

*Alaska Department of Transportation
and Public Facilities*



*Southeast Region
2005 Traffic and Safety Report*

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*Alaska Department of Transportation
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2005 Traffic and Safety Report

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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 2005, 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

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 1st, 2001 – December 31st, 2005. 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, only intersections with ten or more crashes or one fatal crash in a five-year period were listed and analyzed.

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): | 1 |
| Minor (non-disabling) injury: | 10 |
| Major (disabling) injury: | 50 |
| Fatality: | 100 |

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 = $[(\text{the number of PDO crashes}) \times 1] + [(\text{the number of minor crashes}) \times 10] + [(\text{the number of major crashes}) \times 50] + [(\text{the number of fatal crashes}) \times 100]$

It should be noted that crash weights have been revised since the 2004 Southeast Regional Traffic and Safety Report. The new weights place an even greater importance on crashes resulting in major injury or death.

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 (2001-2005)

(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 | 34 | 37 | 2 | 0 | 73 |
| 2 | Juneau | 296000 | Egan - Loop | 35 | 28 | 2 | 0 | 65 |
| 3 | Juneau | 296000 | Egan - McNugget | 29 | 31 | 1 | 0 | 61 |
| 4 | Juneau | 296000 | Egan - Vanderbilt | 27 | 32 | 1 | 0 | 60 |
| 5 | Juneau | 296000 | Egan - Yandukin | 30 | 17 | 3 | 0 | 50 |
| 6 | Juneau | 296000 | Egan - Sunny Drive | 20 | 22 | 2 | 0 | 44 |
| 7 | Juneau | 296000 | Egan - 10th | 28 | 14 | 0 | 0 | 42 |
| 8 | Juneau | 296400 | Loop - Atlin | 22 | 17 | 2 | 0 | 41 |
| 9 | Juneau | 296400 | Loop - Stephen Richards | 9 | 17 | 3 | 2 | 31 |
| 10 | Juneau | 296000 | Egan - Highland | 14 | 12 | 1 | 0 | 27 |
| 11 | Juneau | 296331 | Glacier - Old Dairy Rd - Trout | 12 | 9 | 1 | 0 | 22 |
| 12 | Juneau | 296500 | Riverside - Vintage | 15 | 6 | 1 | 0 | 22 |
| 13 | Ketchikan | 291400 | S Tongass - Jefferson | 17 | 2 | 3 | 0 | 22 |
| 14 | Ketchikan | 291400 | S Tongass - Washington | 14 | 4 | 1 | 0 | 19 |
| 15 | Juneau | 296000 | Egan - Willoughby | 11 | 5 | 1 | 0 | 17 |
| 16 | Juneau | 296000 | Egan - Riverside | 11 | 6 | 0 | 0 | 17 |
| 17 | Ketchikan | 291400 | S Tongass - Carlanna Lake | 10 | 6 | 0 | 0 | 16 |
| 18 | Juneau | 296331 | Glacier - Jordan | 8 | 7 | 0 | 0 | 15 |
| 19 | Juneau | 296000 | Egan - 12th | 7 | 8 | 0 | 0 | 15 |
| 20 | Juneau | 296331 | Glacier - Shell Simmons | 10 | 4 | 0 | 0 | 14 |
| 21 | Juneau | 296400 | Loop - Nancy | 5 | 9 | 0 | 0 | 14 |
| 22 | Ketchikan | 291500 | N Tongass - Heckman | 7 | 7 | 0 | 0 | 14 |
| 23 | Juneau | 296000 | Egan - Fritz Cove Rd | 8 | 3 | 2 | 0 | 13 |
| 24 | Juneau | 296229 | Glacier - Sunny Point | 6 | 7 | 0 | 0 | 13 |
| 25 | Juneau | 296000 | Egan - Glacier North | 11 | 0 | 2 | 0 | 13 |
| 26 | Ketchikan | 291400 | S Tongass - Grant | 7 | 3 | 2 | 0 | 12 |
| 27 | Sitka | 295400 | Halibut Pt Rd - Lake - Sawmill Cr Rd | 10 | 2 | 0 | 0 | 12 |
| 28 | Juneau | 296400 | Loop - Mendenhall Blvd - Valley | 5 | 5 | 1 | 0 | 11 |
| 29 | Sitka | 295400 | Halibut Pt Rd - Peterson | 4 | 7 | 0 | 0 | 11 |
| 30 | Juneau | 296110 | Douglas Hwy - Cordova | 5 | 4 | 0 | 1 | 10 |
| 31 | Juneau | 296229 | Glacier - Anka | 4 | 4 | 1 | 1 | 10 |
| 32 | Juneau | 296000 | Egan - Main | 7 | 2 | 1 | 0 | 10 |
| 33 | Juneau | 296110 | Douglas Hwy - N Douglas | 5 | 4 | 1 | 0 | 10 |
| 34 | Juneau | 296000 | Egan - Whittier | 6 | 4 | 0 | 0 | 10 |
| 35 | Ketchikan | 291400 | S Tongass - Schoenbar | 6 | 4 | 0 | 0 | 10 |
| 36 | Sitka | 295500 | Sawmill Cr Rd - Jarvis | 10 | 0 | 0 | 0 | 10 |
| 37 | Sitka | 295505 | Lake - Lincoln | 10 | 0 | 0 | 0 | 10 |
| 38 | Juneau | 296229 | Glacier - Former K-Mart | 4 | 2 | 0 | 1 | 7 |
| 39 | Ketchikan | 291400 | S Tongass - Madison | 3 | 1 | 0 | 1 | 5 |
| 40 | Petersburg | 294020 | Nordic - Sing Lee Alley | 1 | 2 | 0 | 1 | 4 |
| 41 | Sitka | 295500 | Sawmill Cr Rd - Baranof | 1 | 1 | 1 | 1 | 4 |
| 42 | Sitka | 295439 | Katlian - Signinaka Way | 2 | 0 | 0 | 1 | 3 |
| 43 | Juneau | 296400 | Loop - Tongass | 0 | 1 | 0 | 1 | 2 |

Table 2: Southeast Region Intersection Crash Rate Ranking

Ranked by 5-Year Weighted Crash Rate (2001-2005)

(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 | 296400 | Loop - Stephen Richards | 9 | 17 | 3 | 2 | 31 | 6.2 | 16292 | 1.04 | 17.79 |
| 2 | Sitka | 295439 | Katlai - Signinaka Way | 2 | 0 | 0 | 1 | 3 | 0.6 | 4840 | 0.34 | 11.55 |
| 3 | Petersburg | 294020 | Nordic - Sing Lee Alley | 1 | 2 | 0 | 1 | 4 | 0.8 | 6370 | 0.34 | 10.41 |
| 4 | Sitka | 295500 | Sawmill Cr Rd - Baranof | 1 | 1 | 1 | 1 | 4 | 0.8 | 8593 | 0.26 | 10.27 |
| 5 | Juneau | 296000 | Egan - Salmon Creek | 34 | 37 | 2 | 0 | 73 | 14.6 | 27498 | 1.45 | 10.04 |
| 6 | Juneau | 296229 | Glacier - Anka | 4 | 4 | 1 | 1 | 10 | 2 | 12661 | 0.43 | 8.40 |
| 7 | Juneau | 296000 | Egan - Vanderbilt | 27 | 32 | 1 | 0 | 60 | 12 | 26337 | 1.25 | 8.26 |
| 8 | Juneau | 296110 | Douglas Hwy - Cordova | 5 | 4 | 0 | 1 | 10 | 2 | 11144 | 0.49 | 7.13 |
| 9 | Juneau | 296000 | Egan - Sunny Point | 20 | 22 | 2 | 0 | 44 | 8.8 | 27875 | 0.86 | 6.68 |
| 10 | Juneau | 296000 | Egan - Fritz Cove Rd | 8 | 3 | 2 | 0 | 13 | 2.6 | 11407 | 0.62 | 6.63 |
| 11 | Juneau | 296400 | Loop - Mendenhall Blvd - Valley | 5 | 5 | 1 | 0 | 11 | 2.2 | 9084 | 0.66 | 6.33 |
| 12 | Juneau | 296000 | Egan - McNugget | 29 | 31 | 1 | 0 | 61 | 12.2 | 33942 | 0.98 | 6.28 |
| 13 | Juneau | 296000 | Egan - Loop | 35 | 28 | 2 | 0 | 65 | 13 | 36234 | 0.98 | 6.28 |
| 14 | Juneau | 296000 | Egan - Yandukin | 30 | 17 | 3 | 0 | 50 | 10 | 30815 | 0.89 | 6.22 |
| 15 | Juneau | 296400 | Loop - Atlin | 22 | 17 | 2 | 0 | 41 | 8.2 | 28379 | 0.79 | 5.64 |
| 16 | Juneau | 296229 | Glacier - Former K-Mart | 4 | 2 | 0 | 1 | 7 | 1.4 | 12800 | 0.30 | 5.31 |
| 17 | Ketchikan | 291400 | S Tongass - Jefferson | 17 | 2 | 3 | 0 | 22 | 4.4 | 20734 | 0.58 | 4.94 |
| 18 | Juneau | 296331 | Glacier - Old Dairy Rd - Trout | 12 | 9 | 1 | 0 | 22 | 4.4 | 16877 | 0.71 | 4.93 |
| 19 | Juneau | 296000 | Egan - Highland | 14 | 12 | 1 | 0 | 27 | 5.4 | 22011 | 0.67 | 4.58 |
| 20 | Juneau | 296400 | Loop - Tongass | 0 | 1 | 0 | 1 | 2 | 0.4 | 14564 | 0.08 | 4.14 |
| 21 | Ketchikan | 291400 | S Tongass - Grant | 7 | 3 | 2 | 0 | 12 | 2.4 | 18527 | 0.35 | 4.05 |
| 22 | Juneau | 296000 | Egan - Willoughby | 11 | 5 | 1 | 0 | 17 | 3.4 | 15768 | 0.59 | 3.86 |
| 23 | Juneau | 296000 | Egan - Glacier North | 11 | 0 | 2 | 0 | 13 | 2.6 | 16054 | 0.44 | 3.79 |
| 24 | Juneau | 296110 | Douglas Hwy - N Douglas | 5 | 4 | 1 | 0 | 10 | 2 | 14686 | 0.37 | 3.54 |
| 25 | Juneau | 296500 | Riverside - Vintage | 15 | 6 | 1 | 0 | 22 | 4.4 | 19921 | 0.61 | 3.44 |
| 26 | Juneau | 296000 | Egan - 10th | 28 | 14 | 0 | 0 | 42 | 8.4 | 27535 | 0.84 | 3.34 |
| 27 | Ketchikan | 291500 | N Tongass - Heckman | 7 | 7 | 0 | 0 | 14 | 2.8 | 12750 | 0.60 | 3.31 |
| 28 | Ketchikan | 291400 | S Tongass - Madison | 3 | 1 | 0 | 1 | 5 | 1 | 18960 | 0.14 | 3.27 |
| 29 | Juneau | 296229 | Glacier - Sunny Point | 6 | 7 | 0 | 0 | 13 | 2.6 | 12953 | 0.55 | 3.21 |
| 30 | Juneau | 296000 | Egan - Main | 7 | 2 | 1 | 0 | 10 | 2 | 13288 | 0.41 | 3.18 |
| 31 | Sitka | 295400 | Halibut Pt Rd - Peterson | 4 | 7 | 0 | 0 | 11 | 2.2 | 13189 | 0.46 | 3.07 |
| 32 | Juneau | 296331 | Glacier - Jordan | 8 | 7 | 0 | 0 | 15 | 3 | 14015 | 0.59 | 3.05 |
| 33 | Ketchikan | 291400 | S Tongass - Washington | 14 | 4 | 1 | 0 | 19 | 3.8 | 18880 | 0.55 | 3.02 |
| 34 | Juneau | 296400 | Loop - Nancy | 5 | 9 | 0 | 0 | 14 | 2.8 | 18360 | 0.42 | 2.84 |
| 35 | Juneau | 296000 | Egan - 12th | 7 | 8 | 0 | 0 | 15 | 3 | 21366 | 0.38 | 2.23 |
| 36 | Juneau | 296331 | Glacier - Shell Simmons | 10 | 4 | 0 | 0 | 14 | 2.8 | 13391 | 0.57 | 2.05 |
| 37 | Ketchikan | 291400 | S Tongass - Carlanna Lake | 10 | 6 | 0 | 0 | 16 | 3.2 | 19944 | 0.44 | 1.92 |
| 38 | Juneau | 296000 | Egan - Riverside | 11 | 6 | 0 | 0 | 17 | 3.4 | 20826 | 0.45 | 1.87 |
| 39 | Juneau | 296000 | Egan - Whittier | 6 | 4 | 0 | 0 | 10 | 2 | 14987 | 0.37 | 1.68 |
| 40 | Ketchikan | 291400 | S Tongass - Schoenbar | 6 | 4 | 0 | 0 | 10 | 2 | 19423 | 0.28 | 1.30 |
| 41 | Sitka | 295400 | Halibut Pt Rd - Lake - Sawmill Cr Rd | 10 | 2 | 0 | 0 | 12 | 2.4 | 15760 | 0.42 | 1.04 |
| 42 | Sitka | 295500 | Sawmill Cr Rd - Jarvis | 10 | 0 | 0 | 0 | 10 | 2 | 7834 | 0.70 | 0.70 |
| 43 | Sitka | 295505 | Lake - Lincoln | 10 | 0 | 0 | 0 | 10 | 2 | 13316 | 0.41 | 0.41 |

Table 3: Southeast Region Intersection Crash Rate Ranking

Ranked by 5-Year Unweighted Crash Rate (2001-2005)

