

Amtrak Office of Inspector General

Evaluation Report E-09-02

Financial Impact of Equipment Delays

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Executive Summary

Amtrak's OIG has been evaluating the efficiency and effectiveness of Amtrak's rolling stock maintenance program for several years. During this period, we noticed that Amtrak had a difficult time quantifying the monetary benefits associated with improved equipment reliability. The objective of this study was to provide Amtrak with a tool to assess the economic benefits of investing in initiatives to improve the reliability of equipment. Having the ability to quantify the benefits of proposed initiatives will not only enhance the business cases of new proposals, but also provide a means to prioritize programs vying for scarce resources.

Results

The revenue impact of equipment related train delays has been quantified in terms of revenue loss per delay minute and total annual revenue loss by type of equipment. As shown in the following table, we estimated that Amtrak lost more than \$13 million in revenue as a result of 284,351 minutes of equipment related delays in FY07. The total annual revenue loss due to equipment related delays reaches \$3.0 million for the P42 locomotives and for the Acela trainsets. This information should be very helpful in determining which equipment maintenance programs to focus on and what revenue gains should be anticipated from any changes that positively impact equipment reliability.

FY07 Revenue Loss Due to Equipment Delays

Equipment	FY07 Delay Mins	FY07 Delay Mins per 10K Miles	Total Rev Loss per Delay Min (\$)	FY 07 Total Rev Loss (\$000's)
P42s	115,731	37.33	\$ 25.71	\$ 2,975.58
Acela	13,525	7.02	\$ 218.63	\$ 2,956.94
AEM7s/HHPs	41,321	52.33	\$ 50.76	\$ 2,097.47
F59s	26,166	49.84	\$ 61.47	\$ 1,608.41
P32DMs	10,358	45.73	\$ 87.42	\$ 905.44
Amfleet Is	14,648	2.40	\$ 59.27	\$ 868.17
Superliners	18,565	2.29	\$ 26.97	\$ 500.74
California cars	8,505	8.36	\$ 34.33	\$ 291.96
Amfleet IIs	12,003	4.94	\$ 22.94	\$ 275.34
Talgo	1,199	4.10	\$ 140.26	\$ 168.23
Heritage	6,567	3.88	\$ 20.52	\$ 134.73
Viewliners	4,806	5.09	\$ 20.69	\$ 99.44
Horizons	4,535	3.69	\$ 19.76	\$ 89.63
Surfliners	2,407	3.41	\$ 35.00	\$ 84.26
Metro Cab Coach	3,112	40.21	\$ 14.17	\$ 44.10
F40CabBag	403	4.15	\$ 48.69	\$ 19.62
P40s	487	13.51	\$ 18.74	\$ 9.13
NC Cars	11	0.36	\$ 9.60	\$ 0.10
Total	284,351	9.69	\$ 46.17	\$ 13,129.30

Introduction

As part of its goal to improve Amtrak's financial performance, Amtrak's OIG has been evaluating the costs and benefits associated with various rolling stock maintenance programs. Our previous evaluation of the Financial Impact of Improved Long Distance Trains On-Time Performance (E-06-05) has shown that there is a direct correlation between equipment reliability and train OTP, and between train OTP and train revenue. The objective of this study is to quantify a relationship between revenue and delay minutes by equipment type. This will enable Amtrak to determine the financial benefit¹ of investing in initiatives to improve equipment reliability.

This report presents our results and documents the approach we used to estimate the revenue loss due to equipment delays.

Methodology

The following process is used to estimate the benefit (greater ticket revenues) of improving the reliability of each type of Amtrak's rolling stock. Since Amtrak maintains its OTP and Delay Minutes by route, the revenue benefit of improving the reliability of train service (reducing delay minutes) is calculated as shown below.

$$\begin{array}{|c|} \hline \text{Revenue Loss} \\ \text{per Delay Min} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Revenue per} \\ \text{1\% change} \\ \text{in OTP} \\ \hline \end{array} \div \begin{array}{|c|} \hline \text{Delay Minutes} \\ \text{per} \\ \text{1\% change} \\ \text{in OTP} \\ \hline \end{array}$$

This relationship quantifies the revenue lost or gained from each change in delay minute for a specific route. The financial impact of specific equipment reliability is calculated as shown below by multiplying the Revenue per Delay Minute ratio for a route by the number of delay minutes experienced by this type of equipment on this route.

$$\begin{array}{|c|} \hline \text{Revenue Loss} \\ \text{per} \\ \text{Delay Minute By} \\ \text{Equipment Type} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Total} \\ \text{Delay Minutes} \\ \text{For Each} \\ \text{Equipment Type} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Revenue Loss} \\ \text{per Delay Min} \\ \hline \end{array}$$

¹ The study focused solely on ticket revenues to estimate financial benefit. Our previous study showed that revenue gains were by far the greatest financial benefit to reduced delays. Due to the market's reaction to new initiatives and perception to improvement, there will be a time lag between improved equipment reliability and the resulting revenue gains.

Finally, the total revenue impact from improving the reliability of each equipment type is obtained by adding up the revenue impact from all routes on which the equipment operated.

The following sections provide the detailed explanations how each of these factors are developed.

OTP versus Delay Minutes

As previously stated, Amtrak's OIG had established that there is a relationship between the OTP of its Long Distance Trains and the number of delay minutes that were incurred by the trains operating on these routes. This new study quantifies this relationship for all Amtrak routes by performing a correlation analysis between the monthly OTP and the monthly delay minutes for each route over a three year period. The delay minutes were measured on a delay minutes per 10,000 train mile basis to normalize the data for differences in the number of monthly train miles operated.

Using three years of data (FY05 through FY07) from Amtrak's On Time Performance and Delay Reporting System, the relationship between Delay Minutes (per 10K train miles) and OTP for each route was derived by plotting OTP against Delay Minutes (per 10K Train Miles) for each month². The best-fit trend (highest R-squared correlation coefficient)³ was then applied to the graph to determine the number of delay minutes that would need to be reduced to increase OTP by 1 percent⁴ -- see the example for the Coast Starlight on the next page . The graphs for the rest of the routes are contained in Appendix I.

In a linear relationship, where the slope of the line is constant, the change in delay minutes for every 1% change in OTP is the same for all points along the linear graph. In a non-linear relationship, the change in delay minutes depends on the base level of the OTP, which is where along the curve line the 1% change in OTP takes place. Consequently, for routes with a non-linear relationship, the change in Delay Minutes was derived with consideration given to the average % OTP in FY07. In the example shown in Figure 1 for the Coast Starlight, with an average base OTP of 23%, the OTP range is taken from 20% OTP to 30% OTP. The corresponding difference in Delay Minutes is 200, (Delay Minutes from 2,560 at 30% OTP to 2,760 at 20% OTP). Therefore, the change per 1% of OTP is

² In some cases, the data used was adjusted for service realignment, such as Illinois/Missouri services, significant schedule changes, and zero OTP data points.

³ The correlation coefficient shows the magnitude of strength (strong or weak) and direction (positive or negative) between two variables.

Linear – best fit when pattern resembles a straight line.

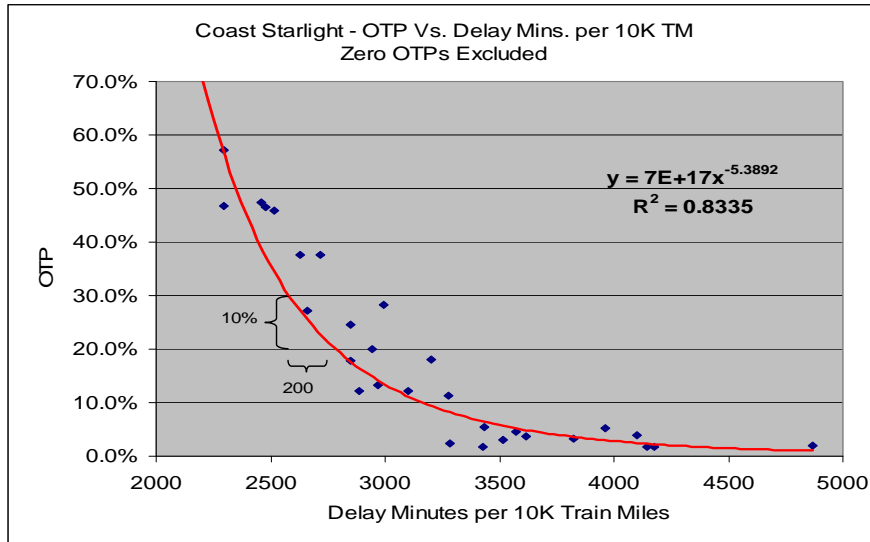
Logarithmic – best fit when rate of change increases or decreases quickly and levels out.

Exponential – best fit curve line when data values rises or fall at increasingly higher rates.

⁴ Sometimes, the trend line from the next best R-squared value was used when the formula for the best-fit trend line lacked the precision to accurately determine the relationship.

estimated to be 20 Delay Minutes per 10K TMs (200 Delay Minutes divided by 10%).

Figure 1 – Example OTP vs. Delay Minutes (per 10K Train Miles)



Revenue Versus OTP

Our analysis used the data provided by Amtrak’s Market Research department that quantifies the relationship between revenue and OTP – see Appendix II. As illustrated in the following data for the Coast Starlight, Market Research provided us a matrix that, using FY07 performance as a base, quantifies the changes in revenue that are estimated to occur for changes in OTP and also for changes in trip time. For example, if the OTP of the Coast Starlight is improved from its FY07 performance level (i.e., 20% OTP and 35:22 running time), the revenue impact of each 1% improvement in OTP is estimated as a 1/10 of the \$110,000 revenue change between 20% OTP and 30% OTP, or \$11,000.

Figure 2 – Example Revenue vs. OTP

**Coast Starlight Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	Seattle-Los Angeles Travel Time**			
		35:22	35:52	36:22	36:52	37:22
Route OTP	(FY07 Base*) 20%		-\$0.54	-\$1.12	-\$1.70	-\$2.26
	30%	+\$0.11	-\$0.43	-\$1.02	-\$1.60	-\$2.16
	40%	+\$0.62	+\$0.08	-\$0.52	-\$1.11	-\$1.69
	50%	+\$1.82	+\$1.25	+\$0.62	+\$0.01	-\$0.59
	60%	+\$3.36	+\$2.77	+\$2.11	+\$1.46	+\$0.83
	70%	+\$4.54	+\$3.92	+\$3.24	+\$2.57	+\$1.92
	80%	+\$5.22	+\$4.59	+\$3.89	+\$3.21	+\$2.54
	90%	+\$5.57	+\$4.93	+\$4.23	+\$3.54	+\$2.86

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)
 ** all travel time changes applied to times between Eugene, OR and San Luis Obispo, CA

Revenue Loss per Delay Minute by Route

As described in the Methodology section, the amount of revenue that is associated with each train delay can be calculated as follows:

$$\frac{REV}{DMin/(10K_TM)} = \frac{REV}{1\% OTP} \div \frac{DMins/(10K_TM)}{1\% OTP}$$

When the change in Revenue per 1% change OTP is divided by the change in Delay Minutes per 1% improvement in OTP, the product is the change in Revenue per Delay Minute.

Using the data for the Coast Starlight as an example:

$$\begin{aligned} & \$11,000 \text{ (Rev per 1\% Change in OTP)} \div 20 \text{ DMins/1\%OTP} \\ & = \quad \$550 \text{ per DMin (per 10K TMs)} \end{aligned}$$

To get to Revenue per Delay Minutes, this result is multiplied by the inverse of the number of 10K TMs.

$$\frac{Rev}{DMin/(10K_TM)} \times \frac{1}{10K_TMs} = \frac{Rev}{DelayMin}$$

Following the Coast Starlight example with 943,000 TMs for the Coast Starlight in FY07 (94.3 10K TMs), the Revenue per Delay Minute is:

$$\begin{aligned} & = \quad (\$550 \text{ per DMin per 10k TM}) \times (1/94.3 \text{ 10K TMs}) \\ & = \quad \$5.83 \text{ per Delay Minute} \end{aligned}$$

This calculation was done for every route and the resulting Revenue impact per Delay Minute for all routes is shown in Table 1 on the next page.

Table 1 - Estimated Revenue Impact per Delay Minute per 10K Train Miles

	FY07				
		Change in Delay Mins per 10K TM per 1% Improvement in OTP	Change in Annual Rev. per 1 % Change in OTP \$(000s)	Annual Rev Per Delay Min per 10k TM \$(000's)	Revenue Loss per Incremental Delay Min. (\$)
NEC	Train Miles Operated				
Acela	3,191,152	15.5	\$ 1,080.00	\$ 69.77	\$ 218.63
Regional (1)	5,760,846	25.7	\$ 976.43	\$ 37.98	\$ 65.93
Long Distance					
Auto Train (2)	618,063	11.1	\$ 121.00	\$ 10.87	\$ 175.90
Zephyr (3)	1,712,075	17.7	\$ 14.00	\$ 0.79	\$ 4.62
Capitol Ltd. (3)	569,872	22.2	\$ 4.00	\$ 0.18	\$ 3.16
Cardinal (4)	325,083	28.0	\$ 18.33	\$ 0.66	\$ 20.16
City of New Orleans	682,043	33.1	\$ 4.29	\$ 0.13	\$ 1.90
Coast Starlight (3)	943,277	20.0	\$ 11.00	\$ 0.55	\$ 5.83
Crescent	947,178	20.4	\$ 110.00	\$ 5.38	\$ 56.82
Empire Builder	1,839,750	16.0	\$ 92.00	\$ 5.76	\$ 31.31
Lake Shore Ltd.	809,344	44.3	\$ 36.36	\$ 0.82	\$ 10.14
Silver Services	2,634,799	29.4	\$ 137.14	\$ 4.67	\$ 17.73
Southwest Chief	1,605,182	14.0	\$ 117.50	\$ 8.40	\$ 52.32
Sunset Ltd. (3)	616,089	56.8	\$ 2.50	\$ 0.04	\$ 0.71
Texas Eagle	929,152	29.8	\$ 34.29	\$ 1.15	\$ 12.39
State Supported and Other Short Distance Corridors					
Capitol Corridor	1,146,051	48.5	\$ 84.00	\$ 1.73	\$ 15.10
Cascades	869,000	36.1	\$ 440.00	\$ 12.19	\$ 140.26
Downeaster	325,463	32.8	\$ 20.00	\$ 0.61	\$ 18.74
Carolinian (3)	496,193	27.0	\$ 22.14	\$ 0.82	\$ 16.51
Empire (5)	2,076,980	39.7	\$ 751.37	\$ 18.94	\$ 91.17
Heartland Flyer (3)	141,133	31.2	\$ 3.13	\$ 0.10	\$ 7.11
Hiawatha	427,541	97.8	\$ 20.00	\$ 0.20	\$ 4.78
Hoosier	81,754	55.8	\$ 2.50	\$ 0.04	\$ 5.48
Illinois (6)	1,573,412	31.1	\$ 150.50	\$ 4.84	\$ 30.76
Keystone (7)	1,340,883	20.0	\$ 38.00	\$ 1.90	\$ 14.17
Michigan (8)	995,605	32.0	\$ 87.17	\$ 2.73	\$ 27.39
Missouri (4, 9)	356,853	47.8	\$ 5.88	\$ 0.12	\$ 3.45
Pacific Surfliner	1,607,006	38.8	\$ 218.00	\$ 5.62	\$ 35.00
Pennsylvanian	321,618	28.7	\$ 16.67	\$ 0.58	\$ 18.03
Piedmont	123,665	28.1	\$ 3.33	\$ 0.12	\$ 9.60
San Joaquins	1,343,304	29.5	\$ 237.14	\$ 8.04	\$ 59.84

Notes:

- (1) Includes Vermonter, WAS-NPN, NHV-SPG
- (2) Used delta revenue at 70% - 80% range to reflect post-schedule change OTP
- (3) Excluded Zero OTP datapoints in determining OTP/Delay Mins per 10K TM relationship.
- (4) Used FY07 datapoints only - schedule change in Oct FY06.
- (5) Includes Ethan Allen, Adirondack, Albany-Nia Falls
- (6) 2 years data used due to change in service from FY05 to FY06.
Includes CHI-CDL, CHI-QCY
- (7) FY07 datapoints only - Major schedule change due to infrastructure projects
- (8) Includes Blue Water (CHI-Pt. Huron), Pere Marquette (CHI-G. Rapids)
- (9) 2 years data used due to change in service from FY05 to FY06.

As previously stated, the Route Revenue Loss per Delay Minute was multiplied by the equipment delays in FY07 for each route. The financial impact due to specific equipment type was derived by consolidating the losses for each equipment type and their corresponding delay minutes from all routes.

Annual Minutes of Train Delays by Equipment Type

The annual minutes of train delays was developed by first determining by route the number of minutes of delay due to either car or engine failures and then determining the delays associated with each type of equipment, such as Superliners, Heritage, P42s, etc.

We extracted the FY07 equipment delay minutes by route from Amtrak's On Time Performance and Delay Reporting System. In this study, we were only interested in equipment delays and therefore extracted the minutes for all delay codes associated with equipment. They are:

CAR - Car failures

ENG – Engine failures

ITM – Initial Terminal delay due to Mechanical

CCR – Cab Car failures⁵

In this system, ITM (Initial Terminal delays due to Mechanical) is a generic code that does not identify the type of car or locomotive that caused the delay. Therefore, we allocated the ITM delay minutes to CARs and ENGs in proportion to their respective delay minutes. In some cases, like Acela, only one type of equipment is used. However, for routes that operated with more than one type of equipment, CAR delays were allocated to the different car types in proportion to the respective car miles for each car type as identified in Amtrak Route Profitability System (RPS). In our exercise, we disregarded occasionally used equipment that we considered not material in this analysis; i.e., equipment with relatively low car miles in RPS. Similarly for locomotives, if a route used both Electric and Diesel locomotives, we allocated the ENG delay minutes in proportion to the locomotive miles for that route.

A sample of how delay minutes were proportioned to specific types of equipment is shown in Figure 3 on the next page.

⁵ Revenue impacts for Cab Car failures were not considered in cases where the magnitude of the delays is not material relative to the delays caused by CARs and ENGs.

Figure 3 – Allocation of Delay Minutes to Specific Equipment Type

<u>Equipment</u>	<u>Delays</u>	<u>Allocate ITM</u>	<u>Total Delays</u>	<u>Allocate to Equip Types</u>	<u>Equipment</u>	<u>RPS Car Miles</u>
CAR	1,762	768	2,530			
				2,155	Superliners	9,122,832
				375	Heritage	1,587,652
ENG	4,989	2,173	7,162	7,162	P42	
ITM	2,941					
CCR	9	(Insignificant - ignored)				

Impact of Delays by Equipment Type

The revenue impact due to delays attributable to equipment type for each route was calculated by multiplying the total delay minutes in FY07 attributable to each type of equipment by the route revenue loss per delay minute from Table 1. A sample calculation is show in Figure 4 below for the Coast Starlight example.

Figure 4 – Coast Starlight Revenue Loss by Equipment Type

<u>Equipment</u>	<u>Delay Minutes</u>	<u>Loss Per Min</u>	<u>Total FY07 Loss (\$000)</u>
Superliners	2,155	\$ 5.83	\$ 12.56
Heritage	375	\$ 5.83	\$ 2.19
P42	7,162	\$ 5.83	\$ 41.76

Results

Finally, the revenue impact attributable to delays for each equipment type was derived by consolidating the Delay Minutes and the Revenue Loss per Delay Minute by equipment type for all routes shown in Table 2 on the next page. These results provide a means to quantify the revenue impact of proposed investments in Amtrak’s rolling stock. For every investment in equipment reliability, we first need to estimate its impact on delays resulting from improvement in reliability. The revenue impact can then be estimated using the relationship identified in the tables linking equipment delays to revenue⁶.

⁶ The results are based on service characteristics and equipment consists in effect in FY07. Changes in schedules, consists or performance will affect the results for individual routes and could affect the overall results, depending on the magnitude of the changes. Therefore, periodic updates to this study are recommended.

