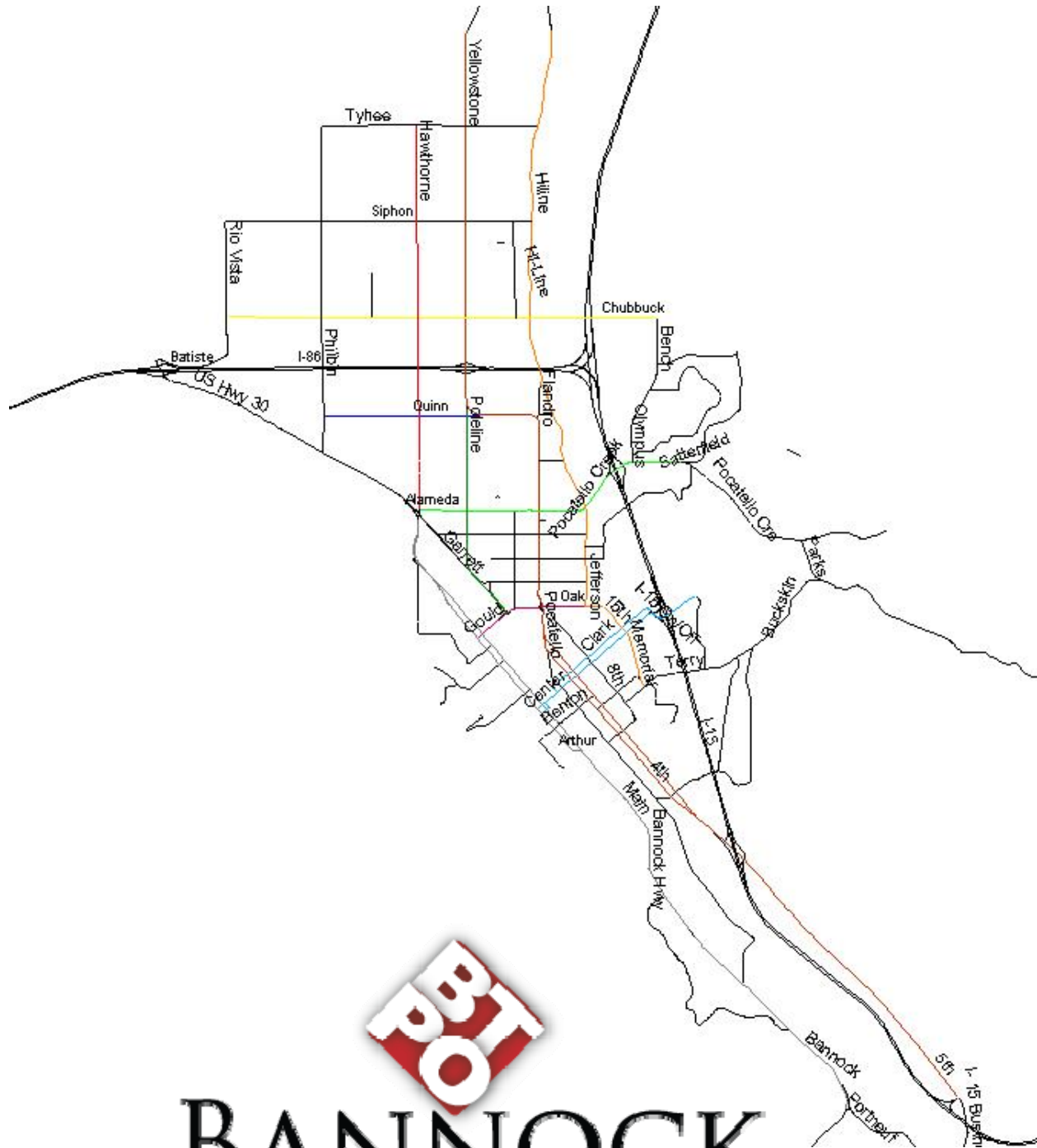


# Arterial Delay Study 2009



# BANNOCK

Transportation Planning  
**ORGANIZATION**

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## Introduction

How long does it take to get there? This is a common question but an important one for transportation planning and the average driver. This Arterial Delay Study will determine the Level of Service (LOS) and delay for each of ten arterial corridors within the Pocatello/Chubbuck urbanized area. The ten corridors shown in Figure 1 represent those with the highest volumes, over a mile in length, and have at least one signalized intersection or multiple all-way stop controls.

This is the third delay study conducted by Bannock Transportation Planning Organization (BTPO) over the last ten years, unfortunately for many reasons each is slightly different which makes comparison difficult. This study tried to select a broad scope to allow for additional studies to be made in the future. The first studies corridors were completely different than the new study. The second used similar corridors, but the purpose was to determine the capacity and speed and was collected for twelve hours. The raw data for this study is not available to compare to the new study. Finally, in this study the corridors were expanded to cover a larger area where growth is likely to occur over the next twenty years and the time was divided into three peak periods. Unlike other studies this study incorporated Global Position System (GPS) technology and software (GeoStats) which collects the data into points. This last feature should allow modifications to the data for enhanced compatibility.

The purpose of the delay study is to determine the LOS of each corridor. LOS is an arbitrary system which tries to show how well a roadway is operating. The scale is similar to a report card with A to F, with “A” being the best. The BTPO policy for acceptable LOS is LOS “C”. Anything lower would require study and possible changes to improve the LOS. This type of LOS analysis is for corridors only and best used for short term analysis. Projections of future LOS based upon the delay runs are difficult.

The corridor study does not look only at the entire corridor. This study will provide many different types of data including the links (segments of the corridor) which might slip below the standard, the delay related to signals, and possible problems with current signal timings.

Two of the corridors (Main and Yellowstone) were broken into multiple sub corridors for several reasons which included road classification that are different across the corridor, length of the corridor, and logical termini. These two corridors were divided into sub corridors and results will be reports for the sub corridors.



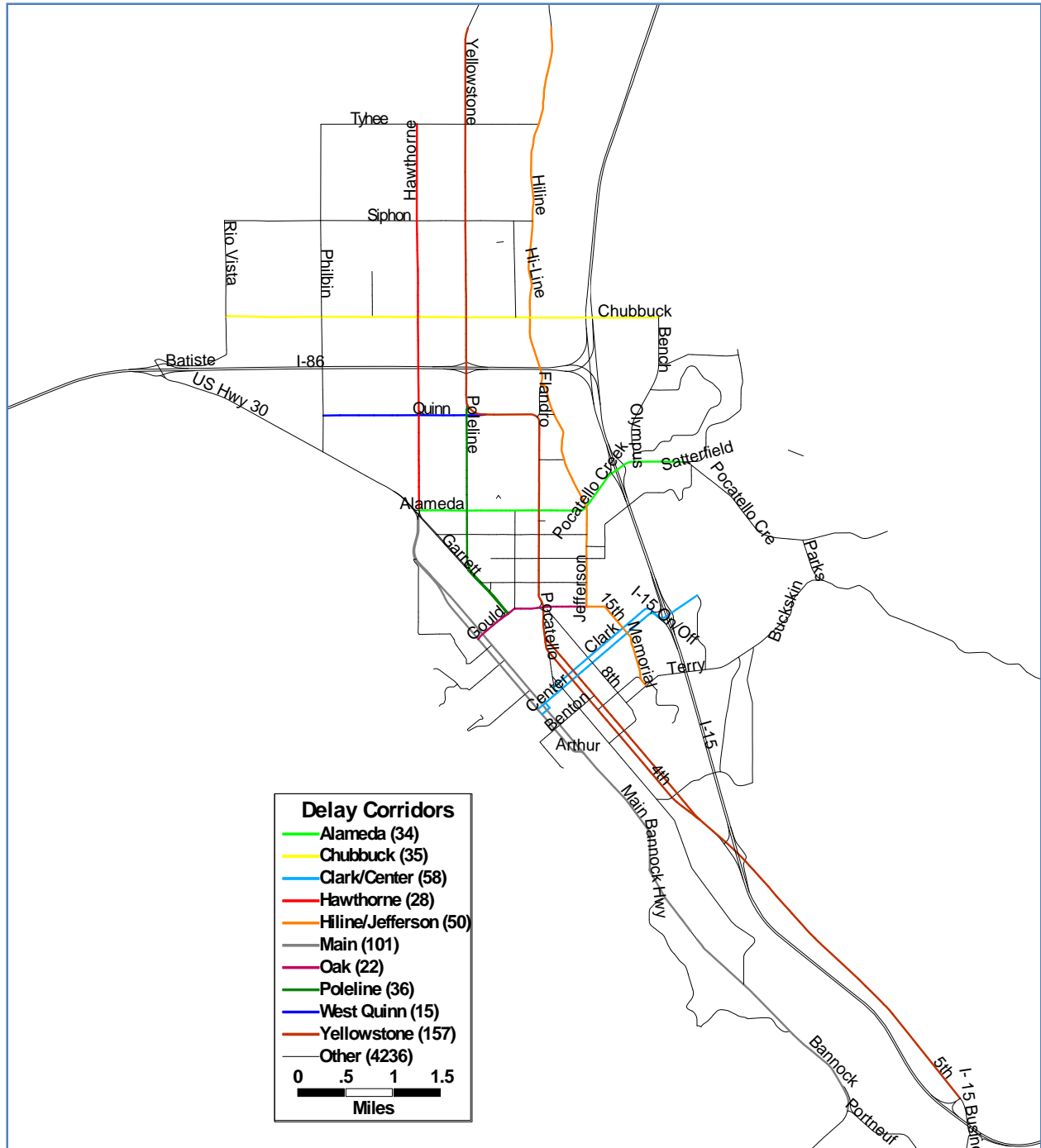


Figure 1 2009 Arterial Delay Corridors

### Overall Findings

For the established three peak periods, all corridors meet the LOS C performance criteria. Some corridors are very close to the LOS standard and many of the links within the corridors are below LOS C. The corridors of most concern are Alameda and Yellowstone. Both of these corridors are at LOS C which is the standard. Within each of these corridors are links which exceed the LOS



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standard. Another result would be the overall delay from the free flow conditions which is low. Jefferson Corridor northbound at 5 minutes of delay of its 3.58 mile length is not much.

**Table 1: Level of Service Summary for all Corridors**

Corridor	Segment	Class	Direction	Level of Service			Delay (minutes)		
				AM Peak	Noon Peak	PM Peak	AM Peak	Noon Peak	PM Peak
<b>Alameda Corridor</b>	Hawthorne to Satterfield	III	EB	C	C	C	2.17	2.84	2.17
	Satterfield to Hawthorne	III	WB	C	C	C	2.04	3.28	2.04
<b>Chubbuck Corridor</b>	Rio Vista to Bench	III	EB	C	B	B	2.14	0.10	0.86
	Bench to Rio Vista	III	WB	B	B	C	1.50	1.58	1.92
<b>Clark/Center Corridor</b>	Garfield to Hospital Way	IV	EB	B	B	B	1.34	1.04	1.29
	Hospital Way to Garfield	IV	WB	A	B	C	0.71	0.67	1.54
<b>Gould/Oak Corridor</b>	Arthur to Jefferson	III	EB	B	B	B	0.13	0.71	0.05
	Jefferson to Arthur	III	WB	B	C	B	1.09	1.58	0.43
<b>Hawthorne Corridor</b>	Alameda to Reservation	III	NB	A	A	A	1.22	0.64	1.26
	Reservation to Alameda	III	NB	A	A	A	1.71	0.98	0.94
<b>Jefferson Corridor</b>	Martin Luther King to Flandro	IV	NB	B	C	C	2.88	3.38	5.16
	Flandro to Martin Luther King	IV	SB	B	B	B	3.36	2.71	2.46
<b>Main/Arthur Corridor</b>	Portneuf Rd to Mattwood	II	NB	A	B	A	0.58	1.23	0.29
	Mattwood to Custer	IV	NB	B	B	B	0.22	0.90	1.05
	Custer to Garrett Way	II	NB	A	A	A	1.07	0.37	0.49
	Garrett Way to Custer	II	SB	A	A	A	0.49	0.19	0.44
	Custer to Mattwood	IV	SB	B	B	B	0.44	0.10	0.44
	Mattwood to Portneuf Rd	II	SB	A	B	A	0.29	0.86	0.47
<b>Poleline Corridor</b>	Gould to Hurley	III	NB	B	C	B	1.41	1.74	2.09
	Hurley to Gould	III	SB	C	B	C	1.80	1.86	1.53
<b>Quinn Corridor</b>	Philbin to Yellowstone	IV	EB	B	B	B	-0.14	-0.62	-0.13
	Yellowstone to Philbin	IV	WB	B	B	B	0.53	0.27	0.60
<b>Yellowstone Corridor</b>	Century High to Barton	II	NB	A	A	A	0.11	0.17	-0.22
	Barton to Oak	III	NB	B	C	C	1.51	2.33	1.90
	Oak to Flandro	III	NB	B	C	C	0.79	0.79	0.79
	Flandro to Chubbuck	III	NB	C	C	C	0.62	1.49	2.58
	Chubbuck to Reservation	II	NB	A	A	A	0.79	0.26	0.73
	Reservation to Chubbuck	II	SB	A	A	A	0.79	0.26	0.74
	Chubbuck to Flandro	III	SB	A	B	C	1.27	1.27	1.27
	Flandro to Oak	III	SB	B	C	B	1.27	1.27	1.27
	Oak to Barton	III	SB	A	B	A	-0.05	0.36	0.05
	Barton to Century High	II	SB	A	A	A	0.44	0.25	0.28



Table 2: Travel Time Percentage Increase by Corridor

Corridor	Segment	Class	Direction	Travel Time Percent Increase as Compared to Free Flow		
				AM Peak	Noon Peak	PM Peak
Yellowstone Corridor	Flandro to Chubbuck	III	NB	21%	51%	88%
Alameda Corridor	Hawthorne to Satterfield	III	EB	44%	47%	57%
Alameda Corridor	Satterfield to Hawthorne	III	WB	35%	56%	57%
Jefferson Corridor	Martin Luther King to Flandro	IV	NB	36%	43%	65%
Yellowstone Corridor	Barton to Oak	III	NB	35%	54%	44%
Yellowstone Corridor	Oak to Flandro	III	NB	35%	54%	44%
Yellowstone Corridor	Flandro to Oak	III	SB	37%	50%	41%
Poleline Corridor	Gould to Hurley	III	NB	30%	37%	44%
Jefferson Corridor	Flandro to Martin Luther King	IV	SB	43%	35%	32%
Poleline Corridor	Hurley to Gould	III	SB	36%	37%	30%
Gould/Oak Corridor	Jefferson to Arthur	III	WB	35%	50%	14%
Yellowstone Corridor	Chubbuck to Flandro	III	SB	9%	40%	49%
Main/Arthur Corridor	Custer to Garrett Way	II	NB	42%	15%	19%
Clark/Center Corridor	Garfield to Hospital Way	IV	EB	24%	19%	23%
Main/Arthur Corridor	Mattwood to Custer	IV	NB	6%	25%	29%
Chubbuck Corridor	Bench to Rio Vista	III	WB	17%	18%	22%
Clark/Center Corridor	Hospital Way to Garfield	IV	WB	12%	12%	27%
Yellowstone Corridor	Reservation to Chubbuck	II	SB	19%	6%	18%
Yellowstone Corridor	Chubbuck to Reservation	II	NB	19%	6%	17%
Quinn Corridor	Yellowstone to Philbin	IV	WB	16%	8%	18%
Main/Arthur Corridor	Garrett Way to Custer	II	SB	17%	6%	15%
Chubbuck Corridor	Rio Vista to Bench	III	EB	23%	1%	9%
Gould/Oak Corridor	Arthur to Jefferson	III	EB	4%	24%	2%
Main/Arthur Corridor	Portneuf Rd to Mattwood	II	NB	8%	17%	4%
Main/Arthur Corridor	Custer to Mattwood	IV	SB	12%	3%	12%
Hawthorne Corridor	Reservation to Alameda	III	NB	14%	7%	6%
Main/Arthur Corridor	Mattwood to Portneuf Rd	II	SB	4%	12%	7%
Yellowstone Corridor	Barton to Century High	II	SB	8%	4%	5%
Yellowstone Corridor	Oak to Barton	III	SB	-1%	8%	1%
Yellowstone Corridor	Century High to Barton	II	NB	2%	3%	-4%
Hawthorne Corridor	Alameda to Reservation	III	NB	1%	-4%	1%
Quinn Corridor	Philbin to Yellowstone	IV	EB	-4%	-16%	-3%

Table 2 shows the various routes by the percent increase of travel time as compared to the free flow. For example, Yellowstone Corridor Flandro to Chubbuck northbound takes 88% (or 5.53 minutes as compared to 2.95 minutes) longer to complete the trip in the PM Peak. Overall, the better measure is Level of Service but this percentage increase is a way to provide a perspective of how much longer it takes to complete a trip for each corridor. The example corridor has LOS of “C”. The Alameda Corridor, which also has LOS “C”, ranks high on the percent increase in travel time.

## Methodology

Corridor and Segments: The study’s ten corridors have been identified with the proposed segments. Control points outside the sphere of an intersection will need to be identified. Travel time runs will be conducted in both directions along the corridor.

Time: Travel times will be taken in four different time periods. The first (00:00 and 02:00) is the free flow time. The three other time periods are; the A.M. Peak (06:00 - 09:00), Noon Peak (11:30 - 13:30 and P.M. Peak (16:30 -18:30).



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Technique: When conducting the travel times a floating-car technique will be used. In a floating car technique the driver tries to emulate an average driver with certain parameters. Those parameters include: never exceeding the posted speed, pass as many cars as were passed, and do not accelerate for yellow lights. The other two accepted techniques are Average-car and Maximum-car. In Average-car the driver tries to go the average speed of the traffic. In the Maximum-car the driver tries to maintain the posted speed unless delayed by traffic.

Number of Runs: Free Flow speeds will be established by running each corridor two times in each direction. The number of runs for the other time periods will be established following a procedure which is a combination from HCS Manual and ITE's Manual of Transportation Engineering Studies. For this study a 3 mph range variance has been selected.