(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 | 34 | 37 | 2 | 0 | 73 | 14.6 | 27498 | 1.45 | 10.04 |
| 2 | Juneau | 296000 | Egan - Vanderbilt | 27 | 32 | 1 | 0 | 60 | 12 | 26337 | 1.25 | 8.26 |
| 3 | Juneau | 296400 | Loop - Stephen Richards | 9 | 17 | 3 | 2 | 31 | 6.2 | 16292 | 1.04 | 17.79 |
| 4 | Juneau | 296000 | Egan - McNugget | 29 | 31 | 1 | 0 | 61 | 12.2 | 33942 | 0.98 | 6.28 |
| 5 | Juneau | 296000 | Egan - Loop | 35 | 28 | 2 | 0 | 65 | 13 | 36234 | 0.98 | 6.28 |
| 6 | Juneau | 296000 | Egan - Yandukin | 30 | 17 | 3 | 0 | 50 | 10 | 30815 | 0.89 | 6.22 |
| 7 | Juneau | 296000 | Egan - Sunny Point | 20 | 22 | 2 | 0 | 44 | 8.8 | 27875 | 0.86 | 6.68 |
| 8 | Juneau | 296000 | Egan - 10th | 28 | 14 | 0 | 0 | 42 | 8.4 | 27535 | 0.84 | 3.34 |
| 9 | Juneau | 296400 | Loop - Atlin | 22 | 17 | 2 | 0 | 41 | 8.2 | 28379 | 0.79 | 5.64 |
| 10 | Juneau | 296331 | Glacier - Old Dairy Rd - Trout | 12 | 9 | 1 | 0 | 22 | 4.4 | 16877 | 0.71 | 4.93 |
| 11 | Sitka | 295500 | Sawmill Cr Rd - Jarvis | 10 | 0 | 0 | 0 | 10 | 2 | 7834 | 0.70 | 0.70 |
| 12 | Juneau | 296000 | Egan - Highland | 14 | 12 | 1 | 0 | 27 | 5.4 | 22011 | 0.67 | 4.58 |
| 13 | Juneau | 296400 | Loop - Mendenhall Blvd - Valley | 5 | 5 | 1 | 0 | 11 | 2.2 | 9084 | 0.66 | 6.33 |
| 14 | Juneau | 296000 | Egan - Fritz Cove Rd | 8 | 3 | 2 | 0 | 13 | 2.6 | 11407 | 0.62 | 6.63 |
| 15 | Juneau | 296500 | Riverside - Vintage | 15 | 6 | 1 | 0 | 22 | 4.4 | 19921 | 0.61 | 3.44 |
| 16 | Ketchikan | 291500 | N Tongass - Heckman | 7 | 7 | 0 | 0 | 14 | 2.8 | 12750 | 0.60 | 3.31 |
| 17 | Juneau | 296000 | Egan - Willoughby | 11 | 5 | 1 | 0 | 17 | 3.4 | 15768 | 0.59 | 3.86 |
| 18 | Juneau | 296331 | Glacier - Jordan | 8 | 7 | 0 | 0 | 15 | 3 | 14015 | 0.59 | 3.05 |
| 19 | Ketchikan | 291400 | S Tongass - Jefferson | 17 | 2 | 3 | 0 | 22 | 4.4 | 20734 | 0.58 | 4.94 |
| 20 | Juneau | 296331 | Glacier - Shell Simmons | 10 | 4 | 0 | 0 | 14 | 2.8 | 13391 | 0.57 | 2.05 |
| 21 | Ketchikan | 291400 | S Tongass - Washington | 14 | 4 | 1 | 0 | 19 | 3.8 | 18880 | 0.55 | 3.02 |
| 22 | Juneau | 296229 | Glacier - Sunny Point | 6 | 7 | 0 | 0 | 13 | 2.6 | 12953 | 0.55 | 3.21 |
| 23 | Juneau | 296110 | Douglas Hwy - Cordova | 5 | 4 | 0 | 1 | 10 | 2 | 11144 | 0.49 | 7.13 |
| 24 | Sitka | 295400 | Halibut Pt Rd - Peterson | 4 | 7 | 0 | 0 | 11 | 2.2 | 13189 | 0.46 | 3.07 |
| 25 | Juneau | 296000 | Egan - Riverside | 11 | 6 | 0 | 0 | 17 | 3.4 | 20826 | 0.45 | 1.87 |
| 26 | Juneau | 296000 | Egan - Glacier North | 11 | 0 | 2 | 0 | 13 | 2.6 | 16054 | 0.44 | 3.79 |
| 27 | Ketchikan | 291400 | S Tongass - Carlanna Lake | 10 | 6 | 0 | 0 | 16 | 3.2 | 19944 | 0.44 | 1.92 |
| 28 | Juneau | 296229 | Glacier - Anka | 4 | 4 | 1 | 1 | 10 | 2 | 12661 | 0.43 | 8.40 |
| 29 | Juneau | 296400 | Loop - Nancy | 5 | 9 | 0 | 0 | 14 | 2.8 | 18360 | 0.42 | 2.84 |
| 30 | Sitka | 295400 | Halibut Pt Rd - Lake - Sawmill Cr Rd | 10 | 2 | 0 | 0 | 12 | 2.4 | 15760 | 0.42 | 1.04 |
| 31 | Juneau | 296000 | Egan - Main | 7 | 2 | 1 | 0 | 10 | 2 | 13288 | 0.41 | 3.18 |
| 32 | Sitka | 295505 | Lake - Lincoln | 10 | 0 | 0 | 0 | 10 | 2 | 13316 | 0.41 | 0.41 |
| 33 | Juneau | 296000 | Egan - 12th | 7 | 8 | 0 | 0 | 15 | 3 | 21366 | 0.38 | 2.23 |
| 34 | Juneau | 296110 | Douglas Hwy - N Douglas | 5 | 4 | 1 | 0 | 10 | 2 | 14686 | 0.37 | 3.54 |
| 35 | Juneau | 296000 | Egan - Whittier | 6 | 4 | 0 | 0 | 10 | 2 | 14987 | 0.37 | 1.68 |
| 36 | Ketchikan | 291400 | S Tongass - Grant | 7 | 3 | 2 | 0 | 12 | 2.4 | 18527 | 0.35 | 4.05 |
| 37 | Petersburg | 294020 | Nordic - Sing Lee Alley | 1 | 2 | 0 | 1 | 4 | 0.8 | 6370 | 0.34 | 10.41 |
| 38 | Sitka | 295439 | Katlina - Signinaka Way | 2 | 0 | 0 | 1 | 3 | 0.6 | 4840 | 0.34 | 11.55 |
| 39 | Juneau | 296229 | Glacier - Former K-Mart | 4 | 2 | 0 | 1 | 7 | 1.4 | 12800 | 0.30 | 5.31 |
| 40 | Ketchikan | 291400 | S Tongass - Schoenbar | 6 | 4 | 0 | 0 | 10 | 2 | 19423 | 0.28 | 1.30 |
| 41 | Sitka | 295500 | Sawmill Cr Rd - Baranof | 1 | 1 | 1 | 1 | 4 | 0.8 | 8593 | 0.26 | 10.27 |
| 42 | Ketchikan | 291400 | S Tongass - Madison | 3 | 1 | 0 | 1 | 5 | 1 | 18960 | 0.14 | 3.27 |
| 43 | Juneau | 296400 | Loop - Tongass | 0 | 1 | 0 | 1 | 2 | 0.4 | 14564 | 0.08 | 4.14 |

Table 4: Southeast Region Intersection Crash Rate Ranking

Sorted by City: Ranked by 5-Year Weighted Crash Rate (2001-2005)

(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 | 296400 | Loop - Stephen Richards | 9 | 17 | 3 | 2 | 31 | 6.2 | 16292 | 1.04 | 17.79 |
| 2 | Juneau | 296000 | Egan - Salmon Creek | 34 | 37 | 2 | 0 | 73 | 14.6 | 27498 | 1.45 | 10.04 |
| 3 | Juneau | 296229 | Glacier - Anka | 4 | 4 | 1 | 1 | 10 | 2 | 12661 | 0.43 | 8.40 |
| 4 | Juneau | 296000 | Egan - Vanderbilt | 27 | 32 | 1 | 0 | 60 | 12 | 26337 | 1.25 | 8.26 |
| 5 | Juneau | 296110 | Douglas Hwy - Cordova | 5 | 4 | 0 | 1 | 10 | 2 | 11144 | 0.49 | 7.13 |
| 6 | Juneau | 296000 | Egan - Sunny Point | 20 | 22 | 2 | 0 | 44 | 8.8 | 27875 | 0.86 | 6.68 |
| 7 | Juneau | 296000 | Egan - Fritz Cove Rd | 8 | 3 | 2 | 0 | 13 | 2.6 | 11407 | 0.62 | 6.63 |
| 8 | Juneau | 296400 | Loop - Mendenhall Blvd - Valley | 5 | 5 | 1 | 0 | 11 | 2.2 | 9084 | 0.66 | 6.33 |
| 9 | Juneau | 296000 | Egan - McNugget | 29 | 31 | 1 | 0 | 61 | 12.2 | 33942 | 0.98 | 6.28 |
| 10 | Juneau | 296000 | Egan - Loop | 35 | 28 | 2 | 0 | 65 | 13 | 36234 | 0.98 | 6.28 |
| 11 | Juneau | 296000 | Egan - Yandukin | 30 | 17 | 3 | 0 | 50 | 10 | 30815 | 0.89 | 6.22 |
| 12 | Juneau | 296400 | Loop - Atlin | 22 | 17 | 2 | 0 | 41 | 8.2 | 28379 | 0.79 | 5.64 |
| 13 | Juneau | 296229 | Glacier - Former K-Mart | 4 | 2 | 0 | 1 | 7 | 1.4 | 12800 | 0.30 | 5.31 |
| 14 | Juneau | 296331 | Glacier - Old Dairy Rd - Trout | 12 | 9 | 1 | 0 | 22 | 4.4 | 16877 | 0.71 | 4.93 |
| 15 | Juneau | 296000 | Egan - Highland | 14 | 12 | 1 | 0 | 27 | 5.4 | 22011 | 0.67 | 4.58 |
| 16 | Juneau | 296400 | Loop - Tongass | 0 | 1 | 0 | 1 | 2 | 0.4 | 14564 | 0.08 | 4.14 |
| 17 | Juneau | 296000 | Egan - Willoughby | 11 | 5 | 1 | 0 | 17 | 3.4 | 15768 | 0.59 | 3.86 |
| 18 | Juneau | 296000 | Egan - Glacier North | 11 | 0 | 2 | 0 | 13 | 2.6 | 16054 | 0.44 | 3.79 |
| 19 | Juneau | 296110 | Douglas Hwy - N Douglas | 5 | 4 | 1 | 0 | 10 | 2 | 14686 | 0.37 | 3.54 |
| 20 | Juneau | 296500 | Riverside - Vintage | 15 | 6 | 1 | 0 | 22 | 4.4 | 19921 | 0.61 | 3.44 |
| 21 | Juneau | 296000 | Egan - 10th | 28 | 14 | 0 | 0 | 42 | 8.4 | 27535 | 0.84 | 3.34 |
| 22 | Juneau | 296229 | Glacier - Sunny Point | 6 | 7 | 0 | 0 | 13 | 2.6 | 12953 | 0.55 | 3.21 |
| 23 | Juneau | 296000 | Egan - Main | 7 | 2 | 1 | 0 | 10 | 2 | 13288 | 0.41 | 3.18 |
| 24 | Juneau | 296331 | Glacier - Jordan | 8 | 7 | 0 | 0 | 15 | 3 | 14015 | 0.59 | 3.05 |
| 25 | Juneau | 296400 | Loop - Nancy | 5 | 9 | 0 | 0 | 14 | 2.8 | 18360 | 0.42 | 2.84 |
| 26 | Juneau | 296000 | Egan - 12th | 7 | 8 | 0 | 0 | 15 | 3 | 21366 | 0.38 | 2.23 |
| 27 | Juneau | 296331 | Glacier - Shell Simmons | 10 | 4 | 0 | 0 | 14 | 2.8 | 13391 | 0.57 | 2.05 |
| 28 | Juneau | 296000 | Egan - Riverside | 11 | 6 | 0 | 0 | 17 | 3.4 | 20826 | 0.45 | 1.87 |
| 29 | Juneau | 296000 | Egan - Whittier | 6 | 4 | 0 | 0 | 10 | 2 | 14987 | 0.37 | 1.68 |
| 1 | Ketchikan | 291400 | S Tongass - Jefferson | 17 | 2 | 3 | 0 | 22 | 4.4 | 20734 | 0.58 | 4.94 |
| 2 | Ketchikan | 291400 | S Tongass - Grant | 7 | 3 | 2 | 0 | 12 | 2.4 | 18527 | 0.35 | 4.05 |
| 3 | Ketchikan | 291500 | N Tongass - Heckman | 7 | 7 | 0 | 0 | 14 | 2.8 | 12750 | 0.60 | 3.31 |
| 4 | Ketchikan | 291400 | S Tongass - Madison | 3 | 1 | 0 | 1 | 5 | 1 | 18960 | 0.14 | 3.27 |
| 5 | Ketchikan | 291400 | S Tongass - Washington | 14 | 4 | 1 | 0 | 19 | 3.8 | 18880 | 0.55 | 3.02 |
| 6 | Ketchikan | 291400 | S Tongass - Carlanna Lake | 10 | 6 | 0 | 0 | 16 | 3.2 | 19944 | 0.44 | 1.92 |
| 7 | Ketchikan | 291400 | S Tongass - Schoenbar | 6 | 4 | 0 | 0 | 10 | 2 | 19423 | 0.28 | 1.30 |
| 1 | Petersburg | 294020 | Nordic - Sing Lee Alley | 1 | 2 | 0 | 1 | 4 | 0.8 | 6370 | 0.34 | 10.41 |
| 1 | Sitka | 295439 | Katlian - Signinaka Way | 2 | 0 | 0 | 1 | 3 | 0.6 | 4840 | 0.34 | 11.55 |
| 2 | Sitka | 295500 | Sawmill Cr Rd - Baranof | 1 | 1 | 1 | 1 | 4 | 0.8 | 8593 | 0.26 | 10.27 |
| 3 | Sitka | 295400 | Halibut Pt Rd - Peterson | 4 | 7 | 0 | 0 | 11 | 2.2 | 13189 | 0.46 | 3.07 |
| 4 | Sitka | 295400 | Halibut Pt Rd - Lake - Sawmill Cr Rd | 10 | 2 | 0 | 0 | 12 | 2.4 | 15760 | 0.42 | 1.04 |
| 5 | Sitka | 295500 | Sawmill Cr Rd - Jarvis | 10 | 0 | 0 | 0 | 10 | 2 | 7834 | 0.70 | 0.70 |
| 6 | Sitka | 295505 | Lake - Lincoln | 10 | 0 | 0 | 0 | 10 | 2 | 13316 | 0.41 | 0.41 |

Table 5: Southeast Region Intersection Crash Rate Ranking

Sorted by City: Ranked by 5-Year Unweighted Crash Rate (2001-2005)
(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 | 34 | 37 | 2 | 0 | 73 | 14.6 | 27498 | 1.45 | 10.04 |
| 2 | Juneau | 296000 | Egan - Vanderbilt | 27 | 32 | 1 | 0 | 60 | 12 | 26337 | 1.25 | 8.26 |
| 3 | Juneau | 296400 | Loop - Stephen Richards | 9 | 17 | 3 | 2 | 31 | 6.2 | 16292 | 1.04 | 17.79 |
| 4 | Juneau | 296000 | Egan - McNugget | 29 | 31 | 1 | 0 | 61 | 12.2 | 33942 | 0.98 | 6.28 |
| 5 | Juneau | 296000 | Egan - Loop | 35 | 28 | 2 | 0 | 65 | 13 | 36234 | 0.98 | 6.28 |
| 6 | Juneau | 296000 | Egan - Yandukin | 30 | 17 | 3 | 0 | 50 | 10 | 30815 | 0.89 | 6.22 |
| 7 | Juneau | 296000 | Egan - Sunny Point | 20 | 22 | 2 | 0 | 44 | 8.8 | 27875 | 0.86 | 6.68 |
| 8 | Juneau | 296000 | Egan - 10th | 28 | 14 | 0 | 0 | 42 | 8.4 | 27535 | 0.84 | 3.34 |
| 9 | Juneau | 296400 | Loop - Atlin | 22 | 17 | 2 | 0 | 41 | 8.2 | 28379 | 0.79 | 5.64 |
| 10 | Juneau | 296331 | Glacier - Old Dairy Rd - Trout | 12 | 9 | 1 | 0 | 22 | 4.4 | 16877 | 0.71 | 4.93 |
| 11 | Juneau | 296000 | Egan - Highland | 14 | 12 | 1 | 0 | 27 | 5.4 | 22011 | 0.67 | 4.58 |
| 12 | Juneau | 296400 | Loop - Mendenhall Blvd - Valley | 5 | 5 | 1 | 0 | 11 | 2.2 | 9084 | 0.66 | 6.33 |
| 13 | Juneau | 296000 | Egan - Fritz Cove Rd | 8 | 3 | 2 | 0 | 13 | 2.6 | 11407 | 0.62 | 6.63 |
| 14 | Juneau | 296500 | Riverside - Vintage | 15 | 6 | 1 | 0 | 22 | 4.4 | 19921 | 0.61 | 3.44 |
| 15 | Juneau | 296000 | Egan - Willoughby | 11 | 5 | 1 | 0 | 17 | 3.4 | 15768 | 0.59 | 3.86 |
| 16 | Juneau | 296331 | Glacier - Jordan | 8 | 7 | 0 | 0 | 15 | 3 | 14015 | 0.59 | 3.05 |
| 17 | Juneau | 296331 | Glacier - Shell Simmons | 10 | 4 | 0 | 0 | 14 | 2.8 | 13391 | 0.57 | 2.05 |
| 18 | Juneau | 296229 | Glacier - Sunny Point | 6 | 7 | 0 | 0 | 13 | 2.6 | 12953 | 0.55 | 3.21 |
| 19 | Juneau | 296110 | Douglas Hwy - Cordova | 5 | 4 | 0 | 1 | 10 | 2 | 11144 | 0.49 | 7.13 |
| 20 | Juneau | 296000 | Egan - Riverside | 11 | 6 | 0 | 0 | 17 | 3.4 | 20826 | 0.45 | 1.87 |
| 21 | Juneau | 296000 | Egan - Glacier North | 11 | 0 | 2 | 0 | 13 | 2.6 | 16054 | 0.44 | 3.79 |
| 22 | Juneau | 296229 | Glacier - Anka | 4 | 4 | 1 | 1 | 10 | 2 | 12661 | 0.43 | 8.40 |
| 23 | Juneau | 296400 | Loop - Nancy | 5 | 9 | 0 | 0 | 14 | 2.8 | 18360 | 0.42 | 2.84 |
| 24 | Juneau | 296000 | Egan - Main | 7 | 2 | 1 | 0 | 10 | 2 | 13288 | 0.41 | 3.18 |
| 25 | Juneau | 296000 | Egan - 12th | 7 | 8 | 0 | 0 | 15 | 3 | 21366 | 0.38 | 2.23 |
| 26 | Juneau | 296110 | Douglas Hwy - N Douglas | 5 | 4 | 1 | 0 | 10 | 2 | 14686 | 0.37 | 3.54 |
| 27 | Juneau | 296000 | Egan - Whittier | 6 | 4 | 0 | 0 | 10 | 2 | 14987 | 0.37 | 1.68 |
| 28 | Juneau | 296229 | Glacier - Former K-Mart | 4 | 2 | 0 | 1 | 7 | 1.4 | 12800 | 0.30 | 5.31 |
| 29 | Juneau | 296400 | Loop - Tongass | 0 | 1 | 0 | 1 | 2 | 0.4 | 14564 | 0.08 | 4.14 |
| 1 | Ketchikan | 291500 | N Tongass - Heckman | 7 | 7 | 0 | 0 | 14 | 2.8 | 12750 | 0.60 | 3.31 |
| 2 | Ketchikan | 291400 | S Tongass - Jefferson | 17 | 2 | 3 | 0 | 22 | 4.4 | 20734 | 0.58 | 4.94 |
| 3 | Ketchikan | 291400 | S Tongass - Washington | 14 | 4 | 1 | 0 | 19 | 3.8 | 18880 | 0.55 | 3.02 |
| 4 | Ketchikan | 291400 | S Tongass - Carlanna Lake | 10 | 6 | 0 | 0 | 16 | 3.2 | 19944 | 0.44 | 1.92 |
| 5 | Ketchikan | 291400 | S Tongass - Grant | 7 | 3 | 2 | 0 | 12 | 2.4 | 18527 | 0.35 | 4.05 |
| 6 | Ketchikan | 291400 | S Tongass - Schoenbar | 6 | 4 | 0 | 0 | 10 | 2 | 19423 | 0.28 | 1.30 |
| 7 | Ketchikan | 291400 | S Tongass - Madison | 3 | 1 | 0 | 1 | 5 | 1 | 18960 | 0.14 | 3.27 |
| 1 | Petersburg | 294020 | Nordic - Sing Lee Alley | 1 | 2 | 0 | 1 | 4 | 0.8 | 6370 | 0.34 | 10.41 |
| 1 | Sitka | 295500 | Sawmill Cr Rd - Jarvis | 10 | 0 | 0 | 0 | 10 | 2 | 7834 | 0.70 | 0.70 |
| 2 | Sitka | 295400 | Halibut Pt Rd - Peterson | 4 | 7 | 0 | 0 | 11 | 2.2 | 13189 | 0.46 | 3.07 |
| 3 | Sitka | 295400 | Halibut Pt Rd - Lake - Sawmill Cr Rd | 10 | 2 | 0 | 0 | 12 | 2.4 | 15760 | 0.42 | 1.04 |
| 4 | Sitka | 295505 | Lake - Lincoln | 10 | 0 | 0 | 0 | 10 | 2 | 13316 | 0.41 | 0.41 |
| 5 | Sitka | 295439 | Katlina - Signinaka Way | 2 | 0 | 0 | 1 | 3 | 0.6 | 4840 | 0.34 | 11.55 |
| 6 | Sitka | 295500 | Sawmill Cr Rd - Baranof | 1 | 1 | 1 | 1 | 4 | 0.8 | 8593 | 0.26 | 10.27 |