Table 2 – Revenue Impact Due to Equipment Delays

<u>Equipment/Services</u>	<u>Delay Mins</u>	<u>Total Rev Loss per Delay Min (\$)</u>	<u>FY 07 Total Rev Loss (\$000's)</u>
<u>Acela</u>	<u>13,525</u>	<u>\$ 218.63</u>	<u>\$ 2,956.94</u>
<u>Amfleet Is</u>			
Regional	8,841	\$ 65.93	\$ 582.87
Crescent	20	\$ 56.82	\$ 1.12
Lake Shore Ltd	123	\$ 10.14	\$ 1.25
Silver Services	651	\$ 17.73	\$ 11.54
Cascades	180	\$ 140.26	\$ 25.19
Downeaster	113	\$ 18.74	\$ 2.11
Carolinian	666	\$ 16.51	\$ 10.99
Empire	2,197	\$ 91.17	\$ 200.27
Illinois	212	\$ 30.76	\$ 6.52
Keystone	1,200	\$ 14.17	\$ 17.01
Michigan	172	\$ 27.39	\$ 4.72
Missouri	25	\$ 3.45	\$ 0.08
Pennsylvanian	249	\$ 18.03	\$ 4.50
	<u>14,648</u>	<u>\$ 59.27</u>	<u>\$ 868.17</u>
<u>AEM7s/HHPs</u>			
Regional	28,542	\$ 65.93	\$ 1,881.66
Cardinal	415	\$ 20.16	\$ 8.37
Crescent	548	\$ 56.82	\$ 31.13
Silver Services	2,015	\$ 17.73	\$ 35.74
Keystone	9,362	\$ 14.17	\$ 132.65
Pennsylvanian	439	\$ 18.03	\$ 7.91
	<u>41,321</u>	<u>\$ 50.76</u>	<u>\$ 2,097.47</u>
<u>Superliners</u>			
AutoTrain	828	\$ 175.90	\$ 145.70
Zephyr	2,598	\$ 4.62	\$ 12.00
Capitol Ltd	2,416	\$ 3.16	\$ 7.62
City of New Orleans	900	\$ 1.90	\$ 1.71
Coast Starlight	2,155	\$ 5.83	\$ 12.56
Empire Builder	4,004	\$ 31.31	\$ 125.37
Southwest Chief	2,974	\$ 52.32	\$ 155.59
Sunset Ltd	412	\$ 0.71	\$ 0.29
Texas Eagle	1,682	\$ 12.39	\$ 20.84
Capitol Corridor	270	\$ 15.10	\$ 4.08
Cascades	67	\$ 140.26	\$ 9.46
Heartland Flyer	115	\$ 7.11	\$ 0.81
Pacific Surfliners	134	\$ 35.00	\$ 4.68
Missouri	11	\$ 3.45	\$ 0.04
	<u>18,565</u>	<u>\$ 26.97</u>	<u>\$ 500.74</u>
<u>P42s</u>			
Regional	5,039	\$ 65.93	\$ 332.22
AutoTrain	1,901	\$ 175.90	\$ 334.33
Zephyr	10,149	\$ 4.62	\$ 46.86
Capitol Ltd	4,830	\$ 3.16	\$ 15.24
Cardinal	2,067	\$ 20.16	\$ 41.68
City of New Orleans	2,906	\$ 1.90	\$ 5.51
Coast Starlight	7,162	\$ 5.83	\$ 41.74
Crescent	4,407	\$ 56.82	\$ 250.40
Empire Builder	9,575	\$ 31.31	\$ 299.83
Lake Shore Ltd	6,245	\$ 10.14	\$ 63.33
Silver Services	13,458	\$ 17.73	\$ 238.67
Southwest Chief	10,242	\$ 52.32	\$ 535.91
Sunset Ltd	3,136	\$ 0.71	\$ 2.24
Texas Eagle	4,958	\$ 12.39	\$ 61.44
Carolinian	3,016	\$ 16.51	\$ 49.80
Heartland Flyer	323	\$ 7.11	\$ 2.30
Hiawatha	1,922	\$ 4.78	\$ 9.19
Hoosier	550	\$ 5.48	\$ 3.02
Illinois	9,118	\$ 30.76	\$ 280.43
Michigan	11,941	\$ 27.39	\$ 327.03
Missouri	1,086	\$ 3.45	\$ 3.74
Pennsylvanian	1,701	\$ 18.03	\$ 30.67
	<u>115,731</u>	<u>\$ 25.71</u>	<u>\$ 2,975.58</u>
<u>P40s</u>			
Downeaster	487	\$ 18.74	\$ 9.13

Table 2 – Revenue Impact Due to Equipment Delays (Con't)

<u>Equipment/Services</u>	<u>Delay Mins</u>	<u>Total Rev Loss per Delay Min (\$)</u>	<u>FY 07 Total Rev Loss (\$000's)</u>
<u>Amfleet IIs</u>			
Cardinal	685	\$ 20.16	\$ 13.82
Crescent	1,298	\$ 56.82	\$ 73.74
Lake Shore Ltd	1,678	\$ 10.14	\$ 17.02
Silver Services	7,474	\$ 17.73	\$ 132.55
Carolinian	84	\$ 16.51	\$ 1.38
Empire	310	\$ 91.17	\$ 28.29
Pennsylvanian	474	\$ 18.03	\$ 8.55
	<u>12,003</u>	<u>\$ 22.94</u>	<u>\$ 275.34</u>
<u>Viewliners</u>			
Cardinal	178	\$ 20.16	\$ 3.59
Crescent	527	\$ 56.82	\$ 29.92
Lake Shore Ltd	897	\$ 10.14	\$ 9.10
Silver Services	3,205	\$ 17.73	\$ 56.84
	<u>4,806</u>	<u>\$ 20.69</u>	<u>\$ 99.44</u>
<u>Heritage</u>			
Zephyr	339	\$ 4.62	\$ 1.57
Capitol Ltd	331	\$ 3.16	\$ 1.04
Coast Starlight	375	\$ 5.83	\$ 2.19
Crescent	532	\$ 56.82	\$ 30.21
Empire Builder	415	\$ 31.31	\$ 13.00
Lake Shore Ltd	765	\$ 10.14	\$ 7.76
Silver Services	3,130	\$ 17.73	\$ 55.50
Southwest Chief	392	\$ 52.32	\$ 20.52
Sunset Ltd	43	\$ 0.71	\$ 0.03
Carolinian	125	\$ 16.51	\$ 2.07
Heartland Flyer	121	\$ 7.11	\$ 0.86
	<u>6,567</u>	<u>\$ 20.52</u>	<u>\$ 134.73</u>
<u>Horizons</u>			
Cardinal	39	\$ 20.16	\$ 0.78
Hiawatha	603	\$ 4.78	\$ 2.89
Hoosier	1,050	\$ 5.48	\$ 5.75
Illinois	1,243	\$ 30.76	\$ 38.24
Michigan	1,306	\$ 27.39	\$ 35.77
Missouri	129	\$ 3.45	\$ 0.45
Pacific Surfliners	164	\$ 35.00	\$ 5.75
	<u>4,535</u>	<u>\$ 19.76</u>	<u>\$ 89.63</u>
<u>F59s</u>			
Capitol Corridor	5,278	\$ 15.10	\$ 79.69
Cascades	5,932	\$ 140.26	\$ 831.95
Pacific Surfliners	7,527	\$ 35.00	\$ 263.45
Piedmont	224	\$ 9.60	\$ 2.15
San Joaquins	7,205	\$ 59.84	\$ 431.17
	<u>26,166</u>	<u>\$ 61.47</u>	<u>\$ 1,608.41</u>
<u>Surfliners</u>			
Pacific Surfliners	2,223	\$ 35.00	\$ 77.82
Pacific Surfliners	184	\$ 35.00	\$ 6.44
	<u>2,407</u>	<u>\$ 35.00</u>	<u>\$ 84.26</u>
<u>California cars</u>			
Capitol Corridor	4,720	\$ 15.10	\$ 71.27
Capitol Corridor	130	\$ 15.10	\$ 1.96
San Joaquins	3,615	\$ 59.84	\$ 216.33
San Joaquins	40	\$ 59.84	\$ 2.39
	<u>8,505</u>	<u>\$ 34.33</u>	<u>\$ 291.96</u>
<u>P32DMs</u>			
Lake Shore Ltd	480	\$ 10.14	\$ 4.87
Empire	9,878	\$ 91.17	\$ 900.58
	<u>10,358</u>	<u>\$ 87.42</u>	<u>\$ 905.44</u>
<u>Talgo</u>			
Cascades	1,199	\$ 140.26	\$ 168.23
<u>Metro Cab Coach</u>			
Keystone	3,112	\$ 14.17	\$ 44.10
<u>NC Cars</u>			
Piedmont	11	\$ 9.60	\$ 0.10
<u>F40CabBag</u>			
Cascades	66	\$ 140.26	\$ 9.26
Illinois	337	\$ 30.76	\$ 10.36
	<u>403</u>	<u>\$ 48.69</u>	<u>\$ 19.62</u>
Total	284,351	\$ 46.17	\$ 13,129.30

Since Amtrak does not directly benefit from increases in revenue on all routes, the total revenue loss was also broken down between State revenue loss and Amtrak revenue loss shown in Table 2B below.

Table 2B – Revenue Impact Due to Equipment Delays

<u>Equipment/Services</u>	<u>Delay Mins</u>	<u>Total Rev Loss per Delay Min (\$)</u>	<u>FY 07 Total Rev Loss (\$000's)</u>	<u>State Rev Loss per Delay Min (\$)</u>	<u>FY 07 State Rev Loss (\$000's)</u>	<u>Amtrak Rev Loss per Delay Min (\$)</u>	<u>FY 07 Amtrak Rev Loss (\$000's)</u>
<u>Acela</u>	<u>13,525</u>	<u>\$ 218.63</u>	<u>\$ 2,956.94</u>			<u>\$ 218.63</u>	<u>\$ 2,956.94</u>
<u>Amfleet Is</u>							
Regional	8,841	\$ 65.93	\$ 582.87			\$ 65.93	\$ 582.87
Crescent	20	\$ 56.82	\$ 1.12			\$ 56.82	\$ 1.12
Lake Shore Ltd	123	\$ 10.14	\$ 1.25			\$ 10.14	\$ 1.25
Silver Services	651	\$ 17.73	\$ 11.54			\$ 17.73	\$ 11.54
Cascades	180	\$ 140.26	\$ 25.19			\$ 140.26	\$ 25.19
Downeaster	113	\$ 18.74	\$ 2.11			\$ 18.74	\$ 2.11
Carolinian	666	\$ 16.51	\$ 10.99			\$ 16.51	\$ 10.99
Empire	2,197	\$ 91.17	\$ 200.27 (1)			\$ 91.17	\$ 200.27
Illinois	212	\$ 30.76	\$ 6.52			\$ 30.76	\$ 6.52
Keystone	1,200	\$ 14.17	\$ 17.01			\$ 14.17	\$ 17.01
Michigan	172	\$ 27.39	\$ 4.72			\$ 27.39	\$ 4.72
Missouri	25	\$ 3.45	\$ 0.08			\$ 3.45	\$ 0.08
Pennsylvanian	249	\$ 18.03	\$ 4.50			\$ 18.03	\$ 4.50
	<u>14,648</u>	<u>\$ 59.27</u>	<u>\$ 868.17</u>			<u>\$ 59.27</u>	<u>\$ 868.17</u>
<u>AEM7s/HHPs</u>							
Regional	28,542	\$ 65.93	\$ 1,881.66			\$ 65.93	\$ 1,881.66
Cardinal	415	\$ 20.16	\$ 8.37			\$ 20.16	\$ 8.37
Crescent	548	\$ 56.82	\$ 31.13			\$ 56.82	\$ 31.13
Silver Services	2,015	\$ 17.73	\$ 35.74			\$ 17.73	\$ 35.74
Keystone	9,362	\$ 14.17	\$ 132.65			\$ 14.17	\$ 132.65
Pennsylvanian	439	\$ 18.03	\$ 7.91			\$ 18.03	\$ 7.91
	<u>41,321</u>	<u>\$ 50.76</u>	<u>\$ 2,097.47</u>			<u>\$ 50.76</u>	<u>\$ 2,097.47</u>
<u>Superliners</u>							
AutoTrain	828	\$ 175.90	\$ 145.70			\$ 175.90	\$ 145.70
Zephyr	2,598	\$ 4.62	\$ 12.00			\$ 4.62	\$ 12.00
Capitol Ltd	2,416	\$ 3.16	\$ 7.62			\$ 3.16	\$ 7.62
City of New Orleans	900	\$ 1.90	\$ 1.71			\$ 1.90	\$ 1.71
Coast Starlight	2,155	\$ 5.83	\$ 12.56			\$ 5.83	\$ 12.56
Empire Builder	4,004	\$ 31.31	\$ 125.37			\$ 31.31	\$ 125.37
Southwest Chief	2,974	\$ 52.32	\$ 155.59			\$ 52.32	\$ 155.59
Sunset Ltd	412	\$ 0.71	\$ 0.29			\$ 0.71	\$ 0.29
Texas Eagle	1,682	\$ 12.39	\$ 20.84			\$ 12.39	\$ 20.84
Capitol Corridor	270	\$ 15.10	\$ 4.08			\$ 15.10	\$ 4.08
Cascades	67	\$ 140.26	\$ 9.46			\$ 140.26	\$ 9.46
Heartland Flyer	115	\$ 7.11	\$ 0.81			\$ 7.11	\$ 0.81
Pacific Surfliners	134	\$ 35.00	\$ 4.68			\$ 35.00	\$ 4.68
Missouri	11	\$ 3.45	\$ 0.04			\$ 3.45	\$ 0.04
	<u>18,565</u>	<u>\$ 26.97</u>	<u>\$ 500.74</u>			<u>\$ 26.97</u>	<u>\$ 500.74</u>
<u>P42s</u>							
Regional	5,039	\$ 65.93	\$ 332.22			\$ 65.93	\$ 332.22
AutoTrain	1,901	\$ 175.90	\$ 334.33			\$ 175.90	\$ 334.33
Zephyr	10,149	\$ 4.62	\$ 46.86			\$ 4.62	\$ 46.86
Capitol Ltd	4,830	\$ 3.16	\$ 15.24			\$ 3.16	\$ 15.24
Cardinal	2,067	\$ 20.16	\$ 41.68			\$ 20.16	\$ 41.68
City of New Orleans	2,906	\$ 1.90	\$ 5.51			\$ 1.90	\$ 5.51
Coast Starlight	7,162	\$ 5.83	\$ 41.74			\$ 5.83	\$ 41.74
Crescent	4,407	\$ 56.82	\$ 250.40			\$ 56.82	\$ 250.40
Empire Builder	9,575	\$ 31.31	\$ 299.83			\$ 31.31	\$ 299.83
Lake Shore Ltd	6,245	\$ 10.14	\$ 63.33			\$ 10.14	\$ 63.33
Silver Services	13,458	\$ 17.73	\$ 238.67			\$ 17.73	\$ 238.67
Southwest Chief	10,242	\$ 52.32	\$ 535.91			\$ 52.32	\$ 535.91
Sunset Ltd	3,136	\$ 0.71	\$ 2.24			\$ 0.71	\$ 2.24
Texas Eagle	4,958	\$ 12.39	\$ 61.44			\$ 12.39	\$ 61.44
Carolinian	3,016	\$ 16.51	\$ 49.80			\$ 16.51	\$ 49.80
Heartland Flyer	323	\$ 7.11	\$ 2.30			\$ 7.11	\$ 2.30
Hiawatha	1,922	\$ 4.78	\$ 9.19			\$ 4.78	\$ 9.19
Hoosier	550	\$ 5.48	\$ 3.02			\$ 5.48	\$ 3.02
Illinois	9,118	\$ 30.76	\$ 280.43			\$ 30.76	\$ 280.43
Michigan	11,941	\$ 27.39	\$ 327.03			\$ 27.39	\$ 327.03
Missouri	1,086	\$ 3.45	\$ 3.74			\$ 3.45	\$ 3.74
Pennsylvanian	1,701	\$ 18.03	\$ 30.67			\$ 18.03	\$ 30.67
	<u>115,731</u>	<u>\$ 25.71</u>	<u>\$ 2,975.58</u>			<u>\$ 26.88</u>	<u>\$ 2,975.58</u>
<u>P40s</u>							
Downeaster	487	\$ 18.74	\$ 9.13	\$ 18.74	\$ 9.13 (2)		

Table 2B – Revenue Impact Due to Equipment Delays (Con't)

<u>Equipment/Services</u>	<u>Delay Mins</u>	<u>Total Rev Loss per Delay Min (\$)</u>	<u>FY 07 Total Rev Loss (\$000's)</u>	<u>State Rev Loss per Delay Min (\$)</u>	<u>FY 07 State Rev Loss (\$000's)</u>	<u>Amtrak Rev Loss per Delay Min (\$)</u>	<u>FY 07 Amtrak Rev Loss (\$000's)</u>
<u>Amfleet IIs</u>							
Cardinal	685	\$ 20.16	\$ 13.82			\$ 20.16	\$ 13.82
Crescent	1,298	\$ 56.82	\$ 73.74			\$ 56.82	\$ 73.74
Lake Shore Ltd	1,678	\$ 10.14	\$ 17.02			\$ 10.14	\$ 17.02
Silver Services	7,474	\$ 17.73	\$ 132.55			\$ 17.73	\$ 132.55
Carolinian	84	\$ 16.51	\$ 1.38			\$ 16.51	\$ 1.38
Empire	310	\$ 91.17	\$ 28.29 (1)			\$ 91.17	\$ 28.29
Pennsylvanian	474	\$ 18.03	\$ 8.55			\$ 18.03	\$ 8.55
	<u>12,003</u>	<u>\$ 22.94</u>	<u>\$ 275.34</u>			<u>\$ 22.94</u>	<u>\$ 275.34</u>
<u>Viewliners</u>							
Cardinal	178	\$ 20.16	\$ 3.59			\$ 20.16	\$ 3.59
Crescent	527	\$ 56.82	\$ 29.92			\$ 56.82	\$ 29.92
Lake Shore Ltd	897	\$ 10.14	\$ 9.10			\$ 10.14	\$ 9.10
Silver Services	3,205	\$ 17.73	\$ 56.84			\$ 17.73	\$ 56.84
	<u>4,806</u>	<u>\$ 20.69</u>	<u>\$ 99.44</u>			<u>\$ 20.69</u>	<u>\$ 99.44</u>
<u>Heritage</u>							
Zephyr	339	\$ 4.62	\$ 1.57			\$ 4.62	\$ 1.57
Capitol Ltd	331	\$ 3.16	\$ 1.04			\$ 3.16	\$ 1.04
Coast Starlight	375	\$ 5.83	\$ 2.19			\$ 5.83	\$ 2.19
Crescent	532	\$ 56.82	\$ 30.21			\$ 56.82	\$ 30.21
Empire Builder	415	\$ 31.31	\$ 13.00			\$ 31.31	\$ 13.00
Lake Shore Ltd	765	\$ 10.14	\$ 7.76			\$ 10.14	\$ 7.76
Silver Services	3,130	\$ 17.73	\$ 55.50			\$ 17.73	\$ 55.50
Southwest Chief	392	\$ 52.32	\$ 20.52			\$ 52.32	\$ 20.52
Sunset Ltd	43	\$ 0.71	\$ 0.03			\$ 0.71	\$ 0.03
Carolinian	125	\$ 16.51	\$ 2.07			\$ 16.51	\$ 2.07
Heartland Flyer	121	\$ 7.11	\$ 0.86			\$ 7.11	\$ 0.86
	<u>6,567</u>	<u>\$ 20.52</u>	<u>\$ 134.73</u>			<u>\$ 20.52</u>	<u>\$ 134.73</u>
<u>Horizons</u>							
Cardinal	39	\$ 20.16	\$ 0.78			\$ 20.16	\$ 0.78
Hiawatha	603	\$ 4.78	\$ 2.89			\$ 4.78	\$ 2.89
Hoosier	1,050	\$ 5.48	\$ 5.75			\$ 5.48	\$ 5.75
Illinois	1,243	\$ 30.76	\$ 38.24			\$ 30.76	\$ 38.24
Michigan	1,306	\$ 27.39	\$ 35.77			\$ 27.39	\$ 35.77
Missouri	129	\$ 3.45	\$ 0.45			\$ 3.45	\$ 0.45
Pacific Surfliners	164	\$ 35.00	\$ 5.75			\$ 35.00	\$ 5.75
	<u>4,535</u>	<u>\$ 19.76</u>	<u>\$ 89.63</u>			<u>\$ 19.76</u>	<u>\$ 89.63</u>
<u>F59s</u>							
Capitol Corridor	5,278	\$ 15.10	\$ 79.69			\$ 15.10	\$ 79.69
Cascades	5,932	\$ 140.26	\$ 831.95	\$ 140.26	\$ 831.95 (3)	\$ 15.10	\$ 79.69
Pacific Surfliners	7,527	\$ 35.00	\$ 263.45			\$ 35.00	\$ 263.45
Piedmont	224	\$ 9.60	\$ 2.15			\$ 9.60	\$ 2.15
San Joaquins	7,205	\$ 59.84	\$ 431.17	\$ 59.84	\$ 431.17 (4)		
	<u>26,166</u>	<u>\$ 61.47</u>	<u>\$ 1,608.41</u>	<u>\$ 96.15</u>	<u>\$ 1,263.12</u>	<u>\$ 26.50</u>	<u>\$ 345.30</u>
<u>Surfliners</u>							
Pacific Surfliners	2,223	\$ 35.00	\$ 77.82			\$ 35.00	\$ 77.82
Pacific Surfliners	184	\$ 35.00	\$ 6.44			\$ 35.00	\$ 6.44
	<u>2,407</u>	<u>\$ 35.00</u>	<u>\$ 84.26</u>			<u>\$ 35.00</u>	<u>\$ 84.26</u>
<u>California cars</u>							
Capitol Corridor	4,720	\$ 15.10	\$ 71.27			\$ 15.10	\$ 71.27
Capitol Corridor	130	\$ 15.10	\$ 1.96			\$ 15.10	\$ 1.96
San Joaquins	3,615	\$ 59.84	\$ 216.33	\$ 59.84	\$ 216.33 (4)		
San Joaquins	40	\$ 59.84	\$ 2.39	\$ 59.84	\$ 2.39 (4)		
	<u>8,505</u>	<u>\$ 34.33</u>	<u>\$ 291.96</u>	<u>\$ 59.84</u>	<u>\$ 218.72</u>	<u>\$ 15.10</u>	<u>\$ 73.24</u>
<u>P32DMs</u>							
Lake Shore Ltd	480	\$ 10.14	\$ 4.87			\$ 10.14	\$ 4.87
Empire	9,878	\$ 91.17	\$ 900.58 (1)			\$ 91.17	\$ 900.58
	<u>10,358</u>	<u>\$ 87.42</u>	<u>\$ 905.44</u>			<u>\$ 87.42</u>	<u>\$ 905.44</u>
<u>Talgo</u>							
Cascades	1,199	\$ 140.26	\$ 168.23	\$ 140.26	\$ 168.23 (3)		
<u>Metro Cab Coach</u>							
Keystone	3,112	\$ 14.17	\$ 44.10			\$ 14.17	\$ 44.10
<u>NC Cars</u>							
Piedmont	11	\$ 9.60	\$ 0.10			\$ 9.60	\$ 0.10
<u>F40CabBag</u>							
Cascades	66	\$ 140.26	\$ 9.26	\$ 140.26	\$ 9.26 (3)		
Illinois	337	\$ 30.76	\$ 10.36			\$ 30.76	\$ 10.36
	<u>403</u>	<u>\$ 48.69</u>	<u>\$ 19.62</u>	<u>\$ 140.26</u>	<u>\$ 9.26</u>	<u>\$ 30.76</u>	<u>\$ 10.36</u>
Total	284,351	\$ 46.17	\$ 13,129.30	\$ 89.97	\$ 1,668.46	\$ 43.95	\$ 11,460.84

Note: State Supported Services

(1) - NY assumes revenue risk on the Adirondack -- not segregated for this one train.

