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MEMO

TO: New Hampshire Department of Transportation,
Bureau of Turnpikes

DATE: June 24, 2011

FROM: Jacobs Engineering Group, Inc.

SUBJECT: New Hampshire Traffic and Revenue Update

FINAL MEMORANDUM

Introduction

Jacobs had developed traffic and revenue forecasts in September 2009 for the November 6, 2009 New Hampshire Turnpike System Traffic and Revenue Study and subsequent Bond Sale. In May 2010 and March 2011 we updated these forecasts. Now that more months of data are available, we are updating our forecasts once again for use in the upcoming planned Revenue Bond refinancing by the NHDOT. This memorandum presents our latest updated traffic and revenue forecasts for Fiscal Year (FY) 2011 through FY 2019. Please note that this update assumes *no future toll increases*.

Update of the Traffic and Revenue Model

Jacobs updated the Traffic and Revenue model by first estimating FY 2011 T&R and E-ZPass share (both based on 11 months of actual monthly data) and average toll rates, which are dependent on the percent of traffic at each location that pays using the discounted NH E-ZPass transponder. Jacobs made several other changes to the model as detailed below.

Background Growth

In the 2009 Bond Sale work, we correlated historical car toll transaction growth to gross domestic product (GDP) and historical truck growth to increases in the U.S. total industrial production (IPI), then dampened growth to account for an expected reduction in the growth of VMT (vehicle-miles traveled) in the long term. As discussed in the Jacobs study, traffic growth is not expected to be at the high rate it was through the mid 2000s due to such factors as Baby Boomers retiring and driving less and new technology making road travel less necessary.

For each updated forecast, we kept the same correlation and dampening factors but updated projections of GDP and IPI as estimated by industry experts in the latest available *Blue Chip Economic Forecasts*. The fiscal year projections of GDP and IPI used in the May 2010 and March 2011 updates and the current update are compared in the table below. As seen in the table, the Blue Chip forecasters have reduced their growth projections in the near term but are more optimistic in the long term.

Table 2
Revisions to GDP and IPI Growth Rates

		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY2018- FY2019
GDP	Used in May 2010 Estimates*	3.1%	3.3%	3.3%	3.1%	2.8%	2.7%	2.6%	2.6%
	Used in March 2011 Estimates**	3.1%	3.3%	3.1%	2.9%	2.8%	2.7%	2.6%	2.6%
	June 2011 Update***	2.7%	2.9%	3.2%	3.2%	3.0%	2.9%	2.8%	2.7%
IPI	Used in May 2010 Estimates*	5.2%	4.3%	3.8%	3.4%	3.1%	2.9%	2.9%	2.9%
	Used in March 2011 Estimates**	4.1%	4.2%	3.8%	3.3%	3.1%	3.0%	2.9%	2.9%
	June 2011 Update***	5.7%	4.1%	4.0%	3.7%	3.4%	3.3%	3.2%	3.1%

*March 2010 *Blue Chip* used for long-term forecasts; April 2010 *Blue Chip* used for short-term

**October 2010 *Blue Chip* used for long-term forecasts; January 2011 *Blue Chip* used for short-term

***March 2011 *Blue Chip* used for long-term forecasts; June 2011 *Blue Chip* used for short-term

Since eleven months of FY 2011 data are available, plus weekly counts through June 19th, we overrode the FY 2011 growth estimates derived from the GDP and IPI growth in Table 2 with those shown in the “June 2011 Update” columns of Table 3. These are the growth rates when we compare this FY 2011 traffic to the same period last year. The table also shows the growth rates used in our March 2011 Update for comparison. What can be interpreted from this table is there was a reduction in the growth rate of passenger cars over the winter and spring of FY 2011 compared to the spring of FY 2010.

Table 3
Actual FY 2011 Traffic Growth over FY 2010

Location	Car Growth		Truck Growth	
	March 2011 Update*	June 2011 Update**	March 2011 Update*	June 2011 Update**
Hooksett Barrier	2.7%	0.6%	1.8%	0.9%
Hooksett Ramp	4.3%	2.0%	8.1%	2.4%
Bedford Barrier	3.3%	1.7%	0.9%	2.2%
Bedford Road Ramp	3.2%	0.9%	-3.4%	2.1%
Exit 11 (Merrimack) Ramp	-0.3%	-0.6%	14.3%	16.0%
Exit 10 Merrimack Ind. Pk. Ramp	-1.4%	-2.0%	12.9%	17.8%
Hampton Barrier	2.0%	0.2%	4.2%	3.5%
Hampton Ramp	2.3%	0.2%	-0.8%	-0.3%
Dover Barrier	1.7%	-0.4%	-0.7%	-0.6%
Rochester Barrier	2.4%	0.3%	8.1%	3.1%