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 1st 2001 through December 31st 2005).

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
2001-2005
(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 | Juneau | Fish Creek Rd. -All | 16 | 110 | 229 | 5.89 | 6.49 | 44.60 |
| 2 | Ketchikan | Revellia Rd (Ward Lake Rd.) - All | 25 | 137 | 345 | 9.678 | 4.10 | 22.48 |
| 3 | Prince of Wales | Hydaburg Rd: Jct. to Hydaburg | 18 | 188 | 135 | 22.496 | 3.26 | 34.02 |
| 4 | Ketchikan | N. Tongass. Knudson Cv.- End | 8 | 17 | 363 | 3.744 | 3.23 | 6.86 |
| 5 | Skagway | Dyea Rd.: Observ. Pt. - Bridge | 7 | 83 | 256 | 5.39 | 2.78 | 32.96 |
| 6 | Juneau | Glacier Hwy: Cohen - Herbert R. | 15 | 234 | 505 | 6.184 | 2.63 | 41.06 |
| 7 | Ketchikan | S. Tongass Herring Cv. - End | 4 | 4 | 176 | 4.795 | 2.59 | 2.59 |
| 8 | Juneau | Thane Rd. Rock Dump - End | 10 | 68 | 732 | 3.078 | 2.43 | 16.53 |
| 9 | Juneau | Glacier Hwy. Herb. R.. - Echo | 13 | 215 | 257 | 13.044 | 2.12 | 35.10 |
| 10 | Prince of Wales | Craig/Kwk/Hollis: Hollis-Hyd.Rd. | 11 | 154 | 329 | 10.462 | 1.75 | 24.52 |
| 11 | Juneau | N. Douglas Rd. Eaglecrest-End | 8 | 35 | 421 | 6.069 | 1.72 | 7.51 |
| 12 | Prince of Wales | Craig - Port St. Nichols Rd | 9 | 152 | 710 | 5.3 | 1.31 | 22.13 |
| 13 | Haines | Hns Hwy: Airport-Klukwan | 24 | 78 | 609 | 17.904 | 1.21 | 3.92 |
| 14 | Haines | Lutak Rd: Ferry Term.- End | 6 | 172 | 516 | 5.468 | 1.16 | 33.39 |
| 15 | Haines | Hns Hwy: Klukwan-Mosquito | 6 | 15 | 611 | 5.724 | 0.94 | 2.35 |
| 16 | Prince of Wales | Craig/Kwk/Hollis: Hyd.Rd.-Kwk. | 10 | 153 | 591 | 12.865 | 0.72 | 11.03 |
| 17 | Petersburg | Mitkof Hwy: Papke Ld. - End | 3 | 3 | 113 | 22.392 | 0.65 | 0.65 |
| 18 | Skagway | Klondike Hwy. Dyea Rd-Bord. | 6 | 73 | 455 | 12.38 | 0.58 | 7.09 |
| 19 | Prince of Wales | Thorne Bay Road: All | 7 | 34 | 381 | 17.477 | 0.58 | 2.80 |
| 20 | Haines | Mud Bay Rd. Small Tr- End | 3 | 3 | 391 | 7.385 | 0.57 | 0.57 |
| 21 | Yakutat | Airport Rd. | 3 | 12 | 836 | 3.476 | 0.57 | 2.26 |
| 22 | Prince of Wales | North Prince of Wales Hyw | 4 | 112 | 253 | 15.53 | 0.56 | 15.62 |
| 23 | Yakutat | Lost River Rd | 2 | 110 | 251 | 8.254 | 0.53 | 29.09 |
| 24 | Prince of Wales | Big Salt Road:Airport - End | 6 | 33 | 453 | 14.555 | 0.50 | 2.74 |
| 25 | Haines | Haines/Lutak Rd: Haines - Ferry Term | 3 | 70 | 918 | 3.654 | 0.49 | 11.43 |
| 26 | Haines | Hns Hwy: Mosquito-Border | 3 | 21 | 271 | 13.023 | 0.47 | 3.26 |
| 27 | Prince of Wales | Kasaan Road - All | 1 | 10 | 74 | 17.87 | 0.41 | 4.14 |
| 28 | Prince of Wales | Craig/Kwk/Hollis: Kwk.- Craig | 8 | 120 | 1960 | 5.72 | 0.39 | 5.87 |
| 29 | Wrangell | Zimovia Hwy: Mill - End | 1 | 1 | 286 | 7.755 | 0.25 | 0.25 |
| 30 | Prince of Wales | North Prince of Wales Road | 1 | 10 | 220 | 64.43 | 0.04 | 0.39 |
| 31 | Yakutat | Dangerous River Rd.: All | 0 | 0 | 118 | 29.473 | 0.00 | 0.00 |

* Crashes / Million Vehicle Miles

** Weighted Crash Number / Million Vehicle Miles

**Table 7: Rural Road Vehicle Crash Rate Ranking
2001-2005**
(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 | Juneau | Fish Creek Rd. -All | 16 | 110 | 229 | 5.89 | 6.49 | 44.60 |
| 2 | Juneau | Glacier Hwy: Cohen - Herbert R. | 15 | 234 | 505 | 6.184 | 2.63 | 41.06 |
| 3 | Juneau | Glacier Hwy. Herb. R.. - Echo | 13 | 215 | 257 | 13.044 | 2.12 | 35.10 |
| 4 | Prince of Wales | Hydaburg Rd: Jct. to Hydaburg | 18 | 188 | 135 | 22.496 | 3.26 | 34.02 |
| 5 | Haines | Lutak Rd: Ferry Term.- End | 6 | 172 | 516 | 5.468 | 1.16 | 33.39 |
| 6 | Skagway | Dyea Rd.: Observ. Pt. - Bridge | 7 | 83 | 256 | 5.39 | 2.78 | 32.96 |
| 7 | Yakutat | Lost River Rd | 2 | 110 | 251 | 8.254 | 0.53 | 29.09 |
| 8 | Prince of Wales | Craig/Kwk/Hollis: Hollis-Hyd.Rd. | 11 | 154 | 329 | 10.462 | 1.75 | 24.52 |
| 9 | Ketchikan | Revellia Rd (Ward Lake Rd.) - All | 25 | 137 | 345 | 9.678 | 4.10 | 22.48 |
| 10 | Prince of Wales | Craig - Port St. Nichols Rd | 9 | 152 | 710 | 5.3 | 1.31 | 22.13 |
| 11 | Juneau | Thane Rd. Rock Dump - End | 10 | 68 | 732 | 3.078 | 2.43 | 16.53 |
| 12 | Prince of Wales | North Prince of Wales Hyw | 4 | 112 | 253 | 15.53 | 0.56 | 15.62 |
| 13 | Haines | Haines/Lutak Rd: Haines - Ferry Term | 3 | 70 | 918 | 3.654 | 0.49 | 11.43 |
| 14 | Prince of Wales | Craig/Kwk/Hollis: Hyd.Rd.-Kwk. | 10 | 153 | 591 | 12.865 | 0.72 | 11.03 |
| 15 | Juneau | N. Douglas Rd. Eaglecrest-End | 8 | 35 | 421 | 6.069 | 1.72 | 7.51 |
| 16 | Skagway | Klondike Hwy. Dyea Rd-Bord. | 6 | 73 | 455 | 12.38 | 0.58 | 7.09 |
| 17 | Ketchikan | N. Tongass. Knudson Cv.- End | 8 | 17 | 363 | 3.744 | 3.23 | 6.86 |
| 18 | Prince of Wales | Craig/Kwk/Hollis: Kwk.- Craig | 8 | 120 | 1960 | 5.72 | 0.39 | 5.87 |
| 19 | Prince of Wales | Kasaan Road - All | 1 | 10 | 74 | 17.87 | 0.41 | 4.14 |
| 20 | Haines | Hns Hwy: Airport-Klukwan | 24 | 78 | 609 | 17.904 | 1.21 | 3.92 |
| 21 | Haines | Hns Hwy: Mosquito-Border | 3 | 21 | 271 | 13.023 | 0.47 | 3.26 |
| 22 | Prince of Wales | Thorne Bay Road: All | 7 | 34 | 381 | 17.477 | 0.58 | 2.80 |
| 23 | Prince of Wales | Big Salt Road:Airport - End | 6 | 33 | 453 | 14.555 | 0.50 | 2.74 |
| 24 | Ketchikan | S. Tongass Herring Cv. - End | 4 | 4 | 176 | 4.795 | 2.59 | 2.59 |
| 25 | Haines | Hns Hwy: Klukwan-Mosquito | 6 | 15 | 611 | 5.724 | 0.94 | 2.35 |
| 26 | Yakutat | Airport Rd. | 3 | 12 | 836 | 3.476 | 0.57 | 2.26 |
| 27 | Petersburg | Mitkof Hwy: Papke Ld. - End | 3 | 3 | 113 | 22.392 | 0.65 | 0.65 |
| 28 | Haines | Mud Bay Rd. Small Tr- End | 3 | 3 | 391 | 7.385 | 0.57 | 0.57 |
| 29 | Prince of Wales | North Prince of Wales Road | 1 | 10 | 220 | 64.43 | 0.04 | 0.39 |
| 30 | Wrangell | Zimovia Hwy: Mill - End | 1 | 1 | 286 | 7.755 | 0.25 | 0.25 |
| 31 | Yakutat | Dangerous River Rd.: All | 0 | 0 | 118 | 29.473 | 0.00 | 0.00 |

* Vehicle Crashes / 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).

The 2003 Traffic & Safety Report (and earlier reports) used the 1994 Highway Capacity Manual method to calculate LOS and delay. Some traffic counts that appear in both the 2003 and the 2005 reports will show different delay or LOS for this reason. 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 | ≤ 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 | 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.

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. Then if one or more of the warrants are met, the second step, an engineering study, is performed to determine whether signalization will improve the overall safety and/or operation of the intersection. 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 are calculated signals 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 | |
| Juneau | | | | | | | |
| 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% | |

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 | |
| Juneau (cont.) | | | | | | | |
| 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% | |
| Ketchikan | | | | | | | |
| 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% | |
| Petersburg | | | | | | | |
| Main/Haugen Drive (12 hr) | 6/6/2002 | 760 | 63% | | | 49% | |
| Nordic / Gjoa | 6/5/2002 | 674 | | | | 25% | |
| Sitka | | | | | | | |
| 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.

The 2003 Traffic & Safety Report used the 1994 Highway Capacity Manual method to calculate LOS and delay. Some traffic counts that appear in both the 2003 and the 2005 reports will show different delay or LOS for this reason.

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 - occasional cycle failure |
| E | 35.1 to 50.0 | Limit of acceptable delay - frequent cycle failure |
| 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

| 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 | | |

Table 9A: Level of Service (LOS) at Unsignalized 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 (Cont) | 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 | |
| Ketchikan | 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. |
| Petersburg | S. Tongass / Totem Row | 05/02/2006 | 416 | B | 10.6 | 424 | A | 9.8 | |
| | Nordic / Haugen Dr. | 06/05/2002 | 553 | B | 12.4 | 760 | C | 17.8 | |
| Sitka | Nordic / Gjoa | 06/06/2002 | | | | 674 | B | 12.7 | AM counts unavailable |
| | 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

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 10. 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.

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 10: Vehicle Classification 1996 - 2005

