**Agency: Department of Transportation and Public Facilities**

**Project Title:** **Project Type:** Planning and Research

# Matanuska-Susitna - Knik Goosebay Road Reconstruction

**State Funding Requested: $**20,000,000 **House District:** Mat-Su Areawide (13-16)
Future Funding May Be Requested

**Brief Project Description:**

Road improvements to address safety concerns and access along the Knik Goosebay Corridor.

## Funding Plan:

| | |
|---|---|
| Total Project Cost: | $92,000,000 |
| Funding Already Secured: | ($0) |
| FY2013 State Funding Request: | ($20,000,000) |
| Project Deficit: | $72,000,000 |

## Detailed Project Description and Justification:

Knik Goosebay (KGB) is declared a Safety Corridor: A Highway with the highest incidence of Fatal and Serious injury crashes.

KGB traverses a rapidly growing portion of the Matanuska-Susitna Valley. Commuter Traffic on KGB Road has increased dramatically from the significant growth in residential housing and business development. The area has also experienced a growth in tourisms and recreational access. Safety concerns have arisen at major intersections and for turning movements on and off the main road, as well as for non-motorized travel and off-road vehicles that use the corridor.

This Project will provide traffic and safety improvements along the corridor which is presently ranked 3rd in Alaska (#1 Seward and #2 Parks Highways).

This appropriation will be used to complete the Environmental Study, Right of Way Acquisition, Engineering, and Construction of this project.

## Project Timeline:

FY2012 - project will start upon reciept of funding. Construction would take four to five years to complete.

FY 2012 $20,000,000

FY 2013 $25,000,000

FY 2014 $25,000,000

FY 2014 $22,000,000



**Contact Name:** Morgan Hopson
**Contact Number:** (907) 465-2679

*For use by Co-chair Staff Only:*

$15,000,000 Approved

3:15 PM 5/2/2012

## Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Alaska Department of Transportation

## Grant Recipient Contact Information:

| | |
|---|---|
| Name: | Rob Campbell |
| Title: | Southcentral Regional Director |
| Address: | 4111 Aviation Avenue |
| | Anchorage, Alaska 99519 |
| Phone Number: | (907)269-0770 |
| Email: | rob.campbell@alaska.gov |

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No



**Contact Name:** Morgan Hopson
**Contact Number:** (907) 465-2679

*For use by Co-chair Staff Only:*

3:15 PM 5/2/2012

# MEMORANDUM

# STATE OF ALASKA

Department of Transportation and Public Facilities
Central Region-Division of Design and Engineering Services
Traffic, Safety, & Utilities Section

**To:** **Marc Luiken, P.E., Commissioner** **Date:** December 2, 2010

**Thru:** **Lance Wilber, AICP, Regional Director**

**From:** Safety Corridor Review Team

Cindy Cashen, Administrator, Alaska Highway Safety Office, DOT/PF HQ Juneau

Captain Hans Brinke, AST HQ, Division

Jeff Jeffers, P.E., Assistant State Traffic & Safety Engineer, DOT/PF HQ Juneau
Scott Thomas, P.E., Central Region Traffic & Safety Engineer, DOT/PF
Ron Martindale, HSIP Coordinator, Central Region, DOT/PF

**SUBJECT: Safety Corridors – 2010 Annual Review**

Staff from DOT/PF Traffic & Safety, DPS Alaska State Troopers, and the Alaska Highway Safety Office met October 25-26, 2010 and consulted with local EMS providers [1]. The purpose of this audit was to review Safety Corridor crashes, and ensure efforts are combined to reduce fatal and major injury crashes[2].

ACTIONS

Education: - "Roadwise", REDDI safety messages on the radio by DPS, DOT/PF Commissioners, staff
- May 20th, 2010 Channel 2 Special Report on Safety Corridors with DOT/PF, BHP, AG's office, local police, and EMS officials.
- Began monthly Radio Talk Shows with DPS and DOT/PF Commissioners.
- Roadwise courteous driving bumper stickers distributed to agencies and legislators statewide.
- Introduced both aggressive and distracted driving radio and TV ads in statewide media campaigns.
- April 30th Participated in Oprah Winfrey "No Phone Zone" national campaign against distracted driving.