- Estimate the number of runs required (Table 10).
- Conduct the runs.
- Calculate the average range in running speed. This compares each run's average speed against the succeeding run to get a difference. (3)
- Use average range in running speed as calculated again using Table 10 to determine the number of runs required.
- Make additional runs if required.

(1)  $R = S/N - 1$

Where: R = average range in running speed

S = sum of absolute differences in test runs.

N = number of complete test runs



Table 3: Minimum Number of Runs Required

Approximate Minimum Sample Size Requirements for Travel Time					
Average Range in Running Speed (R)	Minimum Number of Runs for Specified Permitted Error				
	1 mph	2 mph	3 mph	4 mph	5 mph
2.5	4	2	2	2	2
5.0	8	4	3	2	2
10.0	21	8	5	4	3
15.0	38	14	8	6	5
20.0	59	221	12	8	6

Interpolation should be used when R is other than the numbers shown in column 1. Table will determine sample size with 95.0 percent confidence. Source: Manual of Transportation Engineering Studies, Institute of Transportation Engineers, 1994.

Equipment

The study was conducted using TravTime product which uses GPS only with post processing to conduct the study.

Table 3 lists the number of runs needed for each route based on a 3 mph error. Most of the routes only required two runs but a few required five runs in a specific direction. For these routes, efforts were made to run the complete route in both directions.



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**Table 4: Number of Runs Needed for each Time Period by Corridor**

Corridor Name	Direction	AM Peak				Noon				PM Peak			
		Run 1	Run 2	Difference	Runs Needed	Run1	Run 2	Difference	Runs Needed	Run 1	Run 2	Difference	Runs Needed
Alameda	EB	21.87	19.73	-2.14	2	20.95	20.87	-0.08	2	22.57	19.53	-3.04	3
	WB	21.47	23.43	1.96	2	27.41	18.22	-9.19	5	19.91	18.5	-1.41	2
Clark/Center	EB	17.88	22.97	5.09	5	21.33	19.34	-1.99	2	19.57	21.09	1.52	2
	WB	19.54	17.84	-1.7	2	21.3	18.57	-2.73	3	16.15	16.83	0.68	2
Chubbuck	EB	23.07	23.78	0.71	2	29.35	27.33	-2.02	2	26.53	26.15	-0.38	2
	WB	27.56	25.77	-1.79	2	26.79	26.45	-0.34	2	25.42	25.97	0.55	2
Gould	EB	21.21	25.89	4.68	3	20.61	17.24	-3.37	3	25.71	23.21	-2.5	2
	WB	23.77	20.67	-3.1	3	15.6	16.79	1.19	2	22.55	22.21	-0.34	2
Hawthorne	NB	27.49	28.08	0.59	2	28.94	29.68	0.74	2	25.64	27.12	1.48	2
	SB	25.53	26.81	1.28	2	27.54	28.28	0.74	2	29.79	26.76	-3.03	3
Jefferson	NB	19.23	20.07	0.84	2	20.85	18.35	-2.5	3	17.71	14.89	-2.82	3
	SB	14.01	19.42	5.41	5	22.19	19.25	-2.94	3	18.47	21.86	3.39	3
Main	NB	29.42	32.57	3.15	3	31.5	27.79	-3.71	3	30.43	32.75	2.32	2
	SB	26.84	32.63	5.79	5	32.49	32.97	0.48	2	31.45	31.44	-0.01	2
Poleline	NB	25.93	27.85	1.92	2	24.19	28.4	4.21	3	23.35	28.04	4.69	3
	SB	19.13	23.73	4.6	3	24.45	21.96	-2.49	2	22.07	26.78	4.71	3
Quinn	EB	25.26	24.75	-0.51	2	28.91	29.09	0.18	2	24.78	26.69	1.91	2
	WB	24.12	23.24	-0.88	2	27.04	26.14	-0.9	2	21.34	25.31	3.97	3
Yellowstone South of Flandro	NB	33.67	28.41	-5.26	5	27.76	28.26	0.5	2	29.78	28.64	-1.14	2
	SB	33	33.88	0.88	2	29.8	34.29	4.49	3	34.52	32.32	-2.2	2
Yellowstone North of Flandro	NB	33.1	34.45	1.35	2	31.66	29.12	-2.54	3	32.09	26.81	-5.28	5
	SB	32.09	34.08	1.99	2	30.03	36.17	6.14	5	30.49	30.89	0.4	2

## Corridor Classification

To determine the Level-of-Service (LOS) each route had to be classified by a Street Classification. Highway Capacity Manual 2000 Exhibit 10-3 and 10-4 were used to assign a classification to each corridor. In some cases, an argument could be made to assign various classifications to each corridor, but the decision was made to be consistent over the entire corridor. The classification determines the speed groups for each LOS class. The study classifications are shown in Table 4.

**Table 5: Street Classification by Corridor**

Corridor	To	From	Distance (mi)	Class
Alameda Corridor	Hawthorne	Saffersfield	2.97	III
Chubbuck Corridor	Rio Vista	Bench	4.51	III
Clark/Center Corridor	Garfield	Hospital Way	2.25	IV
Gould/Oak Corridor	Arthur	Jefferson	1	III
Hawthorne Corridor	Alameda	Reservation	5.03	III
Jefferson Corridor	Martin Luther King	Flandro	3.58	IV
Main/Arthur Corridor	Porneuf Rd	Mattwood	4.55	II
	Mattwood	Custer	1.49	IV
	Custer	Garrett Way	1.85	II
Poleline Corridor	Gould	Hurley	2.62	III
Quinn Corridor	Philbin	Yellowstone	1.6	IV
Yellowstone Corridor	Century High	Barton	4.34	II
	Barton	Oak	2.44	III
	Oak	Flandro	1.99	III
	Flandro	Chubbuck	1.69	III
	Chubbuck	Reservation	3.01	II

## Corridor Breakdowns

This section will breakdown each of the ten corridors. For each corridor, two charts, one for each direction will show the average speed for each time period as well as the speed limit, and speed of a threshold for LOS D. The streets on the horizontal axis are the checkpoints which were either



a signalized intersection or 4-way stop. In some cases, the checkpoint is a speed limit change or change in classification.

### Alameda Corridor

The Alameda Corridor runs from Hawthorne to Safferfield Drive. The corridor is a two lane road on the west end until Poleline Road where it switches to a four lane with a center turn lane for the remainder of the corridor. Overall, the corridor is LOS “C” for all time periods. The main congested points for the corridor occur at intersections with Yellowstone, Jefferson, and the I-15 NB on-ramp. The westbound approach to Yellowstone is the worse with LOS “F”. The primary reason for the delay is related to the overall timing of the Yellowstone and Alameda intersection.

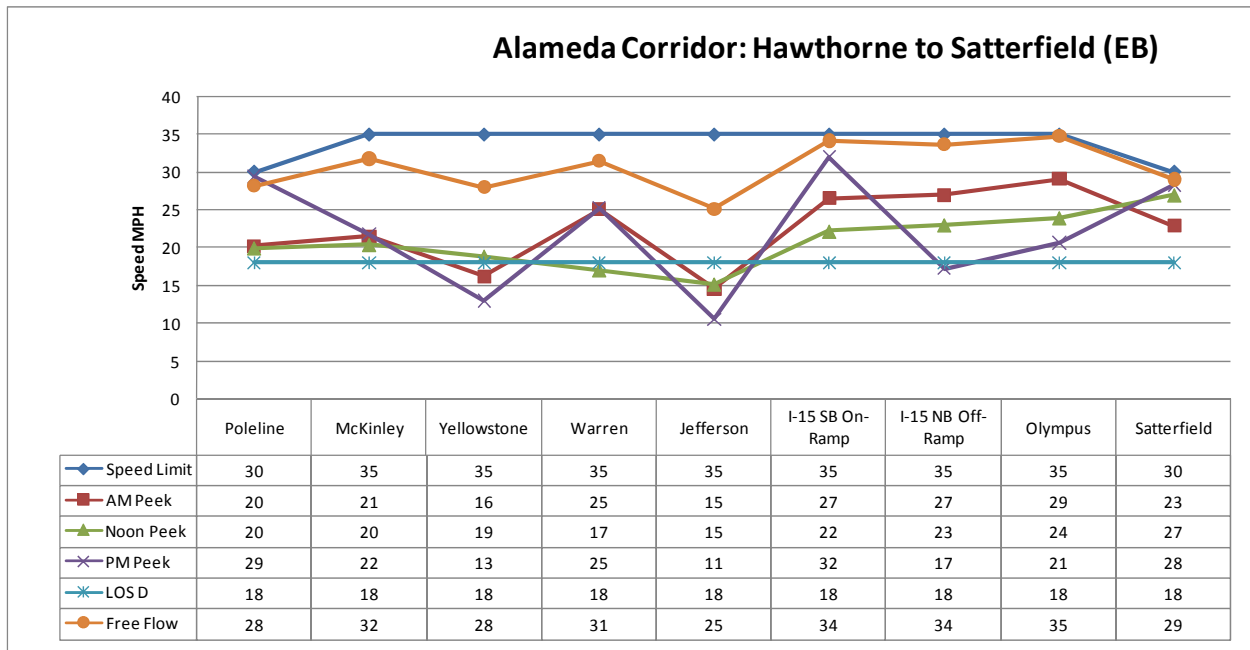


Figure 2: Alameda Corridor Eastbound



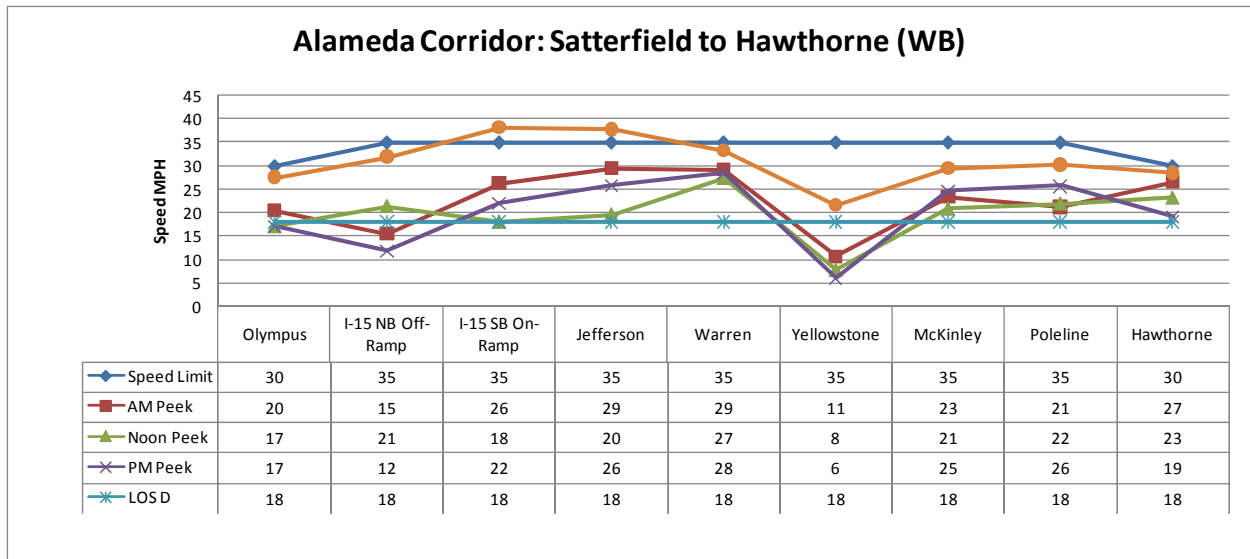


Figure 3: Alameda Corridor Westbound

## Chubbuck Corridor

The Chubbuck Corridor runs east/west from Rio Vista to Bench Road. The corridor has several designs but the overall street classification is Class IV. Chubbuck road is a two lane road until Yellowstone Avenue where it converts to a four lane with a two-way left turn lane. After Chubbuck it returns to a two lane road. The intersection of Chubbuck and Hiline was under construction for most of the study, so only the minimum numbers of runs were completed. The LOS for the corridor was “B” except for two time periods which were LOS “C”.

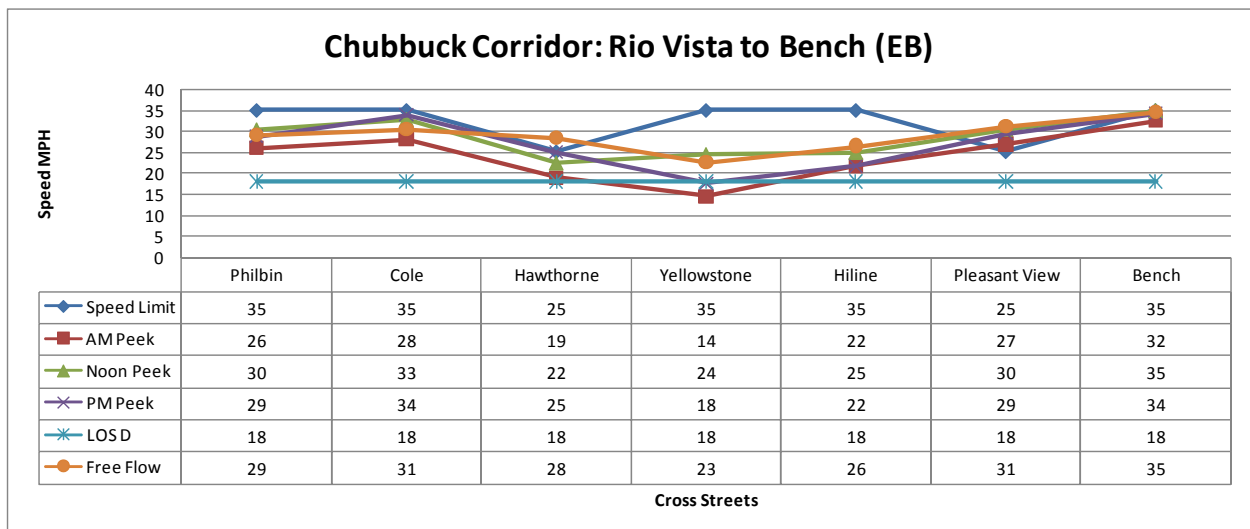


Figure 4: Chubbuck Corridor Eastbound



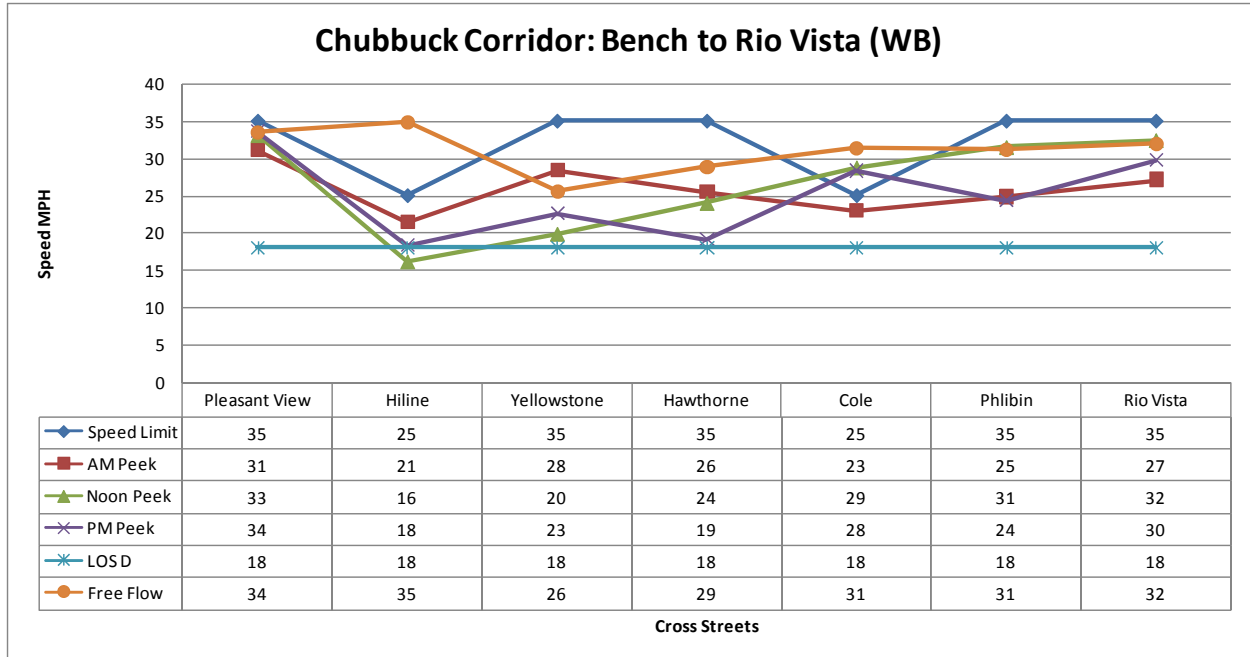


Figure 5: Chubbuck Corridor Westbound

### Clark/Center Corridor

The Clark/Center corridor is three one-way couplets within the ten corridors. The other two are part of the Yellowstone and Main Corridors which cross this corridor. The corridor runs from Garfield to Hospital Way and is a primary access point to Idaho State University and I-15. The corridor LOS ranges from “A” to “C”. The route required five runs to get the required confidence. This means the route does have variation from day to day. The problem spots seem to be the westbound intersection of 4<sup>th</sup> Avenue and eastbound 5<sup>th</sup> Avenue. The main reason for this is the signal coordination system is designed to move the Clark/Center traffic to the north/south 4<sup>th</sup>/5<sup>th</sup> Avenues.