| City | Road Name | Study Date | Mile | Location | Motor-cycles | Cars | Pick-ups | Trucks |
|------------|------------------------|------------|--------|---|--------------|-------|----------|--------|
| Haines | Haines Hwy. | 1997 | 0.346 | 6th St - Mud Bay Rd | 1.7% | 60.3% | 36.1% | 1.9% |
| Haines | Haines Hwy. | 2003 | 0.92 | Mud Bay Rd - Sawmill Rd | 0.6% | 54.1% | 36.4% | 8.8% |
| Haines | Haines Hwy. | 2005 | 1.287 | Sawmill Rd - Airport | 0.2% | 53.7% | 34.2% | 11.8% |
| Haines | Haines Hwy. | 2004 | 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 Hwy. | 1996 | 33.247 | Big Boulder - Border | 2.2% | 47.3% | 36.8% | 13.7% |
| Haines | Haines Lutak Rd | 2002 | 4.016 | Ferry - Front St. | 2.2% | 51.2% | 36.4% | 10.2% |
| Haines | Old Haines Hwy. | 2003 | 0.238 | Haines Hwy - Beach Rd. | 1.0% | 58.1% | 32.8% | 8.1% |
| Juneau | Douglas Hwy | 1996 | 1.218 | betwn Cordova & Lawson Ck. | 0.2% | 76.9% | 20.5% | 2.4% |
| Juneau | Eaglecrest Road | 1997 | 0.056 | At jct. with No. Douglas Hwy | 0.4% | 70.7% | 23.9% | 5.0% |
| Juneau | Eaglecrest Road | 1997 | 3.962 | Fish Ck. Bridge - Lodge | 4.4% | 66.4% | 20.7% | 8.5% |
| Juneau | Egan Drive | 1997 | 2.338 | betwn Highland Dr & 3 Mi. | 0.1% | 77.2% | 20.7% | 2.1% |
| 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 | 2003 | 10.977 | Wayadelich Cr Br to N Jct Loop Rd | 0.5% | 71.4% | 20.7% | 7.5% |
| Juneau | Glacier Highway - Egan | 2002 | 19.6 | Shrine - Pt. Stevens Rd. | 0.1% | 72.6% | 23.1% | 4.2% |
| Juneau | Glacier Highway - Nug | 1997 | 0.87 | At jct with Del Rae Rd. | 0.1% | 79.9% | 18.3% | 1.7% |
| Juneau | Glacier Highway - Will | 1999 | 1.256 | Ross Way - Highland Dr | 1.4% | 77.9% | 14.2% | 6.6% |
| Juneau | Industrial Blvd. | 2003 | 0.063 | Industrial Blvd. | 0.8% | 57.3% | 31.2% | 10.7% |
| Juneau | Lemon Road (Glacier) | 2004 | 1.334 | DOT - Sunny Dr | 1.0% | 74.7% | 19.9% | 4.3% |
| Juneau | Lemon Road (Glacier) | 2001 | 1.509 | Sunny Dr - Walmart | 0.6% | 72.2% | 21.3% | 5.8% |
| Juneau | Lemon Road (Glacier) | 2004 | 1.88 | Walmart - Davis Ave. | 0.5% | 69.8% | 21.2% | 8.5% |
| Juneau | Mendenhall Loop Rd. | 2002 | 1.397 | S Richards - Floyd Dryden | 0.4% | 74.6% | 20.2% | 4.8% |
| Juneau | N. Douglas Hwy | 2004 | 2.104 | Eaglecrest - Heliport | 0.6% | 71.8% | 20.9% | 6.6% |
| Juneau | Old Dairy Rd. | 2002 | 0.337 | Crest - Yandukin | 0.2% | 68.4% | 24.1% | 7.3% |
| Juneau | Shell Simmons Dr. | 1996 | 0.111 | Shell Simmons | 0.2% | 62.6% | 29.8% | 7.4% |
| Juneau | Thane Road | 1997 | 0.414 | Ferry Term - Rock Dump | 1.1% | 62.4% | 25.7% | 10.8% |
| Juneau | Thane Road | 1997 | 0.933 | at Rock Dump | 0.3% | 68.2% | 24.7% | 6.8% |
| Juneau | Thane Road | 1997 | 1.774 | Sewer Plant - Sheep Ck | 0.4% | 67.8% | 24.5% | 7.4% |
| Ketchikan | Baranof Ave | 1997 | 0.126 | Carlanna - Jackson | 1.7% | 76.9% | 20.2% | 1.2% |
| Ketchikan | N. Tongass Hwy. | 2005 | 1.334 | Rose's Caboose | 0.2% | 67.8% | 26.8% | 5.2% |
| 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 | 2003 | 3.635 | North Shoreline Dr - Ward Lake Rd | 0.8% | 67.2% | 25.9% | 6.0% |
| Ketchikan | N. Tongass Hwy | 2004 | 4.625 | Ward Lake Rd - Mill Entrance | 0.8% | 64.1% | 27.9% | 7.3% |
| Ketchikan | Revilla Rd | 1996 | 2.513 | betwn Grassy Pt & White R. Spur | 1.3% | 61.1% | 33.7% | 3.9% |
| 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 | 2005 | 0.02 | Near Park Av | 0.7% | 69.5% | 20.1% | 9.6% |
| 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% |
| 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% |
| P.O.W. | Hydaburg Hwy | 1996 | 12.532 | betwn 12 Mi. Arm Road & end | 0.4% | 47.1% | 50.7% | 1.8% |
| P.O.W. | Hydaburg Hwy | 1996 | 22.476 | betwn start and 12 Mi. Arm Road | 0.8% | 53.2% | 42.0% | 4.0% |
| Petersburg | Nordic Dr. | 2004 | 1.194 | Sing Lee Alley - Ferry Term | 0.7% | 60.0% | 32.5% | 6.8% |
| Petersburg | Nordic Dr. | 2004 | 0.28 | Middleton - Harder Street | 0.9% | 64.5% | 29.8% | 4.7% |
| Petersburg | Haugen Dr. | 1996 | 0.395 | 12th St - Airport | 1.1% | 65.4% | 30.5% | 3.0% |

| City | Road Name | Study Date | Mile | Location | Motor-cycles | Cars | Pick-ups | Trucks |
|---------|------------------|------------|--------|-------------------------------------|--------------|-------|----------|--------|
| Sitka | Halibut Pt. Road | 2005 | 2.022 | Harbor Mountaint Rd - Cascade | 0.3% | 60.5% | 28.8% | 10.5% |
| Sitka | Halibut Pt. Road | 2003 | 4.251 | Granite Creek. - Harbor Mountain Rd | 0.3% | 60.5% | 31.2% | 8.0% |
| Sitka | Katlian 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 | 2000 | 4.276 | Thimbleberry Creek - Mill | 0.5% | 73.1% | 22.7% | 3.6% |
| 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 | 2005 | 2.548 | Dyea Rd. - Sanitarium Rd. | 1.0% | 41.6% | 32.0% | 25.4% |
| Skagway | Klondike Hwy | 2005 | 11.669 | Sanitorium Rd. - U.S. Customs | 1.3% | 48.1% | 25.3% | 25.3% |
| Wrangel | Airport Rd. | 1998 | 0.71 | East Rd. - Airport | 1.0% | 60.8% | 36.6% | 1.6% |
| Wrangel | Zimovia Hwy. | 2002 | 2.231 | MP 2 - Wrangel Inst. | 0.1% | 63.2% | 31.8% | 5.0% |
| Wrangel | Zimovia Hwy. | 2003 | 4.524 | Wrangell Institute - Shoemaker Rd. | 0.0% | 64.3% | 29.7% | 5.9% |

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 11 includes population estimates from 1980 through 2005 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 11 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 (1991-2005), however, the data is complete. The table gives a good overview of long term trends of these southeast communities.

Table 11: Southeast Region Population Estimates

| 2000-2005 | | | | | | | %* | | | | | |
|---------------------------|--------|--------|--------|--------|--------|--------|-----------|--|--|--|--|--|
| Area Name | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Change | | | | | |
| Haines Borough | 2,392 | 2,368 | 2,357 | 2,319 | 2,245 | 2,207 | -1.6% | | | | | |
| Juneau/ City and Borough | 30,711 | 30,371 | 30,899 | 31,656 | 31,142 | 31,193 | 0.3% | | | | | |
| Ketchikan Gateway Borough | 14,059 | 13,742 | 13,676 | 13,533 | 13,030 | 13,125 | -1.4% | | | | | |
| Prince of Wales Borough | 6,157 | 5,814 | 5,680 | 5,594 | 5,548 | 5,497 | -2.2% | | | | | |
| Sitka City/Borough | 8,835 | 8,724 | 8,799 | 8,897 | 8,805 | 8,947 | 0.3% | | | | | |
| City Name | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Change | | | | | |
| Angoon | 572 | 559 | 544 | 507 | 481 | 497 | -2.8% | | | | | |
| Gustavus | 429 | 418 | 421 | 438 | 473 | 459 | 1.4% | | | | | |
| Hoonah | 860 | 875 | 877 | 850 | 841 | 861 | 0.0% | | | | | |
| Kake | 710 | 697 | 701 | 683 | 663 | 598 | -3.4% | | | | | |
| Metlakatla | 1,447 | 1,416 | 1,418 | 1,397 | 1,302 | 1,397 | -0.7% | | | | | |
| Petersburg | 3,224 | 3,218 | 3,148 | 3,079 | 3,123 | 3,155 | -0.4% | | | | | |
| Skagway | 862 | 837 | 843 | 844 | 870 | 834 | -0.7% | | | | | |
| Wrangell | 2,308 | 2,220 | 2,175 | 2,123 | 2,023 | 1,974 | -3.1% | | | | | |
| Yakutat | 680 | 641 | 664 | 635 | 619 | 618 | -1.9% | | | | | |

| 1990-1999 | | | | | | | %** | | | | |
|---------------------------|-------|--------|--------|--------|--------|--------|------------|--------|--------|--------|--------|
| Area Name | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Change |
| Haines Borough | 2117 | 2,242 | 2,230 | 2,293 | 2,331 | 2,280 | 2,352 | 2,404 | 2,461 | 2,475 | 1.2% |
| Juneau/ City and Borough | 26751 | 27,579 | 28,253 | 28,448 | 28,454 | 28,700 | 29,230 | 29,713 | 30,021 | 30,189 | 1.4% |
| Ketchikan Gateway Borough | 13828 | 14,255 | 14,636 | 14,716 | 14,751 | 14,764 | 14,654 | 14,500 | 14,143 | 13,961 | 0.2% |
| Prince of Wales Borough | 6278 | 6,551 | 6,608 | 6,797 | 6,774 | 6,734 | 6,996 | 6,873 | 6,830 | 6,589 | -0.2% |
| Sitka City/Borough | 8588 | 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 | 1680 | 1803 | 1886 | 1950 | 2051 | 2034 | 2036 | 1971 | 1956 | 2058 | 2.3% |
| Juneau/ City and Borough | 19528 | 21329 | 22451 | 24007 | 25268 | 26037 | 25998 | 24966 | 24655 | 25100 | 3.2% |
| Ketchikan Gateway Borough | 11316 | 12042 | 12268 | 12459 | 12438 | 12623 | 12729 | 12793 | 12594 | 13259 | 2.0% |
| Prince of Wales Borough | 3822 | 4204 | 4439 | 4822 | 4993 | 5143 | 5225 | 5392 | 5770 | 5876 | 5.1% |
| Sitka City/Borough | 7803 | 8116 | 7947 | 8028 | 7956 | 8110 | 8128 | 8252 | 8294 | 8283 | 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:

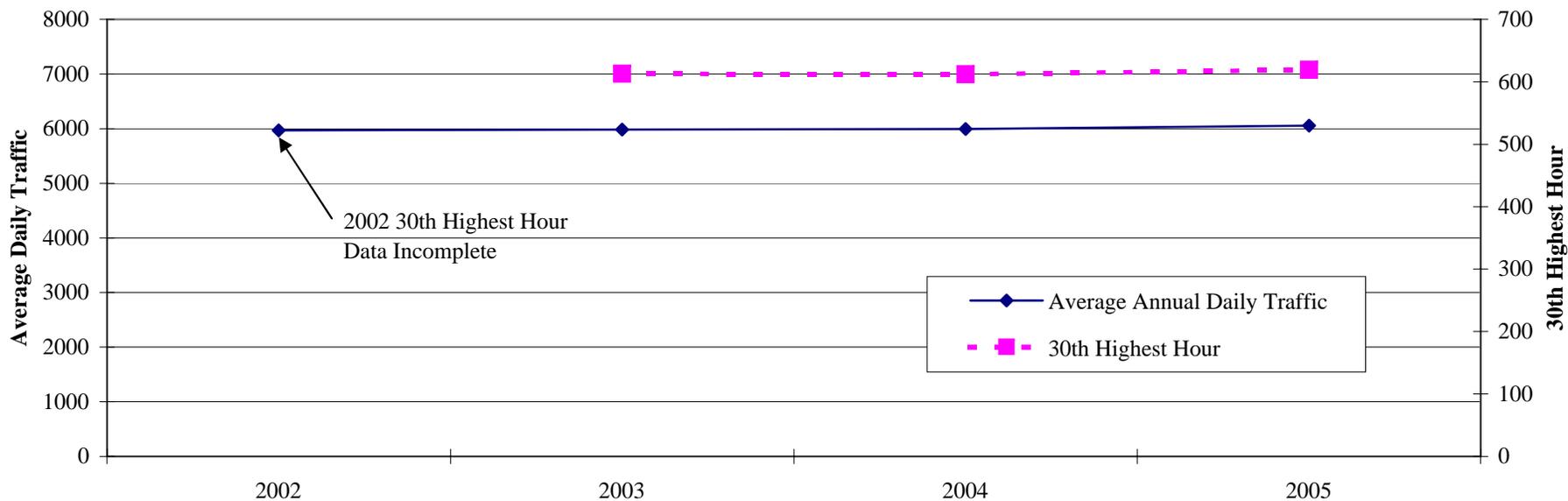
1. Ketchikan – North Tongass Highway (CDS Mile Pt 1.33)
2. Ketchikan – South Tongass Highway (CDS Mile Pt. 3.07)
3. Sitka – Sawmill Creek Road (CDS Mile Pt. 0.73)
4. Sitka – Halibut Point Road (CDS Mile Pt. 0.53)
5. Prince of Wales – Craig / Klawock / Hollis Highway (CDS Mile Pt. 6.71)
6. Wrangell – 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 30th 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 2004. The numerical matrices provide the most detailed and comprehensive data.

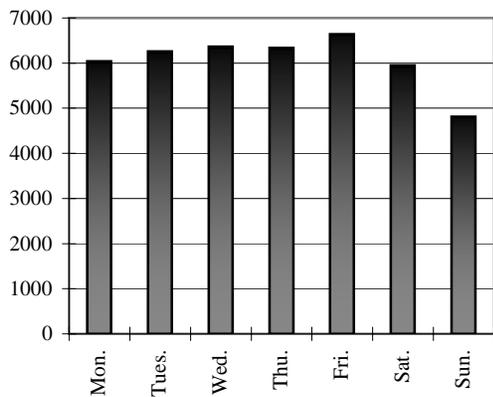
The 30th highest hour volumes, also called the Design Hourly Volume (DHV), are shown because highway projects are usually designed to accommodate this volume in the design year.

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.

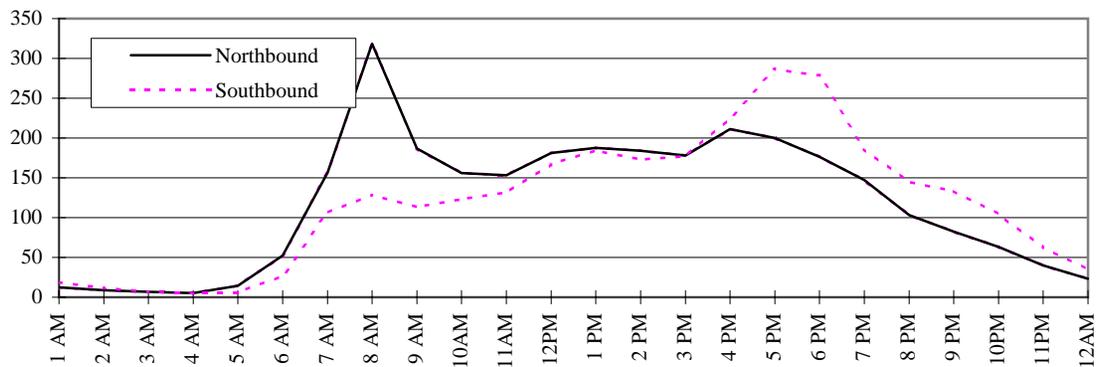
Permanent Traffic Recorder At South Tongass Hwy (CDS Mi 3.07)



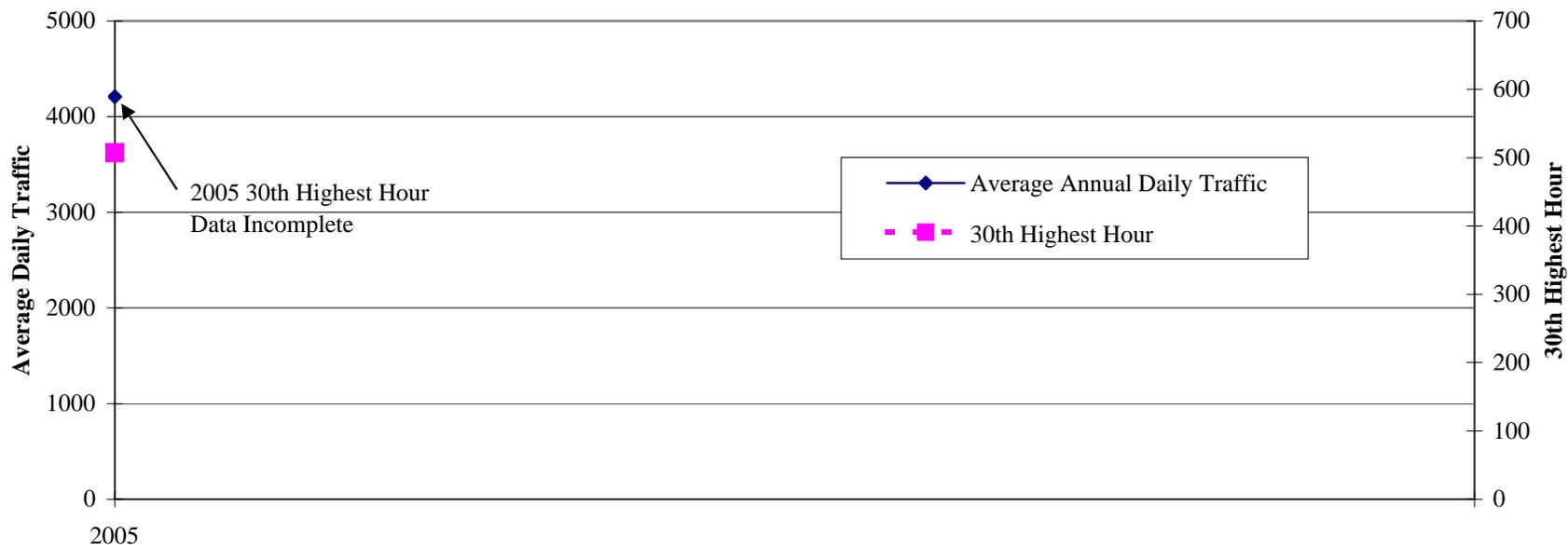
2005 Annual Average Daily Traffic by Day of Week