Engineering: - Installed centerline, shoulder rumble strips on Safety Corridors and main highways.
- Designed project for signing headlight use, ½ mile markers, and REDDI reporting for 2011.
- Design for passing lanes and slow vehicle turnout was begun from Turnagain Pass to Anchorage
- Environmental document approved for the Parks Highway Corridor reconstruction.
- Environmental reviews underway for four lane projects - Seward Hwy and Knik-Goose Bay Road
- Planning and funding is being requested for additional projects in all the corridors.

Enforcement: - AST stationed two full time BHP troopers in Girdwood early in 2010 for the Seward Hwy.
- The BHP increased overall by 5 positions, to 27 positions. 32 is the planned staff level statewide.
- BHP reporting upgraded to track resource use in Safety Corridors
- Full time AST Detachment staff and BHP staff made a visible presence in all Safety Corridors

RESULTS

- **Serious crashes are down by 48% overall (fatal and major injury combined (F+MI)).**
- Fatal crashes are up on the Seward Highway in 2008 and 2009, like occasional years in the past. They've dropped in 2010. This is a volatile indicator due to the small numbers each year.
- Major injury crashes are down significantly based on limited dispatch information. Final crash records for 2009 and 2010 may slightly change this result as each year's final record becomes complete.
- Many factors affect the severity of a crash, including roadway geometrics and road conditions, seatbelt use, vehicle type, impairment, fatigue, aggressive driving, and emergency response abilities.

RECOMMENDATIONS

No additional public and legislative meetings were held since the previous 2009 Audit. Suggestions and ideas from the 2009 Safety Corridors Audit are still being followed for investigation. (see pages 1-21).

## CURRENT SAFETY CORRIDORS PERFORMANCE (Through 9/30/10)

| SEWARD HWY MP 87-117 | Designated 5/26/06 Extended 10/30/07 | | 3.0 Mi S of Girdwood to Potter Rifle Range | | L=30.6 mi |
|---|---|---|---|---|---|
| | BEFORE (1/1/96-5/26/06) | | AFTER | | Overall* |
| | Crashes Per Year | Crashes/ HMVM | Crashes Per Year | Crashes/ HMVM | |
| Fatal Crashes F | 2.0 | 2.1 | 2.8 (+36%) | 2.8 (+31%) | Down in 2010 |
| Major Injury Crashes MI | 7.0 | 7.3 | 3.7 (-48%) | 3.7 (-50%) | |
| Serious Crashes F+MI | 9.0 | 9.4 | 6.4 (-29%) | 6.4 (-32%) | -31% |
| **PARKS HWY MP 44.5-53** | **Designated 10/16/06** | | **Church Rd, Wasilla to LaRae Rd, Houston** | | **L=8.5 mi** |
| | BEFORE (1/1/96-10/16/06) | | AFTER | | Overall* |
| | Crashes Per Year | Crashes/ HMVM | Crashes Per Year | Crashes/ HMVM | |
| Fatal Crashes F | 1.5 | 3.6 | 1.5 (-0%) | 3.2 (-10%) | |
| Major Injury Crashes MI | 4.7 | 11.5 | 2.5 (-47%) | 5.4 (53%) | |
| Serious Crashes F+MI | 6.2 | 15.2 | 4.0 (-35%) | 8.6 _(-43%) | -39% |
| **KNIK-GOOSE BAY RD MP 0.6-17.2** | **Designated 7/01/09** | | **Palmer-Wasilla Hwy to Pt. MacKenzie Rd** | | **L=16.4 mi** |
| | BEFORE (1999-2008) | | AFTER | | Overall* |
| | Crashes Per Year | Crashes/ HMVM | Crashes Per Year | Crashes/ HMVM | |
| Fatal Crashes F | 1.3 | 3.7 | 0 (-100%) | 0 (-100%) | |
| Major Injury Crashes MI | 4.1 | 11.6 | 0.8 (-80%) | 1.8 (-84%) | |
| Serious Crashes F+MI | 5.4 | 15.2 | 0.8 (-85%) | 1.8 (-88%) | -87% |
| **STERLING HWY MP 83-93** | **Designated 7/01/09** | | **Sterling to Soldotna** | | **L=9.8 mi** |
| | BEFORE (1999-2008) | | AFTER | | Overall* |
| | Crashes Per Year | Crashes/ HMVM | Crashes Per Year | Crashes/ HMVM | |
| Fatal Crashes F | 0.9 | 2.8 | 0 (-100%) | 0 (-100%) | |
| Major Injury Crashes MI | 1.8 | 5.6 | 1.6 (-11%) | 4.8 (-14%) | |
| Serious Crashes F+MI | 2.7 | 8.4 | 1.6 (-41%) | 4.8 (-42%) | -42% |