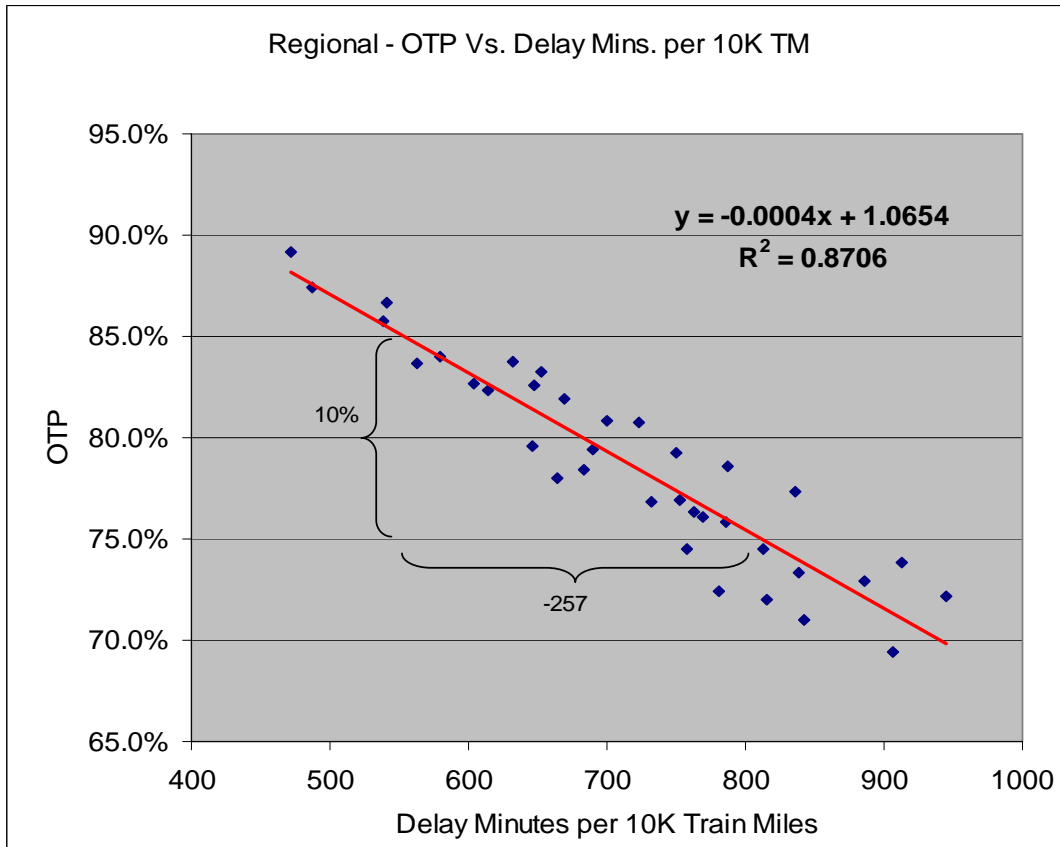
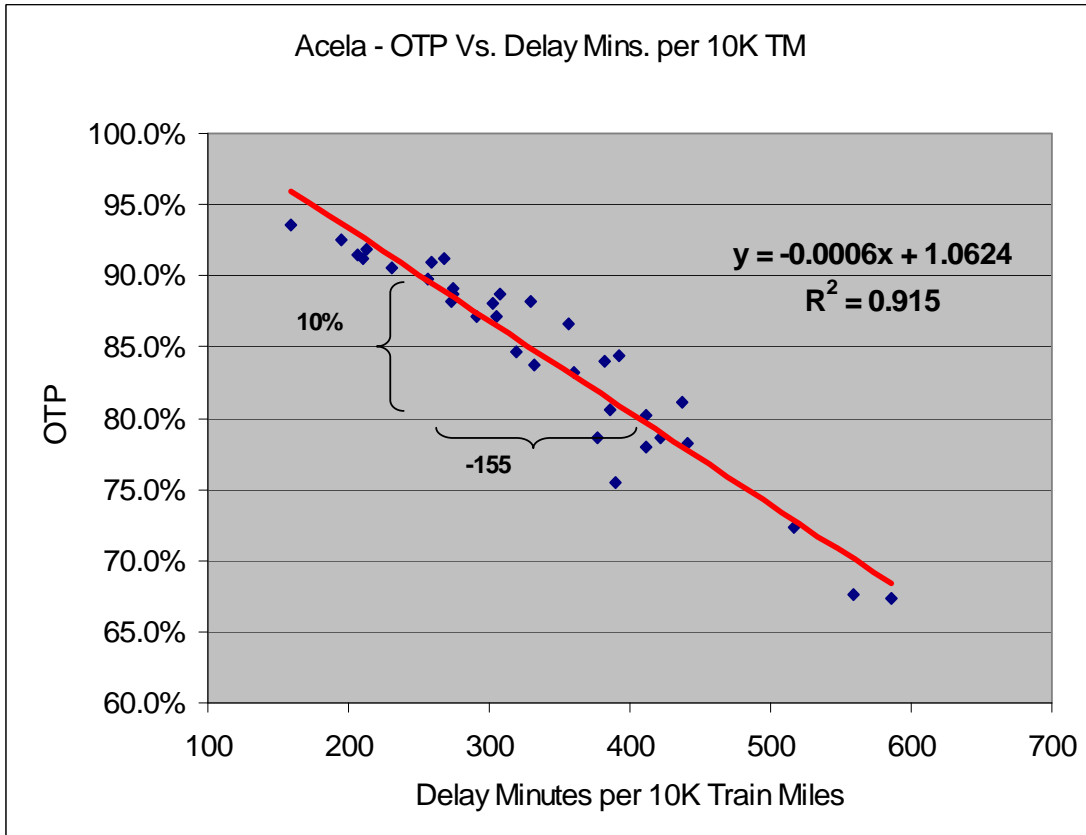
(2) - NNEPRA has revenue risk.

(3) - Washington State assumed risk on one PDX-SEA RT - not segregated for this one RT

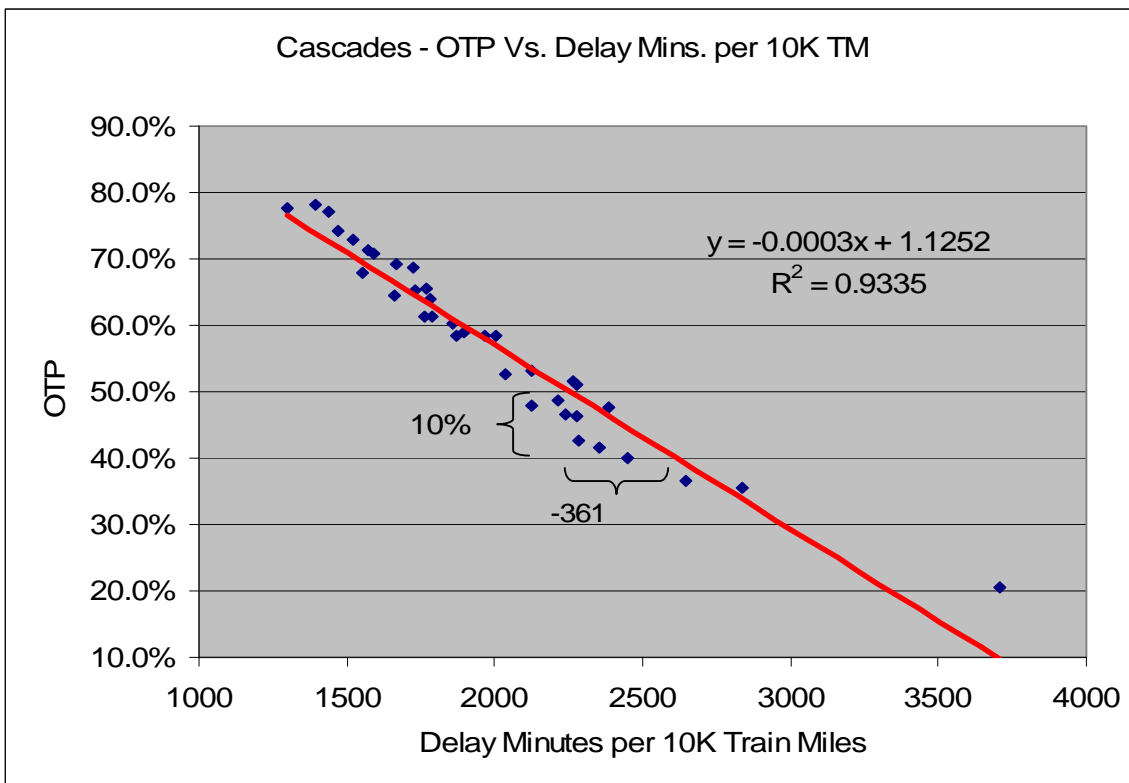
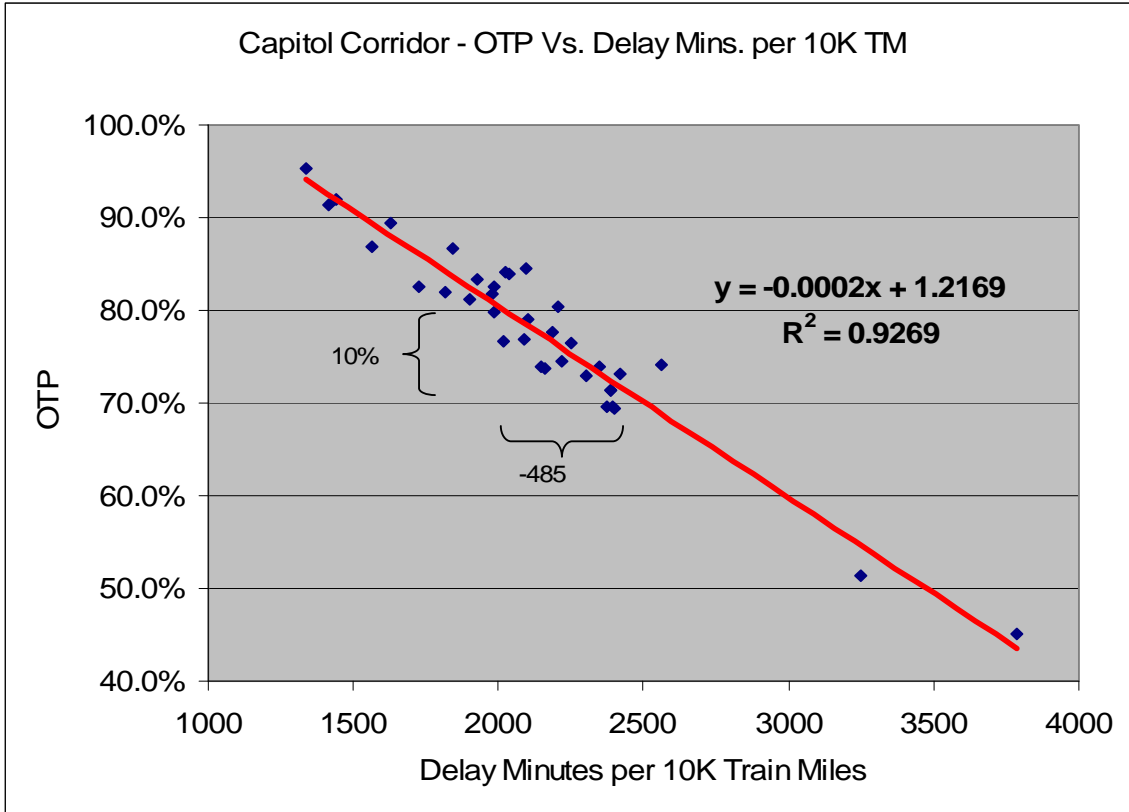
(4) - Caltrans has revenue risk.

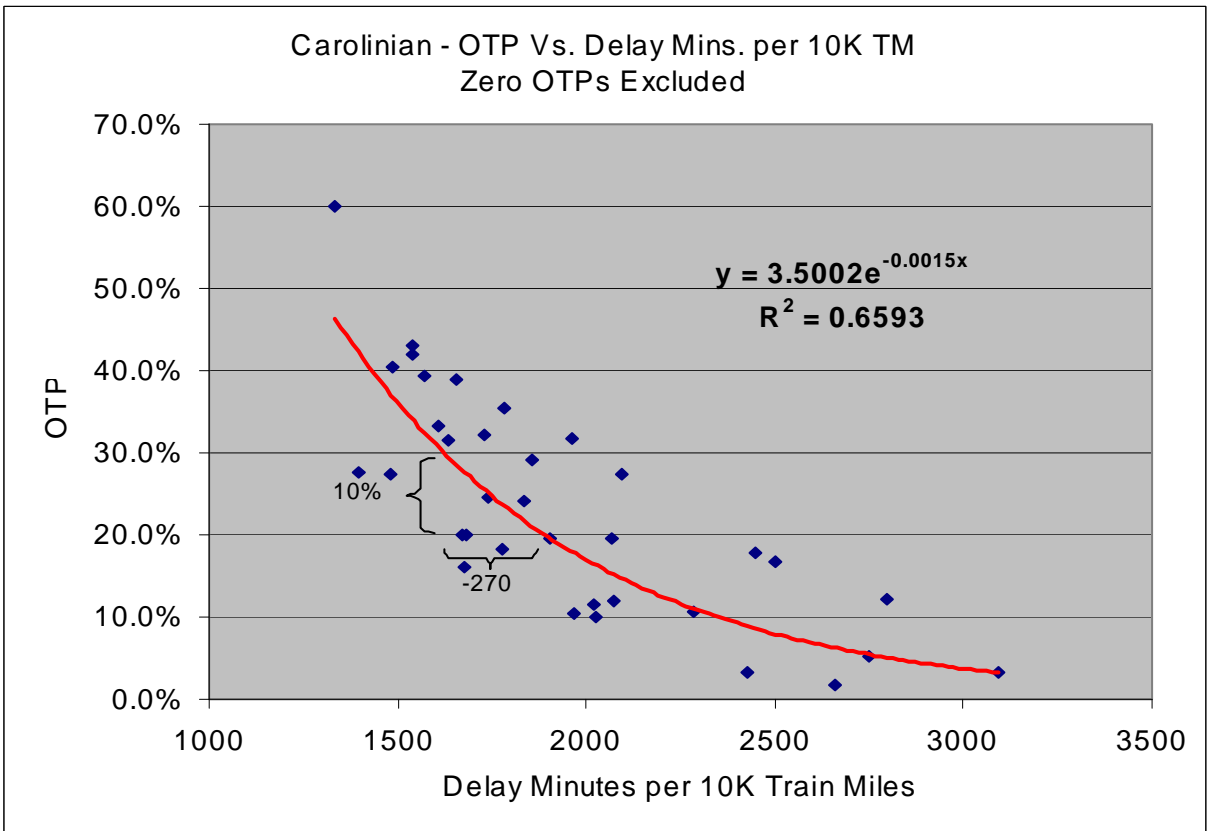
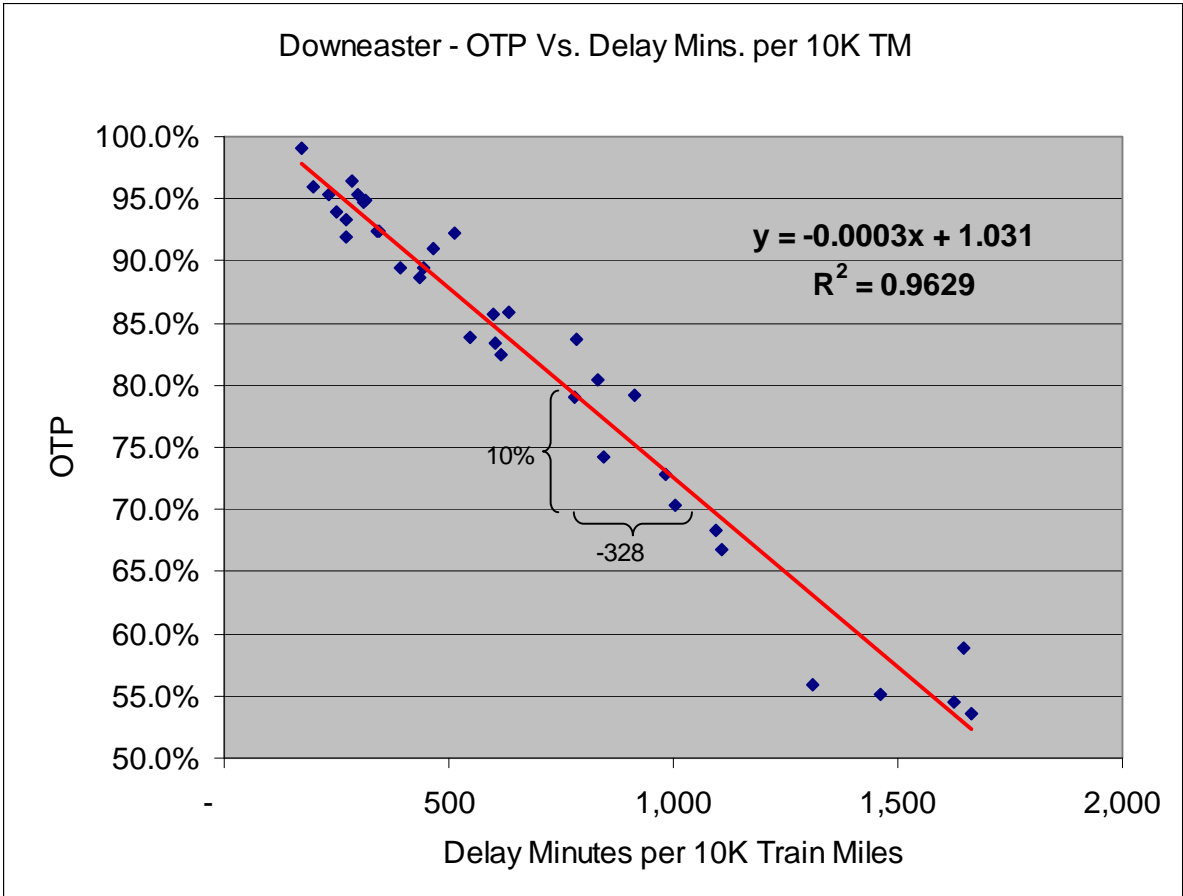
Appendix I - Route OTP vs. Delay minutes