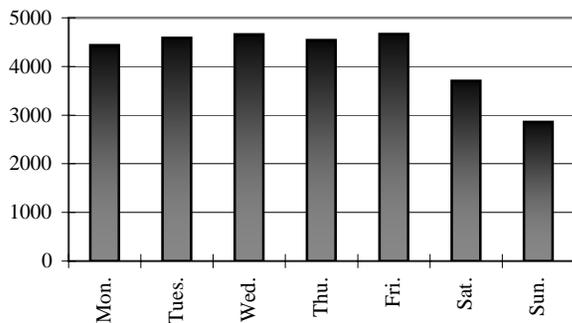
2005 Annual Average Weekday Traffic by Hour of Day



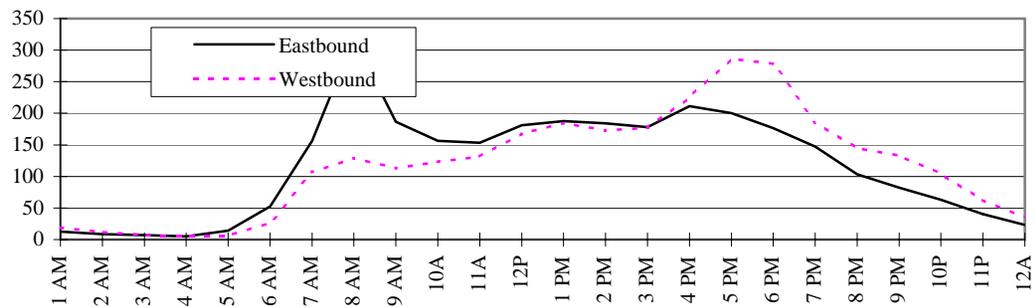
Permanent Traffic Recorder At 3rd Avenue (CDS Mi 0.508)



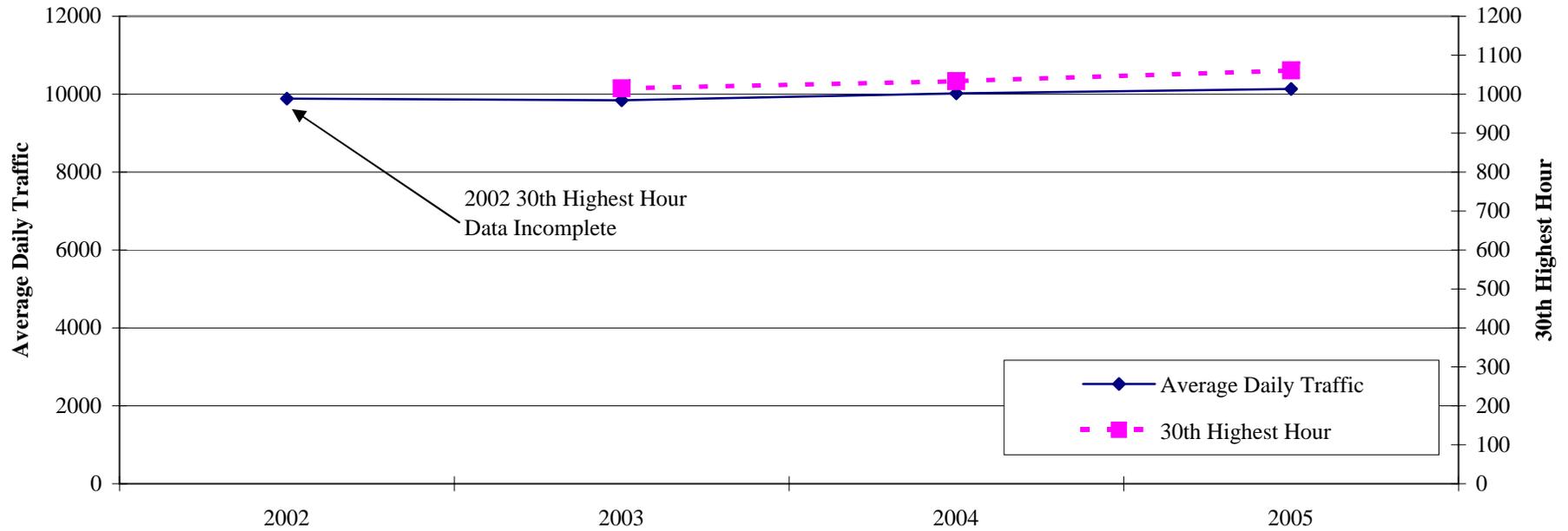
2005 Annual Average Daily Traffic by Day of Week



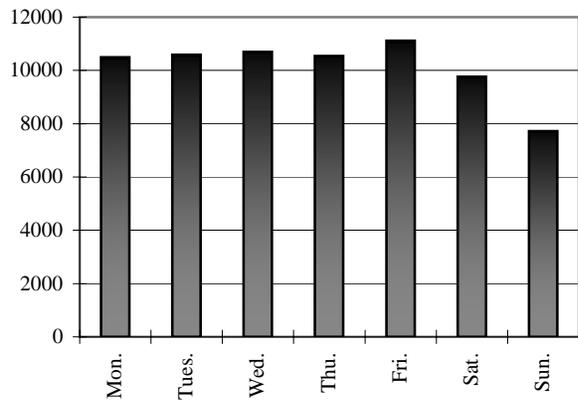
2005 Annual Average Weekday Traffic by Hour of Day



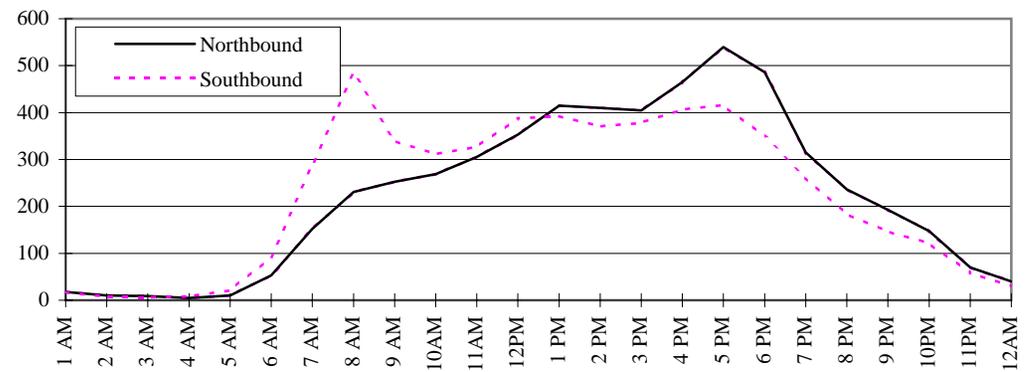
Permanent Traffic Recorder At N. Tongass Hwy (CDS Mi 1.33)



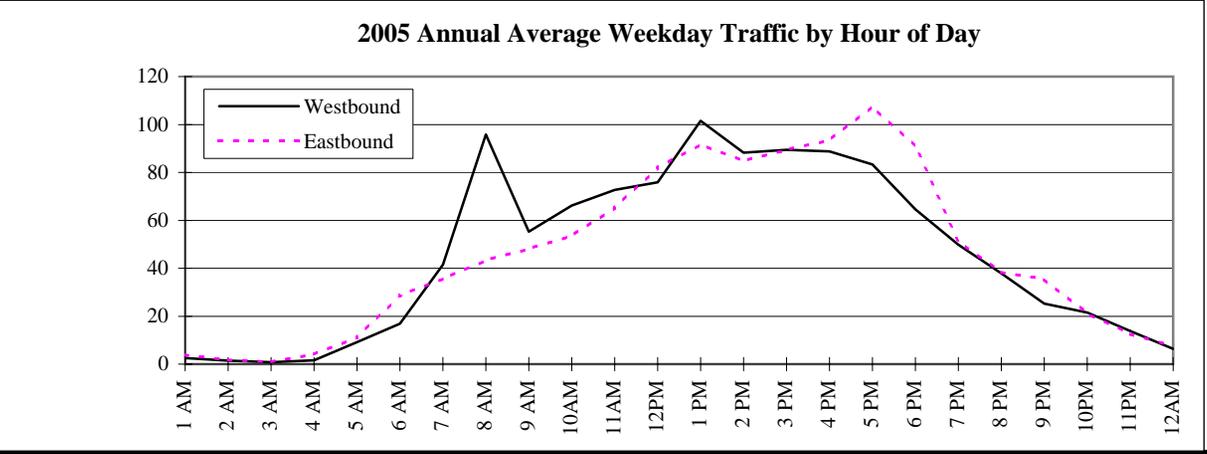
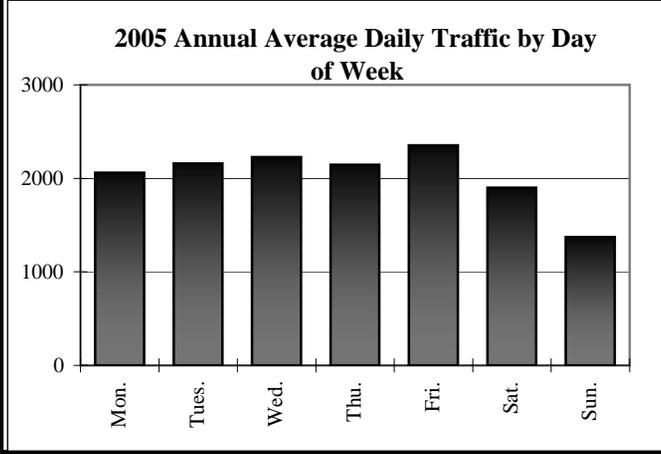
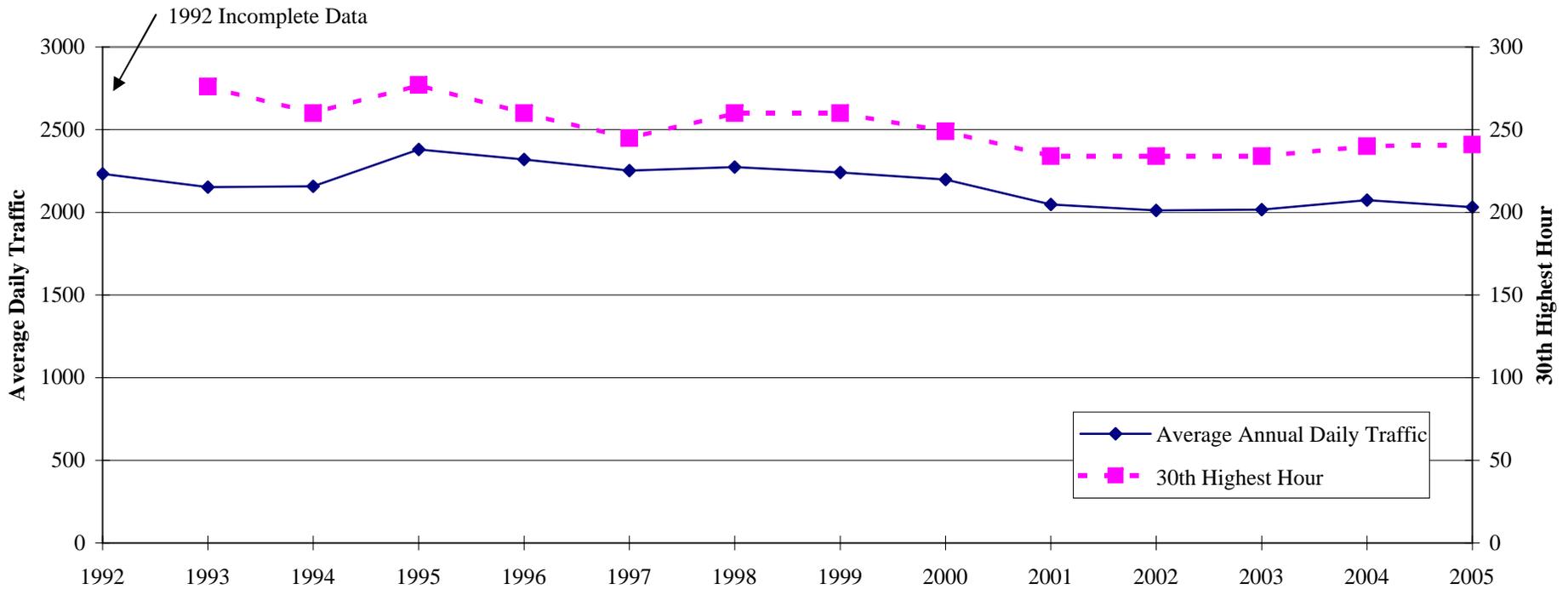
2005 Annual Average Daily Traffic by Day of Week



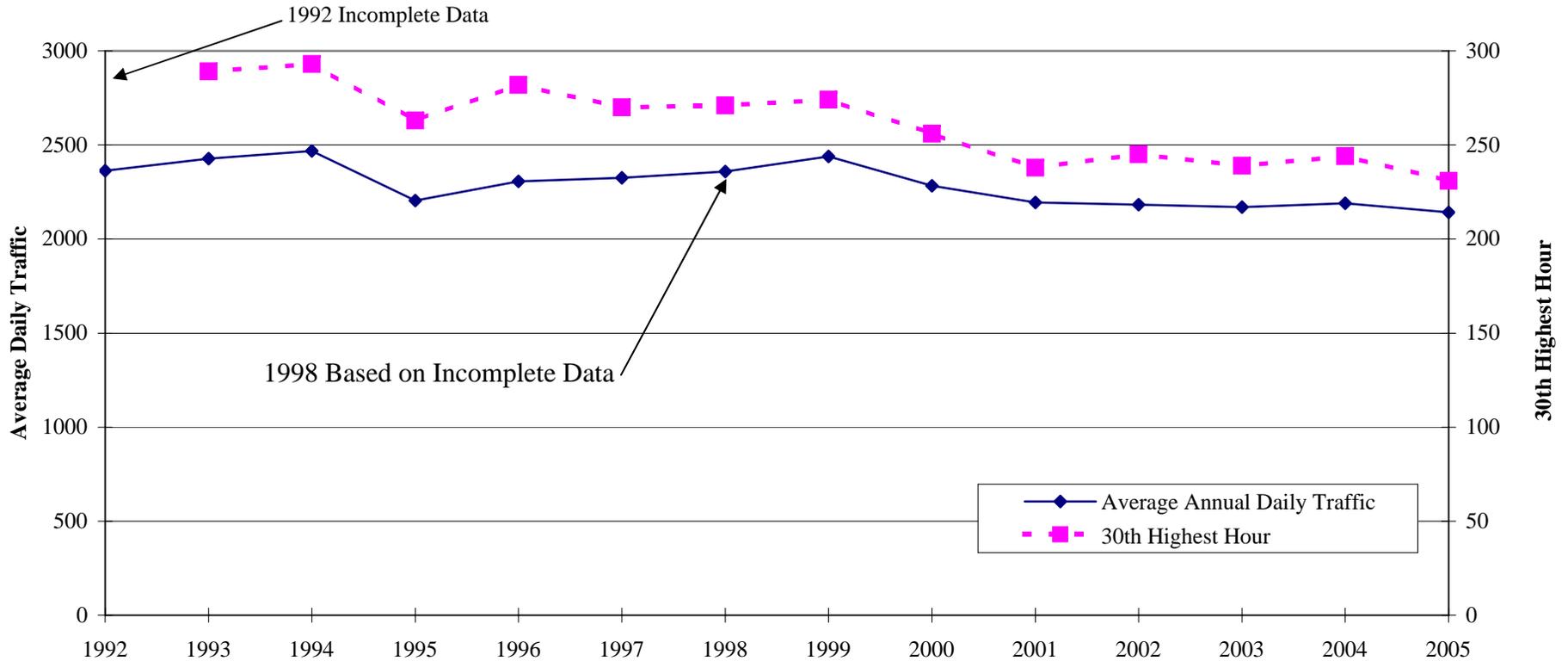
2005 Annual Average Weekday Traffic by Hour of Day



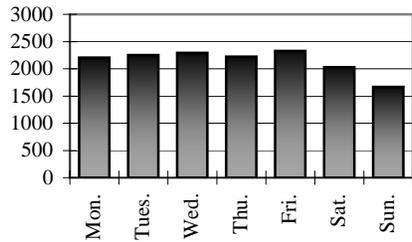
Permanent Traffic Recorder At Craig/Klawock/Hollis Hwy (CDS Mi 6.71)



