	18	15	15	13	18	18	17	
07/02	07/29	07/02	07/02	07/29	07/02	07/02	06/10	06/10	05/27	07/29	09/03	09/02	05/27	
17.9	17.2	17.1	17.1	17.0	16.9	16.9	16.8	16.6	16.4	15.5	14.7	14.1	13.7	17.0

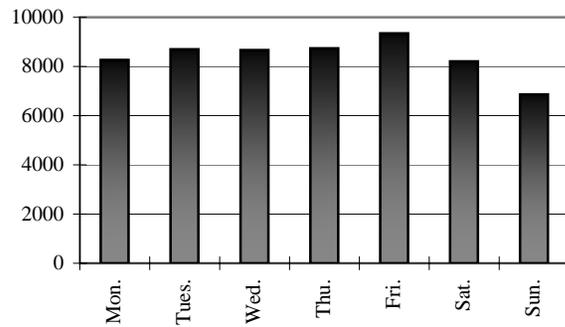
**AM PERCENT BY HOUR PM**

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.7	0.4	0.3	0.3	0.4	1.0	3.1	6.1	5.2	5.0	5.1	5.9	6.6	6.7	6.9	7.2	8.2	8.9	6.8	4.8	4.0	3.2	2.1	1.2

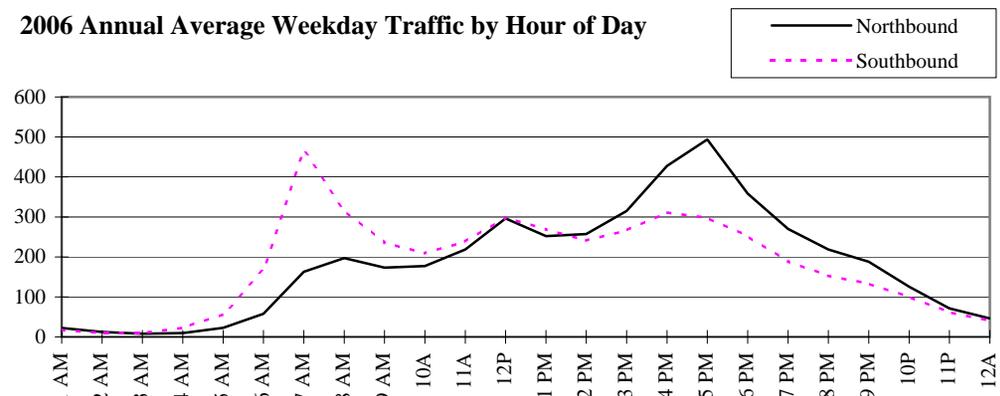
# Permanent Traffic Recorder At Douglas Hwy (CDS Mi 1.04)



2006 Annual Average Daily Traffic by Day of Week



2006 Annual Average Weekday Traffic by Hour of Day



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Juneau  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60348000 9 (Combined North and South)

DOUGLAS HIGHWAY AT JOHN STREET **PTR**TOTAL*** ON 296110 AT MILEPOINT 1.036													HISTORICAL DATA	
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN		
JAN	8128	96.8	92.7	7.3	92.6	102.8	104.8	106.3	116.9	104.7	99.6	76.9	2006	8399
FEB	8255	98.3	93.2	6.8	97.1	106.2	104.8	105.4	111.0	104.9	95.9	79.5	2005	8528
MAR	8280	98.6	93.1	6.9	97.0	101.6	104.4	105.6	112.7	104.3	97.7	81.1	2004	8638
APR	9033	107.5	93.2	6.8	97.9	102.3	102.4	101.9	113.2	103.5	99.5	82.9		
MAY	8909	106.1	92.7	7.3	99.7	99.9	103.3	102.2	114.3	103.9	97.6	83.1		
JUN	9122	108.6	92.0	8.0	98.9	101.2	99.9	106.5	111.9	103.7	96.7	84.8		
JUL	8925	106.3	91.5	8.5	106.2	109.5	101.2	100.0	106.0	104.6	95.1	82.1		
AUG	8508	101.3	91.9	8.1	102.4	102.9	101.9	104.5	109.1	104.2	96.6	82.6		
SEP	8664	103.2	92.7	7.3	94.1	103.6	105.8	105.5	110.9	104.0	99.0	81.2		
OCT	8300	98.8	92.8	7.2	100.9	104.2	100.0	103.5	108.1	103.3	100.4	83.0		
NOV	7307	87.0	92.3	7.7	100.3	104.8	100.7	100.5	110.3	103.3	101.9	81.5		
DEC	7352	87.5	92.3	7.7	94.2	104.7	109.5	105.8	111.3	105.1	92.5	82.0		
ANN	8399		92.5	7.5	98.4	103.6	103.2	104.0	111.3	104.1	97.7	81.7		