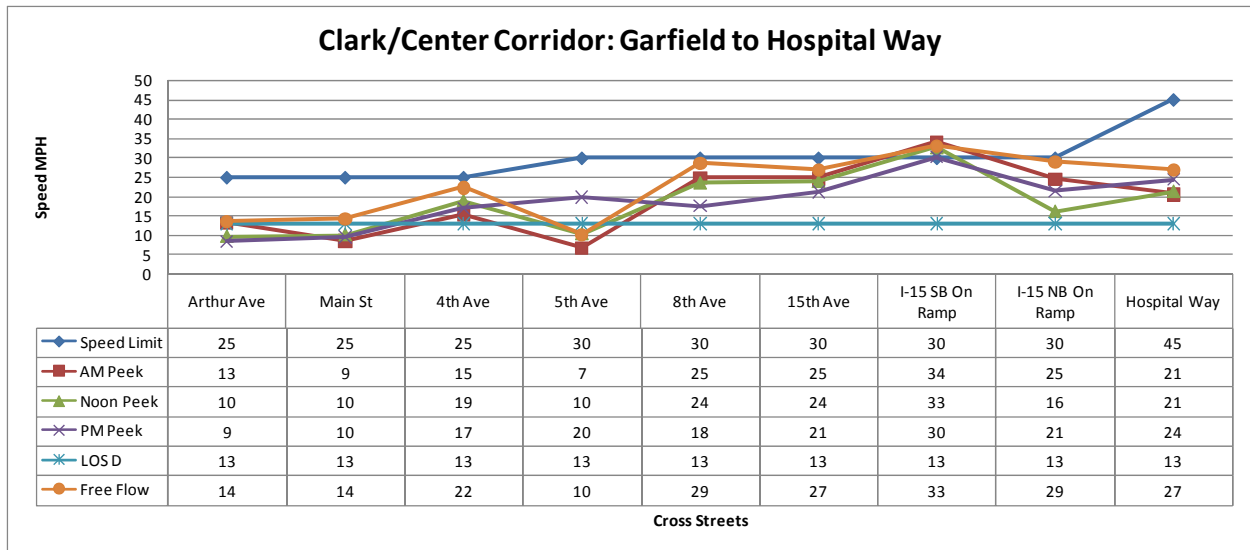


Figure 6: Clark/Center Corridor Eastbound

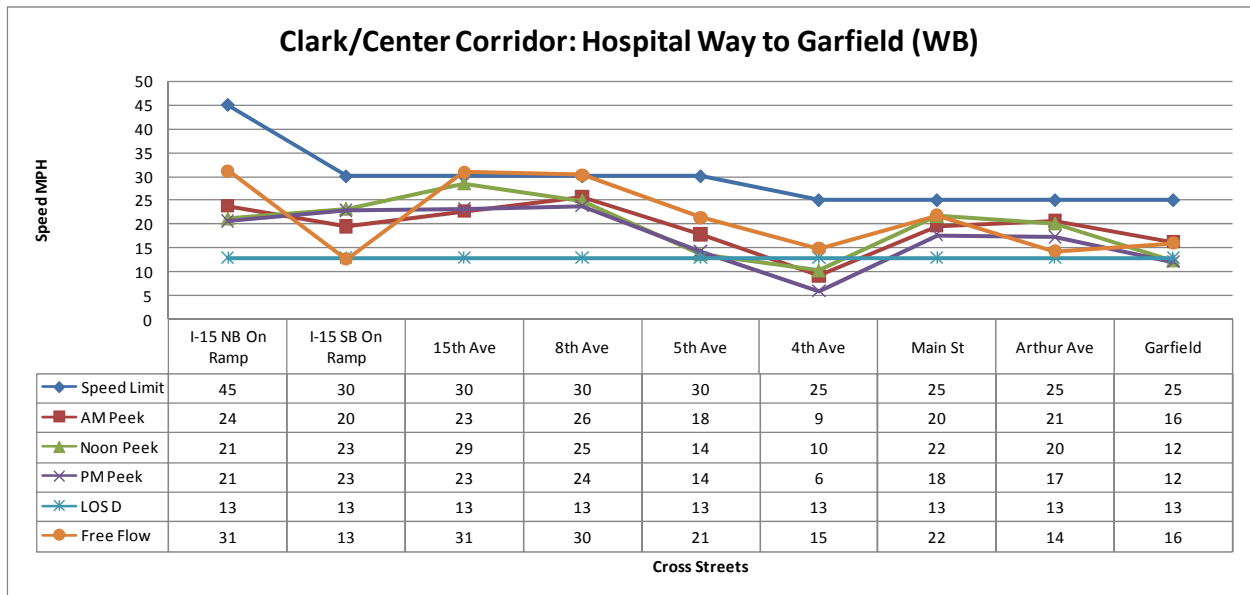


Figure 7: Clark/Center Corridor Westbound

## Gould Corridor

At one mile this corridor is the shortest, but was included due to its importance as a major east/west route through the community. The corridor is also used to move between the three main north/south corridors. The corridor goes from Arthur Avenue to Jefferson Avenue. Overall the LOS is “B” except for westbound during the noon time period which is LOS “C”. The corridor is four-lanes divided from Arthur to Yellowstone where the street name changes to Oak and the design is two-lane with a center turn lane. The one strange spot in the corridor is the westbound approach to Arthur Avenue. In each time period, the average speed indicates that link would be LOS “F”. The only reason for this is the timing from Main to Arthur is not synchronized.



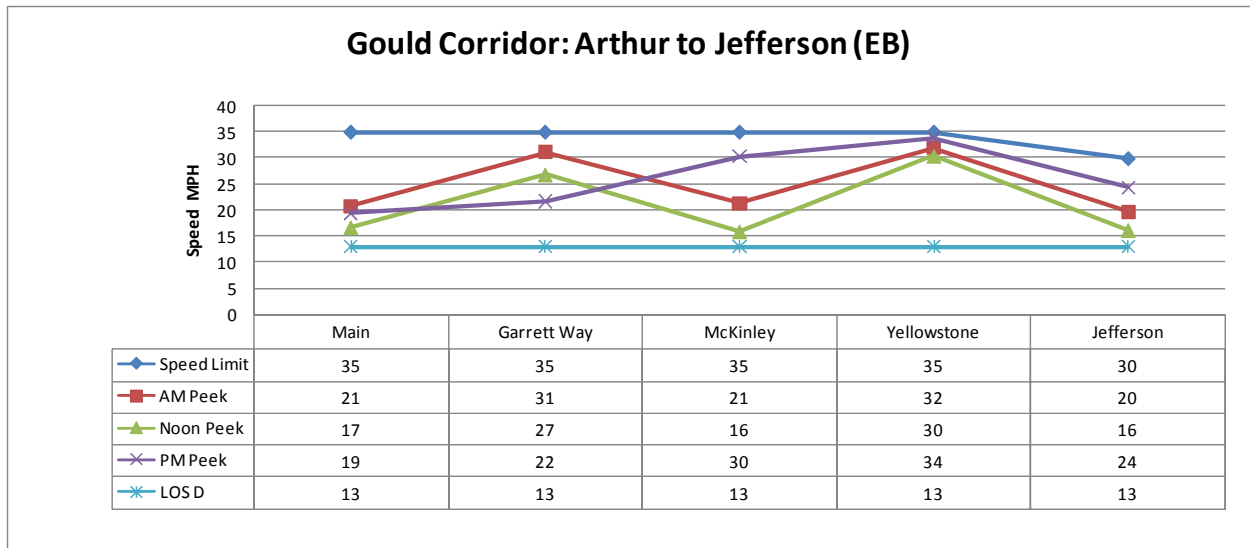


Figure 8: Gould Corridor Eastbound

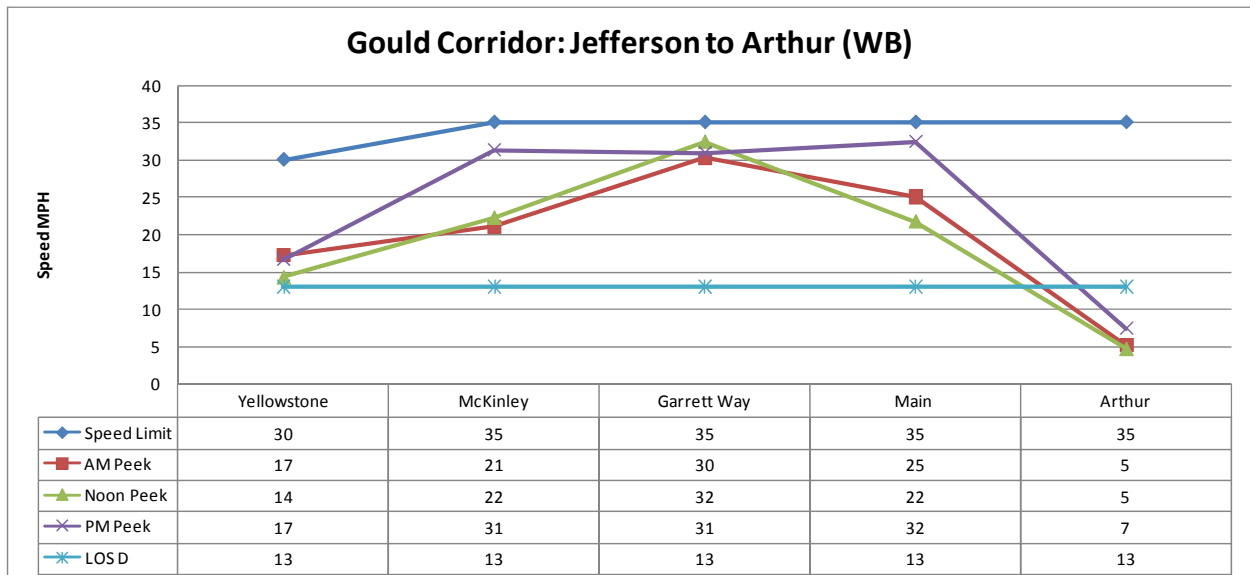


Figure 9: Gould Corridor Westbound

## Hawthorne Corridor

Hawthorne Corridor is the only corridor without a signal. The corridor was selected since it is one of four main north/south routes and two of the intersections warrant signals and one is being installed at the intersection with Chubbuck Road in the fall of 2009. The LOS for the corridor is “A” for all time periods.



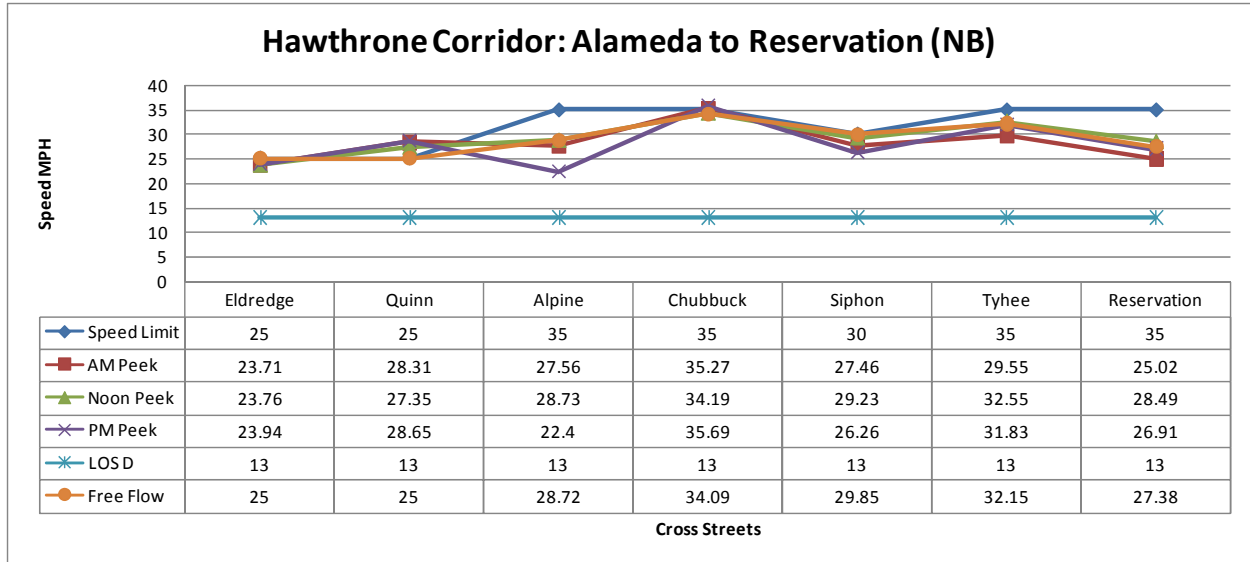


Figure 10: Hawthorne Corridor Northbound

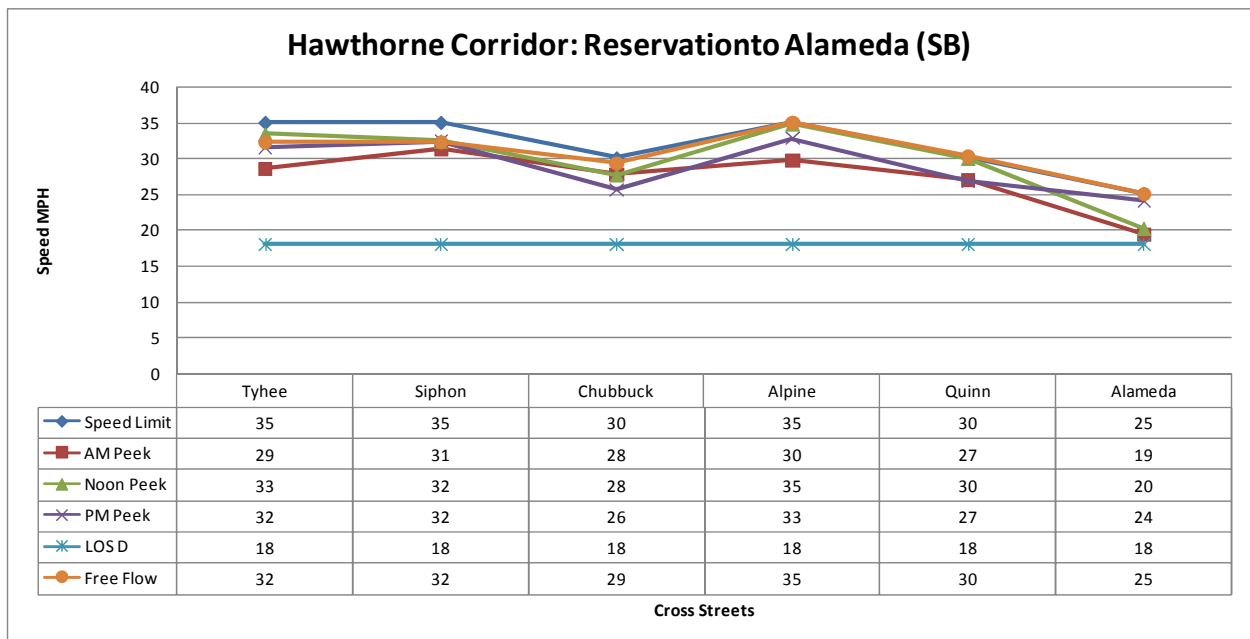


Figure 11: Hawthorne Corridor Southbound

## Jefferson Corridor

Jefferson Corridor is the one corridor which follows three roads (15<sup>th</sup> Avenue, Jefferson Avenue, and Hilina Road) over the course of the 3.58 miles. The corridor goes from Martin Luther King Avenue to Flandro Avenue. The route has two lanes with turn pockets at cross streets. The corridor is LOS “B” southbound and LOS “C” for northbound. The corridor had initially included Hilina from Flandro Avenue to Reservation Road, but construction on a new five lane section precluded completing the prescribed runs.



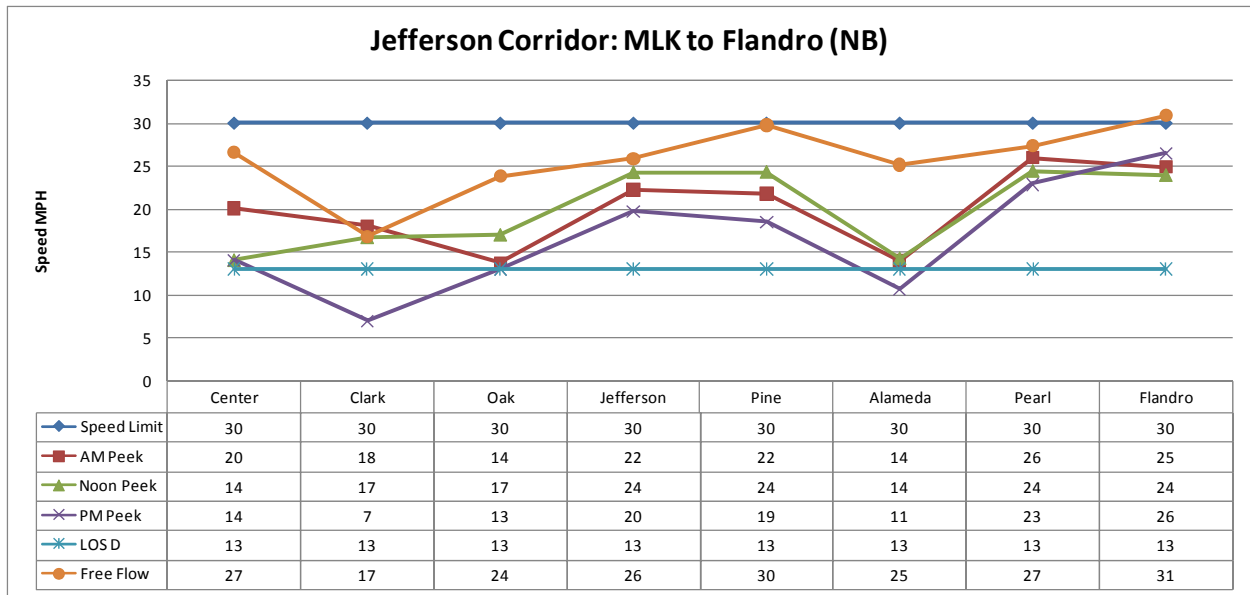


Figure 12: Jefferson Corridor Northbound

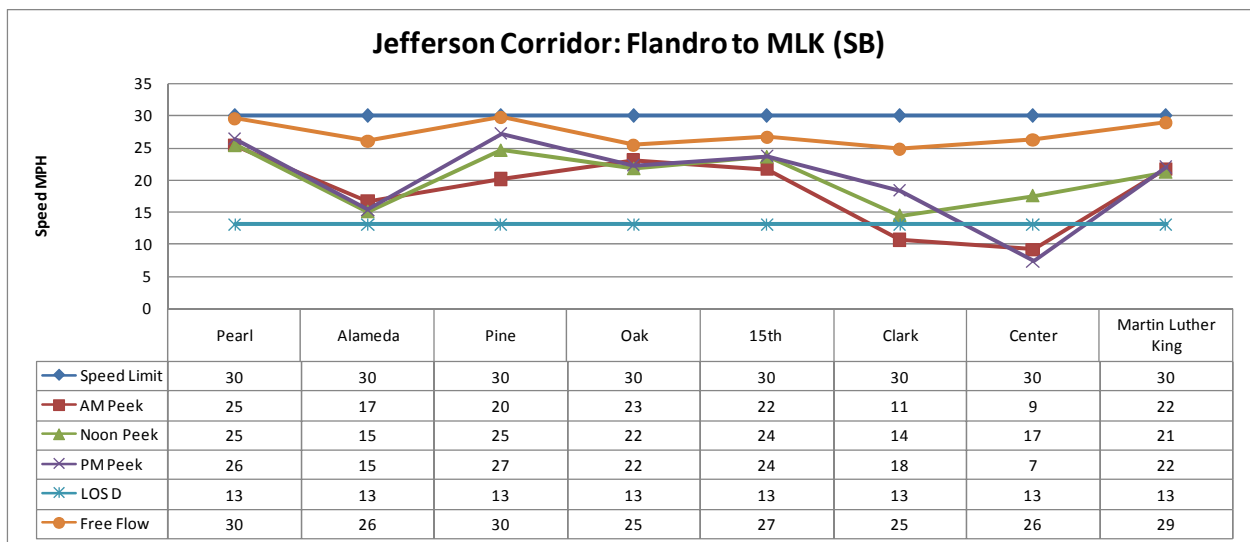


Figure 13: Jefferson Corridor Southbound

## Main/Arthur Corridor

This corridor is the second which includes one-way couplets. It is also the first corridor with different sub-corridors. The main corridor was divided into three sub-corridors due to the street classification change. Two of the substations are Classification II while the other is Classification IV. Each sub-corridor is reviewed separately.