**WEIGHTED TOTAL -48%**

*Interpret results with caution. One year results are too short to be sustained, and three year results are limited. Five or more years are desirable to for a trend to be sustained.

HMVM = rate of crashes per hundred million vehicle miles of travel. Compares all roads equally.

DOT/PF & DPS

**HIGHWAY SAFETY CORRIDORS**

**ENGINEERING PROJECTS**

**(From 2006 through current plans as of 10/26/10)**

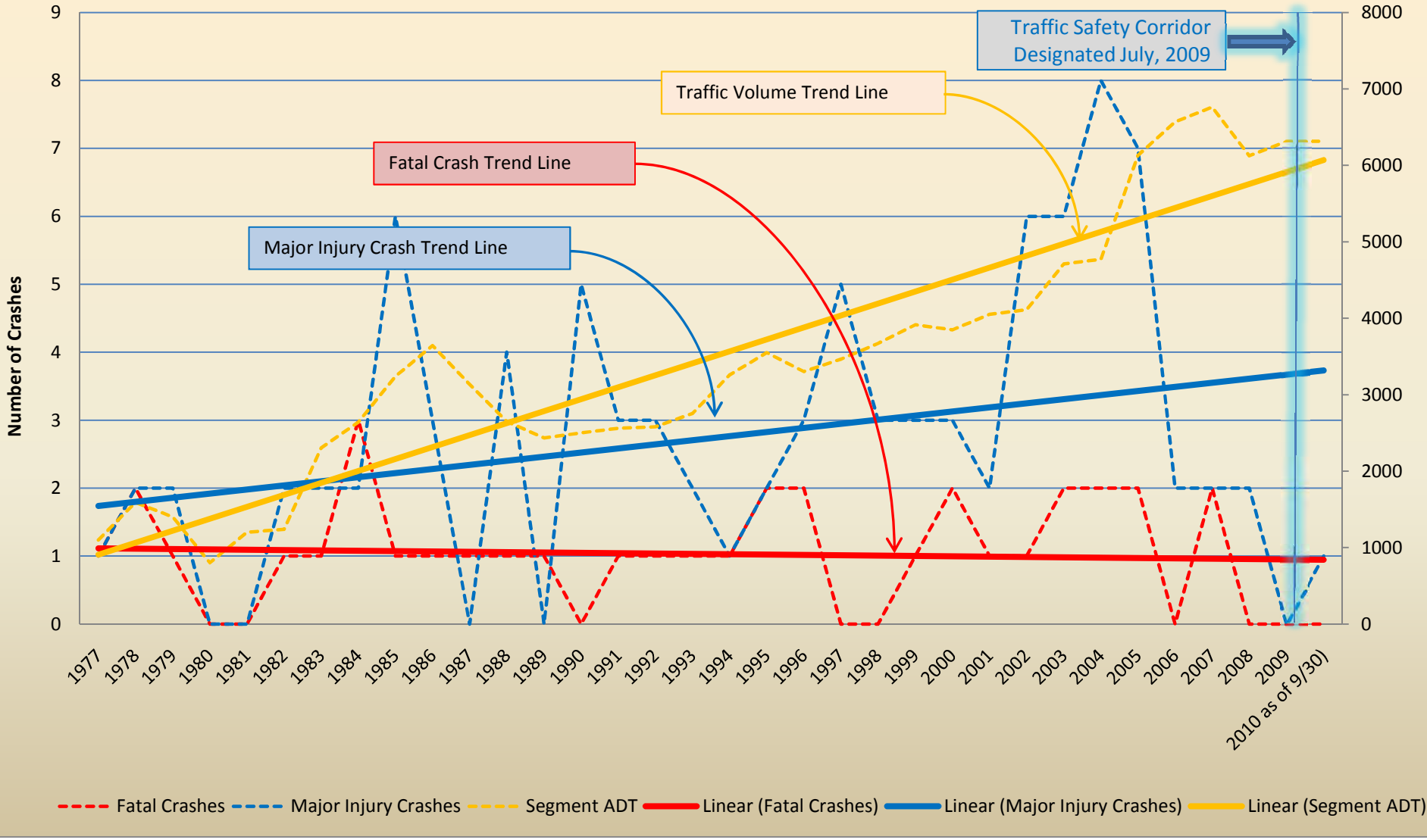
**KNIK-GOOSE BAY ROAD MP 0.6-17.2: PW HWY TO PT. MACKENZIE RD**