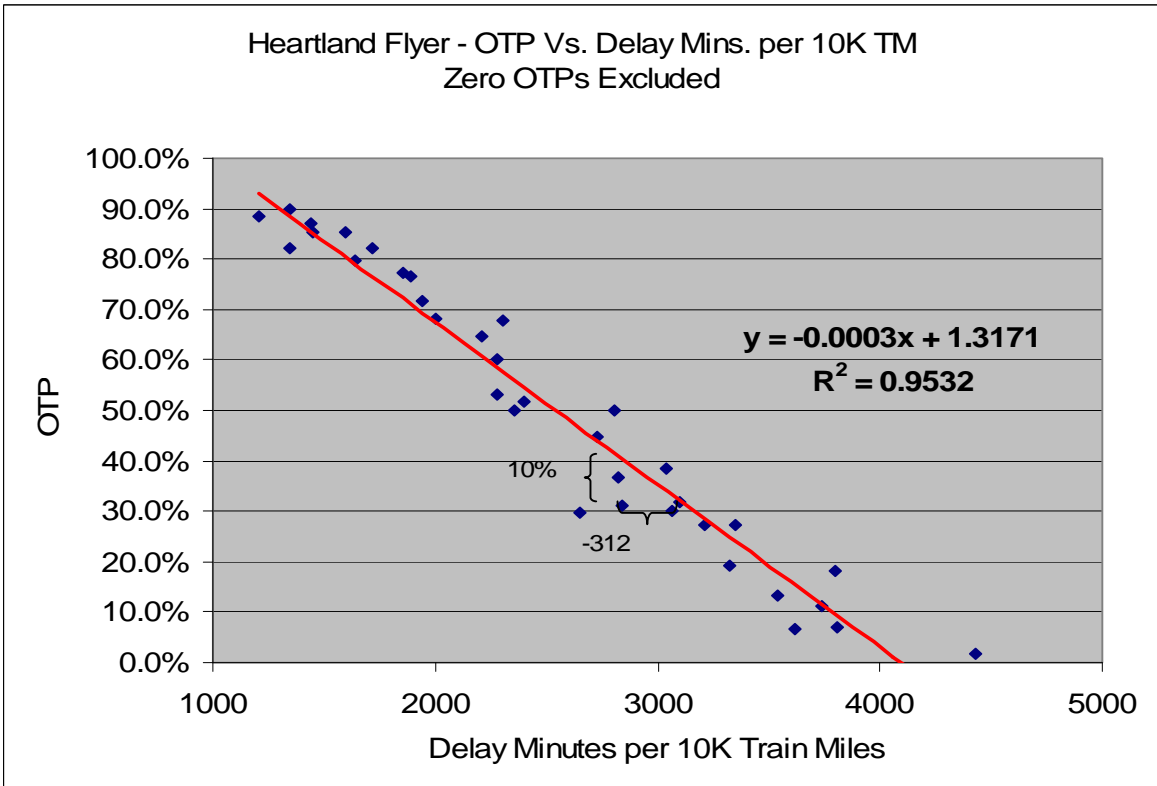
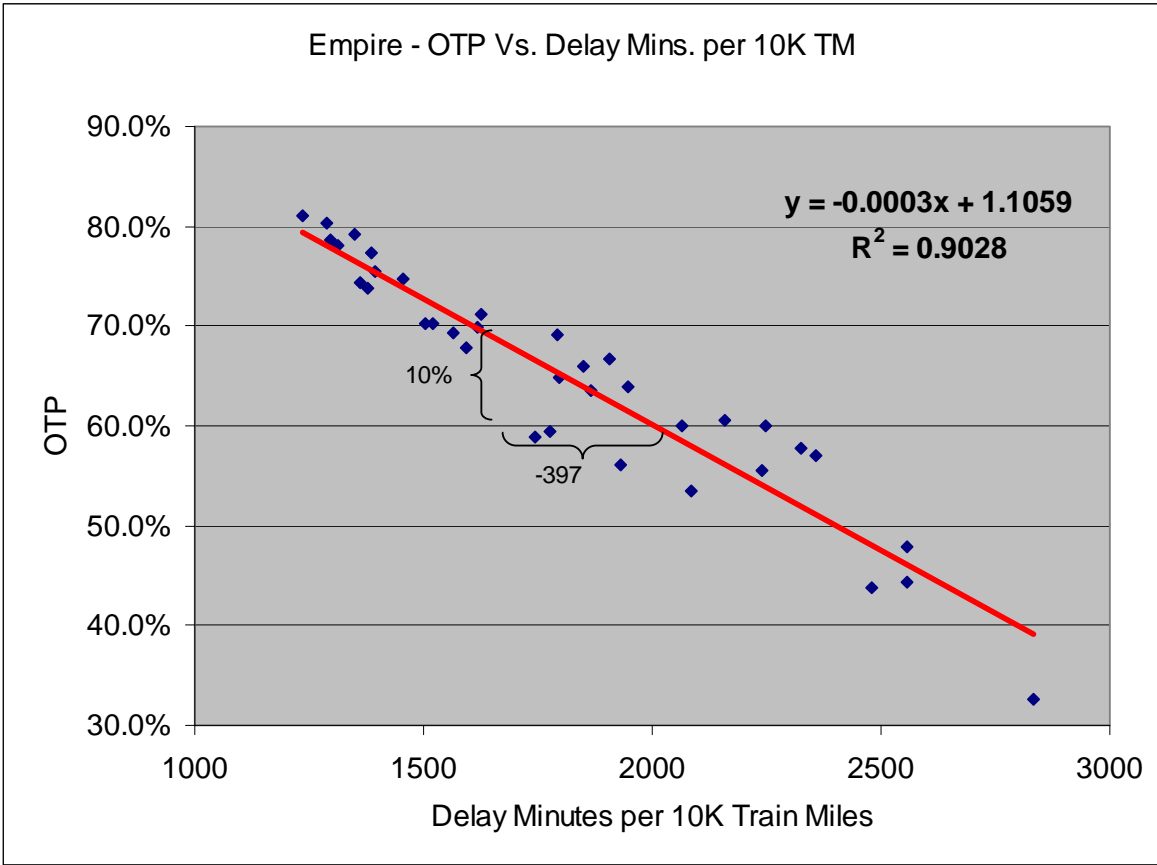
NEC

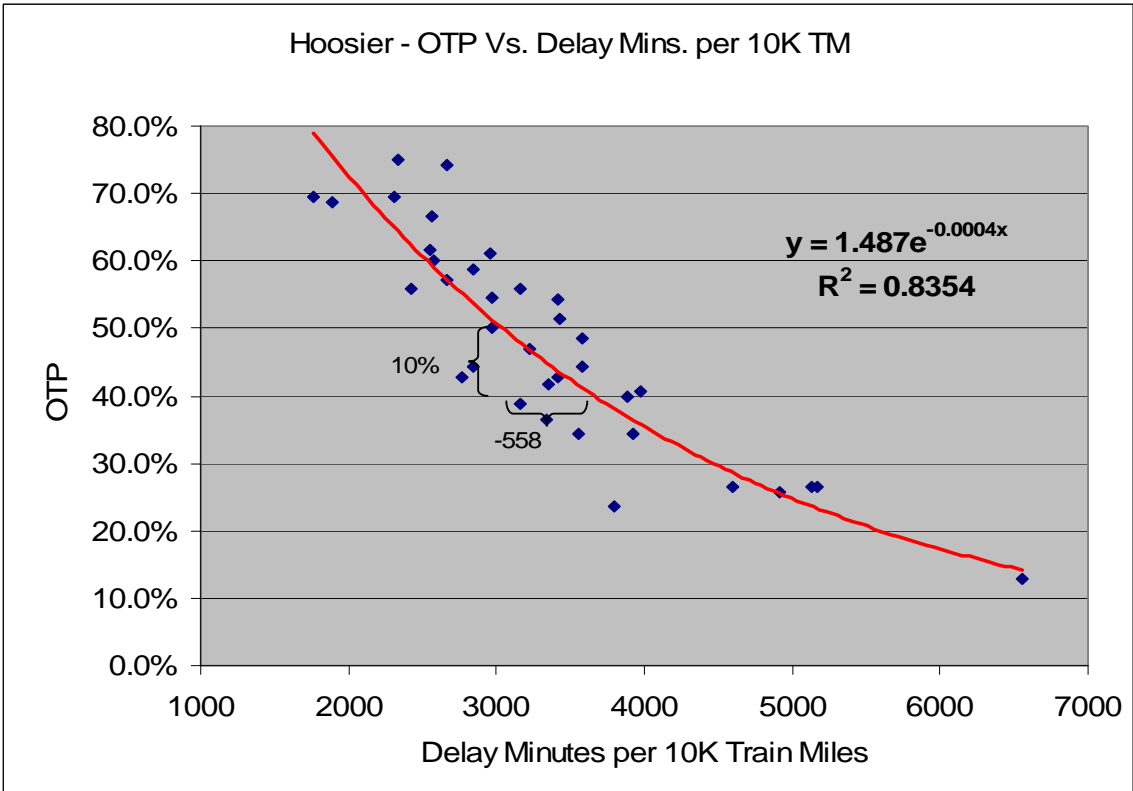
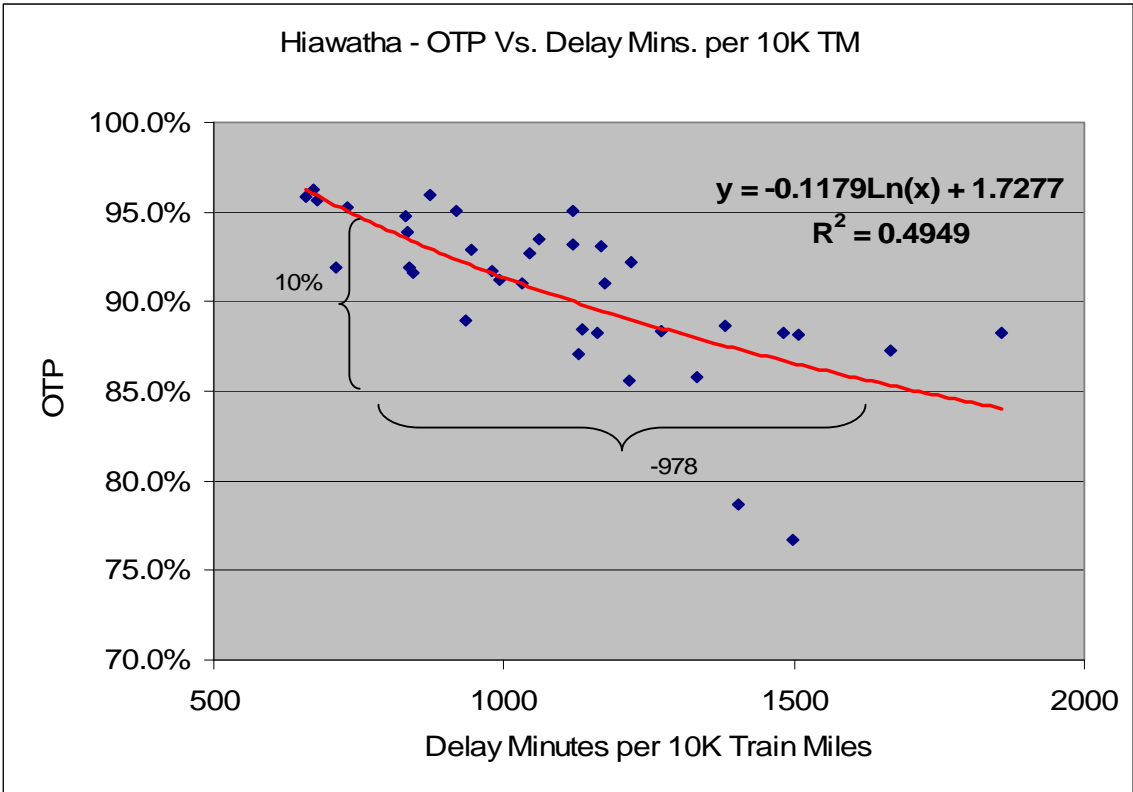


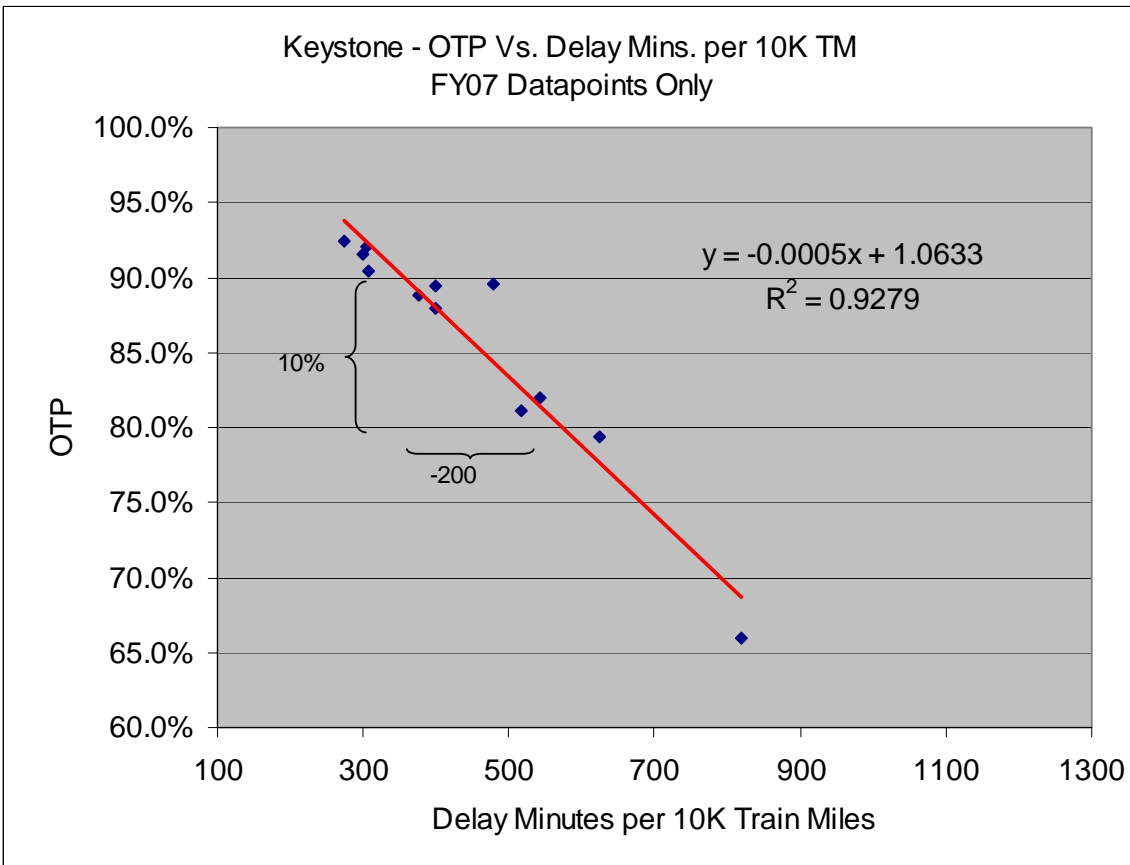
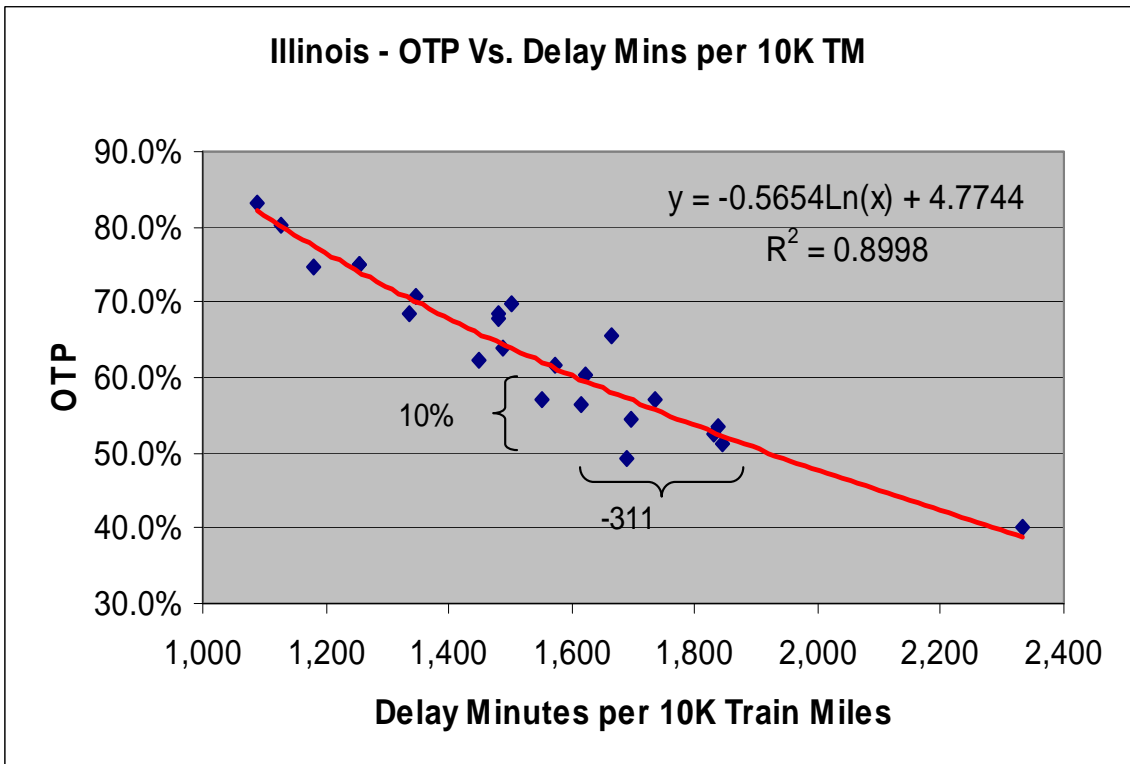
Short Distance

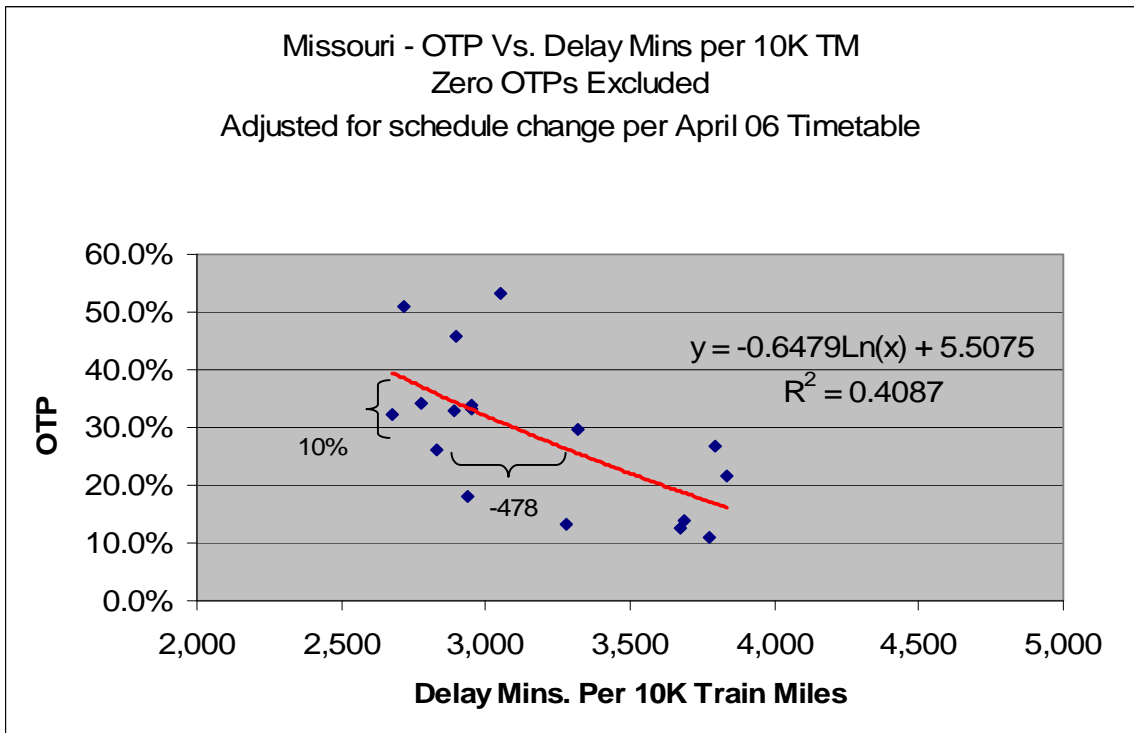
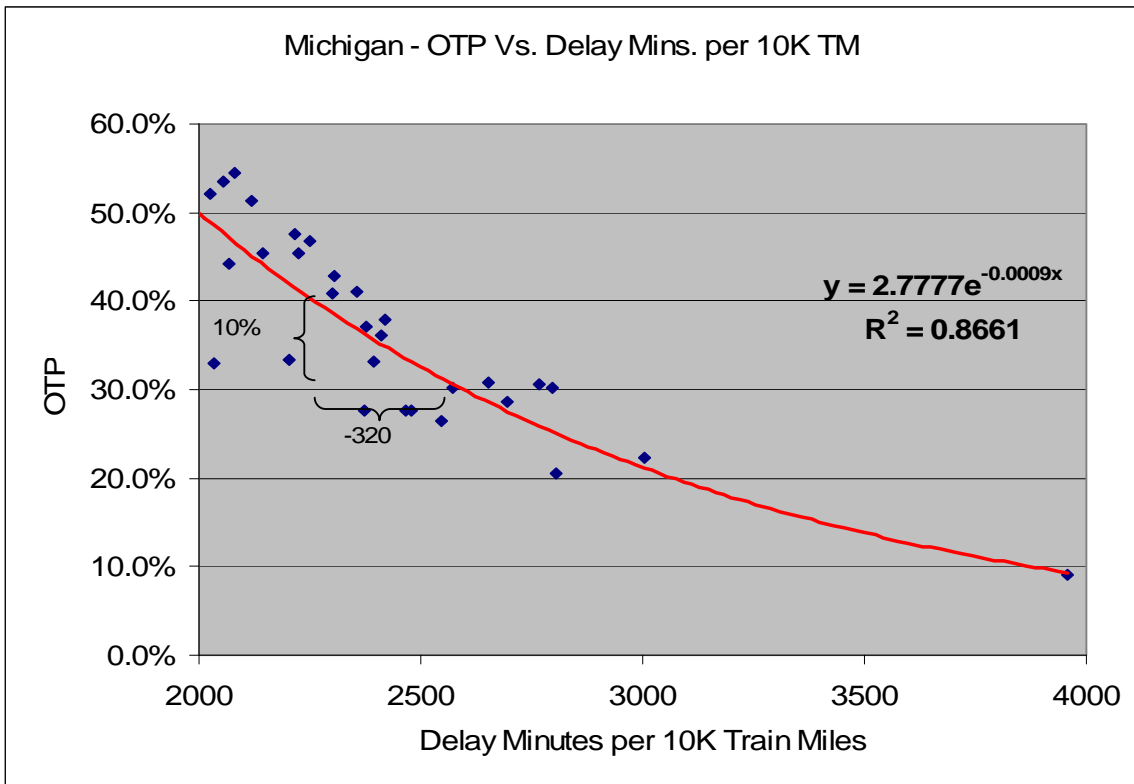