**HIGHEST DAYS**

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
12347	12182	10893	10593	10552	10523	10381	10357	10335	10315	10848
07/04	07/03	06/01	06/30	06/09	05/26	04/21	04/14	05/12	05/19	
147.0	145.0	129.7	126.1	125.6	125.3	123.6	123.3	123.1	122.8	129.2

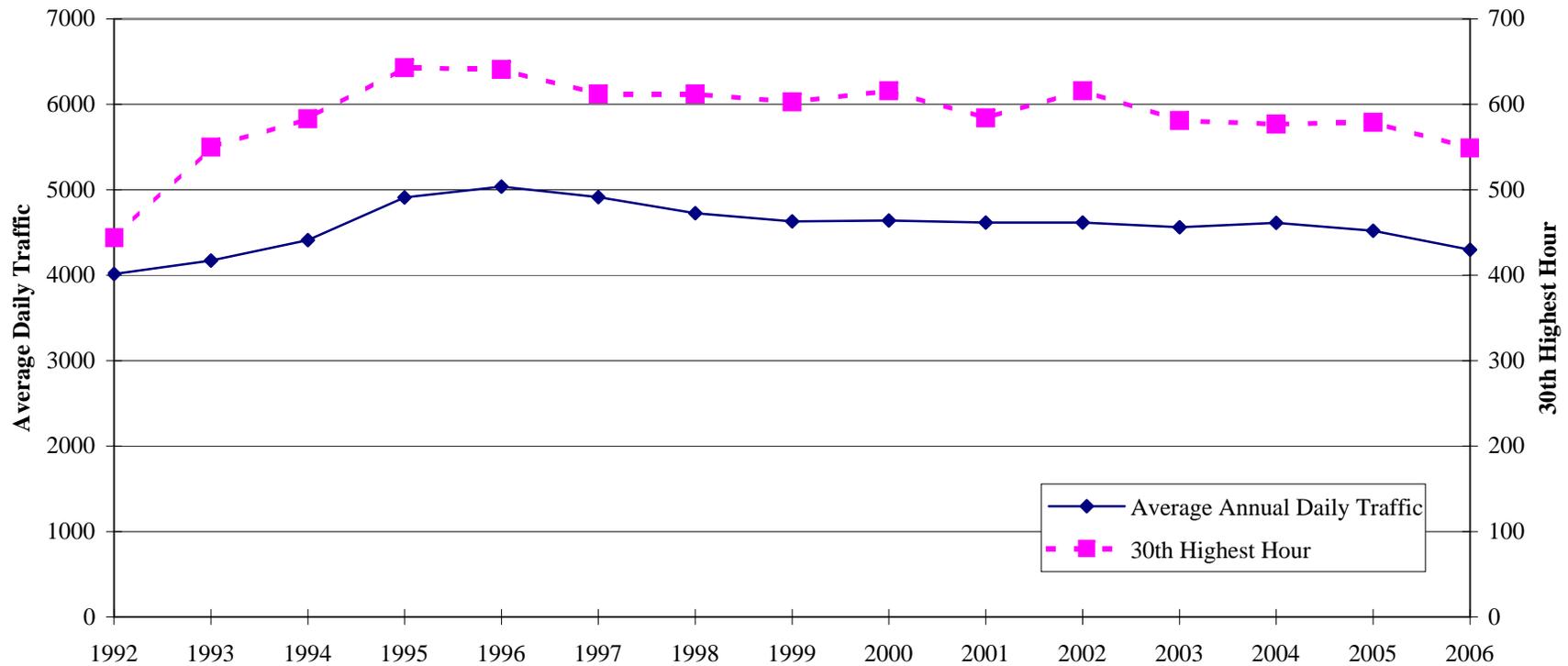
**HIGHEST HOURS**

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
1111	1110	1043	968	964	959	953	940	929	928	910	890	879	867	991
16	17	17	17	14	17	17	17	12	17	17	15	17	18	