### Portneuf to Mattwood Sub-Corridor

The corridor which runs from Portneuf Road to Mattwood is a two-lane road and has no signalized intersections and free flows speeds are 35 to 45 mph. The corridor LOS is “A” and “B” depending upon the time period.



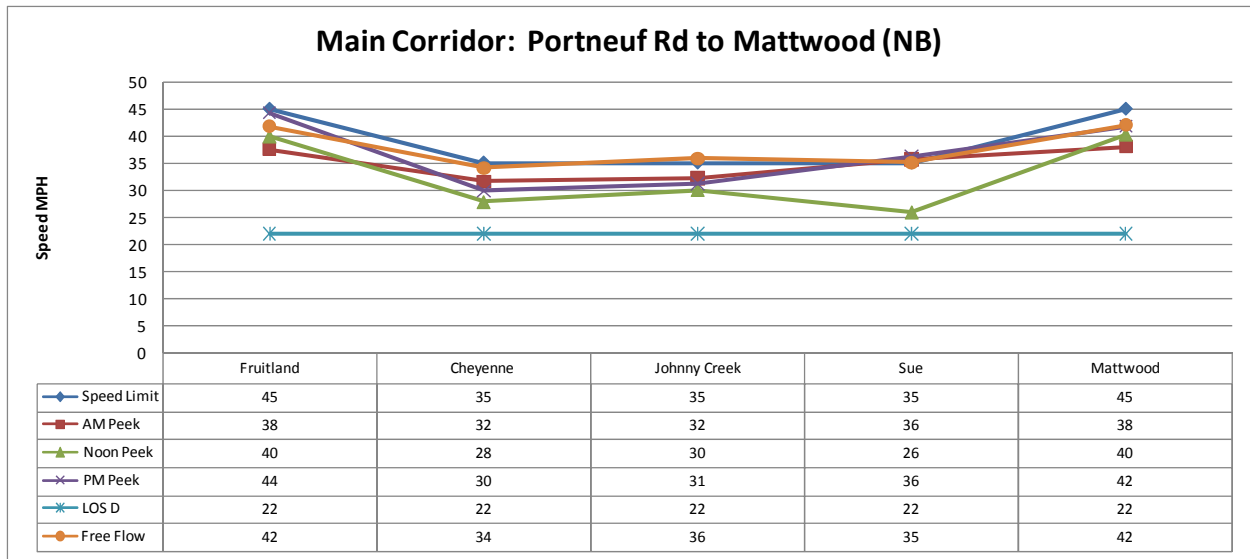


Figure 14: Main Corridor Porneuf Road to Mattwood Northbound

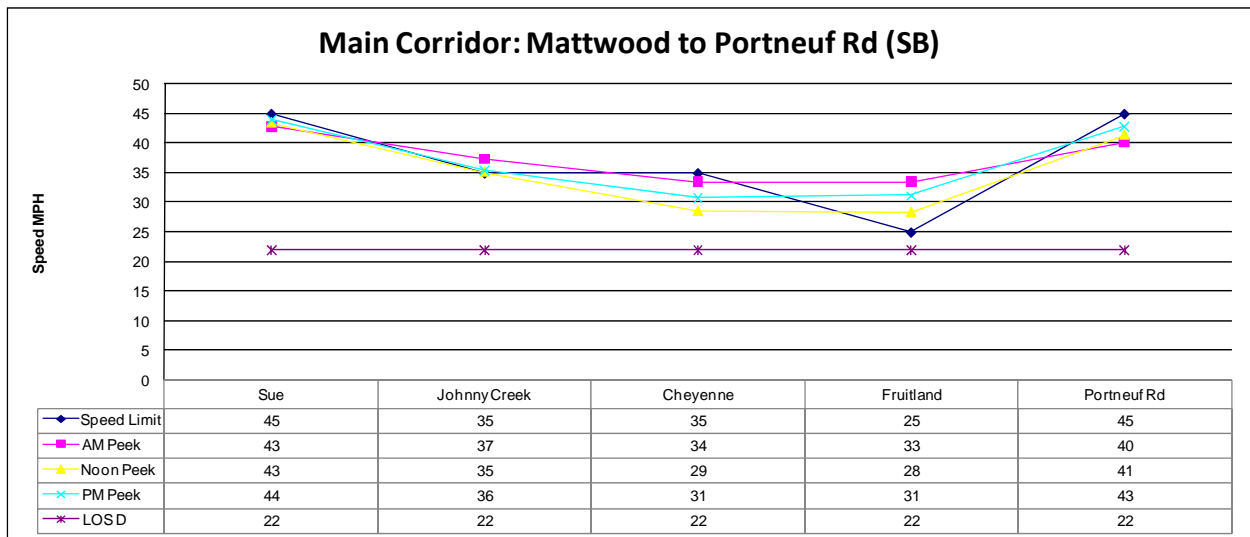


Figure 15: Main Corridor: Mattwood to Portneuf Road Southbound

#### Mattwood to Custer Sub-corridor

This sub-corridor goes through the downtown area of the community. There are four signals in the corridors three signals (Lewis, Center, and Clark) are timed to allow north/south progression. The corridor is LOS “B”. This section seems to be functioning well.



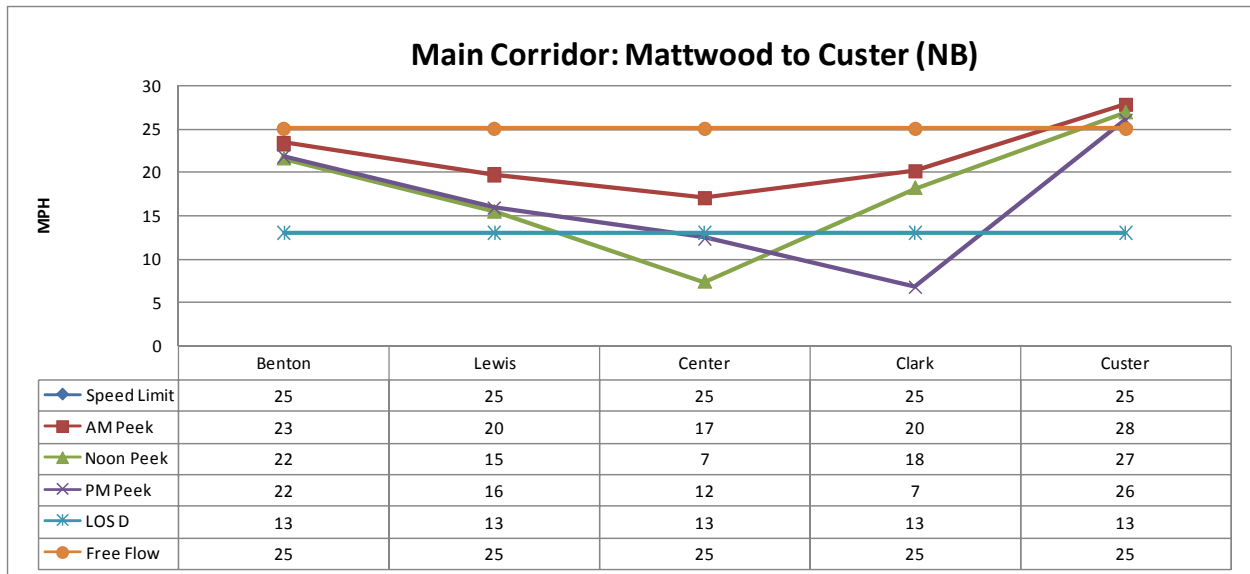


Figure 16: main Corridor: Mattwood to Custer Northbound

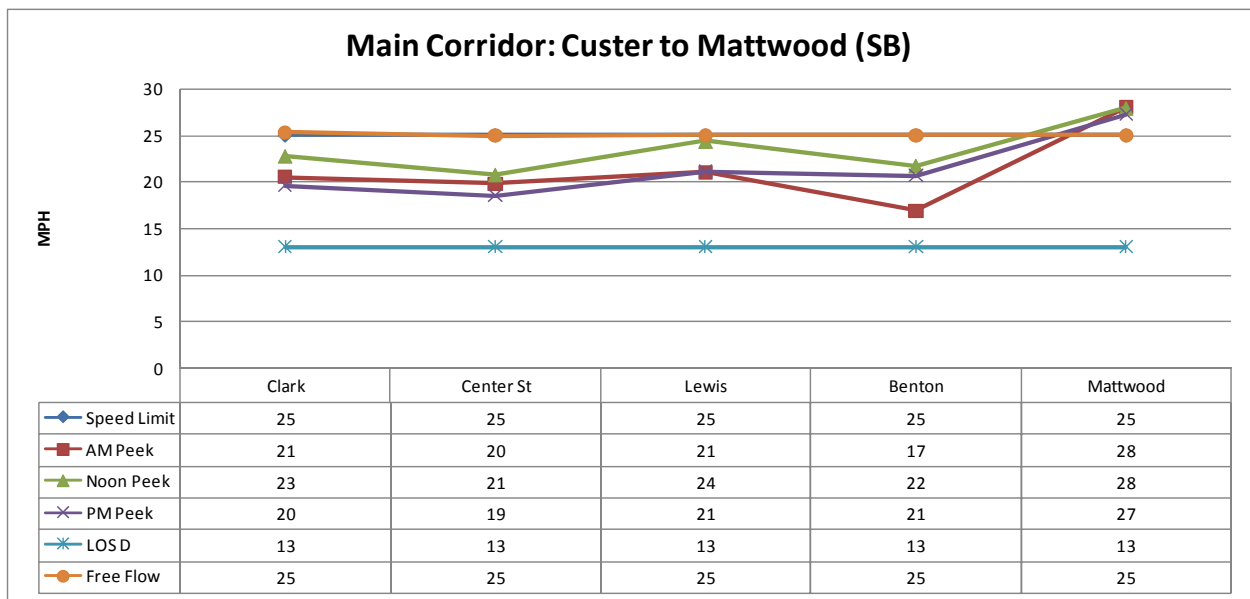


Figure 17: Main Corridor: Mattwood to Custer Southbound

#### Custer to Garrett Way Sub-corridor

This last sub-corridor is a transition from the urbanized area. The area is lightly developed and has free flow speeds near 50 mph. The corridor is LOS "A".



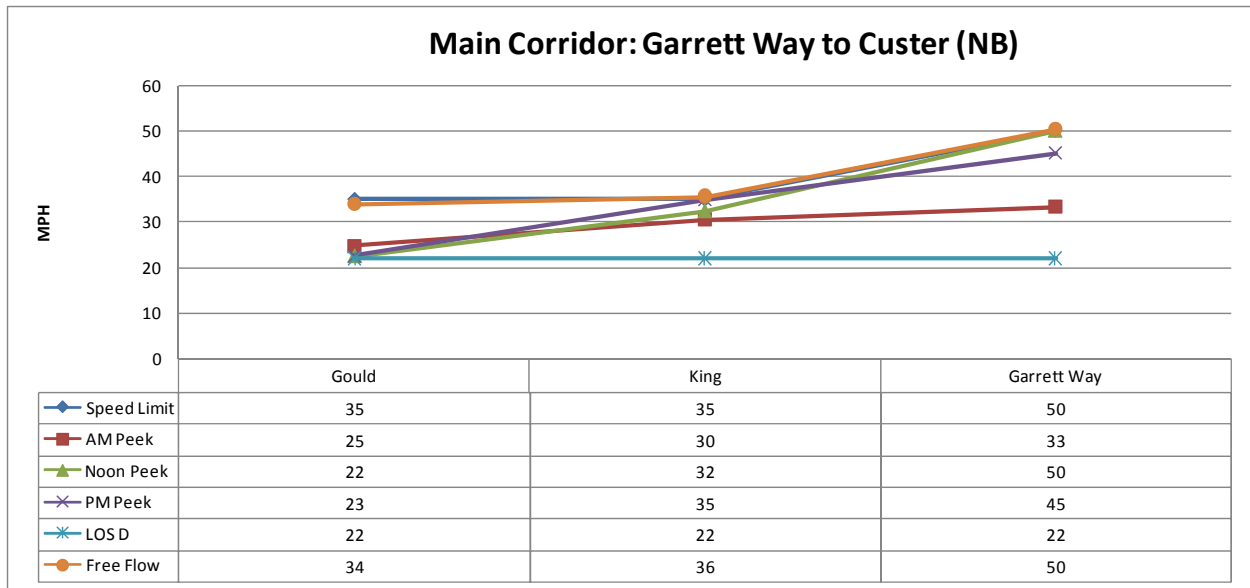


Figure 18: Main Corridor: Garrett Way to Custer Northbound

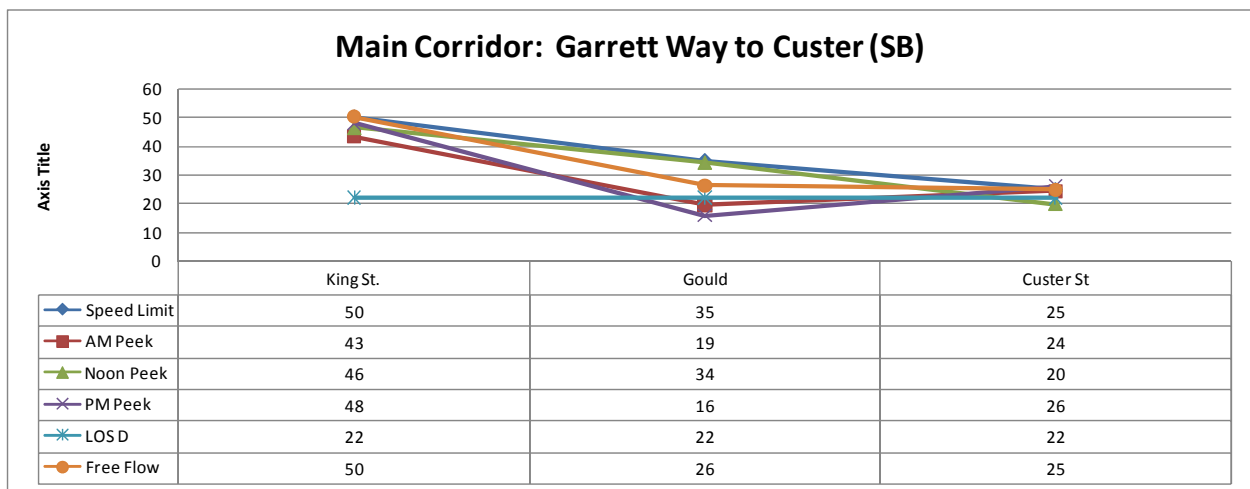


Figure 19: Main Corridor: Garrett Way to Custer Southbound

## Poleline Corridor

The Poleline Corridor is another combination of two routes. The corridor starts as Garrett Way and goes almost a mile before turning into Poleline Road. Eventhough the route is two roads the design and signal configuration is design to function as a signal route. The decision was made to incorporate the two together due to the natural driving patterns, but it could be divided in the future. The route is four-lane with a center turn lane. The corridor is not coordinated. LOS on the corridor is a mixture of B and C. The main congestion points seem to be Eldredge with a fixed time signal and Yellowstone which is coordinated to allow Yellowstone priority.