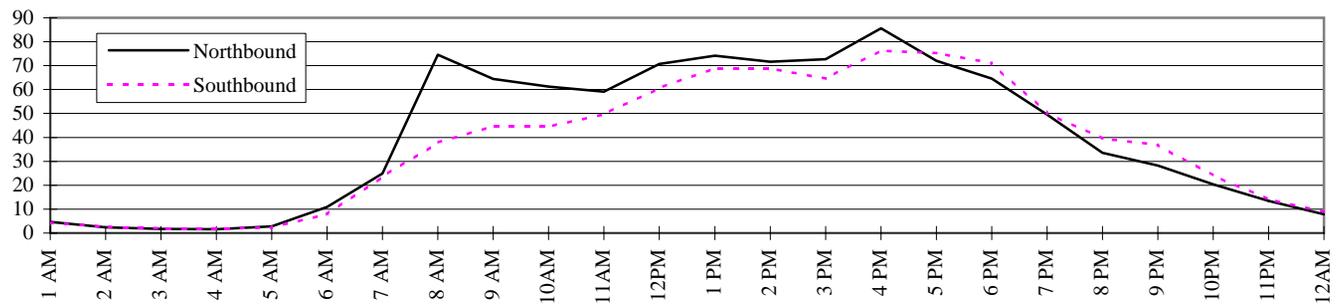
Permanent Traffic Recorder At Zimovia Hwy (CDS Mi 0.71)



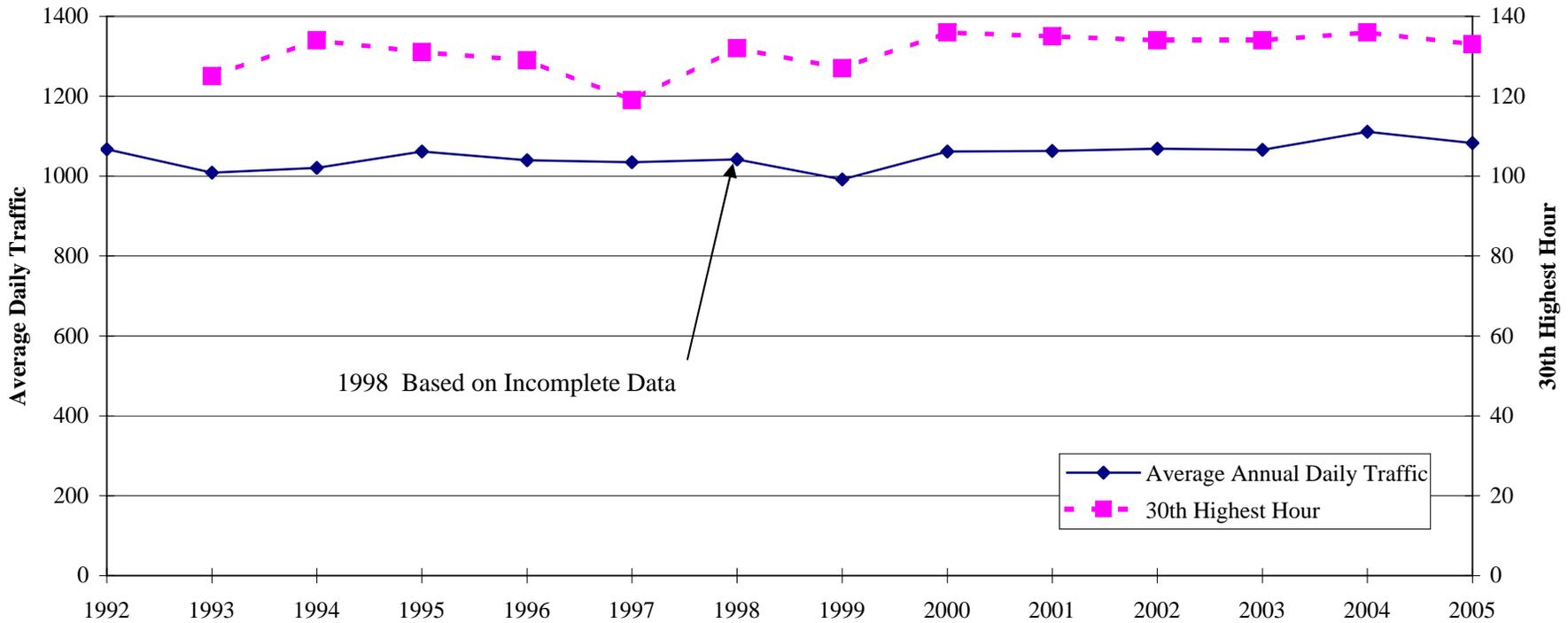
2005 Annual Average Daily Traffic by Day of Week



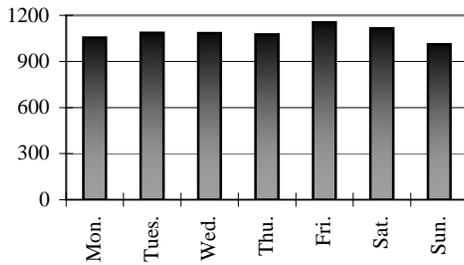
2005 Annual Average Weekday Traffic by Hour of Day



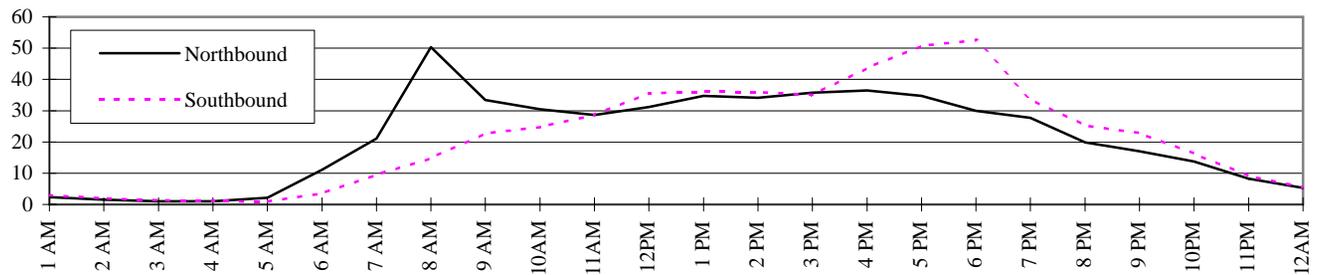
Permanent Traffic Recorder At Mitkof Hwy (CDS Mi 2.55)



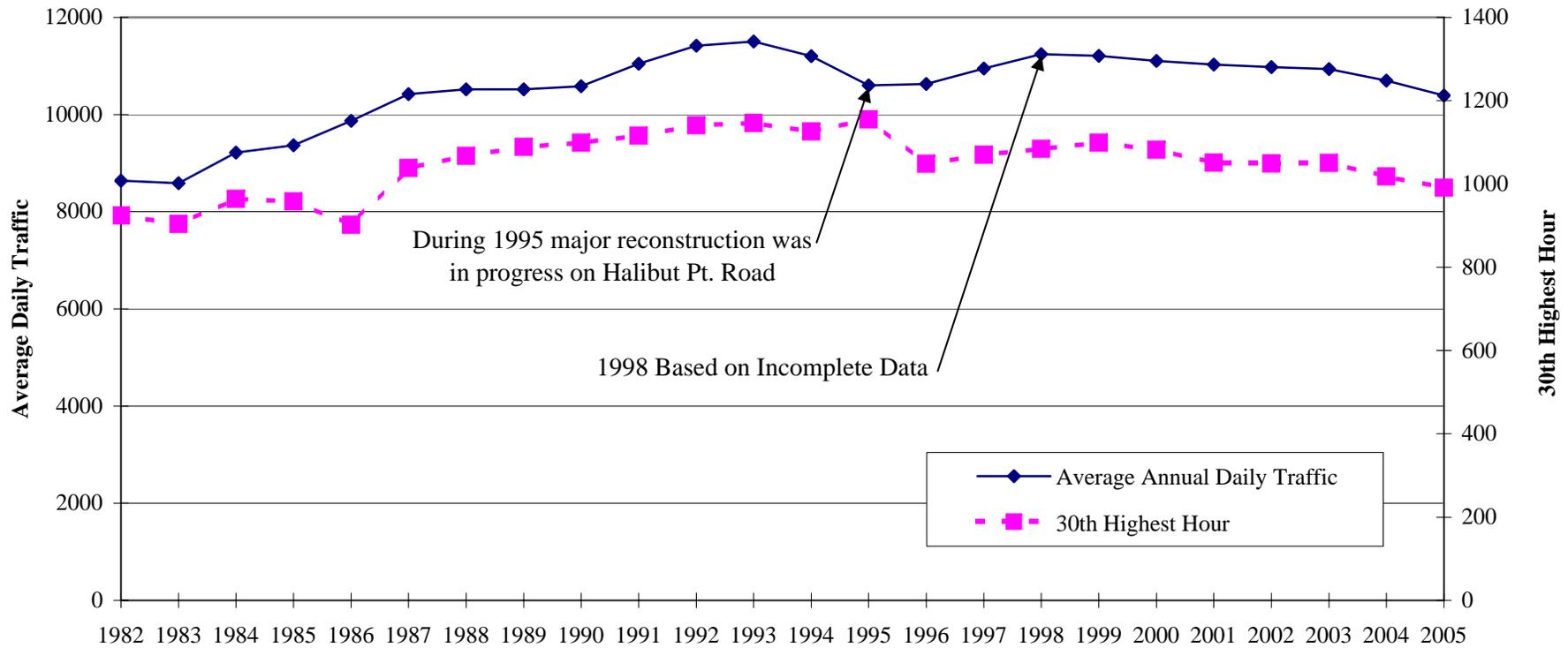
2005 Annual Average Daily Traffic by Day of Week



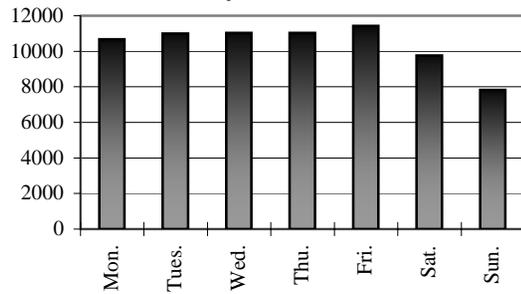
2005 Annual Average Weekday Traffic by Hour of Day



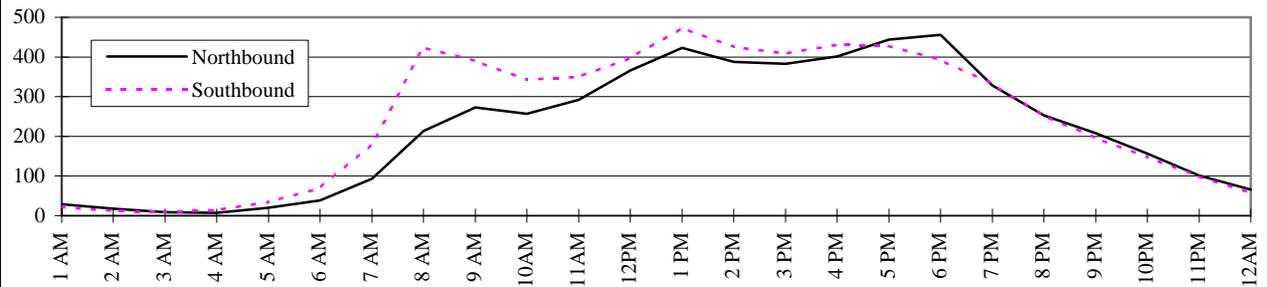
Permanent Traffic Recorder At 1 Mi. Halibut Pt. Road (CDS MP 0.53)



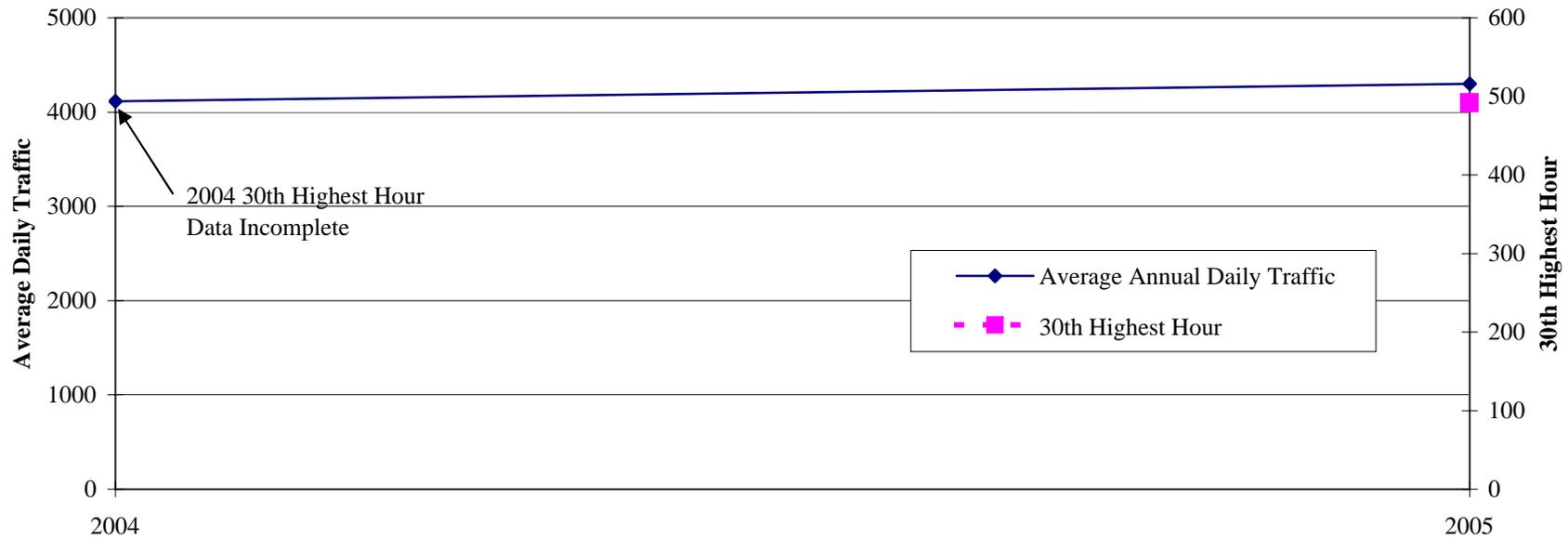
2005 Annual Average Daily Traffic by Day of Week



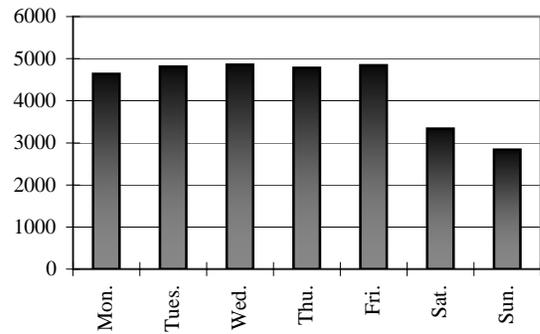
2005 Annual Average Weekday Traffic by Hour of Day



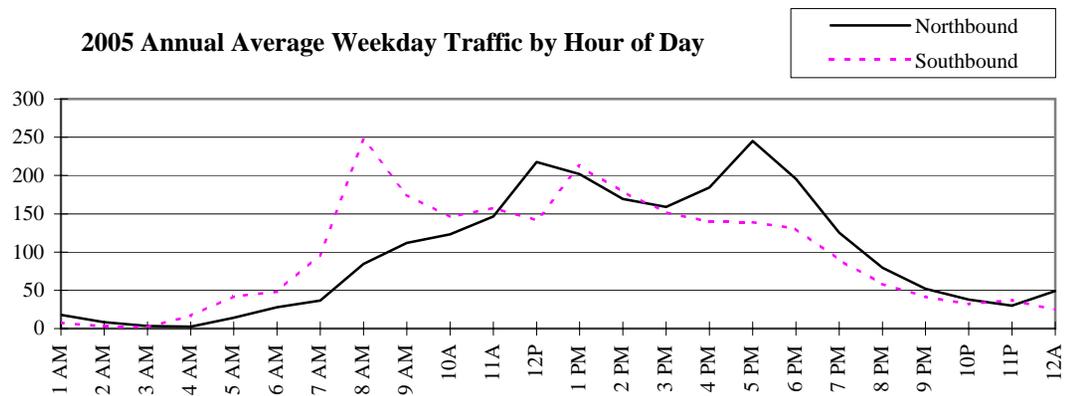
Permanent Traffic Recorder At Harbor Drive (CDS Mi 0.75)