07/04	07/04	06/01	04/14	07/04	05/12	05/31	02/14	07/04	04/10	04/28	07/04	02/13	07/04	
13.2	13.2	12.4	11.5	11.5	11.4	11.3	11.2	11.1	11.0	10.8	10.6	10.5	10.3	11.8

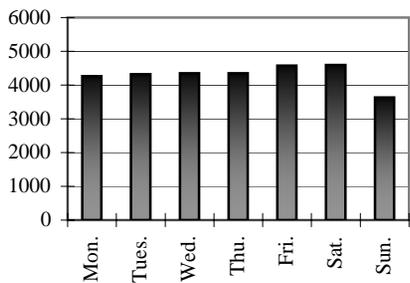
**AM PERCENT BY HOUR PM**

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.6	0.4	0.3	0.4	0.8	2.2	5.9	5.2	4.8	4.8	5.6	7.0	6.4	6.2	6.8	8.2	8.6	7.0	5.3	4.3	3.8	2.8	1.6	1.1

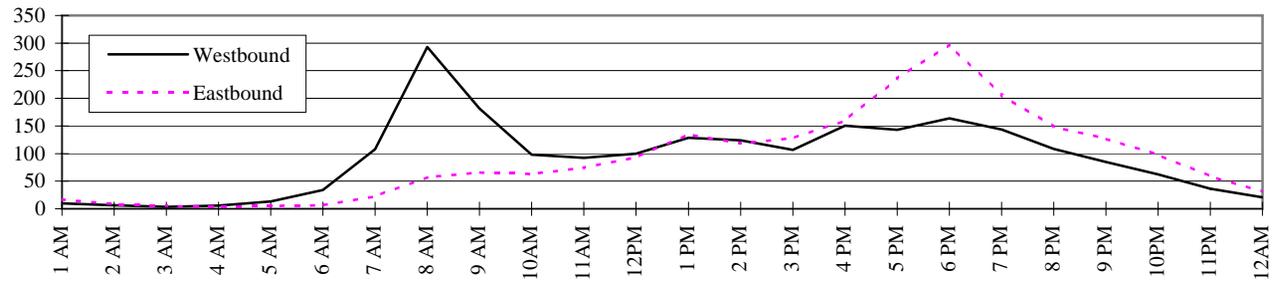
# Permanent Traffic Recorder At Riverside Dr. (CDS Mi 1.47)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