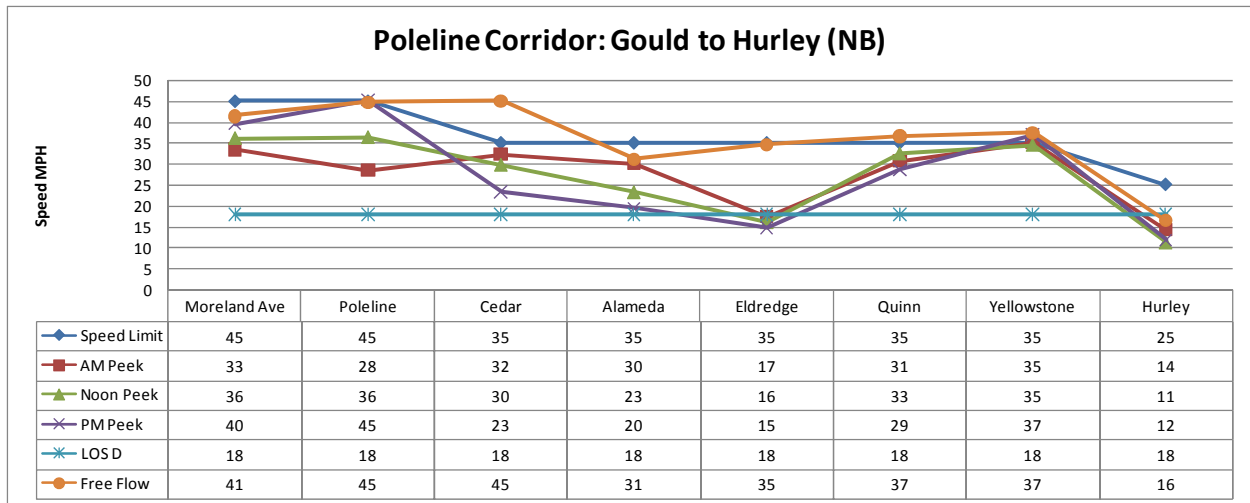


Figure 20: Poleline Corridor Northbound

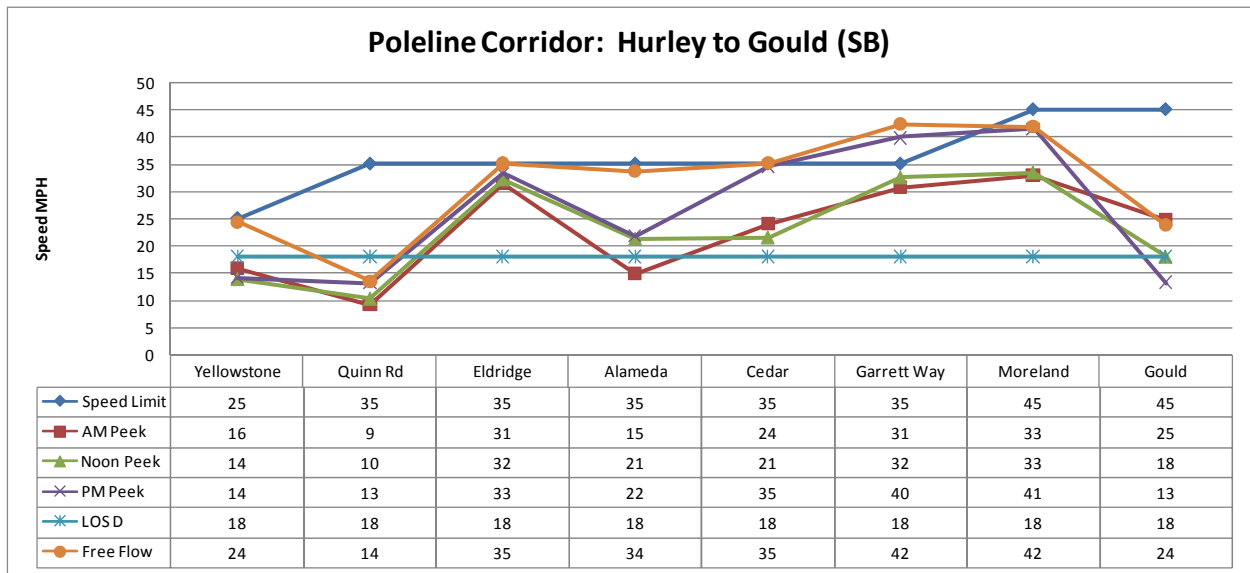


Figure 21: Poleline Corridor Southbound

Quinn Corridor runs from Philbin to Yellowstone. The corridor is a two lane road with few turn bays. The corridor LOS is “B”, the main reason is the delay incurred at the intersection of Hawthorn and Quinn.



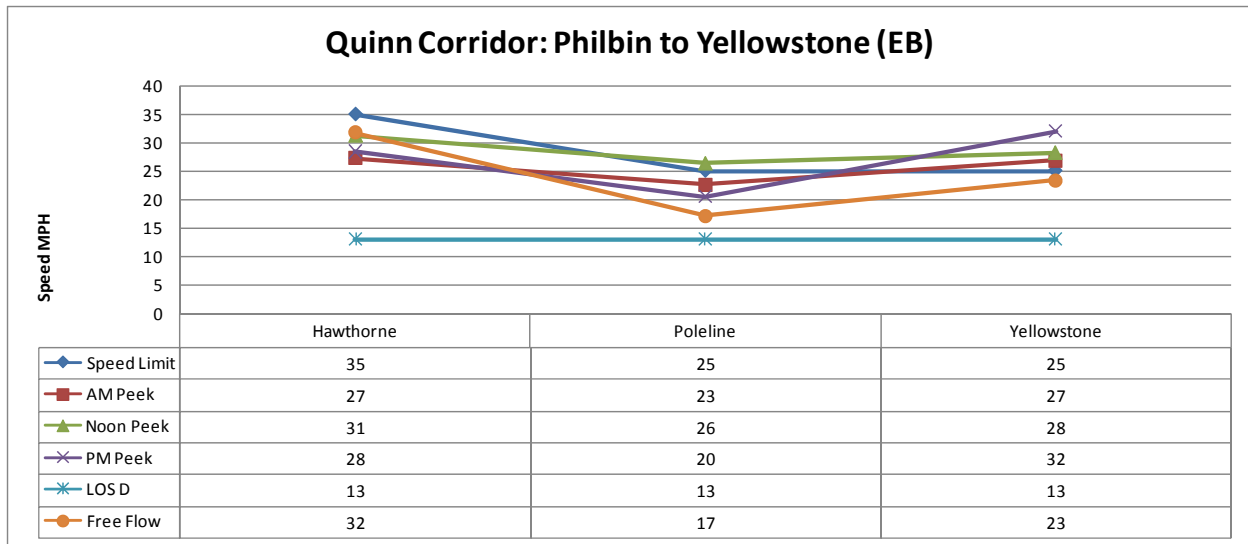


Figure 22: Quinn Corridor Eastbound

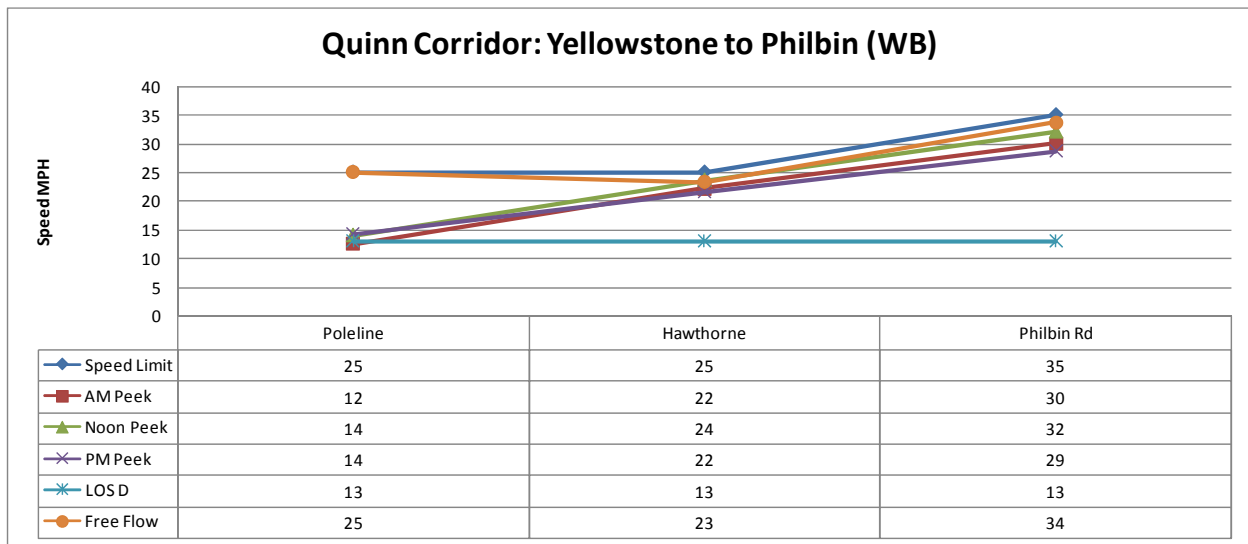


Figure 23: Quinn Corridor Westbound

## Yellowstone Corridor

The Yellowstone Corridor is comprised of five sub-corridors. Yellowstone is all one corridor, but the street classification and design of the roadway varies throughout the corridor. The corridor goes from Century High in the south to Reservation Road in the north. Both ends of the corridor are rural high speed (45 and 50 respectively) which falls into class two. The other sections are class III routes. The separation of the middle three sections is along the signal loops within the regional signal coordination system.

### Century High to Barton Sub-Corridor

This sub-corridor goes from Century to Barton Road and has a 45 mph speed limit. There are no traffic control devices along the corridor. There is a pedestrian actuated signal at Century High School. The sub-corridor is LOS "A".



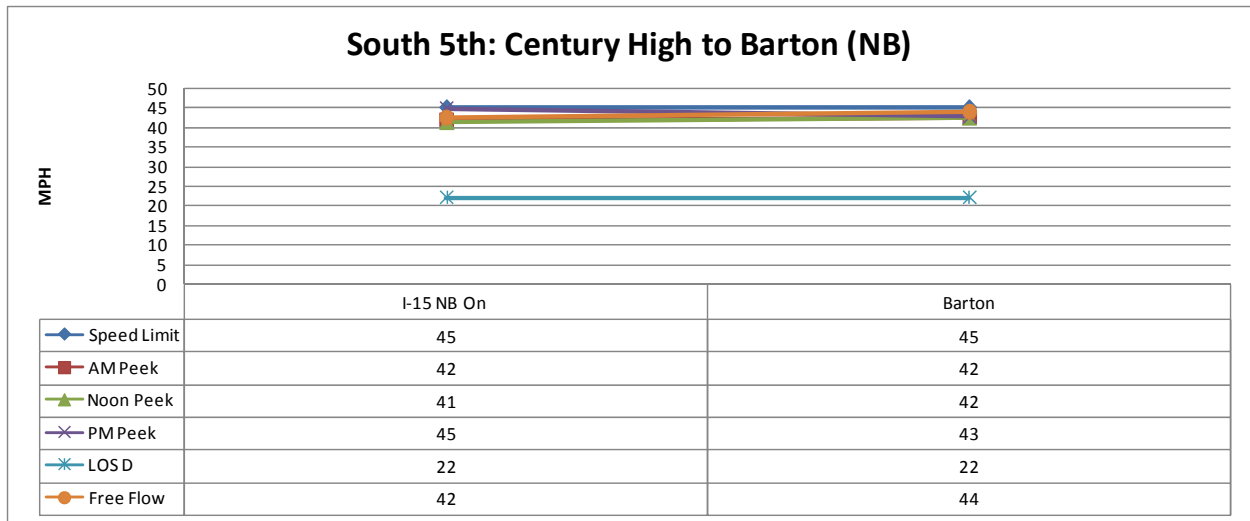


Figure 24: Yellowstone Corridor Century High to Barton Northbound

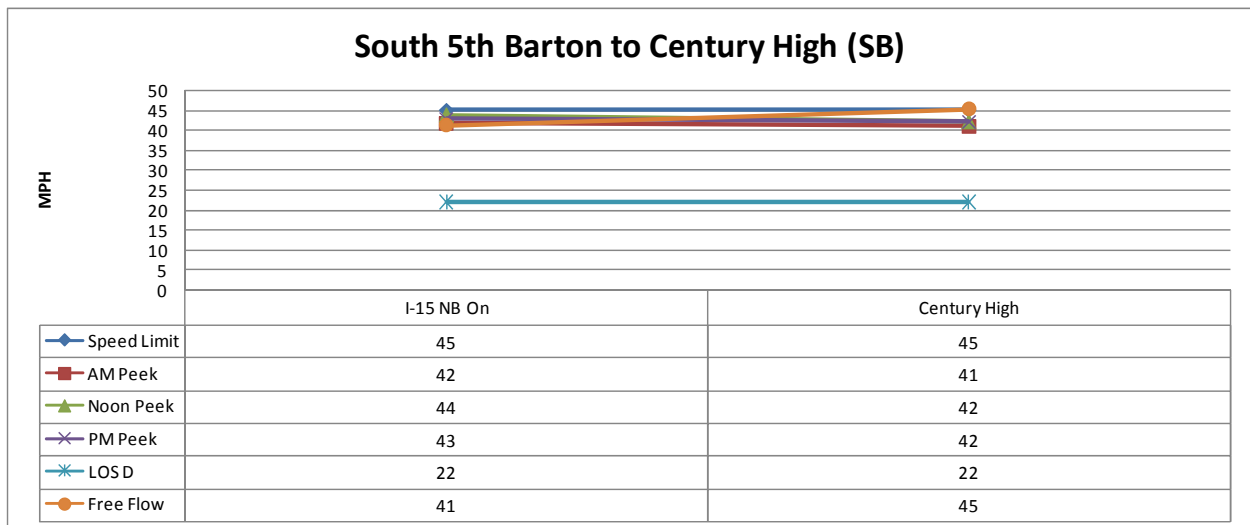


Figure 25: Yellowstone Corridor: Century High to Barton Southbound

### Barton to Oak Sub-Corridor

Barton to Oak sub-corridor runs along the one-way couplets of 4<sup>th</sup> and 5<sup>th</sup>. The corridor also goes along the Idaho State University area where pedestrian traffic is the highest in the entire community. The LOS for the corridor ranges from “A” to “C”. The northbound traffic is LOS “C” except for the AM Peak which is LOS “B”. The main trouble area as with the Clark/Center Corridor is the intersection of the two one-way couplets. The signal timing tries to get the west to south and east to north movements flowing due to traffic storage problems. This tends to delay the through routes, but even in the worst conditions that delay is only 2.33 minutes for the entire sub-corridor.



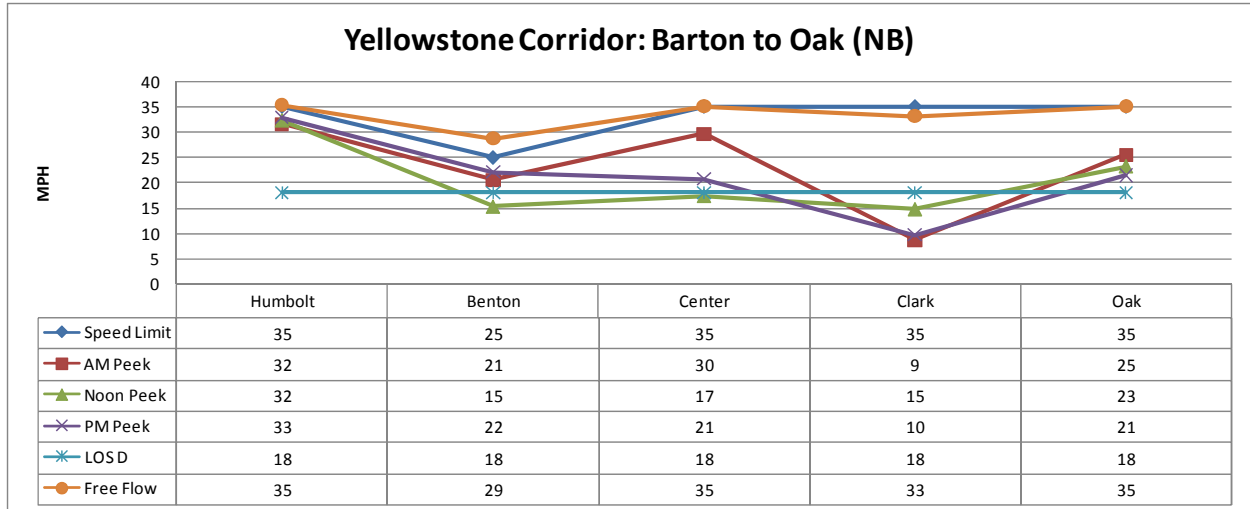


Figure 26: Yellowstone Corridor: Barton to Oak Northbound

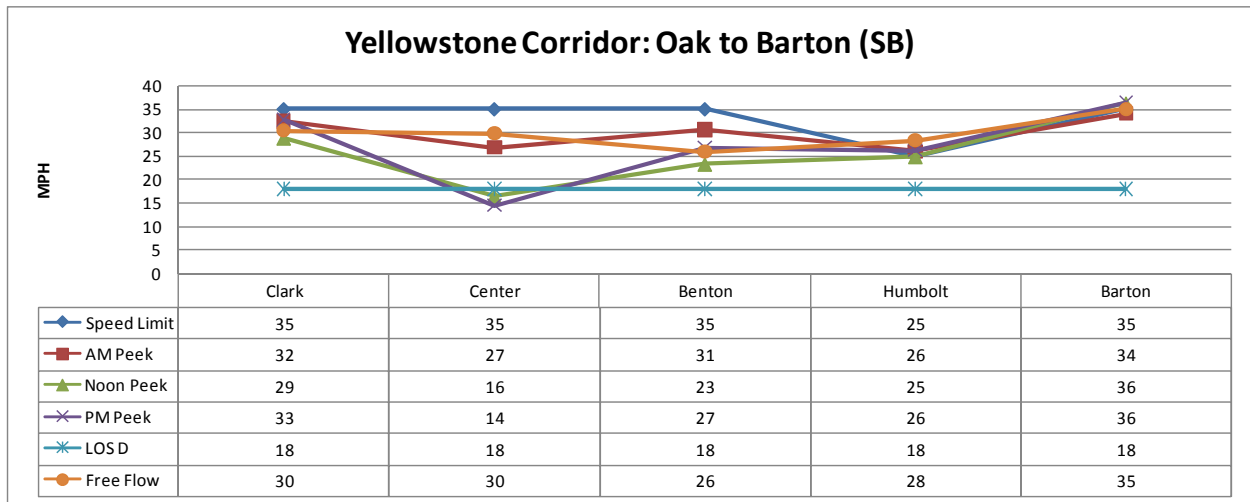


Figure 27: Yellowstone Corridor: Barton to Oak Southbound

### Oak to Flandro Sub-Corridor

This sub-corridor runs through the heart of the commercial district. This sub-corridor and the next one (Flandro to Chubbuck) represent the highest traffic volume streets within the urban area. The LOS for the sub-corridor is LOS “C” northbound and LOS “B” southbound. The main congested area is the intersection with Alameda northbound and the intersection with Cedar in the southbound direction.