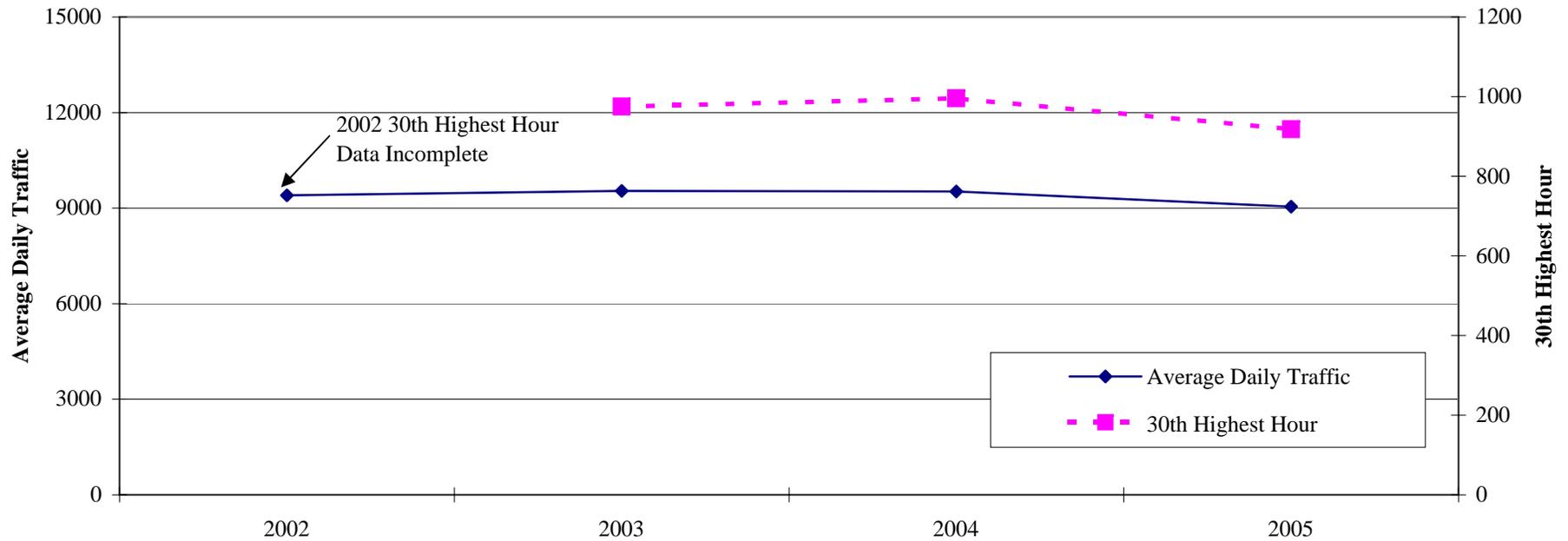
2005 Annual Average Daily Traffic by Day of Week



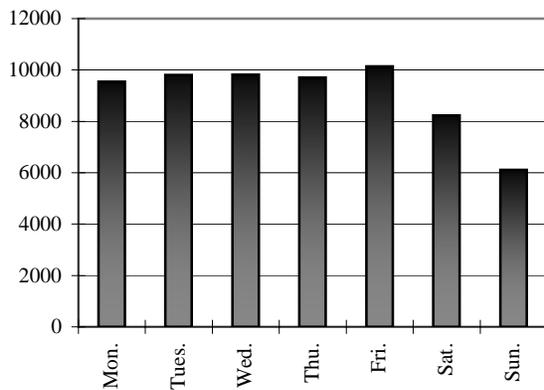
2005 Annual Average Weekday Traffic by Hour of Day



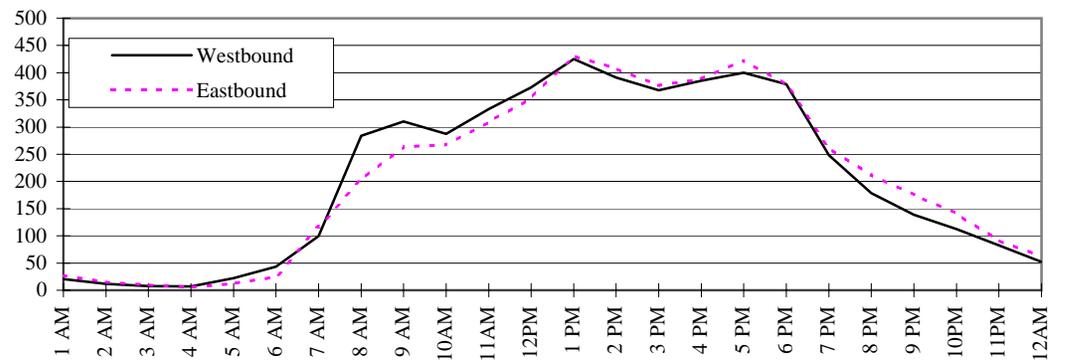
Permanent Traffic Recorder At Sawmill Creek Rd (CDS Mi 0.73)



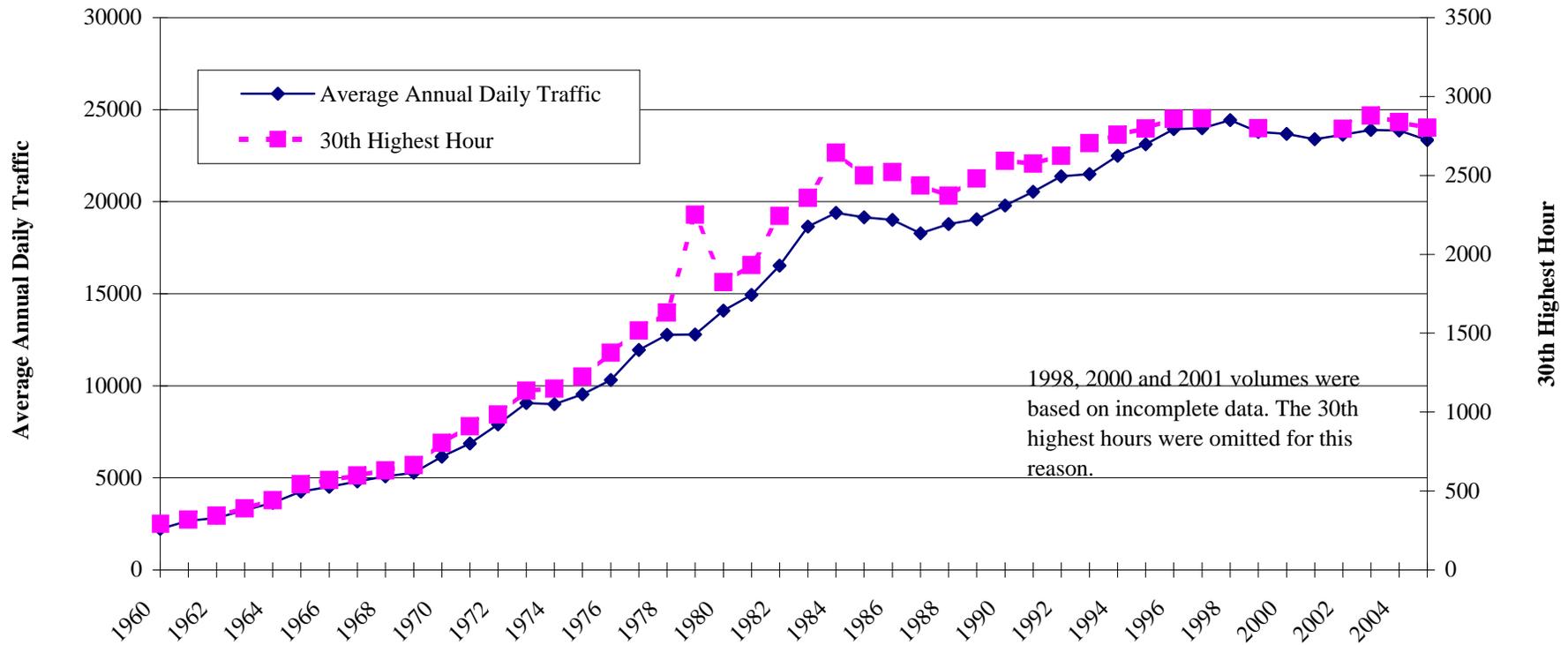
2005 Annual Average Daily Traffic by Day of Week



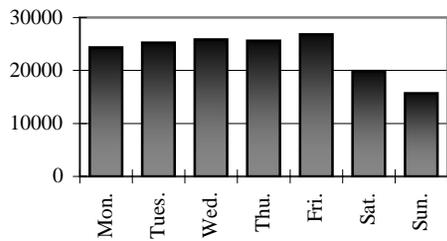
2005 Annual Average Weekday Traffic by Hour of Day



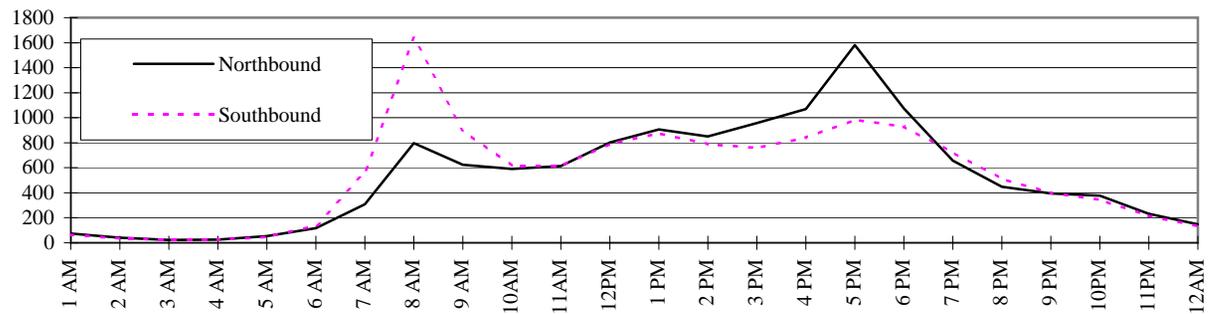
Permanent Traffic Recorder At 3 Mi. Egan Dr. (CDS MP 2.58)



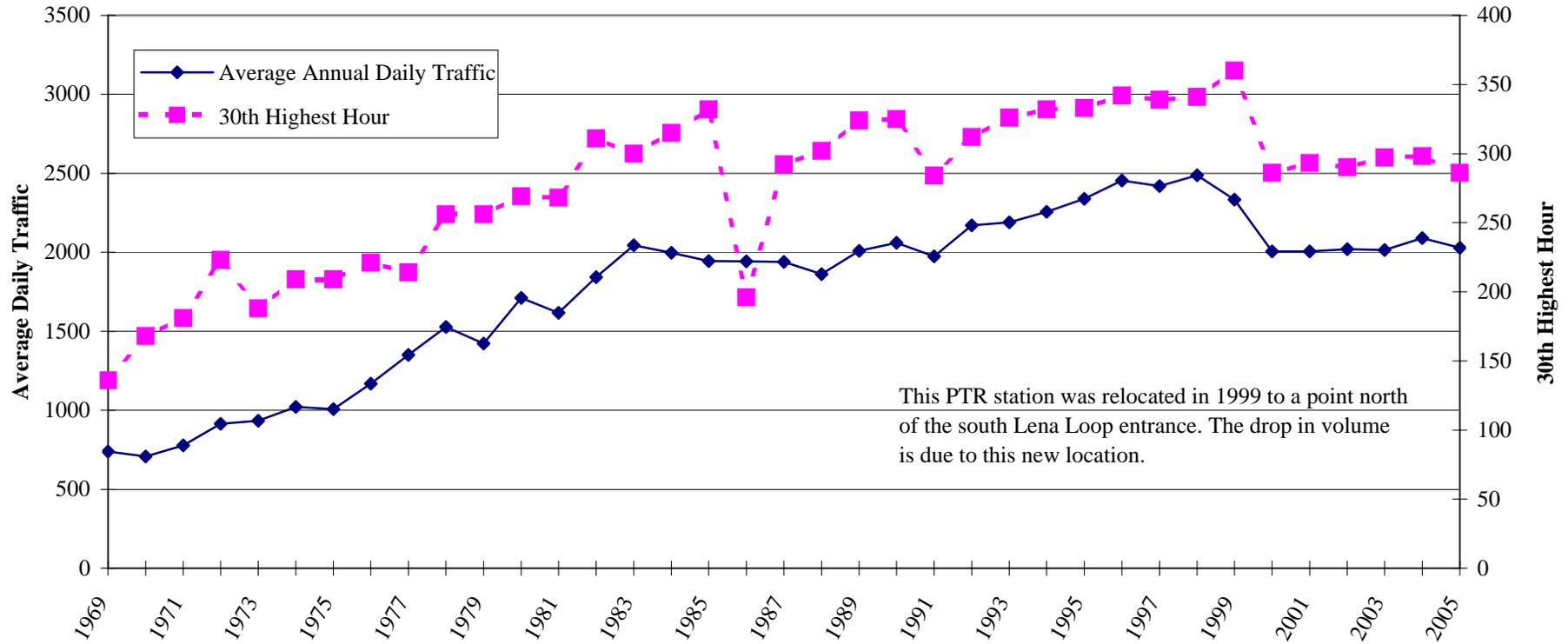
2005 Annual Average Daily Traffic by Day of Week



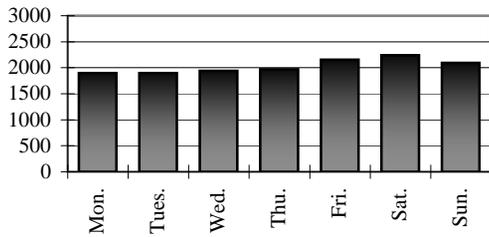
2005 Annual Average Weekday Traffic by Hour of Day



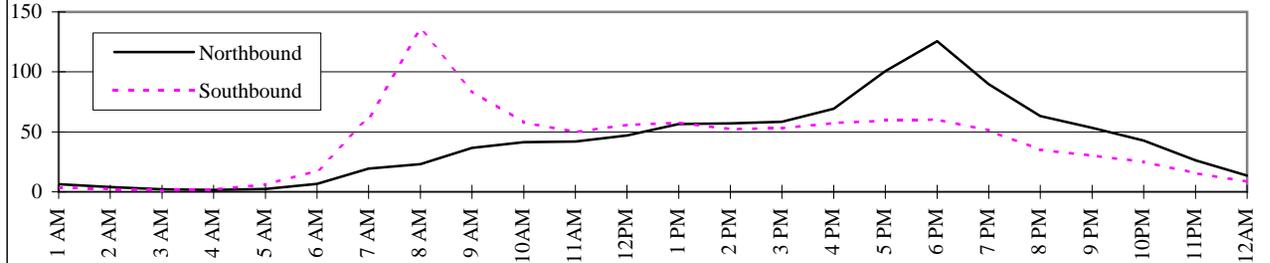
Permanent Traffic Recorder At 16 Mile Glacier Hwy. (CDS MP 14.07)



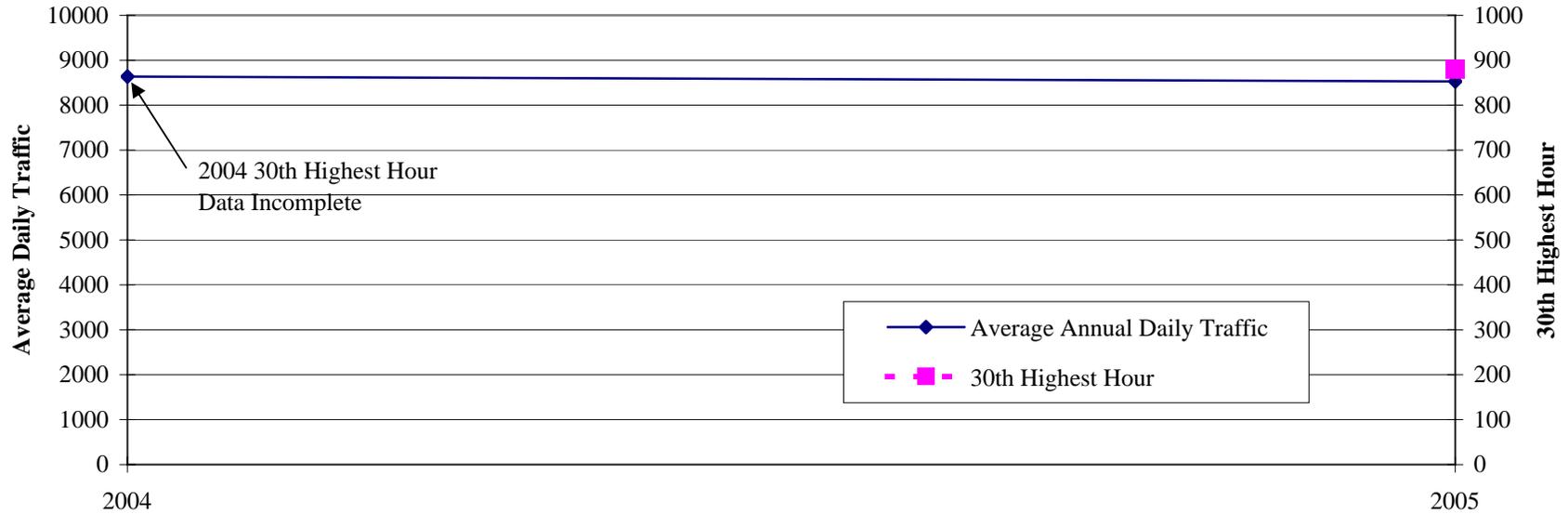
2005 Annual Average Daily Traffic by Day of Week