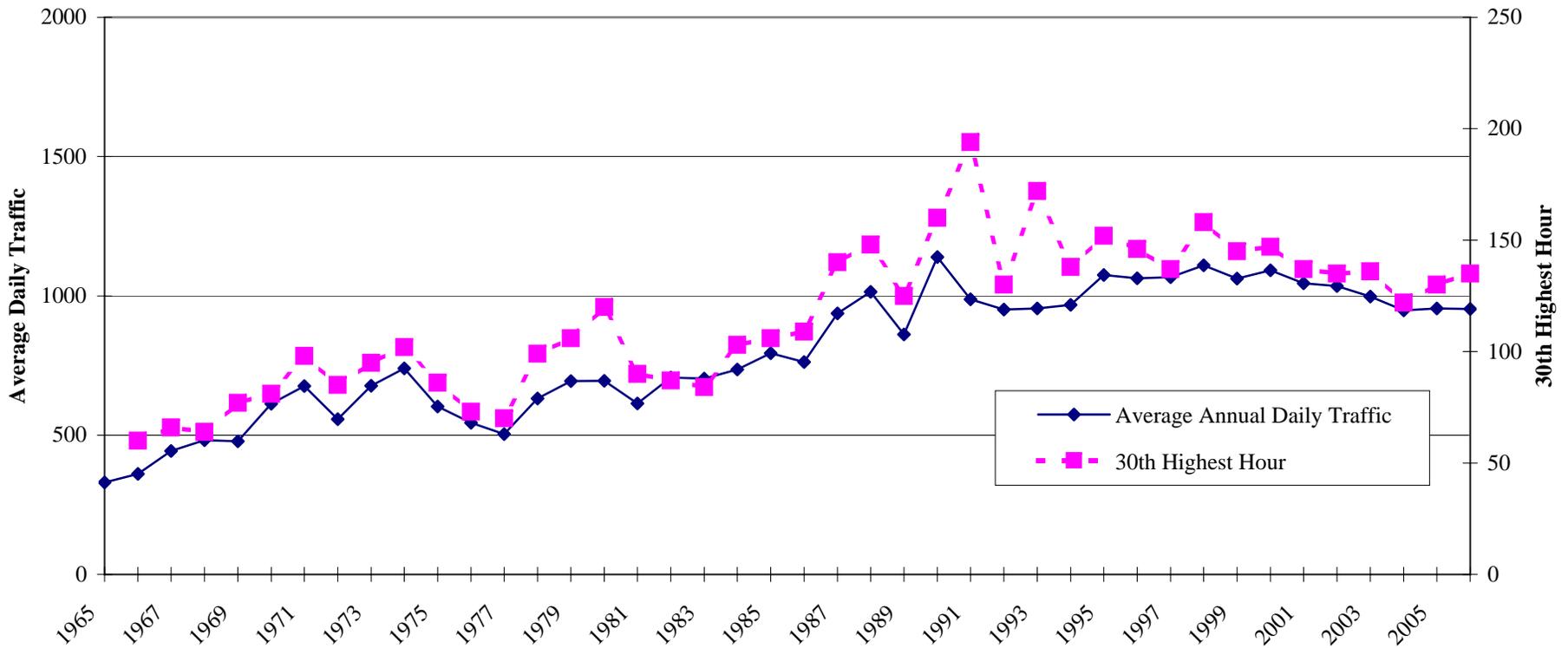
TRAFFIC STUDIES FOR ROUTES IN: **Juneau**

FIXED RECORDER SUMMARY: 2006

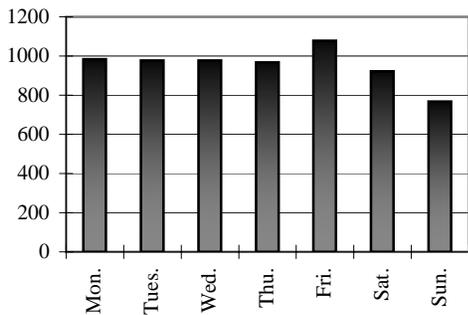
RECORDER NUMBER 60500370 0 (**Combined East and West**)