| AKSAS | Project | Scope | Solution | Cost | Construction Year (Est) |
|---|---|---|---|---|---|
| 50951 | KGB & Vine Rd Signalization GF | New Traffic Signal | Short term | $1,335,000 | 2009 (Completed) |
| 50889 | KGB & Fairview Lp Signal GF | New Traffic Signal | Short Term | $1,300,000 | 2009 (Completed) |
| 51047 | HSIP Central Region Rumble Strips | Hwy Safety Improvement Project: Centerline / shoulder rumble strips | Short Term | $174,000 | 2010 (Completed) |
| 59838 | HSIP Small SPOT Improvements | Signing for headlights, REDDI, Mileposts | Short Term | $55,000 | 2011 Construction w/NHS Delin |
| 51896 | KGB & Fern St Signal & Turn Lanes GF ($1.2M; City $300k) [UNDERFUNDED by $4.6M] | Potential signal, left turn lanes, to serve Fern Street opening. CITY lead in Design, ~$4.6 million more desired in project funding for lane extensions | Short Term | $1,500,000 | 2012 |
| 53425 | Safety Corridors: KGB Hwy Speed Signs GF | Dynamic speed signs, power service and pads. | Short Term | $880,000 | 2013-2014 |
| 51717 | KGB Widening, Centaur to Vine Environmental Study GF + FHWA (Design) [UNDERFUNDED by $62M] | Divided 4 lane hwy. Needs Fairview Lp Rd intersection realignment. Coordination with S. Mack project. | Long Term | $8,000,000<br><br>$13,244,000 | As funding is available<br><br>TOTAL |

Nearby project coordination:
Fairview Loop Road Rehabilitation
City of Wasilla: South Mack Drive Extension
City of Wasilla/Mat-Su Borough: South Fern Street Extension

# Knik/Goose Bay Road: Parks Highway to Goose Bay Airport Fatal & Major Injury Crashes: 1977-2010* (* As of 9/30/2010)

**(2009-2010 major injury crashes approximate)**



# KNIK/GOOSE BAY ROAD: PARKS HIGHWAY TO POINT McKENZIE ROAD
# 1977 - 2010* FATAL & MAJOR INJURY CRASH LOCATIONS

*Fatal & Major Injury Crashes thru 9/30/2010

**Parks Highway Junction to Settlers Bay Drive Segment (8.3 Miles)**
29 of 35 (82.9%) Fatal crashes
73 of 93 Major Injury (78.5%) Crashes