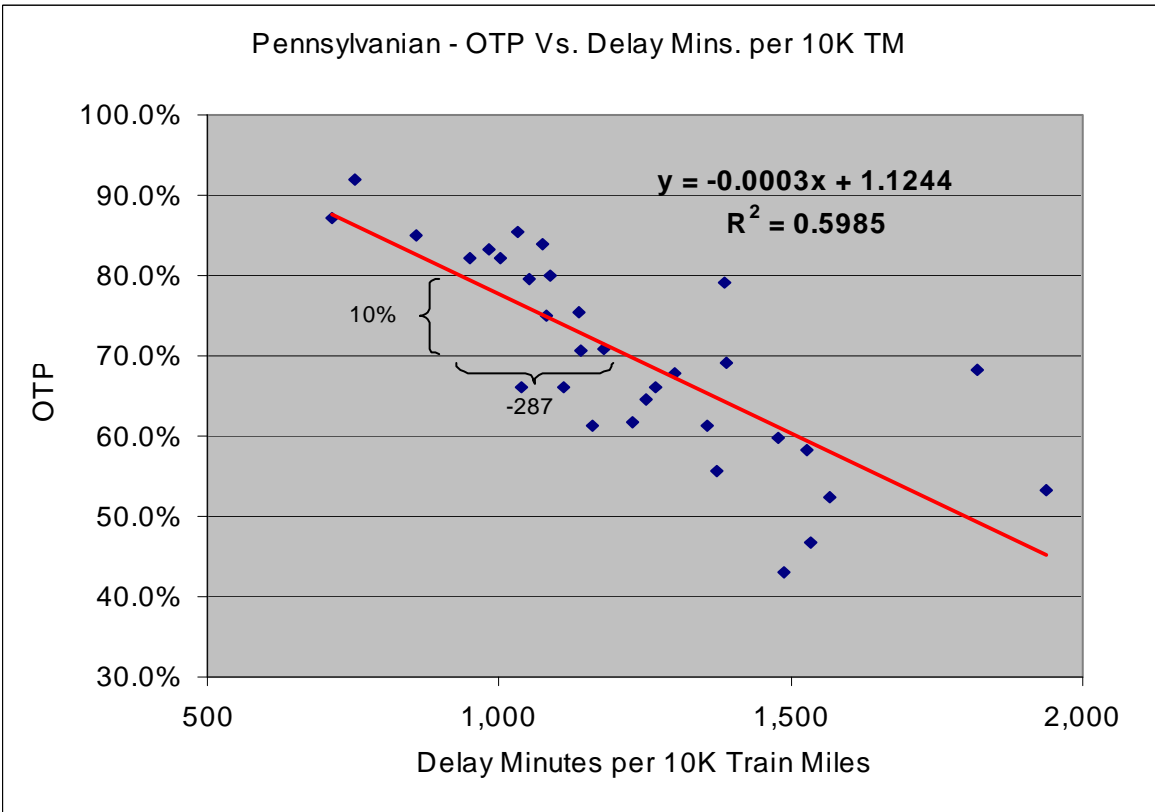
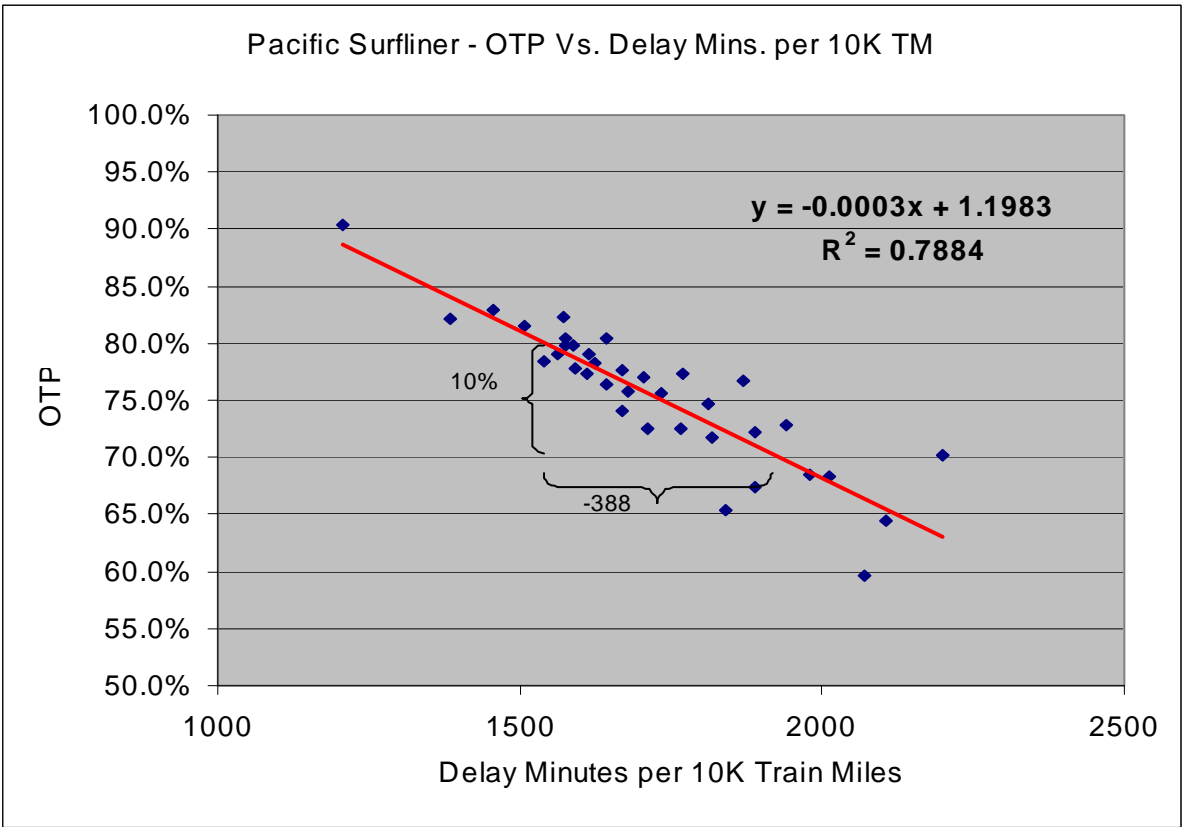


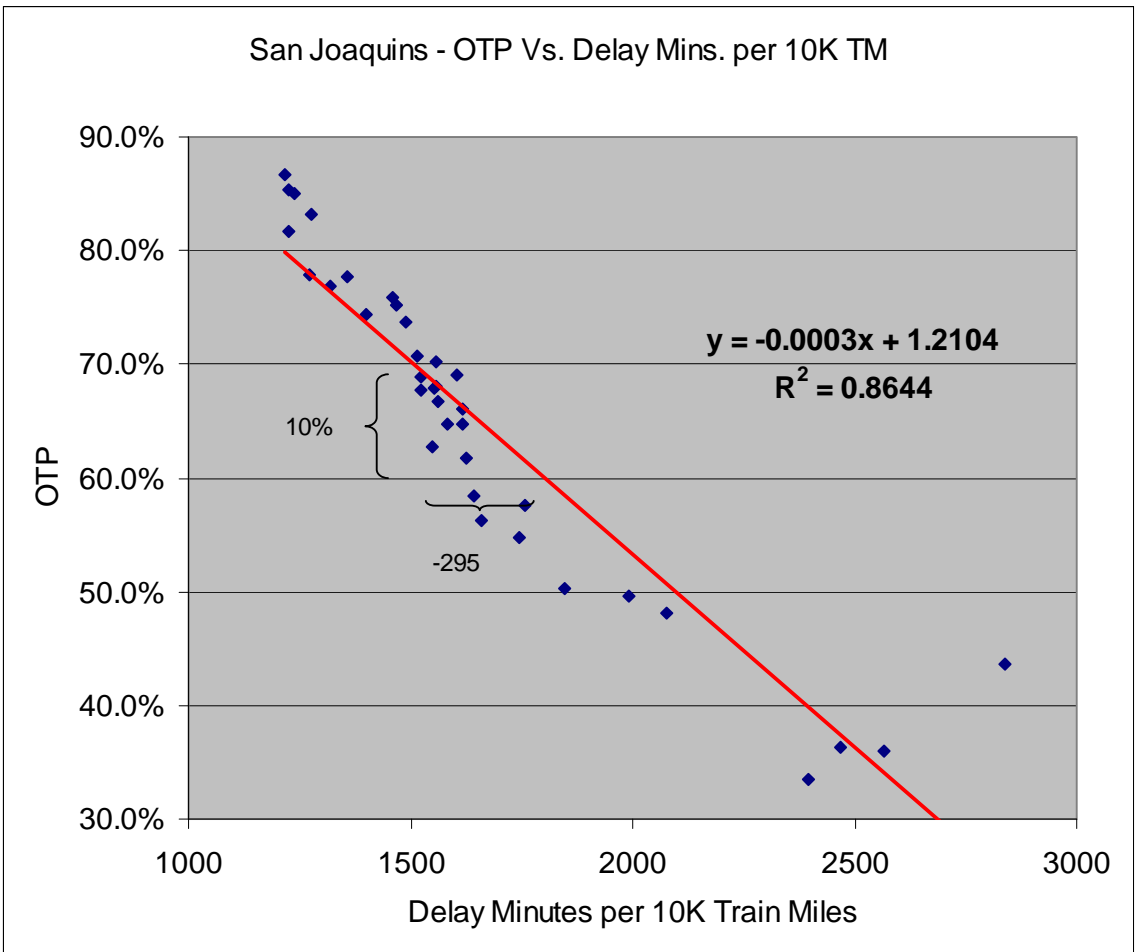
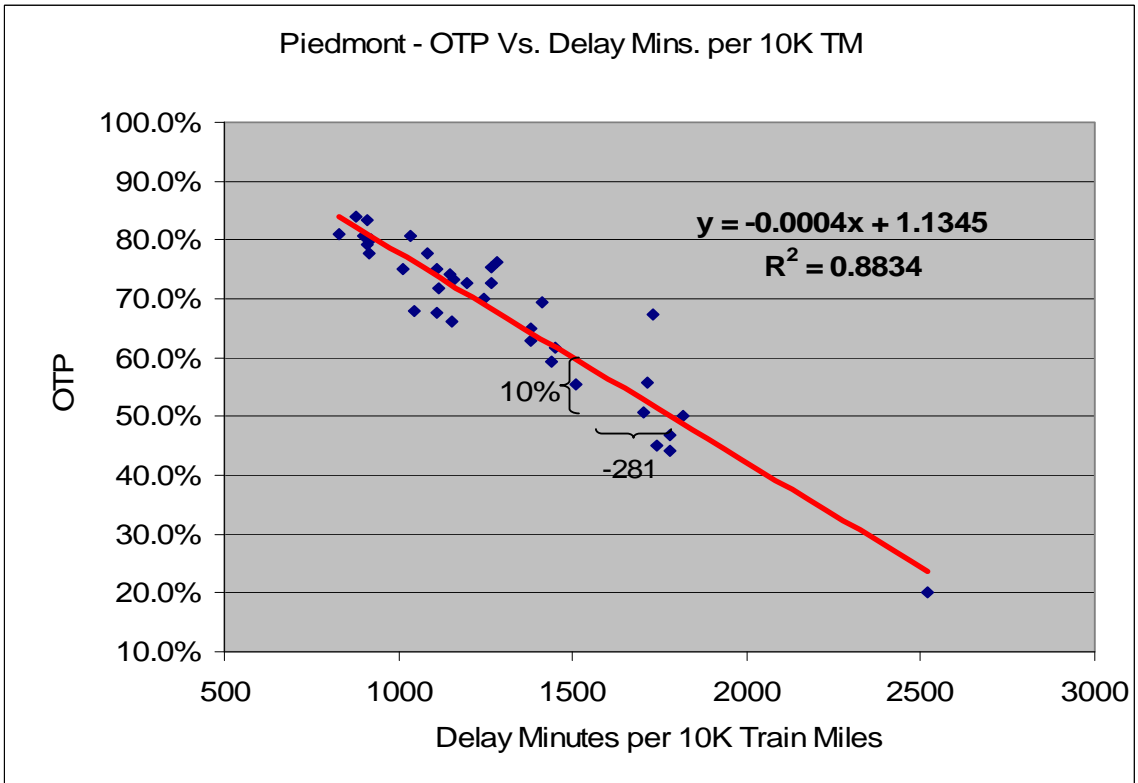




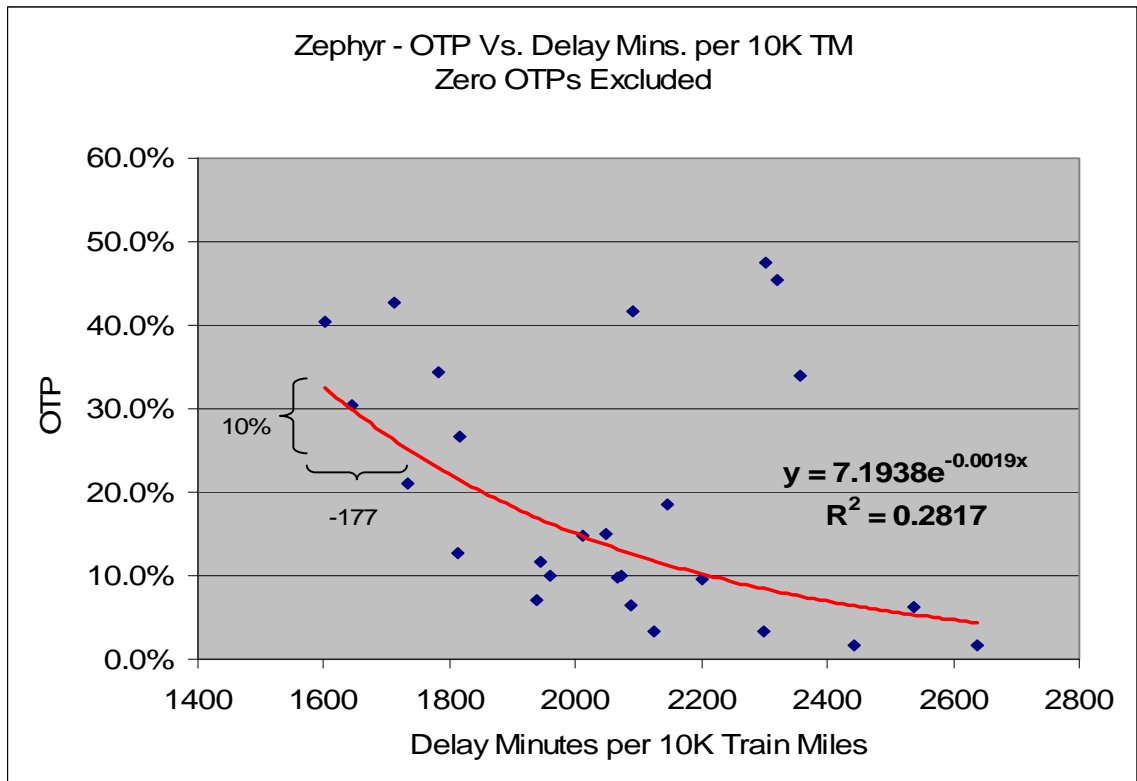
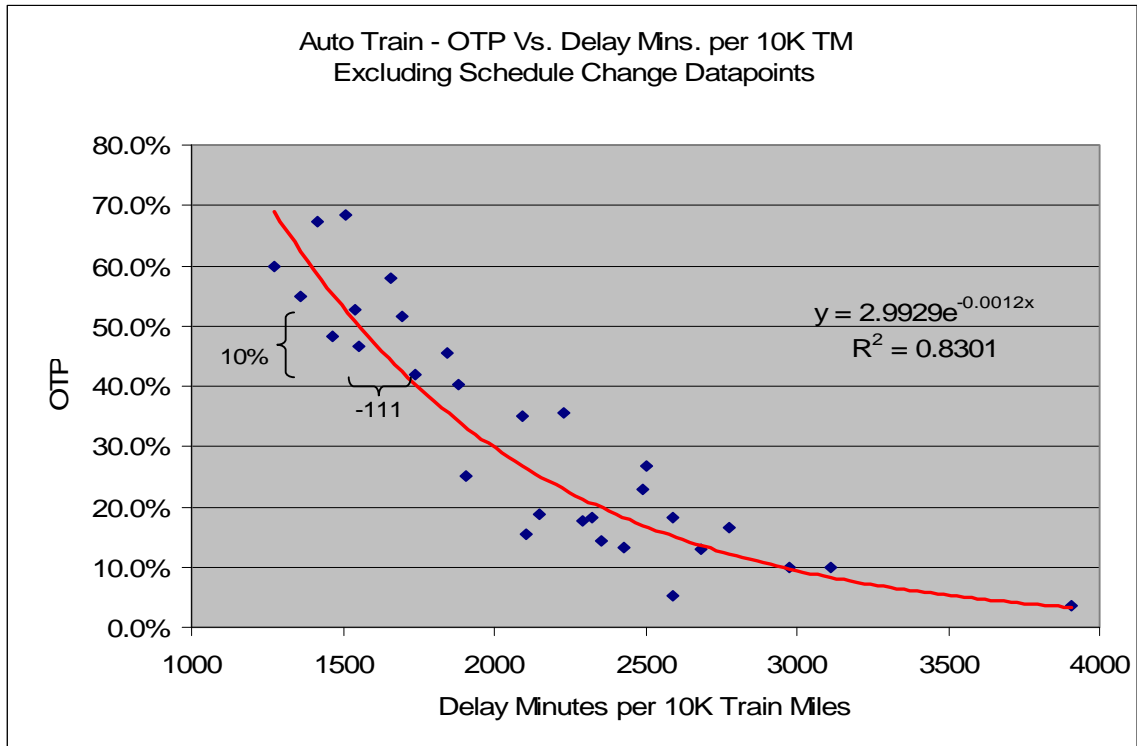