RIVERSIDE PTR CEMETARY ACCESS TO DIVISION JUNEAU ON 296500													AT MILEPOINT 1.471		HISTORICAL DATA								
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN											
JAN	4048	94.2	93.6	6.4	98.8	102.4	103.8	106.1	109.2	104.1	98.9	80.8											
FEB	4098	95.3	94.0	6.0	98.2	104.7	102.6	102.8	105.9	102.8	103.0	82.8											
MAR	4052	94.3	94.2	5.8	99.3	98.7	102.3	104.9	105.6	102.2	104.9	84.2											
APR	4451	103.6	94.4	5.6	99.9	103.1	98.1	99.1	108.7	101.8	111.6	79.5											
MAY	4830	112.4	93.9	6.1	97.8	99.0	100.7	98.9	104.7	100.2	115.0	83.9											
JUN	4781	111.2	92.5	7.5	100.8	97.9	99.1	99.6	103.2	100.1	113.5	86.0											
JUL	4537	105.6	91.1	8.9	97.8	88.4	96.4	100.3	111.7	98.9	116.8	88.5											
AUG	4406	102.5	93.0	7.0	103.4	101.5	101.4	102.5	104.2	102.6	103.2	83.9											
SEP	4256	99.0	93.8	6.2	95.4	104.4	100.6	101.6	106.6	101.7	106.6	84.9											
OCT	4191	97.5	94.2	5.8	106.0	103.4	99.3	98.2	102.2	101.8	103.9	87.0											
NOV	3939	91.6	93.9	6.1	102.6	101.5	104.6	97.1	106.6	102.5	104.7	82.9											
DEC	3981	92.6	92.5	7.5	91.8	101.5	105.2	103.2	108.5	102.0	101.0	88.8											
ANN	4298		93.4	6.6	99.3	100.5	101.2	101.2	106.4	101.7	106.9	84.4											
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH						AVG								
7309	6524	6231	5970	5795	5502	5474	5424	5410	5409						5905								
07/29	07/22	07/28	05/13	06/17	04/29	05/20	05/06	05/12	06/10														
170.1	151.8	145.0	138.9	134.8	128.0	127.4	126.2	125.9	125.8						137.4								
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
728	674	635	632	622	620	614	602	595	582	557	549	541	531	630									
18	18	12	14	18	15	16	18	18	17	18	18	18	13										
10/23	05/10	07/29	07/22	01/09	07/22	05/06	09/12	04/10	04/25	08/15	06/13	05/31	07/22										
16.9	15.7	14.8	14.7	14.5	14.4	14.3	14.0	13.8	13.5	13.0	12.8	12.6	12.4	14.7									
<b>PERCENT BY HOUR</b>																							
					AM					PM													
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.8	0.5	0.3	0.3	0.4	0.8	2.4	6.3	5.1	4.1	4.4	5.0	6.6	6.3	6.1	7.4	8.5	9.7	7.6	5.7	4.7	3.6	2.2	1.3

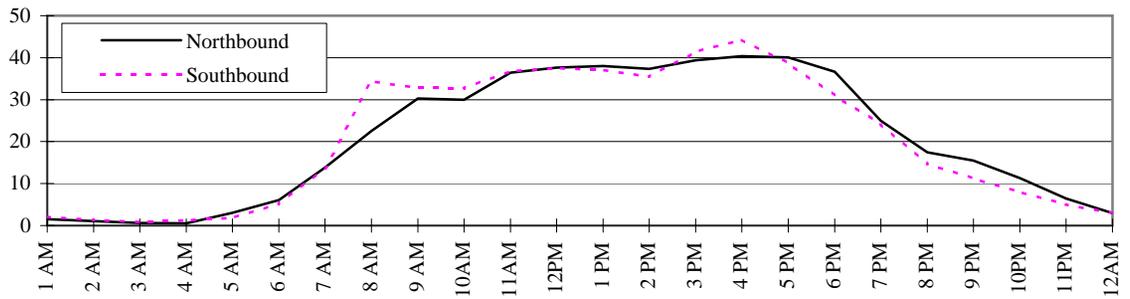
# Permanent Traffic Recorder At 5 Mi. Haines Hwy. (CDS MP 1.29)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 TRAFFIC STUDIES FOR ROUTES IN: Haines  
 FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60621000 9 (Combined North and South)