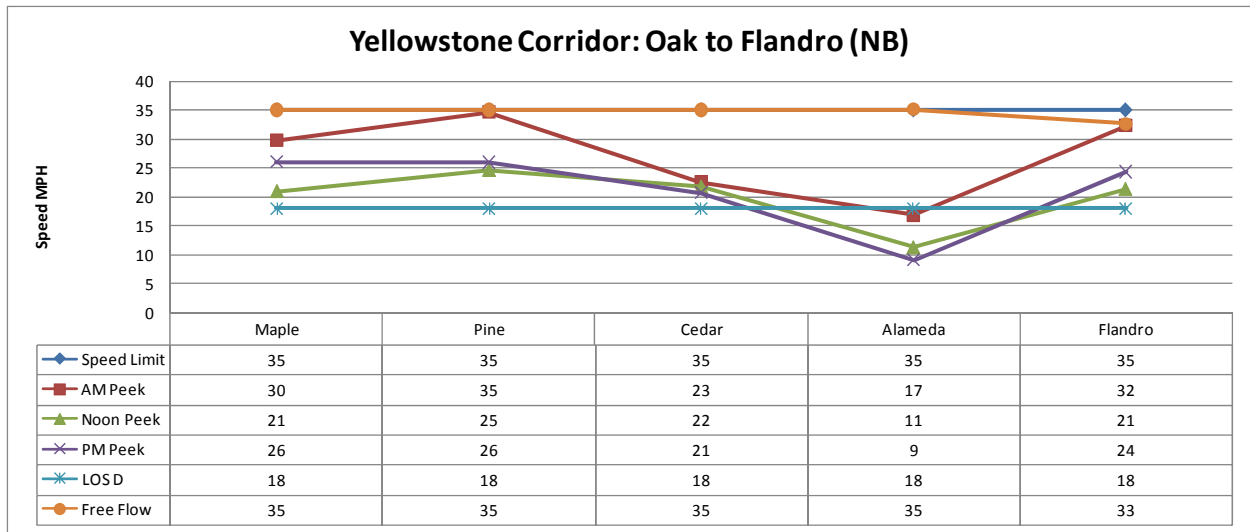


Figure 28: Yellowstone Corridor: Oak to Flandro Northbound

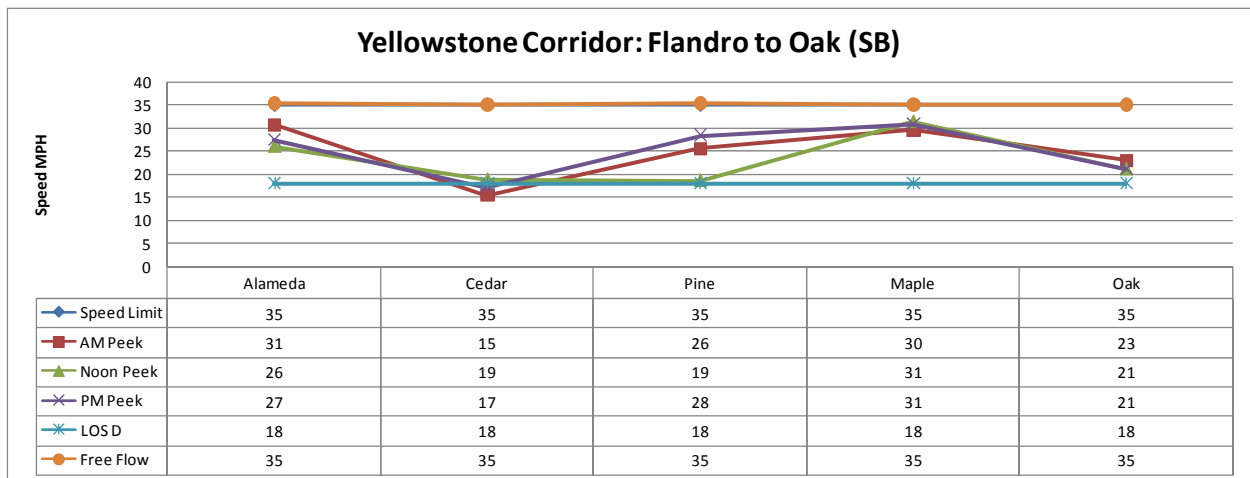


Figure 29: Yellowstone Corridor: Oak to Flandro Southbound

#### Flandro to Chubbuck Sub-corridor

This sub-corridor has the highest concentration to signal (eight) of any corridor or sub-corridor. The sub-corridor runs in front of the regional mall and other major retailers. The northbound LOS is “C” while the southbound goes from “A” in the AM peak to “C” in the PM peak.



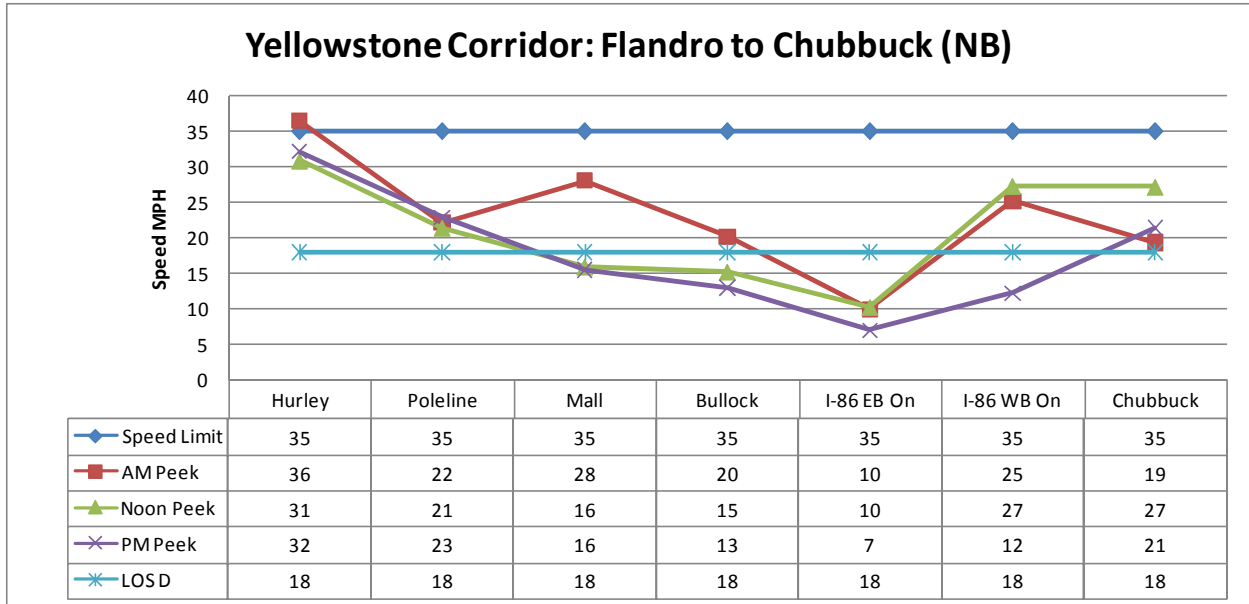


Figure 30: Yellowstone Corridor: Flandro to Chubbuck Northbound

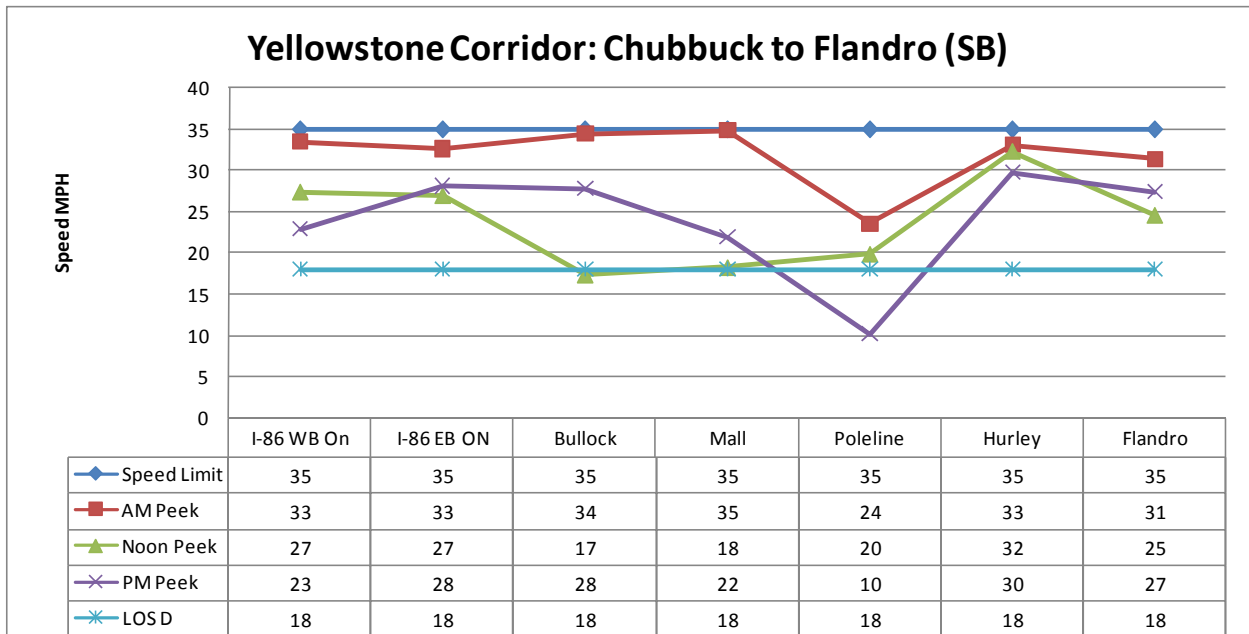


Figure 31: Yellowstone Corridor: Chubbuck to Flandro Southbound

#### Chubbuck to Reservation Sub-corridor

The sub-corridor like the Century sub-corridor has limited traffic control devices. The speed limits along the sub-corridor range from 35 to 50 mph. The entire sub-corridor is LOS “A”.



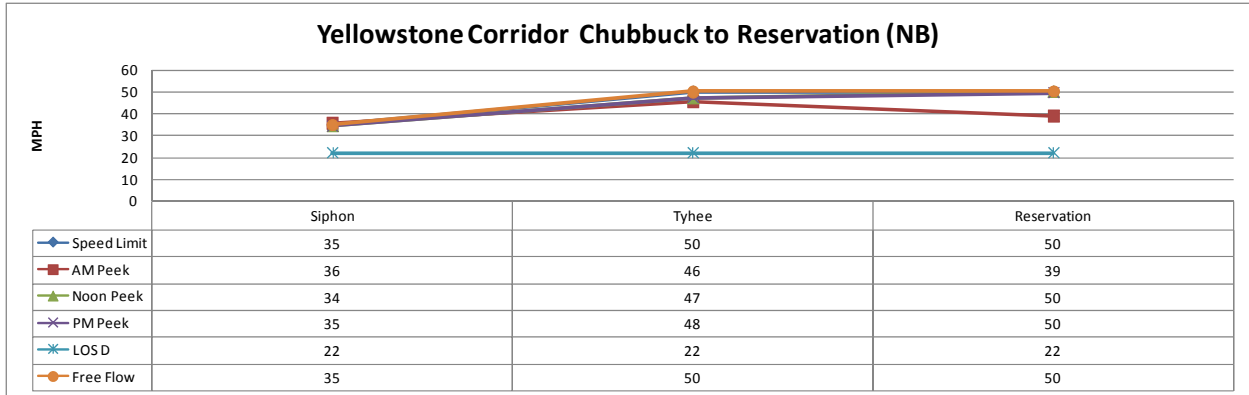


Figure 32: Yellowstone Corridor: Chubbuck to Reservation Northbound

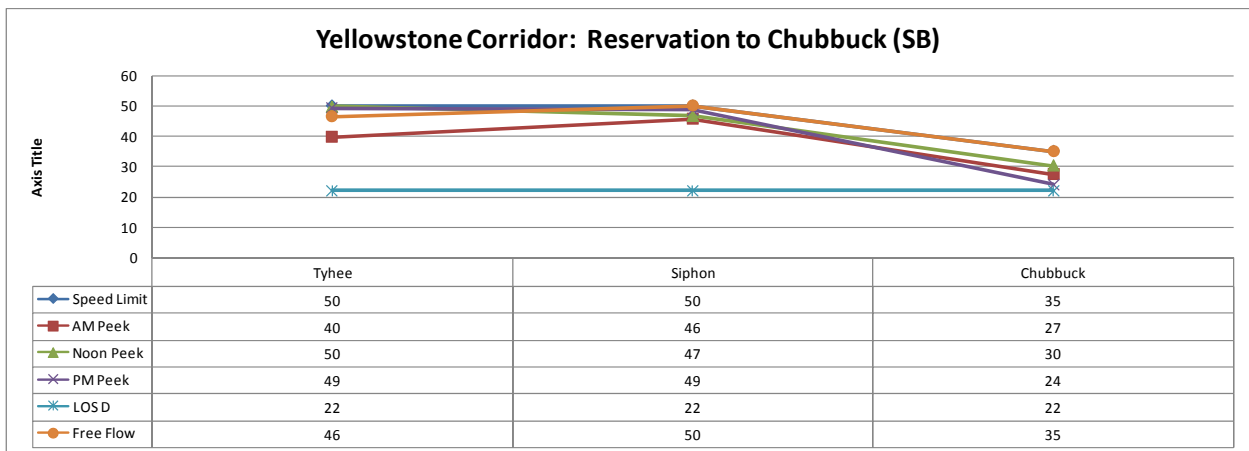


Figure 33: Yellowstone Corridor: Chubbuck to Reservation Southbound



## Appendix A: Runs by route

This appendix provides a summary of the data collected as part of the study. For each route, four spreadsheets, two in each direction are provided. The spreadsheets are:

- Average Speed for the corridor by checkpoint for each analysis period.
- Travel time for each corridor along with the minutes of delay by checkpoint.

These spreadsheets were compiled from the raw data and provide the needed information to make decisions about the Level of Service for each corridor.



## 2009 Arterial Delay Study Appendix A

Center Street Corridor: Garfield to Hospital Way (EB) Class IV

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Lewis	Garfield	Arthur Ave	25	13	10	9	13	14
Lewis	Arthur Ave	Main St	25	9	10	10	13	14
Center Street	Main St	4th Ave	25	15	19	17	13	22
Center Street	4th Ave	5th Ave	30	7	10	20	13	10
Center Street	5th Ave	8th Ave	30	25	24	18	13	29
Center Street	8th Ave	15th Ave	30	25	24	21	13	27
Center Street	5th Ave	I-15 SB On Ramp	30	34	33	30	13	33
Center Street	I-15 SB On Ramp	I-15 NB On Ramp	30	25	16	21	13	29
Center Street	I-15 NB On Ramp	Hospital Way	45	21	21	24	13	27

Center/Clark Corridor: Hospital Way to Garfield (WB) Class IV

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Center St	Hospital Way	I-15 NB On Ramp	45	24	21	21	13	31
Center St	I-15 NB On Ramp	I-15 SB On Ramp	30	20	23	23	13	13
Clark Street	I-15 NB On Ramp	15th Ave	30	23	29	23	13	31
Clark Street	15th Ave	8th Ave	30	26	25	24	13	30
Clark Street	8th Ave	5th Ave	30	18	14	14	13	21
Clark Street	5th Ave	4th Ave	25	9	10	6	13	15
Clark Street	4th Ave	Main St	25	20	22	18	13	22
Center St	Main St	Arthur Ave	25	21	20	17	13	14
Center St	Arthur Ave	Garfield	25	16	12	12	13	16

Center Street Corridor: Garfield to Hospital Way (EB) Class IV

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Lewis	Garfield	Arthur Ave	0.07	0.17	0.31	0.31	0.43	0.49	0.01	0.12	0.18
Lewis	Arthur Ave	Main St	0.07	0.17	0.29	0.48	0.41	0.43	0.19	0.12	0.14
Center Street	Main St	4th Ave	0.47	1.13	1.26	1.83	1.49	1.65	0.57	0.22	0.39
Center Street	4th Ave	5th Ave	0.07	0.14	0.41	0.61	0.40	0.21	0.20	-0.01	-0.20
Center Street	5th Ave	8th Ave	0.21	0.42	0.44	0.50	0.53	0.72	0.06	0.09	0.27
Center Street	8th Ave	15th Ave	0.47	0.94	1.05	1.14	1.18	1.33	0.09	0.13	0.28
Center Street	5th Ave	I-15 SB On Ramp	0.46	0.92	0.84	0.81	0.84	0.92	-0.03	0.01	0.08
Center Street	I-15 SB On Ramp	I-15 NB On Ramp	0.11	0.22	0.23	0.27	0.41	0.31	0.04	0.18	0.08
Center Street	I-15 NB On Ramp	Hospital Way	0.32	0.43	0.72	0.93	0.90	0.78	0.21	0.18	0.07
Total			2.25	4.53	5.55	6.89	6.59	6.84	1.34	1.04	1.29

Center/Clark Corridor: Hospital Way to Garfield (WB) Class IV

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Center St	Hospital Way	I-15 NB On Ramp	0.32	0.43	0.62	0.80	0.91	0.93	0.18	0.29	0.31
Center St	I-15 NB On Ramp	I-15 SB On Ramp	0.11	0.22	0.52	0.34	0.28	0.29	-0.18	-0.24	-0.23
Clark Street	I-15 NB On Ramp	15th Ave	0.46	0.92	1.01	1.21	0.97	1.18	0.20	-0.04	0.17
Clark Street	15th Ave	8th Ave	0.47	0.94	0.95	1.09	1.13	1.19	0.14	0.18	0.24
Clark Street	8th Ave	5th Ave	0.21	0.42	0.59	0.70	0.92	0.87	0.11	0.33	0.28
Clark Street	5th Ave	4th Ave	0.07	0.17	0.30	0.45	0.41	0.70	0.15	0.11	0.40
Clark Street	4th Ave	Main St	0.47	1.13	1.25	1.43	1.30	1.58	0.18	0.05	0.33
Center St	Main St	Arthur Ave	0.07	0.17	0.29	0.20	0.21	0.24	-0.09	-0.08	-0.05
Center St	Arthur Ave	Garfield	0.07	0.17	0.26	0.26	0.34	0.35	0.00	0.08	0.09
Total			2.25	4.56	5.79	6.50	6.46	7.33	0.71	0.67	1.54