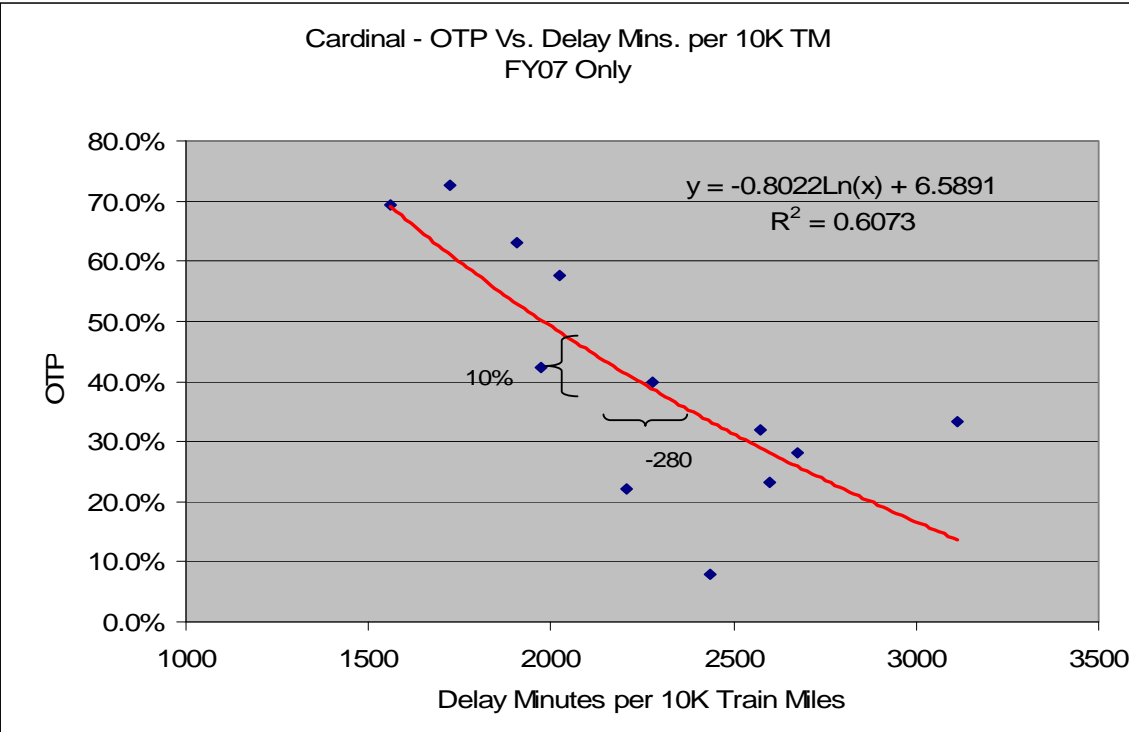
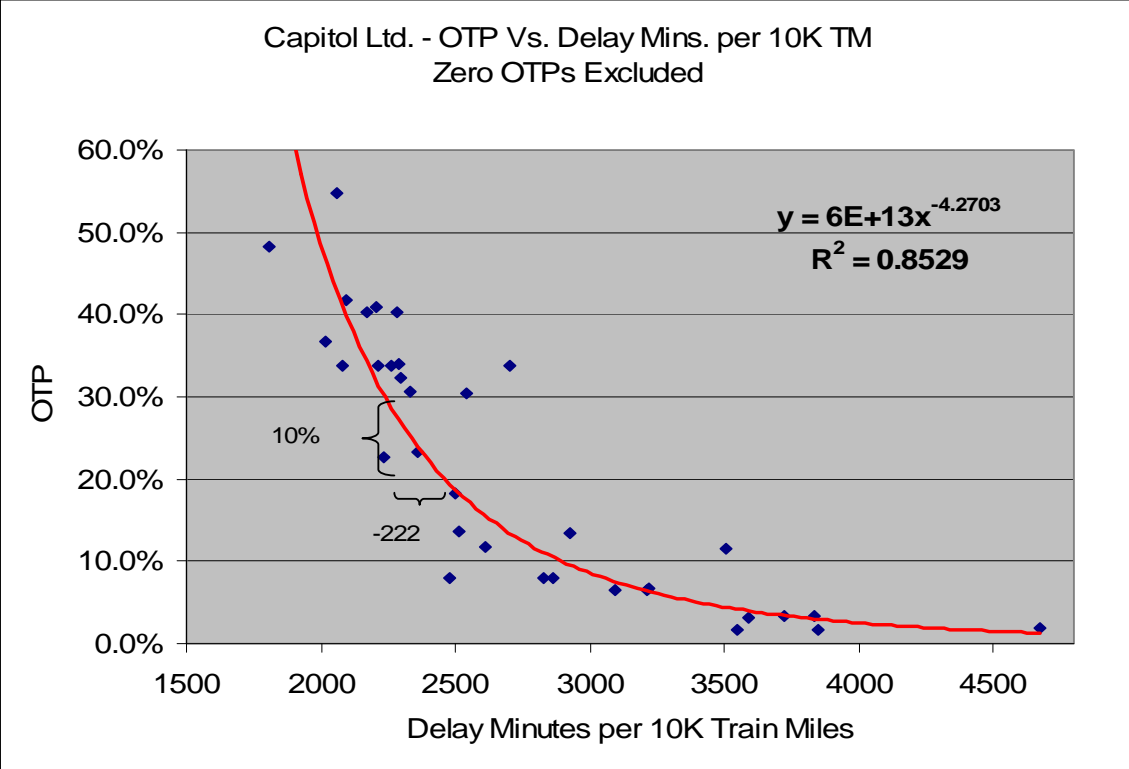


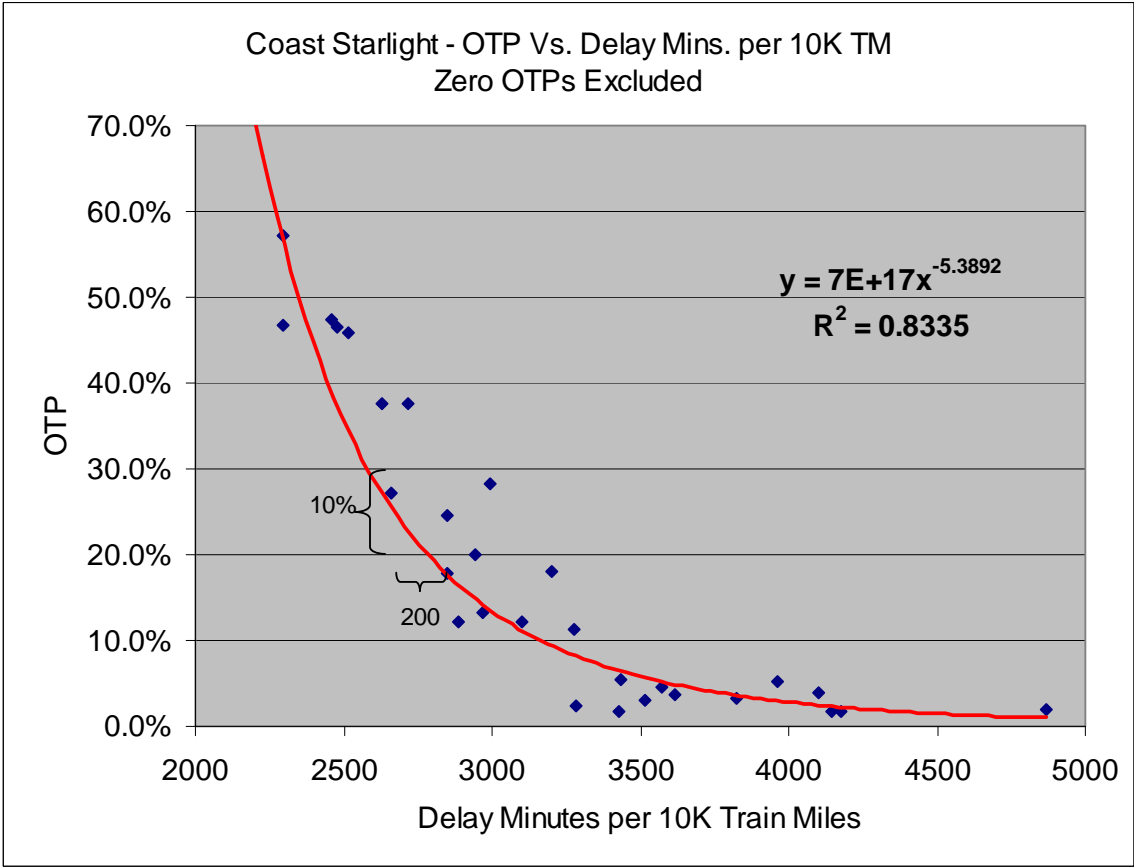
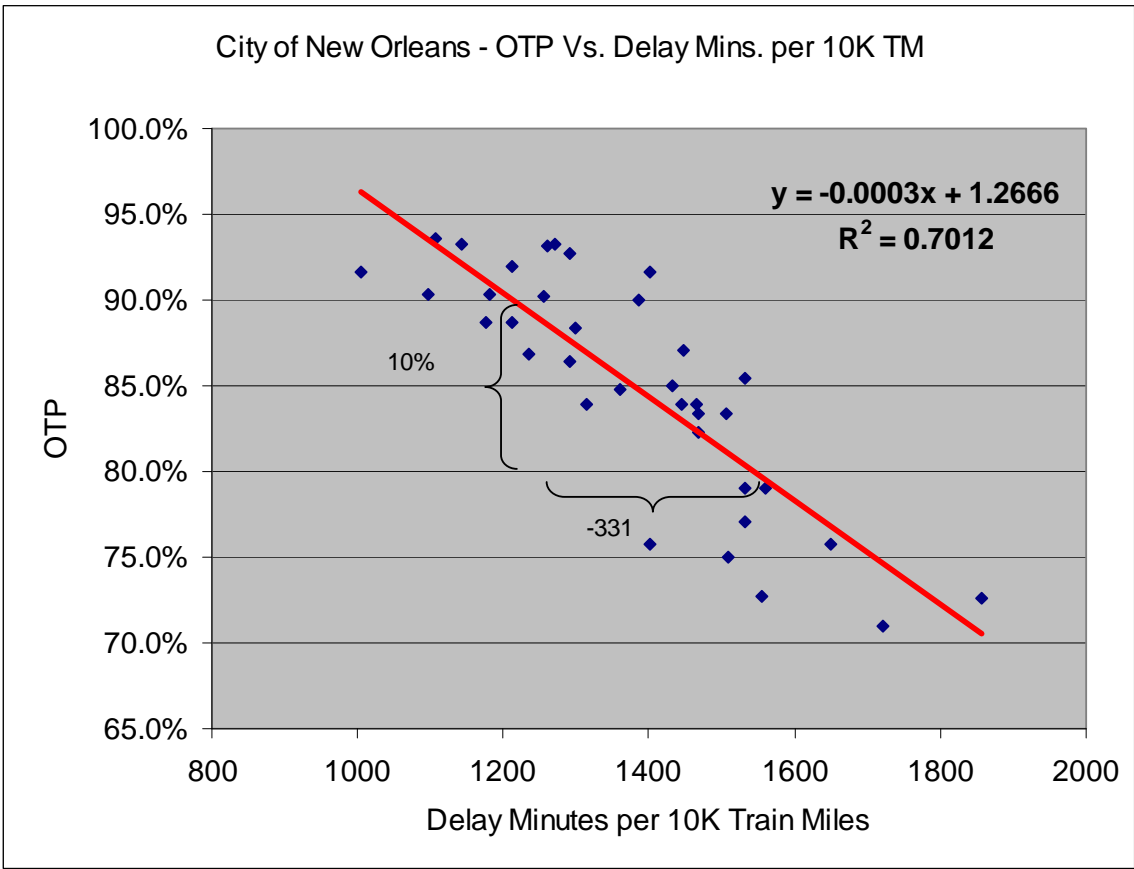


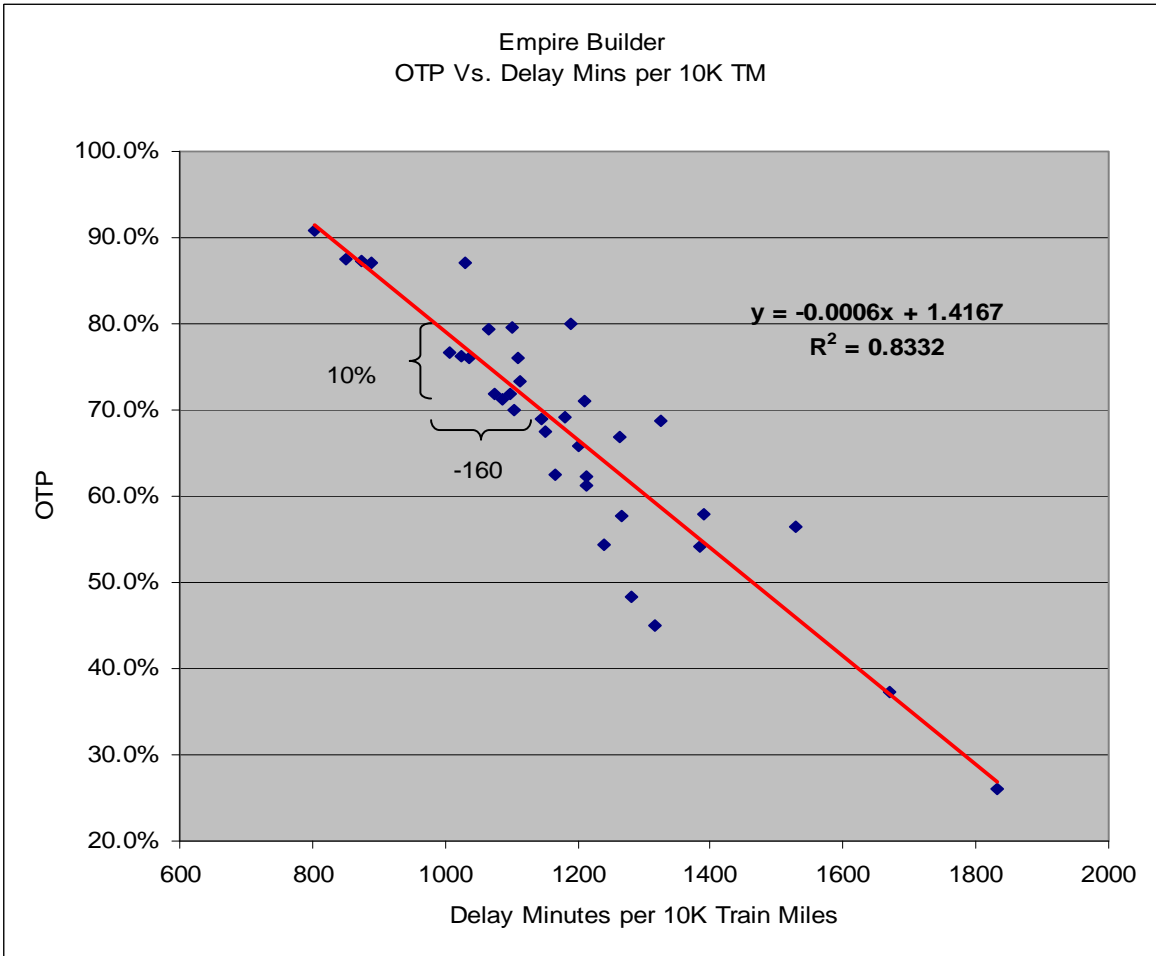
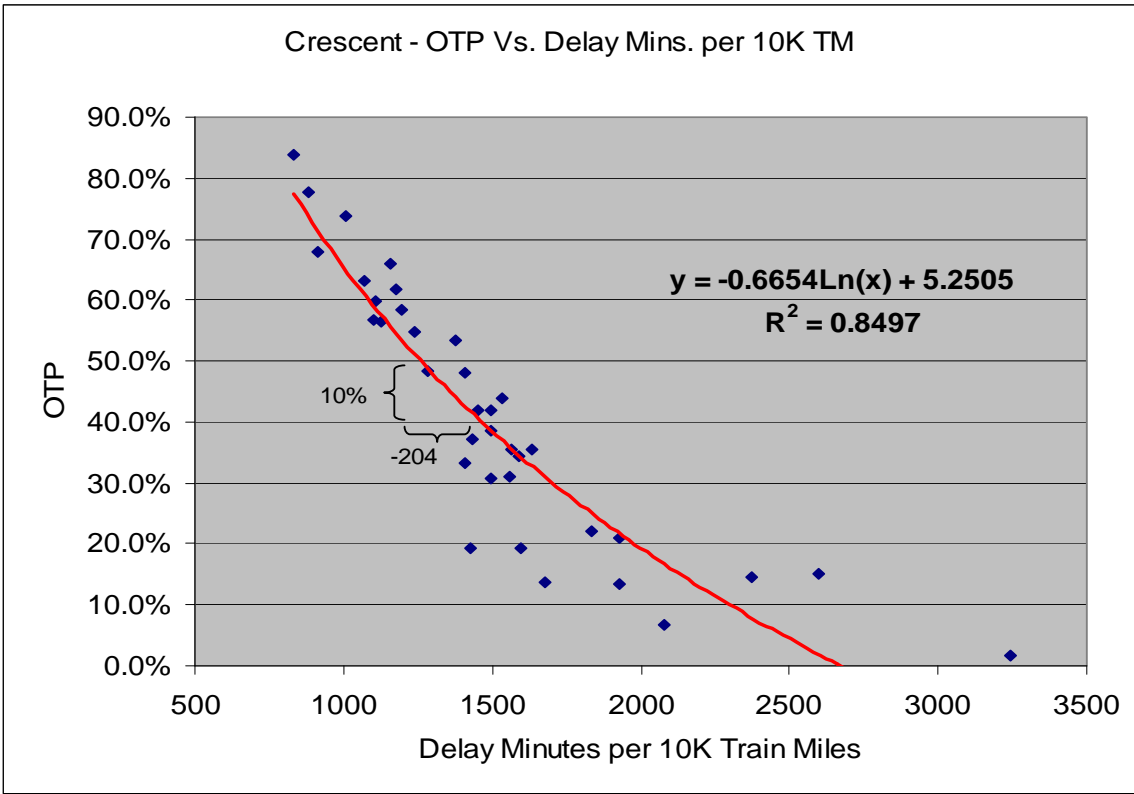