HAINES	HWY	BTW	SAWMILL &	AIRPORT	RDS	1200	FT	N	OF	PIEDA	ON	298000	AT	MILEPOINT	1.287	HISTORICAL DATA	
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN					
JAN	612	64.2	95.4	4.6	106.7	101.6	108.2	102.2	114.5	106.6	93.9	72.8			2006	953	
FEB	622	65.3	96.4	3.6	101.2	109.8	101.5	106.6	116.7	107.2	92.6	72.3			2005	955	
MAR	684	71.8	96.3	3.7	103.2	105.5	101.0	107.2	121.6	107.7	89.5	71.3			2004	948	
APR	938	98.4	96.1	3.9	103.2	105.8	100.5	98.8	117.7	105.2	93.1	81.1			2003	998	
MAY	1115	117.0	94.1	5.9	106.2	107.6	95.0	97.0	109.5	103.1	100.0	84.9			2002	1035	
JUN	1237	129.8	94.0	6.0	100.0	96.9	99.5	101.3	105.5	100.6	105.5	91.1			2001	1045	
JUL	1331	139.7	93.9	6.1	102.0	92.3	108.4	103.7	109.4	103.2	98.8	85.5			2000	1092	
AUG	1310	137.5	95.4	4.6	104.5	100.0	102.6	99.9	111.5	103.7	93.6	87.9			1999	1062	
SEP	1173	123.1	95.6	4.4	105.1	97.6	104.0	104.3	108.1	103.8	100.4	80.5			1998	1110	
OCT	1056	110.8	96.7	3.3	99.9	98.1	97.0	102.5	113.1	102.1	100.2	89.0			1997	1067	
NOV	762	80.0	96.4	3.6	108.9	105.5	101.3	93.6	113.4	104.5	101.3	75.4			1996	1063	
DEC	596	62.5	95.8	4.2	98.2	108.9	110.8	101.2	116.4	107.1	90.9	73.6			1995	1075	
ANN	953		95.5	4.5	103.3	102.5	102.5	101.5	113.1	104.6	96.7	80.5			1994	968	
															1993	955	
															1992	951	
															1991	988	
															1990	998	
															1989	883	
															1988	1014	
															1987	937	
															1986	763	
															1985	794	
															1984	736	
															1983	703	
															1982	707	

HIGHEST DAYS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	AVG
1824	1680	1679	1656	1549	1523	1517	1515	1492	1484	1592
06/17	07/19	07/28	08/18	07/27	08/11	07/21	07/03	06/18	07/20	
191.4	176.3	176.2	173.8	162.5	159.8	159.2	159.0	156.6	155.7	167.1