0.140 - 2/12/1979
Rear End, 2 Vehicles
1 Fatality, ALCOHOL

0.810 - 9/29/1991
Tree, 1 Vehicle
1 Fatality, ALCOHOL

1.280 - 1/24/1996
Head-On, 3 Vehicles
1 Fatality, Unsafe Speed

2.000 - 7/13/2005
Crossed Median, 1 Vehicle, ALCOHOL
1 Fatality, Unsafe Speed

2.280 - 1/28/1984
Overturn, 1 Vehicle
1 Fatality, ALCOHOL
Unsafe Speed

4.080 - 6/27/1995
Right Angle, 2 Vehicles
1 Fatality, Failure to Yield

4.080 - 6/1/2001
Right Angle, 2 Vehicles
1 Fatality, Driver Inattention

4.510 - 5/17/1992
Ditch, 1 Vehicle, Fell Asleep
1 Fatality, ALCOHOL

4.810 - 11/10/1985
Head-On, 2 Vehicles, Unsafe Speed
1 Fatality, ALCOHOL

4.990 - 9/15/2000
Ditch, 1 Vehicle
1 Fatality, Fell Asleep

5.830 - 10/13/2000
Overturn, 1 Vehicle
1 Fatality, ALCOHOL, Unsafe Speed

5.900 - 9/22/2005
Ditch, 1 Vehicle
1 Fatality, Unknown Circumstances

6.280 - 10/7/1984
Embankment, 1 Vehicle
1 Fatality, Fell Asleep,
Unsafe Speed

7.280 - 6/11/1995
Ditch, 1 Vehicle, DRUGS
1 Fatality, Driver Inattention

8.300 - 4/28/1999
Head-On, 2 Vehicles, ALCOHOL
1 Fatality, Improper Lane Use

8.940 - 7/20/2003
Head-On, 2 Vehicles, ALCOHOL
1 Fatality, Improper Lane Use

9.860 - 6/15/2002
Ditch, 1 Vehicle
1 Fatality, ALCOHOL

11.840 - 6/16/2004
Ditch, 1 Vehicle
1 Fatality, Out of Control

12.870 - 7/23/1988
Head-On, 2 Vehicles
1 Fatality, Unsafe Speed

13.290 - 5/31/1982
Embankment, 1 Vehicle
1 Fatality, ALCOHOL
Unsafe Speed

16.240 - 4/30/2003
Embankment, 1 Vehicle, ALCOHOL
1 Fatality, Unsafe Speed

1.220 - Fern St. 12/30/2007
Head-On, 2 Vehicles
1 Fatality, Skidding

1.300 - 10/1/1978
Head-On, 2 Vehicles
2 Fatalities, ALCOHOL

2.240 - 12/19/1993
Head-On, 2 Vehicles
1 Fatality, Unsafe Speed

2.480 - 10/25/1996
Head-On, 2 Vehicles
1 Fatality

2.580 - 2/27/2004
Right Angle, 2 Vehicles
1 Fatality, ALCOHOL/DRUGS
Failure to Yield

3.860 - 11/30/1987
Pedestrian, 1 Vehicle
1 Fatality, Pedestrian Error

4.080 - 2/24/1989
Head-On, 2 Vehicles
1 Fatality, Failure to Yield

4.52 - 12/9/2007 Caryshea St.
Head-On, 2 Vehicles
1 Fatality, Out of Control, Inattention, Unsafe Speed

4.970 - 7/20/1983
Head-On, 2 Vehicles
1 Fatality, ALCOHOL, Lane Use

5.030 - 5/5/1978
Head-On, 2 Vehicles, Unsafe Speed
3 Fatalities, ALCOHOL

5.730 - 6/16/1994
Overturn, 1 Vehicle
1 Fatality, ALCOHOL, Unsafe Speed

5.860 - 12/2/1986
Head-On, 3 Vehicles
1 Fatality, Road Surface

5.930 - 12/26/1984
Head-On, 2 Vehicles
1 Fatality, Unsafe Speed

6.280 - 12/17/1977
Head-On, 2 Vehicles
1 Fatality, Improper Lane Use

Parks Highway
Palmer/Wasilla Extension
Palmer/Wasilla Extension
0.740
Fern Street
1.200
Fern St.
Lake Lucille
1.50-1.95
2.00-2.17
MP 1
1.480
Edlund Road
2.580
Edlund Road
Fairview Loop Road
MP 4
4.010
Mack Road
MP 3
3.480
Mack Road
3.860
4.1-4.41
4.71-4.81
MP 5
5.030
4.99-5.03
Fairview Loop Road
4.080
5.42-5.72
Hollywood Road
Vine Road
MP 6
6.280
MP 7
6.900
Vine Road
6.810
MP 8
8.040
Hayfield Road
Settlers Bay Drive
MP 9
9.040
Settlers Bay Drive
8.090
MP 10
10.060
Lynette Drive/Hallie Drive
9.980
MP 11
11.070
MP 12
12.260
Philo Spees Road
12.880
MP 13
13.090
MP 14
14.080
KNIK ARM
MP 15
15.120
MP 16
16.130
MP 17
17.130
Pt. McKenzie Road
17.250