2009 Arterial Delay Study Appendix A

Chubbuck Corridor: Rio Vista to Bench (EB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Chubbuck Rd	Rio Vista	Philbin	35	26	30	29	18	29
Chubbuck Rd	Philbin	Cole	35	28	33	34	18	31
Chubbuck Rd	Cole	Hawthorne	25	19	22	25	18	28
Chubbuck Rd	Hawthorne	Yellowstone	35	14	24	18	18	23
Chubbuck Rd	Yellowstone	Hiline	35	22	25	22	18	26
Chubbuck Rd	Hiline	Pleasant View	25	27	30	29	18	31
Chubbuck Rd	Pleasant View	Bench	35	32	35	34	18	35

Chubbuck Corridor: Bench to Rio Vista (WB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Chubbuck Rd	Bench	Pleasant View	35	31	33	34	18	34
Chubbuck Rd	Pleasant View	Hiline	25	21	16	18	18	35
Chubbuck Rd	Hiline	Yellowstone	35	28	20	23	18	26
Chubbuck Rd	Yellowstone	Hawthorne	35	26	24	19	18	29
Chubbuck Rd	Hawthorne	Cole	25	23	29	28	18	31
Chubbuck Rd	Cole	Philbin	35	25	31	24	18	31
Chubbuck Rd	Philbin	Rio Vista	35	27	32	30	18	32

Chubbuck Corridor: Rio Vista to Bench (EB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Chubbuck Rd	Rio Vista	Philbin	1.00	1.71	2.07	2.31	1.98	2.10	0.24	-0.09	0.03
Chubbuck Rd	Philbin	Cole	0.53	0.91	1.04	1.13	0.97	0.94	0.09	-0.07	-0.10
Chubbuck Rd	Cole	Hawthorne	0.47	1.13	0.99	1.49	1.26	1.13	0.50	0.27	0.14
Chubbuck Rd	Hawthorne	Yellowstone	0.50	0.86	1.33	2.08	1.23	1.71	0.75	-0.11	0.37
Chubbuck Rd	Yellowstone	Hiline	0.67	1.15	1.52	1.85	1.61	1.86	0.33	0.09	0.34
Chubbuck Rd	Hiline	Pleasant View	0.42	1.01	0.81	0.94	0.83	0.86	0.13	0.02	0.05
Chubbuck Rd	Pleasant View	Bench	0.92	1.58	1.60	1.70	1.58	1.62	0.10	-0.02	0.02
Total			4.51	8.34	9.37	11.51	9.47	10.23	2.14	0.10	0.86

Chubbuck Corridor: Bench to Rio Vista (WB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Chubbuck Rd	Bench	Pleasant View	0.92	1.58	1.65	1.77	1.67	1.64	0.13	0.02	0.00
Chubbuck Rd	Pleasant View	Hiline	0.42	1.01	0.72	1.18	1.56	1.37	0.45	0.84	0.65
Chubbuck Rd	Hiline	Yellowstone	0.67	1.15	1.57	1.41	2.03	1.78	-0.16	0.46	0.21
Chubbuck Rd	Yellowstone	Hawthorne	0.50	0.86	1.04	1.18	1.25	1.57	0.14	0.21	0.54
Chubbuck Rd	Hawthorne	Cole	0.47	1.13	0.90	1.23	0.98	1.00	0.33	0.08	0.10
Chubbuck Rd	Cole	Philbin	0.53	0.91	1.02	1.28	1.01	1.31	0.26	-0.01	0.29
Chubbuck Rd	Philbin	Rio Vista	1.00	1.71	1.87	2.21	1.85	2.01	0.34	-0.02	0.14
Total			4.51	8.34	8.77	10.26	10.35	10.69	1.50	1.58	1.92



2009 Arterial Delay Study Appendix A

Gould Corridor: Arthur to Jefferson (EB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Gould	Arthur	Main	35	21	17	19	13	23
Gould	Main	Garrett Way	35	31	27	22	13	25
Gould	Garrett Way	McKinley	35	21	16	30	13	32
Gould	McKinley	Yellowstone	35	32	30	34	13	34
Oak	Yellowstone	Jefferson	30	20	16	24	13	22

Gould Corridor: Jefferson to Arthur (WB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Oak	Jefferson	Yellowstone	30	17	14	17	13	26
Gould	Yellowstone	McKinley	35	21	22	31	13	31
Gould	McKinley	Garrett Way	35	30	32	31	13	35
Gould	Garrett Way	Main	35	25	22	32	13	33
Gloud	Main	Arthur	35	5	5	7	13	6

Gould Corridor: Arthur to Jefferson (EB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Gould	Arthur	Main	0.07	0.12	0.19	0.20	0.25	0.22	0.02	0.07	0.03
Gould	Main	Garrett Way	0.34	0.58	0.83	0.66	0.76	0.94	-0.17	-0.07	0.11
Gould	Garrett Way	McKinley	0.09	0.15	0.17	0.25	0.34	0.18	0.08	0.17	0.01
Gould	McKinley	Yellowstone	0.30	0.51	0.53	0.57	0.59	0.53	0.04	0.06	0.00
Oak	Yellowstone	Jefferson	0.45	0.90	1.21	1.37	1.68	1.11	0.17	0.48	-0.10
Total			1	2.27	2.92	3.05	3.63	2.97	0.13	0.71	0.05

Gould Corridor: Jefferson to Arthur (WB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Oak	Jefferson	Yellowstone	0.45	0.90	1.05	1.57	1.90	1.62	0.52	0.85	0.57
Gould	Yellowstone	McKinley	0.30	0.51	0.58	0.86	0.81	0.58	0.28	0.23	0.00
Gould	McKinley	Garrett Way	0.09	0.15	0.15	0.18	0.17	0.17	0.03	0.01	0.02
Gould	Garrett Way	Main	0.34	0.58	0.61	0.81	0.94	0.63	0.20	0.33	0.02
Gloud	Main	Arthur	0.07	0.12	0.75	0.81	0.91	0.57	0.06	0.15	-0.18
Total			1.25	2.27	3.14	4.23	4.71	3.57	1.09	1.58	0.43



2009 Arterial Delay Study Appendix A

Hawthorne Corridor NB Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Hawthorne	Alameda	Quinn	25	31	31	32	18	25
Hawthorne	Quinn	Alpine	35	26	26	21	18	28
Hawthorne	Alpine	Chubbuck	35	36	35	36	18	35
Hawthorne	Chubbuck	Siphon	30	28	29	27	18	30
Hawthorne	Siphon	Tyhee	35	30	33	32	18	32
Hawthorne	Tyhee	Reservation	35	23	26	24	18	25

Hawthorne Corridor SB Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Hawthorne	Reservation	Tyhee	35	29	33	32	18	32
Hawthorne	Tyhee	Siphon	35	31	32	32	18	32
Hawthorne	Siphon	Chubbuck	30	28	28	26	18	29
Hawthorne	Chubbuck	Alpine	35	30	35	33	18	35
Hawthorne	Alpine	Quinn	30	27	30	27	18	30
Hawthorne	Quinn	Alameda	25	19	20	24	18	25

Hawthorne Corridor NB Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Hawthorne	Alameda	Quinn	1.01	2.42	2.42	1.94	1.95	1.89	-0.48	-0.47	-0.53
Hawthorne	Quinn	Alpine	0.57	0.98	1.24	1.31	1.30	1.61	0.33	0.32	0.63
Hawthorne	Alpine	Chubbuck	0.45	0.77	0.78	0.75	0.77	0.75	-0.02	0.00	-0.02
Hawthorne	Chubbuck	Siphon	1.00	2.00	1.99	2.16	2.05	2.25	0.16	0.05	0.25
Hawthorne	Siphon	Tyhee	1.00	1.71	1.88	2.03	1.84	1.90	0.32	0.13	0.18
Hawthorne	Tyhee	Reservation	1.00	1.71	2.41	2.63	2.33	2.45	0.91	0.61	0.74
		Total	5.03	9.60	10.72	10.82	10.24	10.86	1.22	0.64	1.26

Hawthorne Corridor SB

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Hawthorne	Reservation	Tyhee	1.00	1.71	1.86	2.10	1.80	1.90	0.39	0.08	0.19
Hawthorne	Tyhee	Siphon	1.00	1.71	1.86	1.92	1.85	1.85	0.21	0.14	0.14
Hawthorne	Siphon	Chubbuck	1.00	2.00	2.05	2.16	2.17	2.34	0.16	0.17	0.34
Hawthorne	Chubbuck	Alpine	0.45	0.77	0.77	0.91	0.78	0.82	0.14	0.00	0.05
Hawthorne	Alpine	Quinn	0.57	1.14	1.13	1.26	1.14	1.28	0.12	0.00	0.14
Hawthorne	Quinn	Alameda	1.01	2.42	2.42	3.12	3.01	2.51	0.69	0.59	0.09
		Total	5.03	9.76	10.09	11.47	10.75	10.71	1.71	0.98	0.94



## 2009 Arterial Delay Study Appendix A

Jefferson Corridor: Martin Luther King to Flandro (NB) Class IV

Primary Street	Segment			Speed Limit	Average Speed				
	Start	End			AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
15th	Martin Luther King	Center		30	20	14	14	13	27
15th	Center	Clark		30	18	17	7	13	17
15th	Clark	Oak		30	14	17	13	13	24
Oak	15th	Jefferson		30	22	24	20	13	26
Jefferson	Oak	Pine		30	22	24	19	13	30
Jefferson	Pine	Alameda		30	14	14	11	13	25
Hilina	Alameda	Pearl		30	26	24	23	13	27
Hilina	Pearl	Flandro		30	25	24	26	13	31

Jefferson Corridor: Flandro to Martin Luther King (SB) Class IV

Primary Street	Segment			Speed Limit	Average Speed				
	Start	End			AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Hilina	Flandro	Pearl		30	25	25	26	13	30
Hilina	Pearl	Alameda		30	17	15	15	13	26
Jefferson	Alameda	Pine		30	20	25	27	13	30
Jefferson	Pine	Oak		30	23	22	22	13	25
Oak	Jefferson	15th		30	22	24	24	13	27
15th	Oak	Clark		30	11	14	18	13	25
15th	Clark	Center		30	9	17	7	13	26
15th	Center	Martin Luther King		30	22	21	22	13	29

Jefferson Corridor: Martin Luther King to Flandro (NB) Class IV

Primary Street	Segment			Length	Travel Time					Delay Minutes		
	Start	End			Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
15th	Martin Luther King	Center		0.60	1.20	1.36	1.79	2.57	2.57	0.44	1.21	1.21
15th	Center	Clark		0.07	0.14	0.25	0.23	0.25	0.60	-0.02	0.00	0.35
15th	Clark	Oak		0.29	0.58	0.73	1.26	1.03	1.33	0.53	0.29	0.60
Oak	15th	Jefferson		0.19	0.38	0.44	0.51	0.47	0.58	0.07	0.03	0.14
Jefferson	Oak	Pine		0.50	1.00	1.01	1.38	1.24	1.62	0.37	0.23	0.61
Jefferson	Pine	Alameda		0.54	1.08	1.29	2.32	2.28	3.03	1.03	0.99	1.74
Hilina	Alameda	Pearl		0.54	1.08	1.19	1.25	1.33	1.42	0.06	0.14	0.23
Hilina	Pearl	Flandro		0.85	1.70	1.66	2.05	2.14	1.93	0.39	0.48	0.27
Total				3.58	7.16	7.92	10.80	11.30	13.08	2.88	3.38	5.16

Jefferson Corridor: Flandro to Martin Luther King (SB) Class IV

Primary Street	Segment			Length	Travel Time					Delay Minutes		
	Start	End			Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Hilina	Flandro	Pearl		0.85	1.70	1.73	2.02	2.01	1.93	0.29	0.28	0.21
Hilina	Pearl	Alameda		0.54	1.08	1.25	1.94	2.16	2.12	0.69	0.92	0.87
Jefferson	Alameda	Pine		0.54	1.08	1.09	1.61	1.32	1.19	0.52	0.23	0.10
Jefferson	Pine	Oak		0.50	1.00	1.18	1.30	1.38	1.35	0.12	0.19	0.17
Oak	Jefferson	15th		0.19	0.38	0.43	0.53	0.48	0.48	0.10	0.05	0.05
15th	Oak	Clark		0.29	0.58	0.70	1.63	1.21	0.95	0.93	0.51	0.25
15th	Clark	Center		0.07	0.14	0.16	0.46	0.24	0.58	0.30	0.08	0.42
15th	Center	Martin Luther King		0.60	1.20	1.24	1.66	1.70	1.64	0.42	0.46	0.40
Total				3.58	7.16	7.78	11.15	10.50	10.25	3.36	2.71	2.46



2009 Arterial Delay Study Appendix A

Main Corridor: Bannock Highway: Portneuf to Mattwood Class II (NB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Bannock Highway	Portneuf Road	Fruitland	45	38	40	44	22	42
Bannock Highway	Fruitland	Cheyenne	35	32	28	30	22	34
Bannock Highway	Cheyenne	Johnny Creek	35	32	30	31	22	36
Bannock Highway	Johnny Creek	Sue	35	36	26	36	22	35
Bannock Highway	Sue	Mattwood	45	38	40	42	22	42

Main Corridor: Bannock Highway: Mattwood to Portneuf Class II (SB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Main Street	Mattwood	Sue	45	43	43	44	22	45
Bannock Highway	Sue	Johnny Creek	35	37	35	36	22	35
Bannock Highway	Johnny Creek	Cheyenne	35	34	29	31	22	35
Bannock Highway	Cheyenne	Fruitland	25	33	28	31	22	35
Bannock Highway	Fruitland	Portneuf Rd	45	40	41	43	22	45

Main Corridor: Bannock Highway: Portneuf to Mattwood Class II (NB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Bannock Highway	Portneuf Road	Fruitland	1.19	1.59	1.71	1.90	1.79	1.62	0.19	0.08	-0.10
Bannock Highway	Fruitland	Cheyenne	0.56	0.96	0.99	1.06	1.21	1.12	0.07	0.22	0.14
Bannock Highway	Cheyenne	Johnny Creek	1.22	2.09	2.04	2.27	2.43	2.34	0.23	0.39	0.30
Bannock Highway	Johnny Creek	Sue	0.83	1.42	1.42	1.40	1.92	1.37	-0.03	0.49	-0.05
Bannock Highway	Sue	Mattwood	0.75	1.00	1.07	1.18	1.12	1.08	0.11	0.05	0.01
Total			4.55	7.06	7.24	7.81	8.47	7.53	0.58	1.23	0.29

Main Corridor: Bannock Highway: Mattwood to Portneuf Class II (SB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Main Street	#REF!	Sue	0.75	1.00	0.99	1.05	1.04	1.02	0.06	0.04	0.03
Bannock Highway	Sue	Johnny Creek	0.83	1.42	1.41	1.34	1.42	1.40	-0.08	0.00	-0.01
Bannock Highway	Johnny Creek	Cheyenne	1.22	2.09	2.11	2.19	2.56	2.37	0.07	0.45	0.26
Bannock Highway	Cheyenne	Fruitland	0.56	1.34	0.96	1.01	1.19	1.08	0.05	0.23	0.12
Bannock Highway	Fruitland	Portneuf Rd	1.19	1.59	1.59	1.78	1.73	1.66	0.19	0.14	0.08
Total			4.55	7.44	7.07	7.35	7.93	7.54	0.29	0.86	0.47



2009 Arterial Delay Study Appendix A

Main Corridor: Mattwood to Custer Class IV (NB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Main Street	Mattwood	Benton	25	23	22	22	13	25
Main Street	Benton	Lewis	25	20	15	16	13	25
Main Street	Lewis	Center	25	17	7	12	13	25
Main Street	Center	Clark	25	20	18	7	13	25
Main Street	Clark	Custer	25	28	27	26	13	25

Main Corridor: Custer to Custer Class IV (SB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Arthur	Custer	Clark	25	21	23	20	13	25
Arthur	Clark	Center St	25	20	21	19	13	25
Arthur	Center St	Lewis	25	21	24	21	13	25
Arthur	Lewis	Benton	25	17	22	21	13	25
Arthur	Benton	Mattwood	25	28	28	27	13	25

Main Corridor: Mattwood to Custer Class IV (NB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Main Street	Mattwood	Benton	0.60	1.44	1.44	1.54	1.67	1.65	0.10	0.23	0.21
Main Street	Benton	Lewis	0.20	0.48	0.48	0.61	0.78	0.76	0.13	0.30	0.28
Main Street	Lewis	Center	0.07	0.17	0.17	0.25	0.57	0.34	0.08	0.40	0.17
Main Street	Center	Clark	0.07	0.17	0.17	0.21	0.23	0.61	0.04	0.06	0.45
Main Street	Clark	Custer	0.55	1.32	1.32	1.19	1.23	1.27	-0.13	-0.09	-0.05
Total			1.49	3.58	3.58	3.80	4.48	4.63	0.22	0.90	1.05

Main Corridor: Custer to Custer Class IV (SB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Arthur	Custer	Clark	0.54	1.30	1.28	1.58	1.43	1.66	0.30	0.14	0.38
Arthur	Clark	Center St	0.07	0.17	0.17	0.21	0.20	0.23	0.04	0.03	0.06
Arthur	Center St	Lewis	0.07	0.17	0.17	0.20	0.17	0.20	0.03	0.00	0.03
Arthur	Lewis	Benton St	0.20	0.48	0.48	0.71	0.55	0.58	0.23	0.07	0.10
Arthur	Benton St	Mattwood	0.63	1.51	1.51	1.35	1.35	1.39	-0.16	-0.16	-0.12
Total			1.51	3.62	3.61	4.05	3.71	4.05	0.44	0.10	0.44



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Main Corridor: Custer to Garrett Way Class II (NB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Main Street	Custer	Gould	35	25	22	23	22	34
Main Street	Gould	King	35	30	32	35	22	36
Main Street	King	Garrett Way	50	33	50	45	22	50

Main Corridor: Garrett Way to Custer Class II (SB)

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Main Street	Garrett Way	King St.	50	43	46	48	22	50
Main Street	King St.	Gould	35	19	34	16	22	26
Arthur	Gould	Custer St	25	24	20	26	22	25