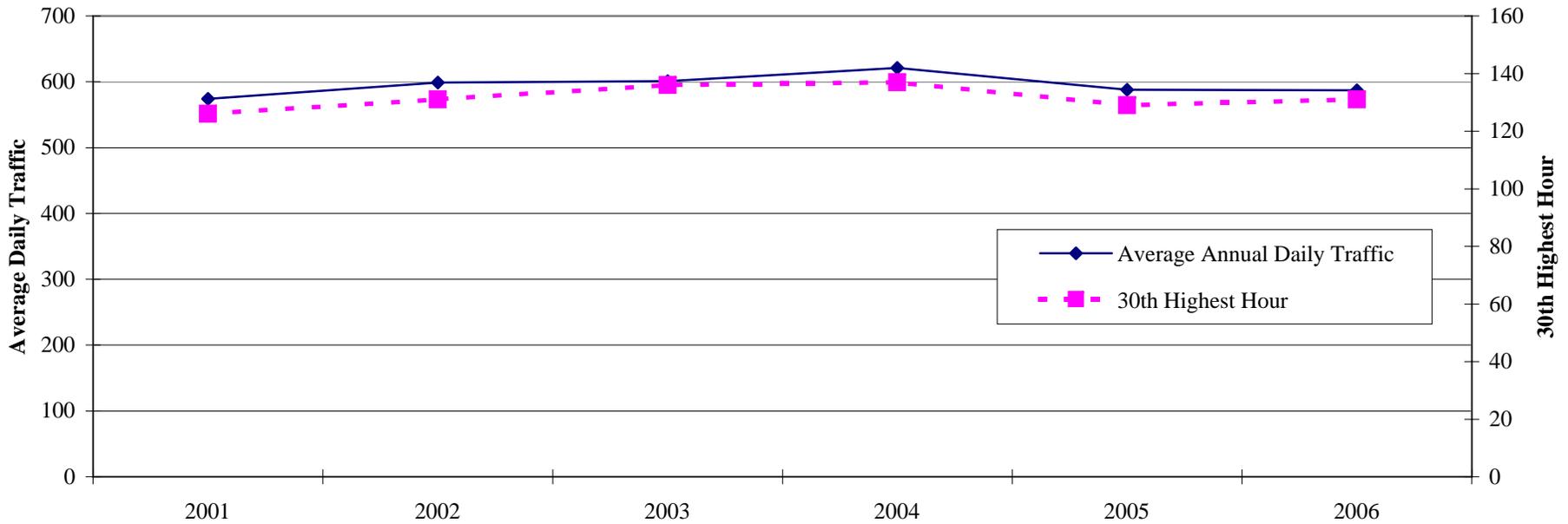
HIGHEST HOURS

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG
201	181	178	173	164	154	153	149	148	147	141	135	132	128	165
18	17	19	20	15	13	13	16	17	11	11	11	15	17	
06/17	06/17	06/17	06/17	10/07	10/14	06/18	07/19	08/11	07/19	06/18	07/21	06/17	07/14	
21.1	19.0	18.7	18.2	17.2	16.2	16.1	15.6	15.5	15.4	14.8	14.2	13.9	13.4	17.3

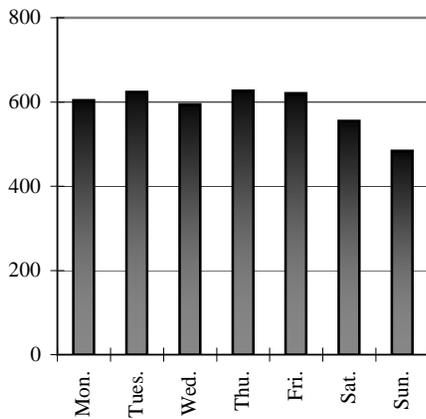
PERCENT BY HOUR

AM					PERCENT BY HOUR										PM								
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.5	0.3	0.2	0.2	0.5	1.1	2.6	5.2	6.0	6.4	7.5	7.7	7.8	7.6	8.3	8.4	7.9	6.7	5.0	3.5	2.8	2.0	1.2	0.7

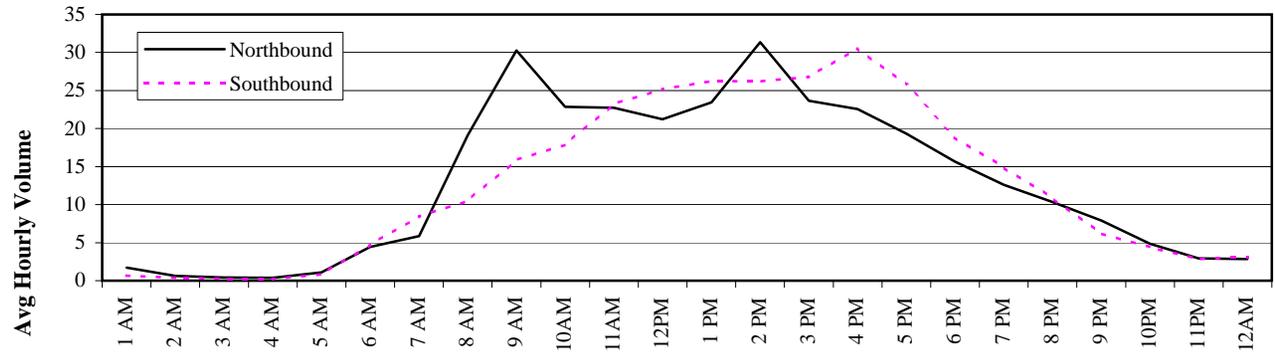
## Permanent Traffic Recorder on Klondike Highway (CDS MP 2.55)



**2006 Annual Average Daily Traffic by Day of Week**



**2006 Annual Average Weekday Traffic by Hour of Day**



ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

TRAFFIC STUDIES FOR ROUTES IN: Skagway

FIXED RECORDER SUMMARY: 2006

RECORDER NUMBER 60711000 9 (Combined North and South)