Long Distance

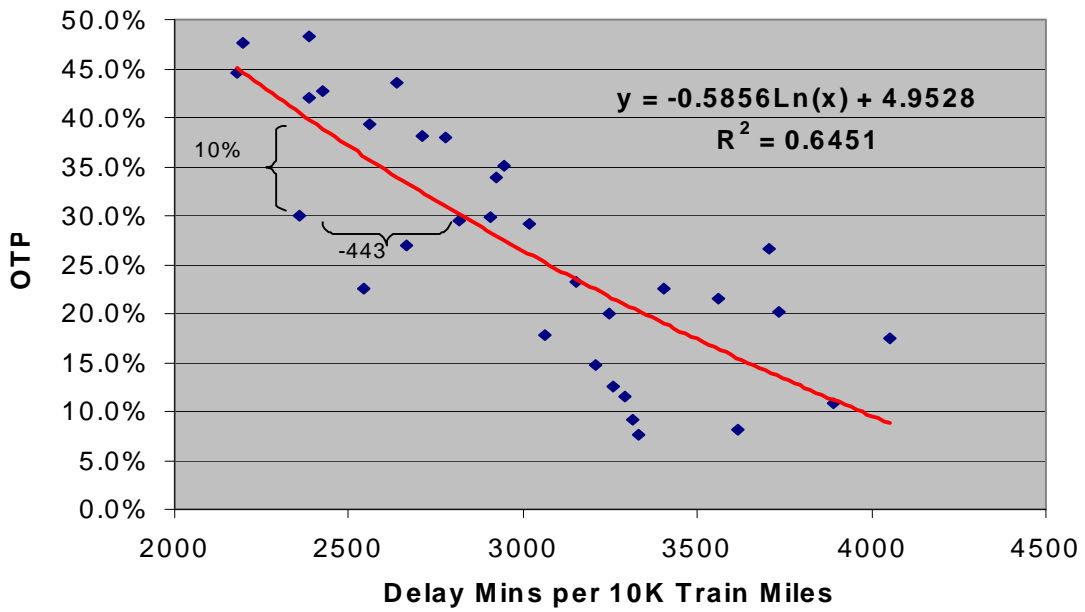




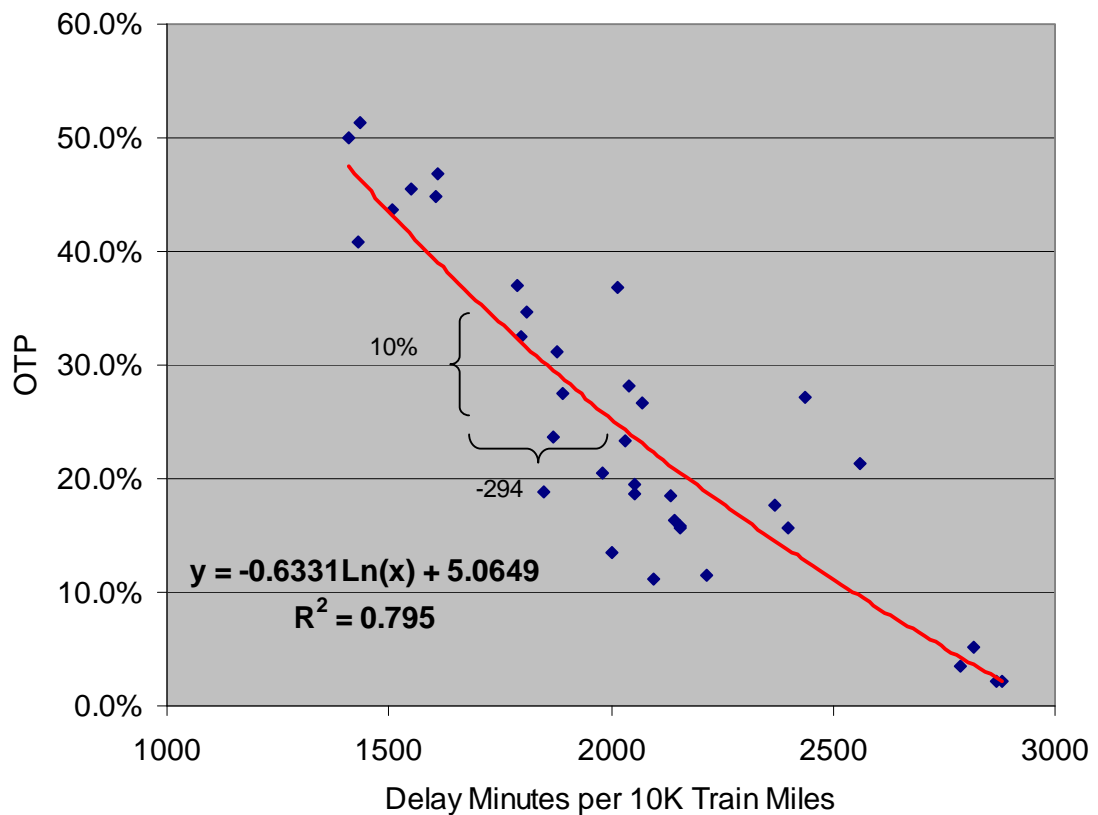


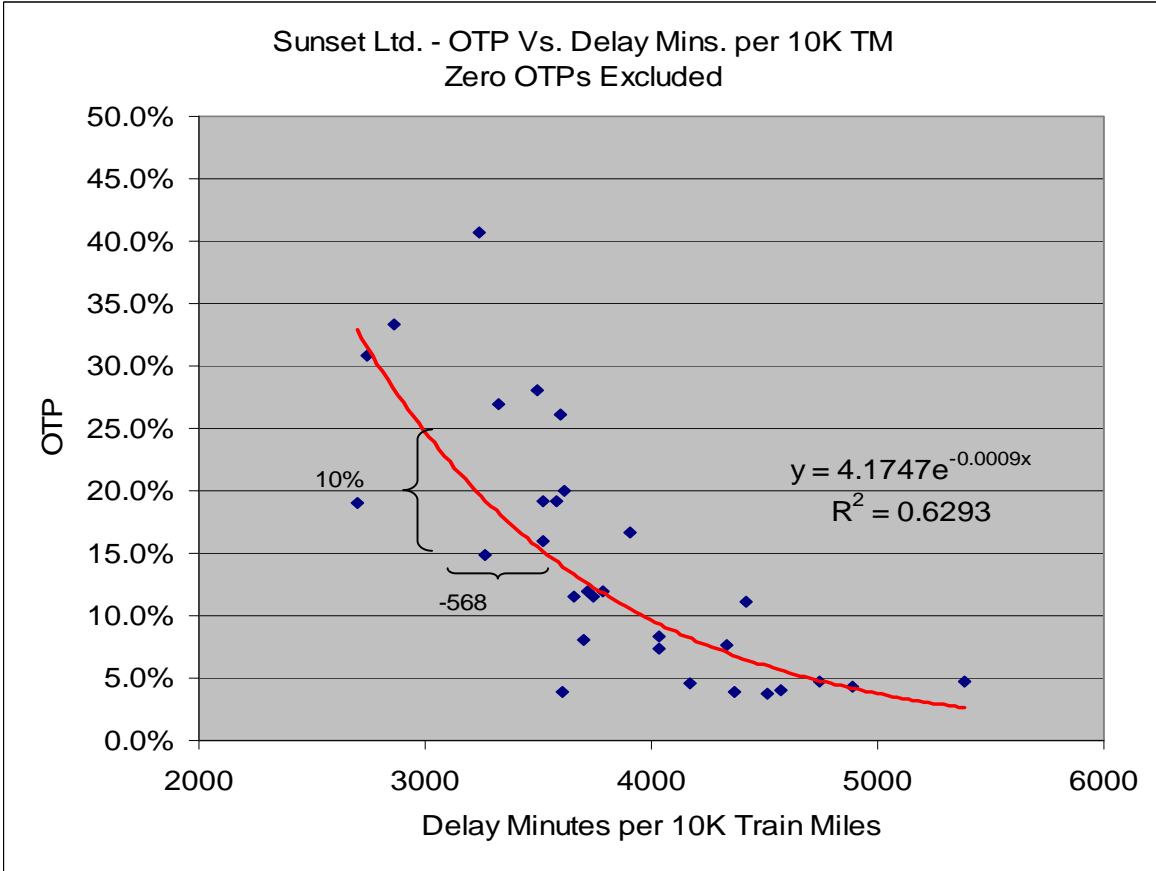
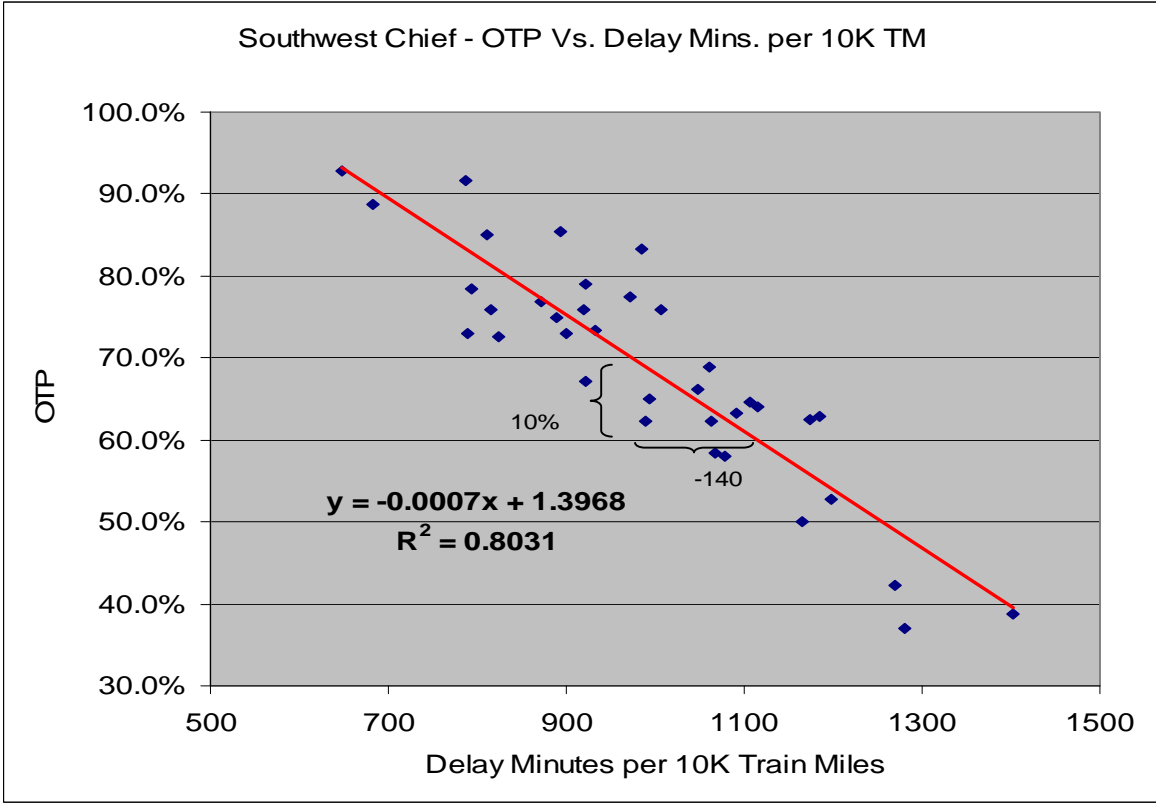


Lake Shore Ltd. - OTP Vs. Delay Mins. per 10K TM

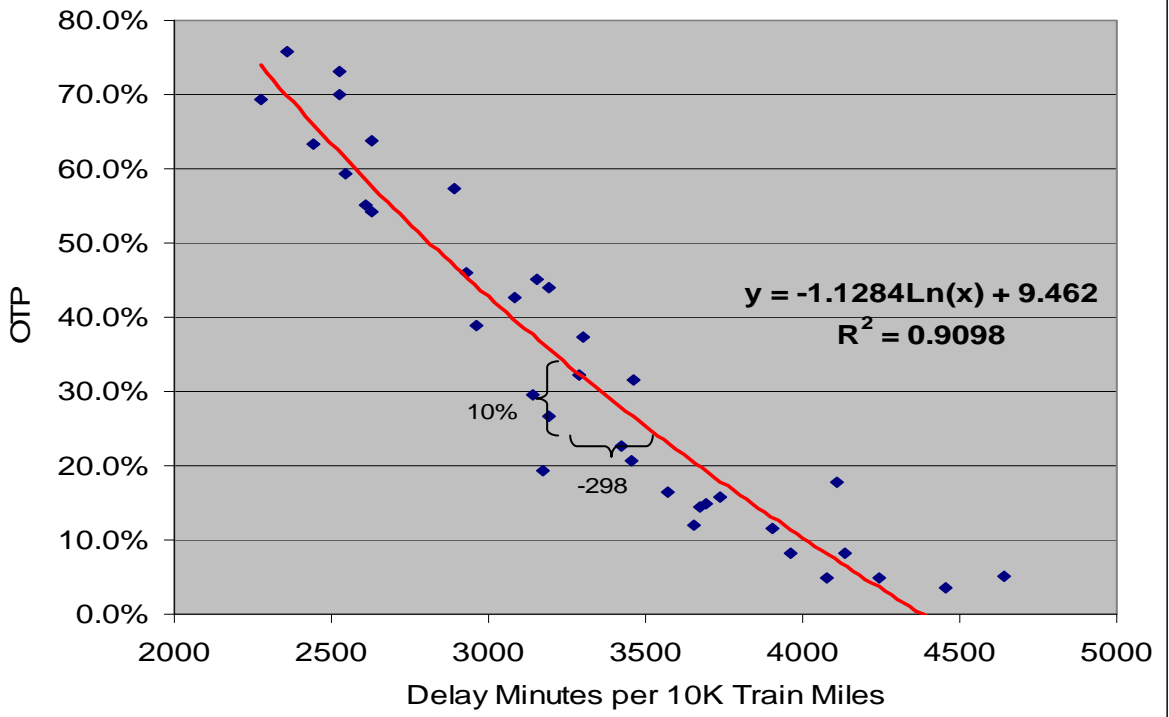


Silver Service - OTP Vs. Delay Mins. per 10K TM





Texas Eagle - OTP Vs. Delay Mins. per 10K TM



Appendix II - Market Research Ticket Revenue Impact

NEC

Acela Ticket Revenue Impacts from Travel Time and OTP Improvements (prepared 11/06/07)

Southend

		(FY08 Base)				
		<u>New York-Washington Travel Time</u>				
		<u>2:25</u>	<u>2:35</u>	<u>2:45</u>	<u>2:55</u>	
(FY08 Base)	Southend OTP	75%	+\$8.0	-\$10.5	-\$27.6	-\$43.3
	80%	+\$23.2	+\$3.8	-\$14.1	-\$30.5	
	85%	+\$33.3	+\$13.2	-\$5.2	-\$22.2	
	90%	+\$39.2	+\$18.8	0	-\$17.2	
	95%	+\$43.0	+\$22.4	+\$3.4	-\$14.1	

Northend

		(FY08 Base)				
		<u>New York-Boston Travel Time</u>				
		<u>3:10</u>	<u>3:20</u>	<u>3:30</u>	<u>3:40</u>	
(FY08 Base)	Northend OTP	70%	+\$2.2	-\$6.6	-\$14.7	-\$22.3
	75%	+\$10.3	+\$0.9	-\$7.8	-\$15.8	
	80%	+\$15.7	+\$6.0	-\$3.1	-\$11.5	
	85%	+\$19.3	+\$9.3	0	-\$8.6	
	90%	+\$21.6	+\$11.4	+\$2.0	-\$6.8	

Regional Ticket Revenue Impacts from Travel Time and OTP Improvements (prepared 11/06/07)

Southend

		(FY08 Base)				
		<u>New York-Washington Travel Time</u>				
		<u>3:00</u>	<u>3:10</u>	<u>3:20</u>	<u>3:30</u>	
(FY08 Base)	Southend OTP	70%	+\$4.4	-\$5.8	-\$15.4	-\$24.4
	75%	+\$14.4	+\$3.8	-\$6.1	-\$15.4	
	80%	+\$21.0	+\$10.1	0	-\$9.5	
	85%	+\$24.6	+\$13.6	+\$3.4	-\$6.2	
	90%	+\$26.9	+\$15.9	+\$5.6	-\$4.1	

Northend

		(FY08 Base)				
		<u>New York-Boston Travel Time</u>				
		<u>3:50</u>	<u>4:00</u>	<u>4:10</u>	<u>4:20</u>	
(FY08 Base)	Northend OTP	70%	+\$4.9	-\$0.2	-\$5.0	-\$9.5
	75%	+\$8.2	+\$3.0	-\$2.0	-\$6.6	
	80%	+\$10.4	+\$5.0	0	-\$4.8	
	85%	+\$11.2	+\$5.8	+\$0.7	-\$4.1	
	90%	+\$11.7	+\$6.3	+\$1.2	-\$3.7	

Short Distance

Ethan Allen Ticket Revenue Impacts from Travel Time and OTP Improvements (prepared 12/18/07)

		(FY08 Base)					
		<u>New York - Rutland Travel Time</u>					
		<u>5:10</u>	<u>5:25</u>	<u>5:40</u>	<u>5:55</u>	<u>6:10</u>	
(FY08 Base)	<u>On-Time Performance</u>	33%	+\$0.07	0	-\$0.07	-\$0.14	-\$0.20
		50%	+\$0.21	+\$0.13	+\$0.06	-\$0.01	-\$0.08
		60%	+\$0.34	+\$0.26	+\$0.18	+\$0.11	+\$0.03
		70%	+\$0.44	+\$0.36	+\$0.28	+\$0.20	+\$0.12
		80%	+\$0.50	+\$0.42	+\$0.33	+\$0.25	+\$0.18

Vermonter Ticket Revenue Impacts from Travel Time and OTP Improvements (prepared 12/18/07)

		(FY08 Base)					
		<u>Washington - St. Albans Travel Time</u>					
		<u>13:10</u>	<u>13:25</u>	<u>13:40</u>	<u>13:55</u>	<u>14:10</u>	
(FY08 Base)	<u>On-Time Performance</u>	59%	+\$0.08	0	-\$0.08	-\$0.15	-\$0.23
		65%	+\$0.18	+\$0.09	+\$0.01	-\$0.06	-\$0.14
		70%	+\$0.24	+\$0.15	+\$0.07	-\$0.01	-\$0.08
		75%	+\$0.28	+\$0.20	+\$0.12	+\$0.04	-\$0.04
		80%	+\$0.32	+\$0.23	+\$0.15	+\$0.07	-\$0.01

Albany-Niagara Falls-Toronto Ticket Revenue Impacts from Travel Time and OTP Improvements (prepared 12/18/07)

		(FY08 Base)					
		<u>New York - Niagara Falls Travel Time</u>					
		<u>8:50</u>	<u>9:05</u>	<u>9:20</u>	<u>9:35</u>	<u>9:50</u>	
(FY08 Base)	<u>On-Time Performance</u>	50%	+\$0.75	0	-\$0.71	-\$1.38	-\$2.02
		60%	+\$1.85	+\$1.06	+\$0.31	-\$0.41	-\$1.08
		70%	+\$4.64	+\$3.73	+\$2.87	+\$2.05	+\$1.28
		75%	+\$5.39	+\$4.45	+\$3.56	+\$2.72	+\$1.92
		80%	+\$5.88	+\$4.92	+\$4.02	+\$3.15	+\$2.33

**Downeaster Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>Boston - Portland Travel Time</u>					
		<u>2:15</u>	<u>2:30</u>	<u>2:45</u>	<u>3:00</u>	<u>3:15</u>	
(FY08 Base)	<u>On-Time Performance</u>	78%	+\$0.56	0	-\$0.52	-\$0.99	-\$1.42
		80%	+\$0.61	+\$0.04	-\$0.48	-\$0.95	-\$1.38
		85%	+\$0.70	+\$0.12	-\$0.40	-\$0.88	-\$1.32
		90%	+\$0.76	+\$0.17	-\$0.36	-\$0.84	-\$1.28

**New Haven-Springfield Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>Washington - Springfield Travel Time</u>					
		<u>7:00</u>	<u>7:15</u>	<u>7:30</u>	<u>7:45</u>	<u>8:00</u>	
(FY08 Base)	<u>On-Time Performance</u>	76%	+\$0.69	0	-\$0.64	-\$1.24	-\$1.79
		80%	+\$0.86	+\$0.16	-\$0.50	-\$1.10	-\$1.66
		85%	+\$1.00	+\$0.29	-\$0.37	-\$0.99	-\$1.55
		90%	+\$1.09	+\$0.37	-\$0.30	-\$0.91	-\$1.48

**Keystone Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>New York - Harrisburg Travel Time</u>					
		<u>3:10</u>	<u>3:25</u>	<u>3:40</u>	<u>3:55</u>	<u>4:10</u>	
(FY08 Base)	<u>On-Time Performance</u>	85%	+\$1.76	0	-\$1.61	-\$3.09	-\$4.45
		90%	+\$1.97	+\$0.19	-\$1.44	-\$2.93	-\$4.30
		95%	+\$2.10	+\$0.32	-\$1.32	-\$2.82	-\$4.20

**Empire (NYP-ALB) Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>New York - Albany Travel Time</u>					
		<u>2:15</u>	<u>2:30</u>	<u>2:45</u>	<u>3:00</u>	<u>3:15</u>	
(FY08 Base)	<u>On-Time Performance</u>	62%	+\$4.44	0	-\$4.03	-\$7.68	-\$11.00
		65%	+\$6.55	+\$1.91	-\$2.30	-\$6.12	-\$9.59
		70%	+\$9.15	+\$4.26	-\$0.18	-\$4.21	-\$7.86
		75%	+\$10.87	+\$5.82	+\$1.23	-\$2.94	-\$6.71
		80%	+\$12.00	+\$6.84	+\$2.15	-\$2.11	-\$5.96

**Chicago-St. Louis Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>Chicago - St. Louis Travel Time</u>					
		<u>5:20</u>	<u>5:35</u>	<u>5:50</u>	<u>6:05</u>	<u>6:20</u>	
(FY08 Base)	<u>On-Time Performance</u>	43%	+\$0.56	0	-\$0.53	-\$1.02	-\$1.49
		55%	+\$1.24	+\$0.65	+\$0.09	-\$0.44	-\$0.95
		65%	+\$2.50	+\$1.84	+\$1.21	+\$0.62	+\$0.05
		75%	+\$3.57	+\$2.85	+\$2.17	+\$1.52	+\$0.91
		80%	+\$3.85	+\$3.12	+\$2.42	+\$1.76	+\$1.13

**Hiawatha Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>Chicago - Milwaukee Travel Time</u>					
		<u>1:15</u>	<u>1:30</u>	<u>1:45</u>	<u>2:00</u>	<u>2:15</u>	
(FY08 Base)	<u>On-Time Performance</u>	89%	+\$1.53	0	-\$1.35	-\$2.54	-\$3.58
		90%	+\$1.55	+\$0.02	-\$1.34	-\$2.53	-\$3.57
		95%	+\$1.62	+\$0.08	-\$1.28	-\$2.48	-\$3.53

**Wolverine Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Chicago - Pontiac Travel Time					
		<u>6:15</u>	<u>6:30</u>	<u>6:45</u>	<u>7:00</u>	<u>7:15</u>	
(FY08 Base)	<u>On-Time Performance</u>	34%	+\$1.13	0	-\$1.06	-\$2.04	-\$2.96
		50%	+\$2.26	+\$1.06	-\$0.07	-\$1.12	-\$2.10
		60%	+\$3.38	+\$2.10	+\$0.91	-\$0.21	-\$1.25
		70%	+\$6.20	+\$4.74	+\$3.37	+\$2.10	+\$0.91
		80%	+\$7.46	+\$5.92	+\$4.47	+\$3.13	+\$1.87

**Chicago-Carbondale (Illini/Saluki) Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Chicago - Carbondale Travel Time					
		<u>5:15</u>	<u>5:30</u>	<u>5:45</u>	<u>6:00</u>	<u>6:15</u>	
(FY08 Base)	<u>On-Time Performance</u>	69%	+\$0.39	0	-\$0.37	-\$0.72	-\$1.05
		75%	+\$0.69	+\$0.29	-\$0.10	-\$0.46	-\$0.80
		80%	+\$0.85	+\$0.44	+\$0.05	-\$0.32	-\$0.68
		85%	+\$0.96	+\$0.54	+\$0.14	-\$0.24	-\$0.59

**Chicago-Quincy (IL Zephyr/Carl Sandburg) Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Chicago - Quincy Travel Time					
		<u>4:10</u>	<u>4:25</u>	<u>4:40</u>	<u>4:55</u>	<u>5:10</u>	
(FY08 Base)	<u>On-Time Performance</u>	65%	+\$0.31	0	-\$0.29	-\$0.57	-\$0.82
		70%	+\$0.57	+\$0.24	-\$0.06	-\$0.35	-\$0.62
		75%	+\$0.74	+\$0.40	+\$0.09	-\$0.21	-\$0.49
		80%	+\$0.86	+\$0.51	+\$0.19	-\$0.12	-\$0.40
		85%	+\$0.93	+\$0.58	+\$0.25	-\$0.06	-\$0.35

**Heartland Flyer Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Oklahoma City - Fort Worth Travel Time					
		<u>4:00</u>	<u>4:15</u>	<u>4:30</u>	<u>4:45</u>	<u>5:00</u>	
(FY08 Base)	<u>On-Time Performance</u>	29%	+\$0.04	0	-\$0.04	-\$0.08	-\$0.11
		45%	+\$0.09	+\$0.05	+\$0.01	-\$0.03	-\$0.07
		60%	+\$0.20	+\$0.15	+\$0.11	+\$0.07	+\$0.03
		70%	+\$0.25	+\$0.21	+\$0.16	+\$0.12	+\$0.08
		80%	+\$0.29	+\$0.24	+\$0.19	+\$0.15	+\$0.10