## ACCIDENT SUMMARY

SEGMENT LENGTH: **19.04 MILES**
1977-2010 FATALITIES: **38 (Thru 9/30/2010)**
1977-2010 FATAL ACCIDENTS: **35 (Thru 9/30/2010)**
1977-2010 MAJOR INJURY ACCIDENTS: **93**
1977-2010 FATALITY + MAJOR INJURY Crashes per MILE: **6.72**
1977-2010 FATALITY + MAJOR INJURY Crashes per MILE per YEAR: **0.20**
1999-2008 FATAL + MAJOR INJURY ACCIDENT RATE: **15.24**
(Rate Per 100 Million Vehicle-Miles)

**Posted Speed Limits**
55 Miles per Hour
45 Miles per Hour
35 Miles per Hour

**Knik/Goose Bay Road Intersection Improvements**
Fairview Loop Intersection Channelization: Complete March, 1995
= Crash Occurred prior to Intersection Improvement
= Crash Occurred following Intersection Improvement
Knik/Goose Bay Road Rehabilitation:
Parks Highway to Vine Road: Completed September, 2004
2 = 1977-2010 Major Injury Crash Location (93 TOTAL)

1 0 1 2 3 miles
SCALE in MILES

DOT/PF & DPS

**HIGHWAY SAFETY CORRIDORS**

**ENGINEERING PROJECTS**

**(From 2006 through current plans as of 10/26/10)**

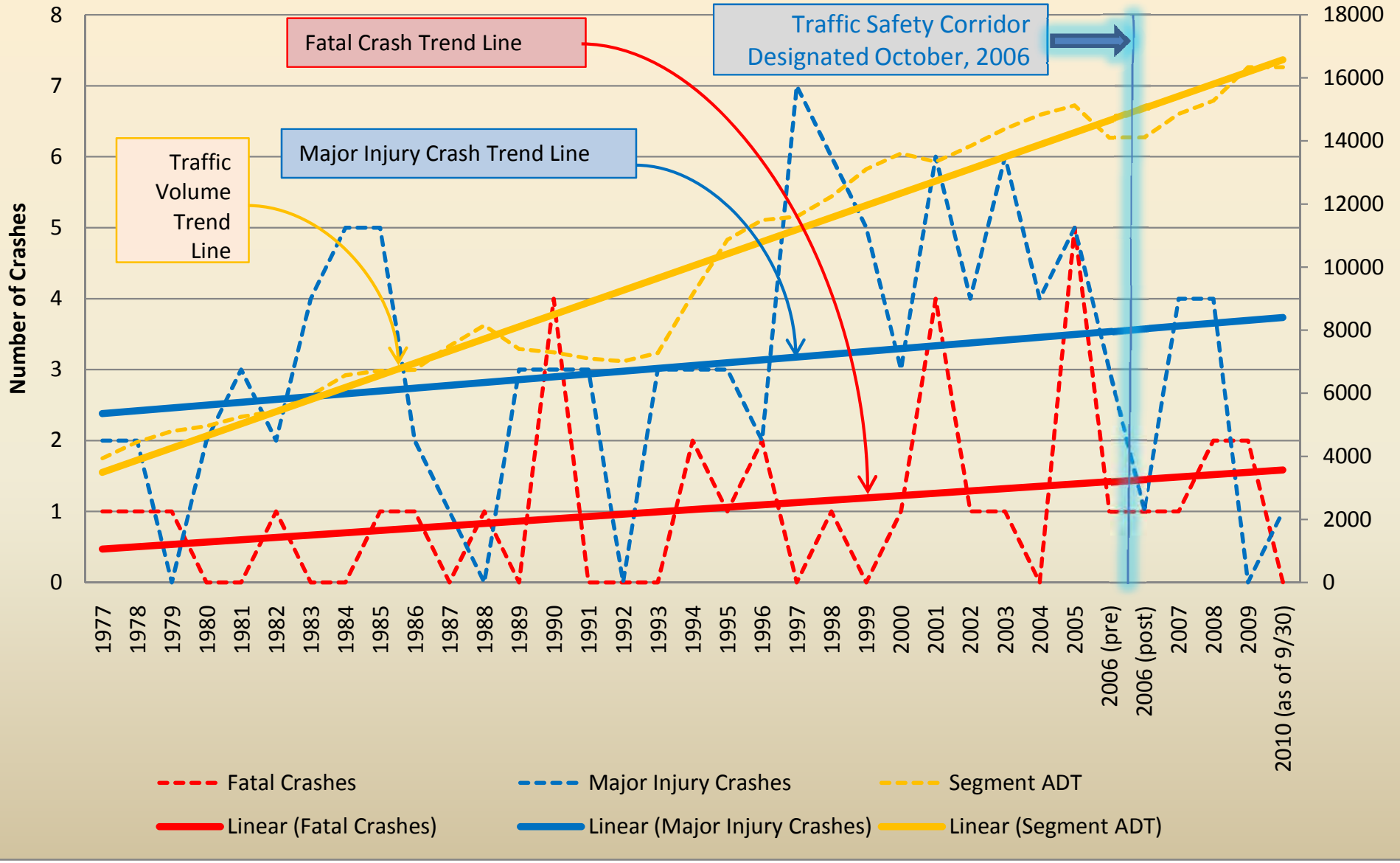
**PARKS HWY MP 44-52.5: WASILLA TO HOUSTON / BIG LAKE JCT**