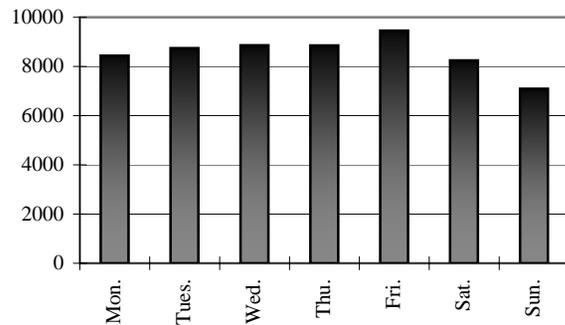
2005 Annual Average Weekday Traffic by Hour of Day



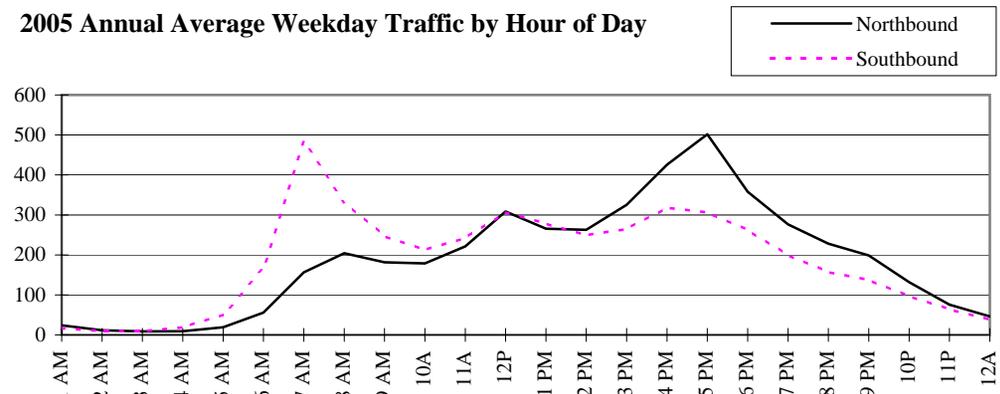
Permanent Traffic Recorder At Douglas Hwy (CDS Mi 1.04)



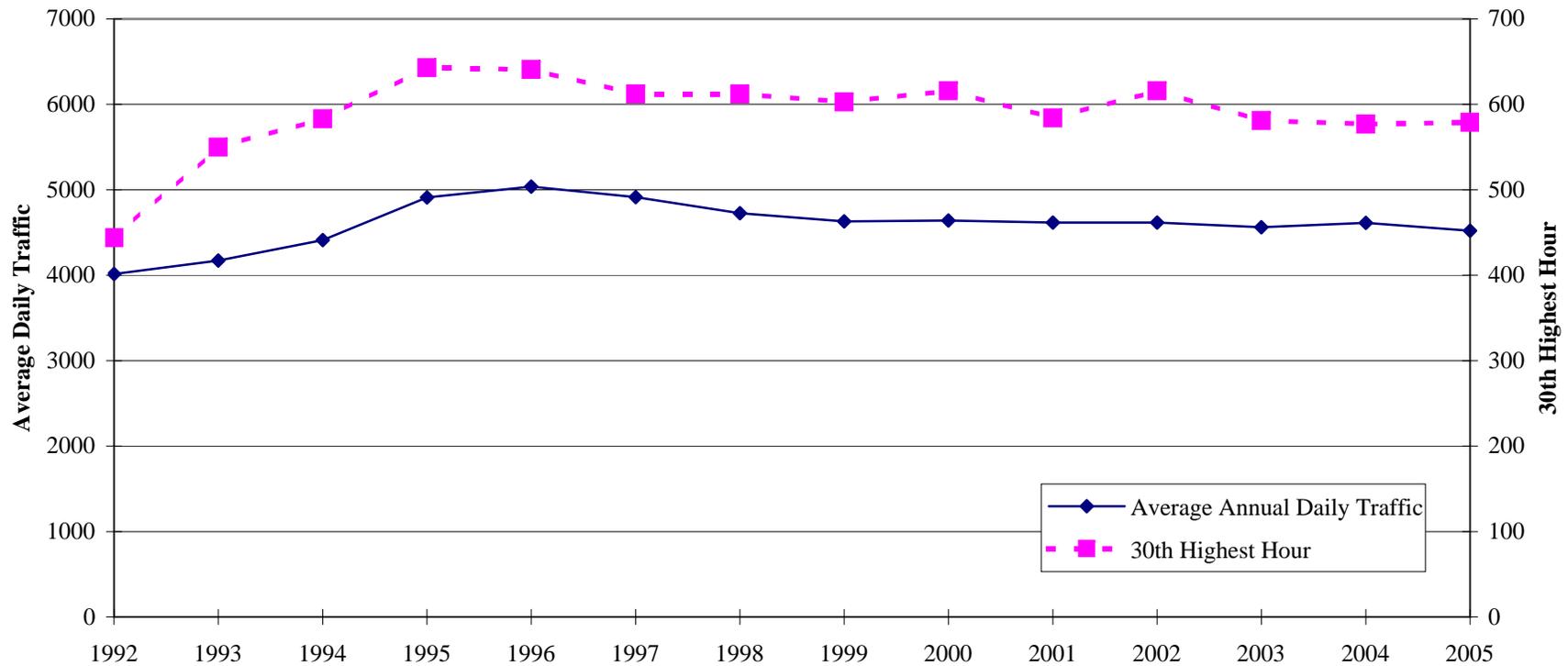
2005 Annual Average Daily Traffic by Day of Week



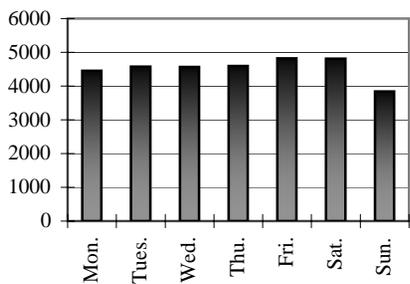
2005 Annual Average Weekday Traffic by Hour of Day



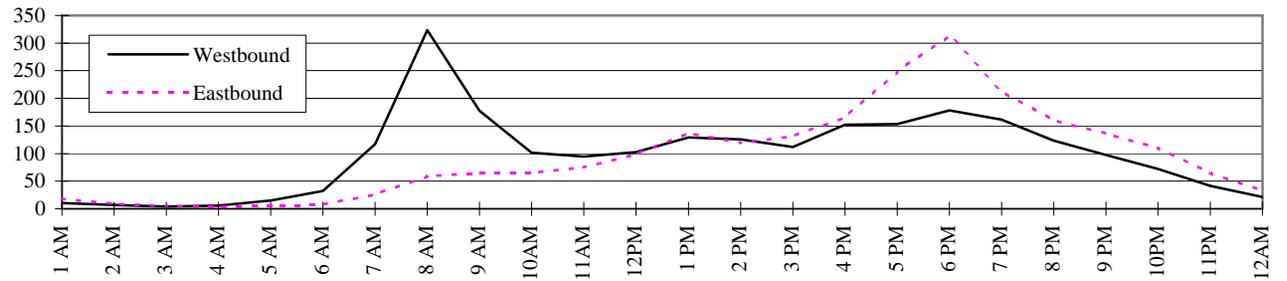
Permanent Traffic Recorder At Riverside Dr. (CDS Mi 1.47)



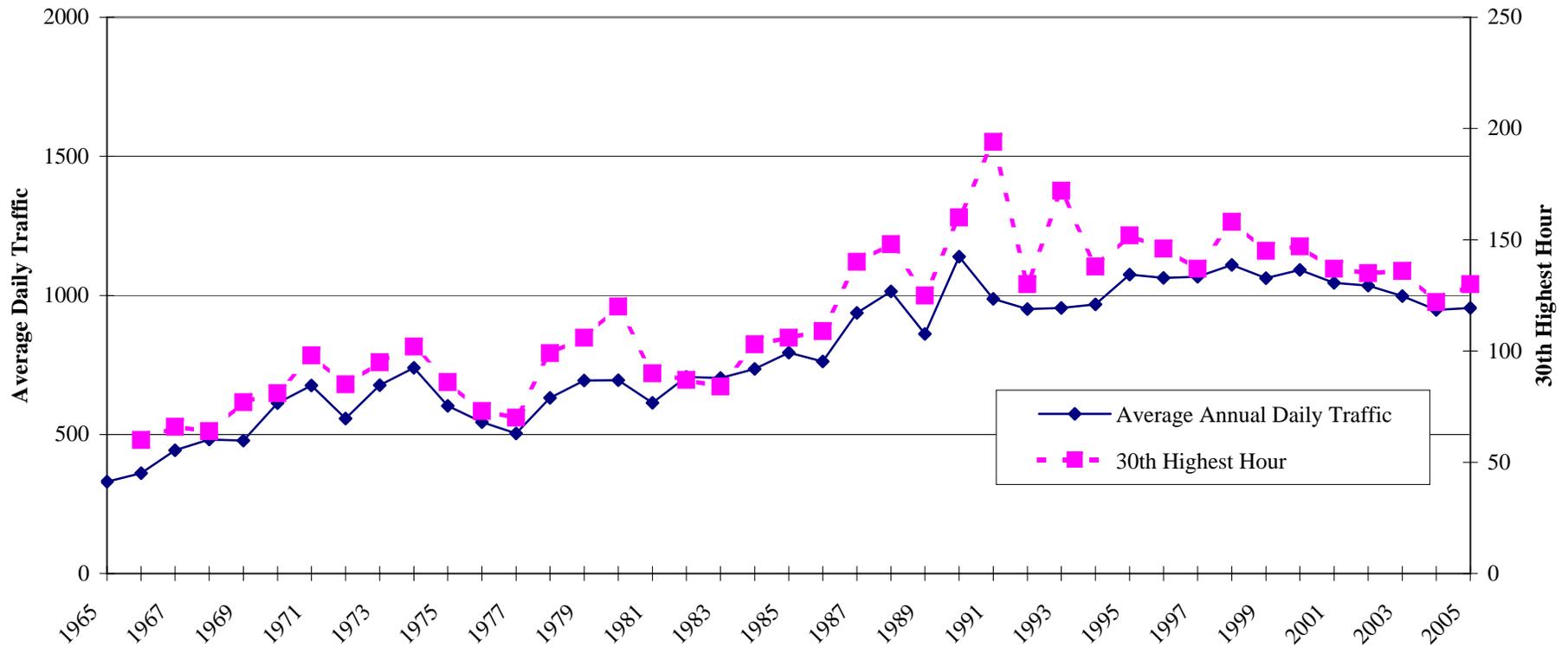
2005 Annual Average Daily Traffic by Day of Week



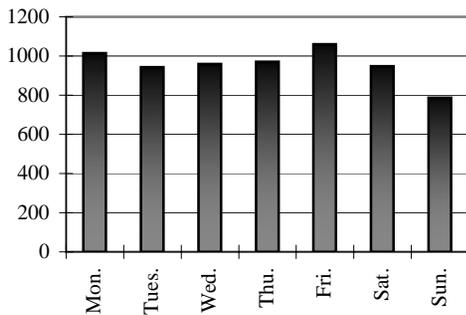
2005 Annual Average Weekday Traffic by Hour of Day



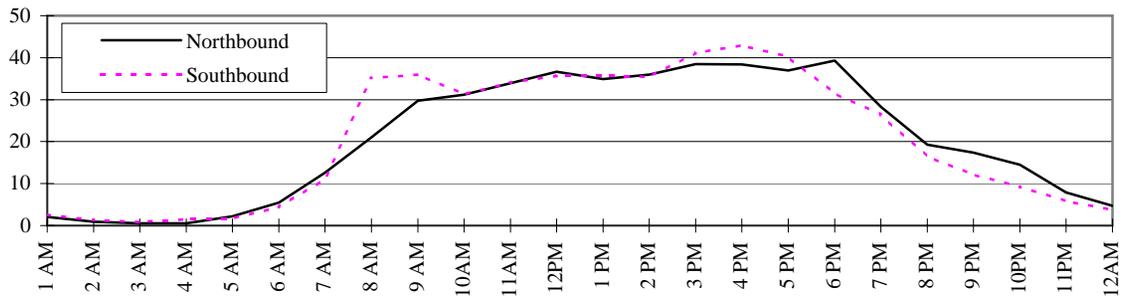
Permanent Traffic Recorder At 5 Mi. Haines Hwy. (CDS MP 1.29)



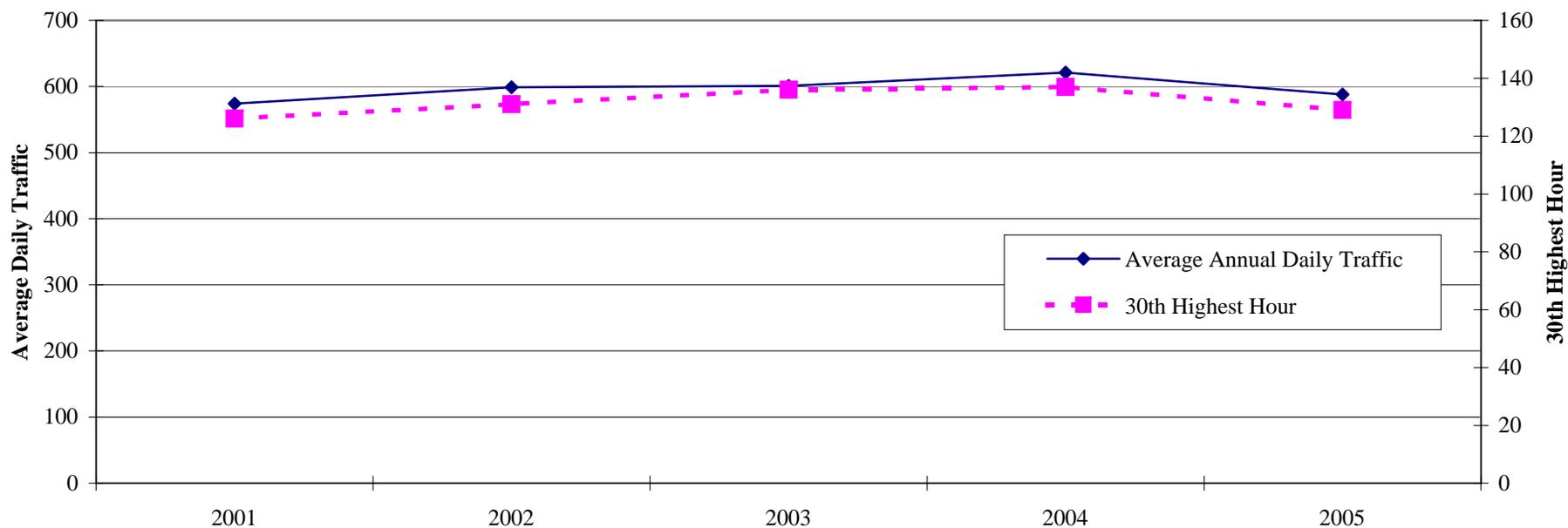
2005 Annual Average Daily Traffic by Day of Week



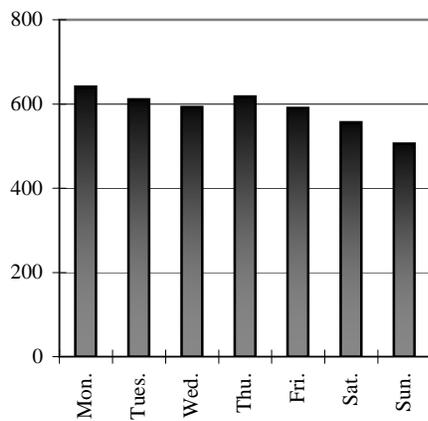
2005 Annual Average Weekday Traffic by Hour of Day



Permanent Traffic Recorder on Klondike Highway (CDS MP 2.55)



2005 Annual Average Daily Traffic by Day of Week



2005 Annual Average Weekday Traffic by Hour of Day