**Pacific Surfliner Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Los Angeles - San Diego Travel Time					
		<u>2:30</u>	<u>2:45</u>	<u>3:00</u>	<u>3:15</u>	<u>3:30</u>	
(FY08 Base)	<u>On-Time Performance</u>	75%	+\$5.83	0	-\$5.09	-\$9.53	-\$13.41
		80%	+\$7.04	+\$1.09	-\$4.11	-\$8.65	-\$12.62
		85%	+\$7.73	+\$1.71	-\$3.55	-\$8.15	-\$12.17
		90%	+\$8.12	+\$2.05	-\$3.24	-\$7.87	-\$11.91

**Cascades Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Seattle - Portland Travel Time					
		<u>3:20</u>	<u>3:35</u>	<u>3:50</u>	<u>4:05</u>	<u>4:20</u>	
(FY08 Base)	<u>On-Time Performance</u>	60%	+\$1.91	0	-\$1.69	-\$3.18	-\$4.50
		65%	+\$4.34	+\$2.20	+\$0.31	-\$1.35	-\$2.82
		70%	+\$5.93	+\$3.64	+\$1.63	-\$0.15	-\$1.73
		75%	+\$6.89	+\$4.52	+\$2.42	+\$0.58	-\$1.06
		80%	+\$7.46	+\$5.03	+\$2.89	+\$1.00	-\$0.67

**Capitol Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Oakland - Sacramento Travel Time					
		<u>1:45</u>	<u>2:00</u>	<u>2:15</u>	<u>2:30</u>	<u>2:45</u>	
(FY08 Base)	<u>On-Time Performance</u>	75%	+\$3.48	0	-\$2.90	-\$5.32	-\$7.34
		80%	+\$3.97	+\$0.42	-\$2.54	-\$5.01	-\$7.08
		85%	+\$4.26	+\$0.66	-\$2.34	-\$4.84	-\$6.93
		90%	+\$4.42	+\$0.79	-\$2.22	-\$4.74	-\$6.84

**San Joaquins Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) Oakland - Bakersfield Travel Time					
		<u>5:55</u>	<u>6:10</u>	<u>6:25</u>	<u>6:40</u>	<u>6:55</u>	
(FY08 Base)	<u>On-Time Performance</u>	68%	+\$1.71	0	-\$1.52	-\$2.87	-\$4.09
		75%	+\$3.48	+\$1.66	+\$0.05	-\$1.39	-\$2.68
		80%	+\$4.14	+\$2.28	+\$0.63	-\$0.84	-\$2.15
		85%	+\$4.51	+\$2.64	+\$0.97	-\$0.52	-\$1.86

**Adirondack Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) New York - Montreal Travel Time					
		<u>10:35</u>	<u>10:50</u>	<u>11:05</u>	<u>11:20</u>	<u>11:35</u>	
(FY08 Base)	<u>On-Time Performance</u>	11%	+\$0.11	0	-\$0.11	-\$0.21	-\$0.31
		30%	+\$0.13	+\$0.02	-\$0.09	-\$0.19	-\$0.29
		50%	+\$0.47	+\$0.35	+\$0.24	+\$0.13	+\$0.02
		65%	+\$0.90	+\$0.78	+\$0.66	+\$0.54	+\$0.42
		80%	+\$1.14	+\$1.01	+\$0.89	+\$0.76	+\$0.64

**Blue Water Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>Chicago - Port Huron Travel Time</u>					
		<u>6:45</u>	<u>7:00</u>	<u>7:15</u>	<u>7:30</u>	<u>7:45</u>	
(FY08 Base)	<u>On-Time Performance</u>	33%	+\$0.27	0	-\$0.25	-\$0.49	-\$0.71
		50%	+\$0.50	+\$0.21	-\$0.06	-\$0.31	-\$0.54
		60%	+\$0.72	+\$0.42	+\$0.14	-\$0.13	-\$0.37
		70%	+\$0.89	+\$0.58	+\$0.28	+\$0.01	-\$0.25
		80%	+\$0.99	+\$0.67	+\$0.37	+\$0.09	-\$0.17

**Washington-Newport News Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>New York - Richmond Travel Time</u>					
		<u>6:05</u>	<u>6:20</u>	<u>6:35</u>	<u>6:50</u>	<u>7:05</u>	
(FY08 Base)	<u>On-Time Performance</u>	73%	+\$1.12	0	-\$1.06	-\$2.05	-\$2.99
		80%	+\$1.87	+\$0.71	-\$0.38	-\$1.41	-\$2.38
		85%	+\$2.18	+\$1.01	-\$0.09	-\$1.14	-\$2.12
		90%	+\$2.39	+\$1.21	+\$0.09	-\$0.96	-\$1.96

**Hoosier State Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>Chicago - Indianapolis Travel Time</u>					
		<u>4:50</u>	<u>5:05</u>	<u>5:20</u>	<u>5:35</u>	<u>5:50</u>	
(FY08 Base)	<u>On-Time Performance</u>	43%	+\$0.02	0	-\$0.02	-\$0.03	-\$0.05
		55%	+\$0.05	+\$0.03	+\$0.01	-\$0.00	-\$0.02
		65%	+\$0.08	+\$0.06	+\$0.04	+\$0.02	+\$0.00
		75%	+\$0.10	+\$0.08	+\$0.06	+\$0.04	+\$0.02
		80%	+\$0.10	+\$0.08	+\$0.06	+\$0.04	+\$0.03

**Kansas City-St. Louis Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>St. Louis - Kansas City Travel Time</u>					
		<u>5:25</u>	<u>5:40</u>	<u>5:55</u>	<u>6:10</u>	<u>6:25</u>	
(FY08 Base)	<u>On-Time Performance</u>	28%	+\$0.12	0	-\$0.12	-\$0.23	-\$0.34
		45%	+\$0.23	+\$0.10	-\$0.03	-\$0.14	-\$0.25
		60%	+\$0.44	+\$0.30	+\$0.16	+\$0.04	-\$0.08
		70%	+\$0.82	+\$0.65	+\$0.50	+\$0.35	+\$0.22
		80%	+\$0.98	+\$0.81	+\$0.65	+\$0.49	+\$0.35

**Pennsylvanian Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>New York - Pittsburgh Travel Time</u>					
		<u>9:10</u>	<u>9:25</u>	<u>9:40</u>	<u>9:55</u>	<u>10:10</u>	
(FY08 Base)	<u>On-Time Performance</u>	72%	+\$0.15	0	-\$0.14	-\$0.28	-\$0.42
		75%	+\$0.19	+\$0.05	-\$0.10	-\$0.24	-\$0.37
		80%	+\$0.25	+\$0.11	-\$0.04	-\$0.18	-\$0.32
		85%	+\$0.30	+\$0.15	+\$0.00	-\$0.14	-\$0.28

**Pere Marquette Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base) <u>Chicago - Grand Rapids Travel Time</u>					
		<u>3:45</u>	<u>4:00</u>	<u>4:15</u>	<u>4:30</u>	<u>4:45</u>	
(FY08 Base)	<u>On-Time Performance</u>	23%	+\$0.23	0	-\$0.22	-\$0.42	-\$0.61
		40%	+\$0.30	+\$0.06	-\$0.16	-\$0.37	-\$0.56
		55%	+\$0.52	+\$0.26	+\$0.03	-\$0.19	-\$0.40
		70%	+\$0.73	+\$0.46	+\$0.21	-\$0.02	-\$0.24
		80%	+\$0.81	+\$0.53	+\$0.27	+\$0.03	-\$0.19

**Carolinian Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>New York - Charlotte Travel Time</u>					
		<u>13:00</u>	<u>13:15</u>	<u>13:30</u>	<u>13:45</u>	<u>14:00</u>	
(FY08 Base)	<u>On-Time Performance</u>	26%	+\$0.21	0	-\$0.21	-\$0.42	-\$0.62
		40%	+\$0.52	+\$0.30	+\$0.08	-\$0.13	-\$0.34
		55%	+\$1.49	+\$1.26	+\$1.03	+\$0.80	+\$0.58
		70%	+\$2.45	+\$2.20	+\$1.96	+\$1.72	+\$1.48
		80%	+\$2.79	+\$2.53	+\$2.29	+\$2.04	+\$1.80

**Piedmont Ticket Revenue Impacts from
Travel Time and OTP Improvements
(prepared 12/18/07)**

		(FY08 Base)					
		<u>Raleigh - Charlotte Travel Time</u>					
		<u>2:55</u>	<u>3:10</u>	<u>3:25</u>	<u>3:40</u>	<u>3:55</u>	
(FY08 Base)	<u>On-Time Performance</u>	74%	+\$0.07	0	-\$0.07	-\$0.13	-\$0.19
		80%	+\$0.10	+\$0.02	-\$0.05	-\$0.11	-\$0.17
		85%	+\$0.11	+\$0.04	-\$0.04	-\$0.10	-\$0.16
		90%	+\$0.12	+\$0.04	-\$0.03	-\$0.09	-\$0.15

Long Distance

Auto Train Ticket Revenue Impacts (millions) from Changes in Travel Time and OTP

		(FY07 Base*)				
		<u>Lorton-Sanford Travel Time</u>				
		<u>17:30</u>	<u>18:00</u>	<u>18:30</u>	<u>19:00</u>	<u>19:30</u>
(FY07 Base*)	52%		-\$1.30	-\$2.69	-\$4.10	-\$5.54
<u>Route OTP</u>	60%	+\$2.21	+\$0.85	-\$0.59	-\$2.05	-\$3.56
	70%	+\$4.31	+\$2.90	+\$1.41	-\$0.12	-\$1.68
	80%	+\$5.52	+\$4.08	+\$2.56	+\$1.00	-\$0.59
	90%	+\$6.14	+\$4.69	+\$3.14	+\$1.58	-\$0.03

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

California Zephyr Ticket Revenue Impacts (millions) from Changes in Travel Time and OTP

		(FY07 Base*)				
		<u>Chicago-Emeryville Travel Time**</u>				
		<u>52:37</u>	<u>53:07</u>	<u>53:37</u>	<u>54:07</u>	<u>54:37</u>
(FY07 Base*)	10%		-\$0.40	-\$1.03	-\$1.49	-\$1.93
	30%	+\$0.14	-\$0.26	-\$0.89	-\$1.35	-\$1.79
	40%	+\$0.81	+\$0.40	-\$0.25	-\$0.71	-\$1.16
<u>Route OTP</u>	50%	+\$2.35	+\$1.92	+\$1.25	+\$0.76	+\$0.30
	60%	+\$4.35	+\$3.90	+\$3.19	+\$2.68	+\$2.19
	70%	+\$5.87	+\$5.40	+\$4.67	+\$4.14	+\$3.63
	80%	+\$6.75	+\$6.27	+\$5.53	+\$4.99	+\$4.47
	90%	+\$7.20	+\$6.71	+\$5.96	+\$5.42	+\$4.89

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between Chicago and Emeryville

** same time changes are assumed in parallel corridor trains (Chicago-Galesburg)

**Capitol Limited Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Washington-Chicago Travel Time**</u>			
		<u>17:30</u>	<u>18:00</u>	<u>18:30</u>	<u>19:00</u>	<u>19:30</u>
<u>Route OTP</u>	(FY07 Base*) 15%		-\$0.28	-\$0.56	-\$0.83	-\$1.10
	30%	+\$0.06	-\$0.23	-\$0.50	-\$0.78	-\$1.04
	40%	+\$0.33	+\$0.04	-\$0.24	-\$0.52	-\$0.79
	50%	+\$0.95	+\$0.65	+\$0.36	+\$0.07	-\$0.22
	60%	+\$1.76	+\$1.44	+\$1.13	+\$0.83	+\$0.53
	70%	+\$2.38	+\$2.05	+\$1.73	+\$1.41	+\$1.10
	80%	+\$2.73	+\$2.40	+\$2.07	+\$1.75	+\$1.43
	90%	+\$2.92	+\$2.58	+\$2.24	+\$1.92	+\$1.60

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between Washington and Chicago

**City of New Orleans Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Chicago-New Orleans Travel Time**</u>			
		<u>19:23</u>	<u>19:53</u>	<u>20:23</u>	<u>20:53</u>	<u>21:23</u>
<u>Route OTP</u>	(FY07 Base*) 80%	-\$0.11	-\$0.37	-\$0.63	-\$0.88	-\$1.13
	87%		-\$0.26	-\$0.52	-\$0.78	-\$1.03
	90%	+\$0.03	-\$0.23	-\$0.49	-\$0.75	-\$1.00

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between Chicago and Seattle/Portland

** same time changes assumed for parallel corridor trains (Chicago-Carbondale)

**Cardinal Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>New York-Chicago Travel Time**</u>			
		<u>24:10</u>	<u>24:40</u>	<u>25:10</u>	<u>25:40</u>	<u>26:10</u>
(FY07 Base*)	38%		-\$0.09	-\$0.16	-\$0.26	-\$0.37
<u>Route OTP</u>	50%	+\$0.22	+\$0.13	+\$0.05	-\$0.04	-\$0.16
	60%	+\$0.48	+\$0.38	+\$0.30	+\$0.20	+\$0.07
	70%	+\$0.67	+\$0.57	+\$0.49	+\$0.38	+\$0.26
	80%	+\$0.78	+\$0.68	+\$0.60	+\$0.49	+\$0.36
	90%	+\$0.84	+\$0.74	+\$0.65	+\$0.55	+\$0.41

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** all travel time changes applied to times west of Washington; New York-Wash. times are fixed

** same time changes assumed for parallel corridor trains (Hoosier State)

**Coast Starlight Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Seattle-Los Angeles Travel Time**</u>			
		<u>35:22</u>	<u>35:52</u>	<u>36:22</u>	<u>36:52</u>	<u>37:22</u>
(FY07 Base*)	20%		-\$0.54	-\$1.12	-\$1.70	-\$2.26
<u>Route OTP</u>	30%	+\$0.11	-\$0.43	-\$1.02	-\$1.60	-\$2.16
	40%	+\$0.62	+\$0.08	-\$0.52	-\$1.11	-\$1.69
	50%	+\$1.82	+\$1.25	+\$0.62	+\$0.01	-\$0.59
	60%	+\$3.36	+\$2.77	+\$2.11	+\$1.46	+\$0.83
	70%	+\$4.54	+\$3.92	+\$3.24	+\$2.57	+\$1.92
	80%	+\$5.22	+\$4.59	+\$3.89	+\$3.21	+\$2.54
	90%	+\$5.57	+\$4.93	+\$4.23	+\$3.54	+\$2.86

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** all travel time changes applied to times between Eugene, OR and San Luis Obispo, CA

**Crescent Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>New York-New Orleans Travel Time**</u>			
		<u>25:51</u>	<u>26:21</u>	<u>26:51</u>	<u>27:21</u>	<u>27:51</u>
(FY07 Base*)	43%		-\$0.29	-\$0.57	-\$0.85	-\$1.13
<u>Route OTP</u>	50%	+\$0.77	+\$0.47	+\$0.18	-\$0.11	-\$0.40
	60%	+\$2.08	+\$1.76	+\$1.46	+\$1.15	+\$0.85
	70%	+\$3.07	+\$2.75	+\$2.43	+\$2.11	+\$1.80
	80%	+\$3.64	+\$3.31	+\$2.99	+\$2.67	+\$2.35
	90%	+\$3.94	+\$3.60	+\$3.27	+\$2.95	+\$2.63

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** all travel time changes applied to times south of Washington; New York-Wash. times are fixed

**Empire Builder Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Chicago-Portland Travel Time**</u>			
		<u>45:40</u>	<u>46:10</u>	<u>46:40</u>	<u>47:10</u>	<u>47:40</u>
(FY07 Base*)	75%		-\$0.49	-\$2.44	-\$2.92	-\$3.20
<u>Route OTP</u>	80%	+\$0.46	-\$0.03	-\$2.00	-\$2.49	-\$2.77
	90%	+\$1.02	+\$0.52	-\$1.47	-\$1.96	-\$2.25

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between Chicago and Seattle/Portland

**Lake Shore Limited Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>New York-Chicago Travel Time**</u>			
		<u>19:22</u>	<u>19:52</u>	<u>20:22</u>	<u>20:52</u>	<u>21:22</u>
(FY07 Base*)	29%		-\$0.54	-\$1.02	-\$1.27	-\$1.72
	40%	+\$0.40	-\$0.16	-\$0.65	-\$0.90	-\$1.36
	<u>Route OTP</u>					
	50%	+\$1.27	+\$0.69	+\$0.18	-\$0.08	-\$0.56
	60%	+\$2.41	+\$1.79	+\$1.26	+\$0.98	+\$0.48
	70%	+\$3.28	+\$2.63	+\$2.07	+\$1.79	+\$1.27
	80%	+\$3.78	+\$3.11	+\$2.54	+\$2.25	+\$1.72
	90%	+\$4.03	+\$3.36	+\$2.79	+\$2.49	+\$1.96

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** all travel time changes applied to times west of Albany; New York-Albany times are fixed

** includes connect losses on Albany-Boston stub train

**Silver Service Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>New York-Miami Travel Time (Meteor)**</u>			
		<u>28:27</u>	<u>28:57</u>	<u>29:27</u>	<u>29:57</u>	<u>30:27</u>
(FY07 Base*)	33%		-\$1.01	-\$2.26	-\$3.54	-\$4.86
	40%	+\$0.96	-\$0.07	-\$1.34	-\$2.64	-\$3.97
	<u>Average OTP (3 routes)</u>					
	50%	+\$3.71	+\$2.64	+\$1.32	-\$0.03	-\$1.42
	60%	+\$7.29	+\$6.16	+\$4.78	+\$3.36	+\$1.91
	70%	+\$10.01	+\$8.84	+\$7.41	+\$5.94	+\$4.43
	80%	+\$11.58	+\$10.39	+\$8.93	+\$7.43	+\$5.89
	90%	+\$12.38	+\$11.18	+\$9.70	+\$8.19	+\$6.64

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

* combined impacts to Silver Star, Silver Meteor, and Palmetto

** all travel time changes applied to times south of Washington; New York-Wash. times are fixed

**Southwest Chief Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Chicago-Los Angeles Travel Time**</u>			
		<u>42:47</u>	<u>43:17</u>	<u>43:47</u>	<u>44:17</u>	<u>44:47</u>
(FY07 Base*)		66%	-\$0.12	-\$0.37	-\$0.66	-\$0.87
	<u>Route OTP</u>	70%	+\$0.47	+\$0.35	+\$0.10	-\$0.19
		80%	+\$1.27	+\$1.14	+\$0.89	+\$0.59
		90%	+\$1.68	+\$1.55	+\$1.30	+\$0.99

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between Chicago and Los Angeles

** same time changes are assumed in parallel corridor trains (Chicago-Galesburg)

**Sunset Limited Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>New Orleans-Los Angeles Travel Time**</u>			
		<u>47:52</u>	<u>48:22</u>	<u>48:52</u>	<u>49:22</u>	<u>49:52</u>
(FY07 Base*)		18%	-\$0.15	-\$0.21	-\$0.31	-\$0.42
		30%	+\$0.03	-\$0.12	-\$0.18	-\$0.28
		40%	+\$0.18	+\$0.03	-\$0.04	-\$0.14
	<u>Route OTP</u>	50%	+\$0.52	+\$0.36	+\$0.30	+\$0.19
		60%	+\$0.96	+\$0.80	+\$0.73	+\$0.61
		70%	+\$1.29	+\$1.13	+\$1.06	+\$0.94
		80%	+\$1.48	+\$1.32	+\$1.24	+\$1.13
		90%	+\$1.58	+\$1.42	+\$1.34	+\$1.22

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** travel time changes applied to entire route between New Orleans and Los Angeles

** includes losses on Texas Eagle thru cars at San Antonio

**Texas Eagle Ticket Revenue Impacts (millions)
from Changes in Travel Time and OTP**

		(FY07 Base*)	<u>Chicago-San Antonio Travel Time*</u>			
		<u>31:54</u>	<u>32:24</u>	<u>32:54</u>	<u>33:24</u>	<u>33:54</u>
(FY07 Base*)	33%		-\$0.24	-\$0.31	-\$0.49	-\$0.84
	40%	+\$0.24	-\$0.00	-\$0.08	-\$0.25	-\$0.61
<u>Route OTP</u>	50%	+\$0.94	+\$0.69	+\$0.61	+\$0.43	+\$0.07
	60%	+\$1.85	+\$1.59	+\$1.50	+\$1.32	+\$0.94
	70%	+\$2.54	+\$2.28	+\$2.18	+\$2.00	+\$1.61
	80%	+\$2.94	+\$2.67	+\$2.57	+\$2.39	+\$2.00
	90%	+\$3.14	+\$2.87	+\$2.77	+\$2.59	+\$2.19

* Spring 2007 timetable, fares, year-to-date OTP, and FY07 annual forecast (prepared 6/14/07)

** all travel time changes applied between Chicago and San Antonio

** same time changes are assumed in parallel corridor trains (Chicago-St. Louis)

** includes losses on Texas Eagle thru cars at San Antonio

Appendix III - Major Contributors

Major Contributors to Report E-09-02

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