| AKSAS | Project | Scope | Solution | Cost | Construction Year (Est) |
|---|---|---|---|---|---|
| 51097 | MP 44-52.3 Parks Hwy Rut Repair | M&O overlay repair Wasilla to Big Lake | Short term | $5,483,000 | 2008 (Completed) |
| 53160 | Parks & Vine Signal | Traffic signal installation | Short Term | $1,200,000 | 2008 (Completed) |
| 51047 | HSIP Central Region Rumble Strips | Hwy Safety Imprvmt Proj: Centerline/shoulder rumble strips | Short Term | $89,000 | 2010 (Completed) |
| 59838 | HSIP Small SPOT Improvements | Signing for headlights, REDDI, Mileposts | Short Term | $55,000 | 2011 Construction w/NHS Delin |
| 51289 | HSIP NHS Delineation | Curves, guardrail, roadside delineation, signing consistency on Parks, Glenn, Seward, Sterling Hwys. | Short Term | $100,000 | 2011 |
| 53425 | Safety Corridors GF: Parks Hwy Speed Signs, Parks and Stanley Signal | Dynamic speed signs, power service and pads; Traffic Signal installation | Short Term | $1,940,000 | 2013-2014 |
| 57178 | MP 44-52.3 Reconstruction [UNDERFUNDED by $110M] | Four lane divided highway, signals | Medium Term | $56,250,000 | 2014 (Phase I) |
| Undet. | Access Mgmt. Study & Implementations | Parks andGlenn Hwys. Develop and plan strategies for access mgmt. | Long Term | $250,000 | Undetermined (Phase I) |
| | | | | $65,367,000 | TOTAL |

Nearby project coordination:
Mat-Su Borough: Machen Drive Extension: Church Rd to Stanley Dr
Mat-Su Borough: Museum Drive Extension

# Parks Highway Traffic Safety Corridor Fatal & Major Injury Crashes: 1977-2010*

(*as of 9/30/2010) (2009-2010 major injury crashes approximate)