Main Corridor: Custer to Garrett Way Class II (NB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Main Street	Custer	Gould	0.35	0.60	0.62	0.85	0.94	0.93	0.23	0.32	0.31
Main Street	Gould	King	0.26	0.45	0.44	0.51	0.48	0.45	0.07	0.04	0.01
Main Street	King	Garrett Way	1.24	1.49	1.48	2.24	1.49	1.65	0.76	0.01	0.17
Total			1.85	2.53	2.54	3.60	2.91	3.03	1.07	0.37	0.49

Main Corridor: Garrett Way to Custer Class II (SB)

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Main Street	Garrett Way	King St.	1.27	1.52	1.52	1.77	1.64	1.59	0.24	0.12	0.07
Main Street	King St.	Gould	0.27	0.46	0.62	0.84	0.47	1.02	0.22	-0.14	0.40
Arthur	Gould	Custer St	0.34	0.82	0.82	0.84	1.03	0.78	0.03	0.22	-0.04
Total			1.88	2.80	2.96	3.45	3.15	3.39	0.49	0.19	0.44



## 2009 Arterial Delay Study Appendix A

Poleline Corridor: Gould to Hurley (NB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Garrett Way	Gould	Moreland Ave	45	33	36	40	18	41
Garrett Way	Moreland Ave	Poleline	45	28	36	45	18	45
Poleline	Garrett Way	Cedar	35	32	30	23	18	45
Poleline	Cedar	Alameda	35	30	23	20	18	31
Poleline	Alameda	Eldredge	35	17	16	15	18	35
Poleline	Eldredge	Quinn	35	31	33	29	18	37
Poleline	Quinn	Yellowstone	35	35	35	37	18	37
Poleline	Yellowstone	Hurley	25	14	11	12	18	16

Poleline Corridor: Hurley to Gould (SB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Poleline	Hurley	Yellowstone	25	16	14	14	18	24
Poleline	Yellowstone	Quinn Rd	35	9	10	13	18	14
Poleline	Quinn Rd	Eldridge	35	31	32	33	18	35
Poleline	Eldridge	Alameda	35	15	21	22	18	34
Poleline	Alameda	Cedar	35	24	21	35	18	35
Poleline	Cedar	Garrett Way	35	31	32	40	18	42
Garrett Way	Garrett Way	Moreland	45	33	33	41	18	42
Garrett Way	Moreland	Gould	45	25	18	13	18	24

Poleline Corridor: Gould to Hurley (NB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Garrett Way	Gould	Moreland Ave	0.31	0.41	0.45	0.56	0.51	0.47	0.11	0.07	0.02
Garrett Way	Moreland Ave	Poleline	0.32	0.43	0.43	0.67	0.53	0.43	0.24	0.10	0.00
Poleline	Garrett Way	Cedar	0.35	0.60	0.47	0.65	0.71	0.90	0.18	0.24	0.43
Poleline	Cedar	Alameda	0.25	0.43	0.48	0.50	0.64	0.77	0.02	0.16	0.29
Poleline	Alameda	Eldredge	0.25	0.43	0.43	0.86	0.93	1.01	0.43	0.50	0.58
Poleline	Eldredge	Quinn	0.74	1.27	1.21	1.45	1.37	1.55	0.24	0.15	0.34
Poleline	Quinn	Yellowstone	0.09	0.15	0.14	0.15	0.16	0.15	0.01	0.01	0.00
Poleline	Yellowstone	Hurley	0.31	0.74	1.13	1.31	1.64	1.56	0.18	0.52	0.43
Total			2.62	4.46	4.75	6.16	6.49	6.83	1.41	1.74	2.09

Poleline Corridor: Hurley to Gould (SB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Poleline	Hurley	Yellowstone	0.31	0.74	0.76	1.18	1.34	1.31	0.41	0.57	0.55
Poleline	Yellowstone	Quinn Rd	0.09	0.15	0.40	0.59	0.52	0.41	0.19	0.12	0.01
Poleline	Quinn Rd	Eldridge	0.75	1.29	1.29	1.44	1.40	1.35	0.15	0.12	0.07
Poleline	Eldridge	Alameda	0.25	0.43	0.45	1.01	0.71	0.69	0.56	0.26	0.24
Poleline	Alameda	Cedar	0.25	0.43	0.43	0.63	0.70	0.43	0.20	0.27	0.01
Poleline	Cedar	Garrett Way	0.35	0.60	0.50	0.68	0.65	0.53	0.19	0.15	0.03
Garrett Way	Garrett Way	Moreland	0.32	0.43	0.46	0.59	0.58	0.46	0.13	0.12	0.00
Garrett Way	Moreland	Gould	0.31	0.41	0.78	0.75	1.03	1.40	-0.03	0.25	0.62
Total			2.63	4.48	5.06	6.86	6.93	6.59	1.80	1.86	1.53



2009 Arterial Delay Study Appendix A

Quinn Corridor: Philbin to Yellowstone (EB) Class IV

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Quinn Rd	Philbin Rd	Hawthorne	35	27	31	28	13	32
Quinn Rd	Hawthorne	Poleline	25	23	26	20	13	17
Quinn Rd	Poleline	Yellowstone	25	27	28	32	13	23

Quinn Corridor: Yellowstone to Philbin (WB) Class IV

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Quinn Rd	Yellowstone	Poleline	25	12	14	14	13	25
Quinn Rd	Poleline	Hawthorne	25	22	24	22	13	23
Quinn Rd	Poleline	Philbin Rd	35	30	32	29	13	34

Quinn Corridor: Philbin to Yellowstone (EB) Class IV

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Quinn Rd	Philbin Rd	Hawthorne	1.00	1.71	1.89	2.21	1.92	2.11	0.31	0.03	0.22
Quinn Rd	Hawthorne	Poleline	0.50	1.20	1.75	1.33	1.14	1.46	-0.42	-0.61	-0.29
Quinn Rd	Poleline	Yellowstone	0.10	0.24	0.26	0.22	0.21	0.19	-0.03	-0.04	-0.07
Total			1.60	3.15	3.90	3.76	3.28	3.76	-0.14	-0.62	-0.13

Quinn Corridor: Yellowstone to Philbin (WB) Class IV

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Quinn Rd	Yellowstone	Poleline	0.10	0.24	0.24	0.48	0.43	0.42	0.24	0.19	0.18
Quinn Rd	Poleline	Hawthorne	0.50	1.20	1.29	1.36	1.27	1.39	0.07	-0.01	0.11
Quinn Rd	Poleline	Philbin Rd	1.00	1.71	1.78	2.00	1.87	2.09	0.22	0.09	0.31
Total			1.60	3.15	3.31	3.84	3.57	3.90	0.53	0.27	0.60



2009 Arterial Delay Study Appendix A

Yellowstone Corridor: South 5th Century High to Barton (NB) Class II

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
South 5th	Century High	I-15 NB On	45	42	41	45	22	42
5th/4th	I-15 NB On	Barton	45	42	42	43	22	44

Yellowstone Corridor: South 5th: Barton to Century (SB) Class II

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
5th/4th	Barton	I-15 NB On	45	42	44	43	22	41
South 5th	I-15 NB On	Century High	45	41	42	42	22	45

Yellowstone Corridor: South 5th: Barton to Century (SB) Class II

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
South 5th	Century High	I-15 NB On	3.34	4.45	4.74	4.80	4.85	4.48	0.06	0.12	-0.26
5th/4th	I-15 NB On	Barton	1.00	1.33	1.37	1.42	1.42	1.41	0.05	0.05	0.04
Total			4.34	5.79	6.10	6.22	6.27	5.88	0.11	0.17	-0.22

Yellowstone Corridor: South 5th: Barton to Century (SB) Class II

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
5th/4th	#REF!	I-15 NB On	1.00	1.33	1.46	1.44	1.37	1.40	-0.02	-0.08	-0.06
South 5th	I-15 NB On	Century High	3.34	4.45	4.43	4.90	4.77	4.77	0.46	0.34	0.33
Total			4.34	5.79	5.89	6.34	6.14	6.17	0.44	0.25	0.28



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Yellowstone Corridor: Barton to Oak (NB) Class III

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
5th/4th	Barton	Humbolt	35	32	32	33	18	35
5th/4th	Humbolt	Benton	25	21	15	22	18	29
5th/4th	Benton	Center	35	30	17	21	18	35
5th/4th	Center	Clark	35	9	15	10	18	33
5th/4th	Clark	Oak	35	25	23	21	18	35

Yellowstone Corridor: Oak to Barton (SB) Class III

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
5th/4th	Oak	Clark	35	32	29	33	18	30
5th/4th	Clark	Center	35	27	16	14	18	30
5th/4th	Center	Benton	35	31	23	27	18	26
5th/4th	Benton	Humbolt	25	26	25	26	18	28
5th/4th	Humbolt	Barton	35	34	36	36	18	35

Yellowstone Corridor: Barton to Oak (NB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
5th/4th	Barton	Humbolt	0.85	1.46	1.44	1.62	1.58	1.56	0.17	0.14	0.12
5th/4th	Humbolt	Benton	0.48	1.15	1.00	1.40	1.89	1.31	0.40	0.89	0.31
5th/4th	Benton	Center	0.27	0.46	0.46	0.55	0.93	0.78	0.08	0.47	0.32
5th/4th	Center	Clark	0.07	0.12	0.13	0.48	0.29	0.44	0.36	0.16	0.31
5th/4th	Clark	Oak	0.77	1.32	1.32	1.82	1.99	2.16	0.50	0.67	0.84
Total			2.44	4.51	4.36	5.87	6.69	6.25	1.51	2.33	1.90

Yellowstone Corridor: Oak to Barton (SB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
5th/4th	Oak	Clark	0.77	1.32	1.52	1.43	1.61	1.41	-0.10	0.08	-0.11
5th/4th	Clark	Center	0.07	0.12	0.14	0.16	0.26	0.29	0.02	0.11	0.15
5th/4th	Center	Benton	0.27	0.46	0.63	0.53	0.70	0.60	-0.10	0.07	-0.02
5th/4th	Benton	Humbolt	0.48	1.15	1.02	1.11	1.16	1.10	0.09	0.14	0.08
5th/4th	Humbolt	Barton	0.85	1.46	1.46	1.50	1.41	1.40	0.04	-0.05	-0.06
Total			2.44	4.51	4.77	4.72	5.13	4.81	-0.05	0.36	0.05



2009 Arterial Delay Study Appendix A

Yellowstone Corridor: Oak to Flandro (NB) Class III

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Yellowstone	Oak	Maple	35	30	21	26	18	35
Yellowstone	Maple	Pine	35	35	25	26	18	35
Yellowstone	Pine	Cedar	35	23	22	21	18	35
Yellowstone	Cedar	Alameda	35	17	11	9	18	35
Yellowstone	Alameda	Flandro	35	32	21	24	18	33

Yellowstone Corridor: Flandro to Oak (SB) Class III

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peek	Noon Peek	PM Peek	LOS D	Free Flow
Yellowstone	Flandro	Alameda	35	31	26	27	18	35
Yellowstone	Alameda	Cedar	35	15	19	17	18	35
Yellowstone	Cedar	Pine	35	26	19	28	18	35
Yellowstone	Pine	Maple	35	30	31	31	18	35
Yellowstone	Maple	Oak	35	23	21	21	18	35

Yellowstone Corridor: Oak to Flandro (NB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Oak	Maple	0.27	0.46	0.46	0.54	0.77	0.62	0.08	0.31	0.16
Yellowstone	Maple	Pine	0.25	0.43	0.43	0.43	0.61	0.58	0.00	0.18	0.15
Yellowstone	Pine	Cedar	0.25	0.43	0.43	0.66	0.69	0.73	0.23	0.26	0.30
Yellowstone	Cedar	Alameda	0.25	0.43	0.43	0.89	1.33	1.65	0.46	0.90	1.22
Yellowstone	Alameda	Flandro	0.97	1.66	1.78	1.80	2.73	2.39	0.01	0.95	0.60
Total			1.99	3.41	3.53	4.32	6.13	5.96	0.79	2.60	2.43

Yellowstone Corridor: Flandro to Oak (SB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Flandro	Alameda	0.97	1.66	1.65	1.90	2.23	2.13	0.25	0.58	0.48
Yellowstone	Alameda	Cedar	0.25	0.43	0.43	0.97	0.80	0.87	0.54	0.37	0.45
Yellowstone	Cedar	Pine	0.25	0.43	0.43	0.59	0.81	0.53	0.16	0.38	0.10
Yellowstone	Pine	Maple	0.25	0.43	0.43	0.51	0.48	0.49	0.08	0.05	0.06
Yellowstone	Maple	Oak	0.27	0.46	0.46	0.70	0.77	0.77	0.24	0.30	0.30
Total			1.99	3.41	3.39	4.66	5.08	4.79	1.27	1.69	1.39



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Yellowstone Corridor: Flandro to Chubbuck (NB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Yellowstone	Flandro	Hurley	35	36	31	32	18	34
Yellowstone	Hurley	Poleline	35	22	21	23	18	35
Yellowstone	Poleline	Mall	35	28	16	16	18	35
Yellowstone	Mall	Bullock	35	20	15	13	18	35
Yellowstone	Bullock	I-86 EB On	35	10	10	7	18	35
Yellowstone	I-86 EB On	I-86 WB On	35	25	27	12	18	29
Yellowstone	I-86 WB On	Chubbuck	35	19	27	21	18	35

Yellowstone Corridor: Chubbuck to Flandro (SB) Class III

Primary Street	Segment		Speed Limit	Average Speed				
	Start	End		AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Yellowstone	Chubbuck	I-86 WB On	35	33	27	23	18	35
Yellowstone	I-86 WB On	I-86 EB ON	35	33	27	28	18	35
Yellowstone	I-86 EB ON	Bullock	35	34	17	28	18	35
Yellowstone	Bullock	Mall	35	35	18	22	18	35
Yellowstone	Mall	Poleline	35	24	20	10	18	34
Yellowstone	Poleline	Hurley	35	33	32	30	18	35
Yellowstone	Hurley	Flandro	35	31	25	27	18	34

Yellowstone Corridor: Flandro to Chubbuck (NB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Flandro	Hurley	0.46	0.79	0.81	0.76	0.89	0.86	-0.05	0.08	0.05
Yellowstone	Hurley	Poleline	0.29	0.50	0.50	0.78	0.81	0.76	0.29	0.32	0.26
Yellowstone	Poleline	Mall	0.13	0.22	0.22	0.23	0.29	0.34	0.01	0.06	0.12
Yellowstone	Mall	Bullock	0.11	0.19	0.19	0.20	0.25	0.23	0.01	0.06	0.05
Yellowstone	Bullock	I-86 EB On	0.11	0.19	0.19	0.19	0.38	0.24	0.00	0.19	0.05
Yellowstone	I-86 EB On	I-86 WB On	0.12	0.21	0.21	0.21	0.40	0.33	0.00	0.19	0.12
Yellowstone	I-86 WB On	Chubbuck	0.47	0.81	0.83	1.19	1.42	2.77	0.36	0.59	1.94
Total			1.69	2.90	2.95	3.57	4.44	5.53	0.62	1.49	2.58

Yellowstone Corridor: Chubbuck to Flandro (SB) Class III

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Chubbuck	I-86 WB On	0.47	0.81	0.81	0.84	1.03	1.23	0.04	0.22	0.42
Yellowstone	I-86 WB On	I-86 EB ON	0.12	0.21	0.21	0.22	0.27	0.26	0.02	0.06	0.05
Yellowstone	I-86 EB ON	Bullock	0.11	0.19	0.19	0.19	0.38	0.24	0.00	0.19	0.05
Yellowstone	Bullock	Mall	0.11	0.19	0.19	0.19	0.36	0.30	0.00	0.17	0.11
Yellowstone	Mall	Poleline	0.13	0.22	0.23	0.33	0.39	0.77	0.10	0.16	0.54
Yellowstone	Poleline	Hurley	0.29	0.50	0.50	0.53	0.54	0.58	0.03	0.04	0.09
Yellowstone	Hurley	Flandro	0.46	0.79	0.82	0.88	1.12	1.01	0.06	0.31	0.19
Total			1.69	2.90	2.93	3.18	4.10	4.38	0.25	1.17	1.45



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Yellowstone Corridor: Chubbuck to Reservation (NB) Class II

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Yellowstone	Chubbuck	Siphon	35	36	34	35	22	35
Yellowstone	Siphon	Tyhee	50	46	47	48	22	50
Yellowstone	Tyhee	Reservation	50	39	50	50	22	50

Yellowstone Corridor: Reservation to Chubbuck (SB) Class II

Primary Street	Segment		Average Speed					
	Start	End	Speed Limit	AM Peak	Noon Peak	PM Peak	LOS D	Free Flow
Yellowstone	Reservation	Tyhee	50	40	50	49	22	46
Yellowstone	Tyhee	Siphon	50	46	47	49	22	50
Yellowstone	Siphon	Chubbuck	35	27	30	24	22	35

Yellowstone Corridor: Chubbuck to Reservation (NB) Class II

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Chubbuck	Siphon	1.01	1.73	1.31	1.52	1.22	1.23	0.21	-0.09	-0.08
Yellowstone	Siphon	Tyhee	1.00	1.20	1.20	1.31	1.28	1.23	0.11	0.08	0.03
Yellowstone	Tyhee	Reservation	1.00	1.20	1.71	2.18	1.98	2.49	0.47	0.27	0.78
Total			3.01	4.13	4.22	5.01	4.48	4.95	0.79	0.26	0.73

Yellowstone Corridor: Reservation to Chubbuck (SB) Class II

Primary Street	Segment		Length	Travel Time					Delay Minutes		
	Start	End		Ideal	Free Flow	AM Peak	Noon	PM Peak	AM Peak	Noon	PM Peak
Yellowstone	Reservation	Tyhee	1.00	1.20	1.29	1.50	1.20	1.22	0.21	-0.09	-0.08
Yellowstone	Tyhee	Siphon	1.00	1.20	1.20	1.31	1.28	1.23	0.11	0.08	0.03
Yellowstone	Siphon	Chubbuck	1.01	1.73	1.73	2.21	2.00	2.52	0.47	0.27	0.79
Total			3.01	4.13	4.23	5.02	4.49	4.97	0.79	0.26	0.74