KLONDIKE HWY BTW DYEA & SANITORIUM RD, SKAGWAY													ON 299500		AT MILEPOINT		2.548						
MONTH	MADT	%	6-10	10-6	MON	TUE	WED	THU	FRI	WKDY	SAT	SUN	HISTORICAL DATA										
JAN	267	45.5	95.9	4.1	90.9	98.9	95.2	118.4	144.1	109.5	99.6	53.9	2006	587									
FEB	353	60.1	96.4	3.6	93.5	98.7	96.8	122.6	112.7	104.9	128.0	48.7	2005	588									
MAR	365	62.2	96.8	3.2	107.9	127.4	105.8	110.2	94.0	109.1	89.3	64.7	2004	621									
APR	440	75.0	95.8	4.2	99.6	101.8	99.7	100.5	108.6	102.0	101.2	88.4	2003	601									
MAY	864	147.2	95.4	4.6	101.9	102.5	100.0	93.2	92.6	98.0	100.3	109.1	2002	599									
JUN	1080	184.0	95.1	4.9	106.7	110.1	110.0	102.6	96.3	105.1	81.3	92.8	2001	574									
JUL	1192	203.1	95.7	4.3	105.1	108.7	109.2	105.8	91.0	104.0	85.8	94.7	2000	879									
AUG	1113	189.6	96.0	4.0	110.2	107.7	100.7	108.0	90.5	103.4	91.2	91.9	1999	872									
SEP	792	134.9	95.7	4.3	102.7	101.7	99.1	103.9	106.8	102.8	88.1	97.6	1996	659									
OCT	268	45.7	93.7	6.3	110.1	104.0	90.1	104.9	109.2	103.7	91.7	90.9	1995	571									
NOV	163	27.8	91.4	8.6	116.3	100.0	106.9	99.0	107.1	105.9	94.3	73.9	1994	584									
DEC	146	24.9	92.4	7.6	89.4	113.9	102.1	112.3	115.2	106.6	82.7	82.9	1993	542									
ANN	587		95.0	5.0	102.9	106.3	101.3	106.8	105.7	104.6	94.5	82.5	1991	608									
<b>HIGHEST DAYS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH					AVG									
1465	1422	1384	1371	1371	1358	1355	1321	1308	1306					1366									
05/21	07/03	08/10	08/07	07/05	09/08	07/04	07/13	07/18	08/08														
249.6	242.2	235.8	233.6	233.6	231.3	230.8	225.0	222.8	222.5					232.7									
<b>HIGHEST HOURS</b>																							
1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	20TH	30TH	40TH	50TH	AVG									
191	164	162	160	144	144	143	143	141	140	135	131	126	123	153									
12	19	14	20	14	11	14	14	12	14	14	11	12	15										
05/21	09/08	08/07	09/08	06/20	05/21	07/25	06/27	08/21	08/08	08/10	05/20	07/05	07/12										
32.5	27.9	27.6	27.3	24.5	24.5	24.4	24.4	24.0	23.9	23.0	22.3	21.5	21.0	26.1									
<b>AM PERCENT BY HOUR PM</b>																							
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0.4	0.2	0.1	0.1	0.3	1.3	2.1	4.5	7.0	6.5	7.7	7.7	8.2	9.6	8.4	8.6	7.3	5.7	4.6	3.5	2.4	1.6	1.0	1.1

## **C. Average Daily Traffic Maps**

The volumes shown on the traffic maps denote average daily traffic (ADT) during 2006. This data is derived from the traffic volume counts which are done between May and October. Since it is impractical to do a count on every road in the region in a single year, they are done on a three year rotating schedule. The maps have been prepared by the Department's Mapping Section from data collected by the Southeast Traffic and Safety Section.

The "push pin" tick marks along roads define the boundary between road segments. The ADT's marked indicate the average traffic, under statistically derived normal conditions, between the tick marks or major road intersections.

The traffic map file sizes are too large to fit in this Adobe Acrobat document. They may be found online at <http://dot.alaska.gov/stwdplng/mapping/trafficmaps/adtsoutheast.shtml>.