# PARKS HIGHWAY: WASILLA TO HOUSTON 1996 - 2006* FATAL CRASH LOCATIONS - Pre TRAFFIC SAFETY CORRIDOR DESIGNATION

## (Including Major Injury Crashes) * Current Alignment-1996-October 16, 2006

**CRASH SUMMARY** (7/1996-10/16/2006)

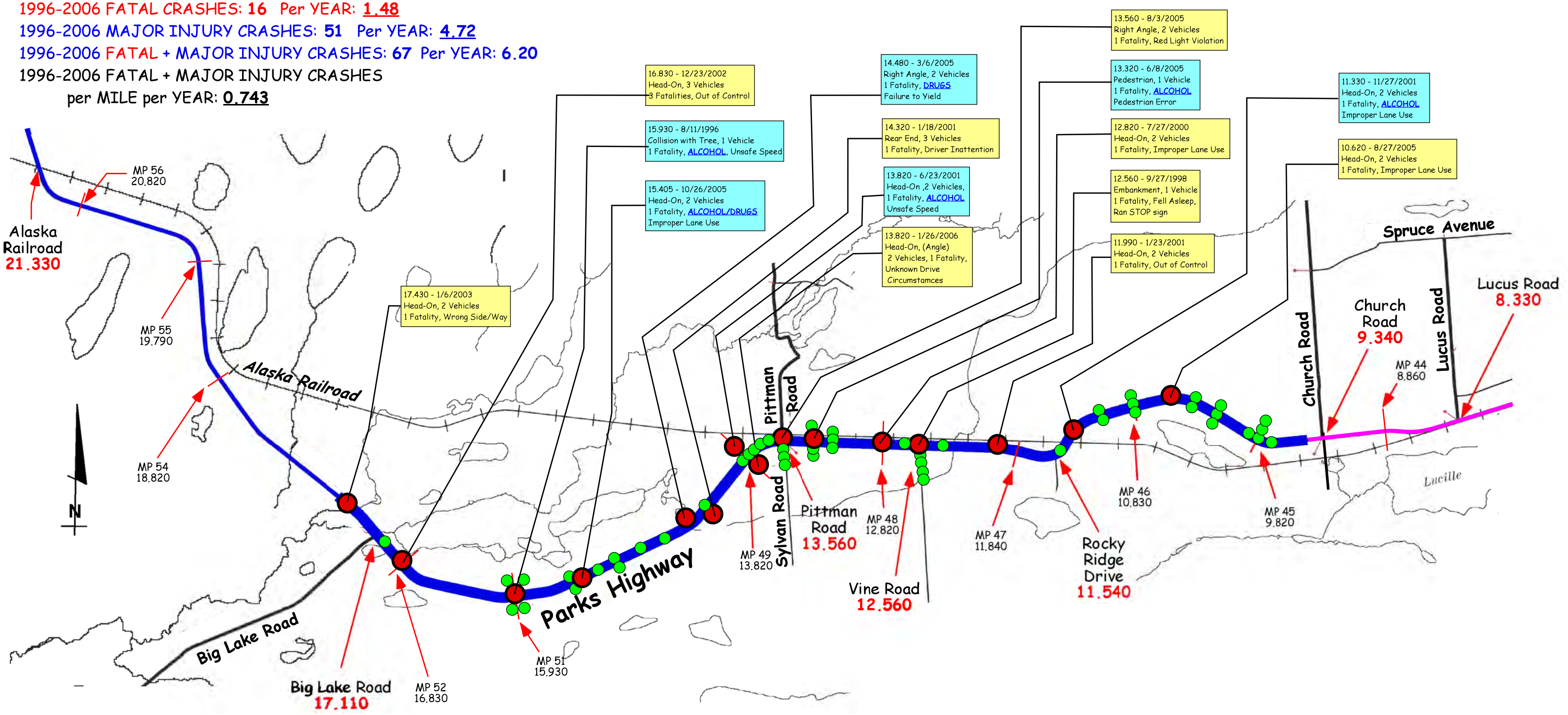
SEGMENT LENGTH: **8.35 MILES**

1996-2006 FATAL CRASHES: **16** Per YEAR: **1.48**

1996-2006 MAJOR INJURY CRASHES: **51** Per YEAR: **4.72**

1996-2006 FATAL + MAJOR INJURY CRASHES: **67** Per YEAR: **6.20**

1996-2006 FATAL + MAJOR INJURY CRASHES per MILE per YEAR: **0.743**




### Parks Highway Major Realignments Timeline

Milepost 44-52: Complete July, 1996

Milepost 52-57: Complete July, 1998

= Crash Occured following Highway Realignment

= Major Injury Crash (1996-2006)

### Parks Highway Speed Limits

55 Miles per Hour

Portion for Satety Corridor Designation

45 Miles per Hour

1 0 1 2 3 miles

SCALE in MILES