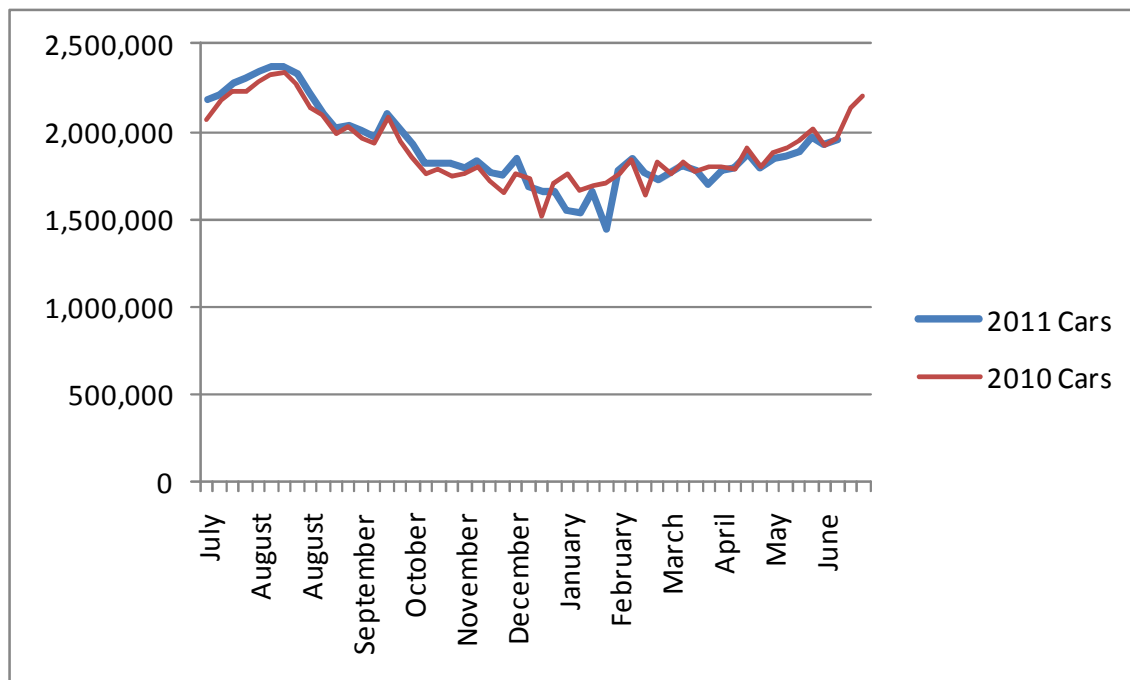
*July through November (5 months) compared to previous year

**Using July through May (11 months) monthly data, plus estimated June 2011 traffic, compared to previous year

Figure 1 further illustrates the lower traffic growth by comparing the year-over-year weekly total car traffic. The loss in traffic over the winter and spring can mainly be attributed to:

- Abnormally heavy snow this winter
- The spring 2011 spike in gas prices

Figure 1
FY 2011 Weekly Car Traffic Compared to FY 2010, Total Turnpike System



Since the March 2011 update relied on monthly data through November 2010, which showed an increase in traffic over FY 2010, the forecast for the rest of FY 2011 was based on those higher growth levels. However, since traffic growth was lower than expected, we re-ran our forecast models with this new information.

E-ZPass Market Share

FY 2011 E-ZPass market shares were updated in our traffic and revenue model to incorporate actual data. Table 4 compares our new estimates – based on 11 months of FY 2011 data – to our previous estimates of market share. The previous estimates were based on actual FY 2010 data and estimated growth in E-ZPass share from FY 2010 to FY 2011.

Table 4
FY 2011 Estimated E-ZPass Market Share Compared to Previous Estimates

	FY 2011 Projections, March 2011 Update*		FY 2011 Projections, June 2011 Update**		Differences	
	Cars	Trucks	Cars	Trucks	Cars	Trucks
CENTRAL TURNPIKE						
Hooksett Barrier	56.5%	78.2%	57.1%	79.0%	0.5%	0.8%
Hooksett Ramp	57.8%	80.7%	57.9%	79.8%	0.1%	-0.9%
Bedford Barrier	64.9%	82.5%	65.1%	82.3%	0.3%	-0.2%
Bedford Road Ramp	73.8%	73.1%	73.1%	71.2%	-0.7%	-1.9%
Exit 11 (Merrimack) Ramp	71.4%	66.7%	71.9%	69.4%	0.5%	2.8%
Exit 10 Merrimack Ind. Pk. Ramp	76.3%	78.4%	75.0%	77.7%	-1.3%	-0.7%
BLUE STAR TURNPIKE						
Hampton Barrier	58.4%	78.9%	60.6%	79.9%	2.2%	0.9%
Hampton Ramp	62.9%	83.5%	63.7%	83.5%	0.7%	0.0%
SPAULDING TURNPIKE						
Dover Barrier	63.3%	81.6%	64.2%	83.3%	0.9%	1.8%
Rochester Barrier	61.7%	75.4%	62.7%	79.0%	1.0%	3.5%

* Based on estimated growth from FY 2010

** Estimated from 11 months of actual FY 2011 data

Similar to our earlier models, for this update we expect E-ZPass market share to grow over the forecast period based on observing its growth over the past several years, with a maximum market share for each facility reached in FY 2016. In this update, we increased the maximum E-ZPass share for the Hampton Barrier from 80% to 85%, since the share paying electronically has grown more than expected at that location over the past two years, due to expansion of the E-ZPass system throughout the northeastern U.S.

Home (Discounted) E-ZPass

Since E-ZPass tags issued by the New Hampshire DOT (“Home”) are assessed a lower toll rate than other E-ZPass tags (“Away”), it was necessary to look at actual FY 2011 Home E-ZPass shares for cars and trucks to develop a revised share of discounted vehicles in the future year revenue forecasts. Table 5 compares the FY 2011 overall Home E-ZPass share – estimated based on 11 months of data – to FY 2010 data. As the table shows, the estimated share of E-ZPass that is Home E-ZPass did not change at most locations between FY 2010 and FY 2011, except at the Hooksett Barrier and the two Merrimack ramps, which had slight reductions in the Home E-ZPass share.

Table 5
FY 2011 New Estimates of HOME E-ZPass as a Percent of Total E-ZPass
For Total Car and Truck Traffic

Barriers/Ramps	FY 2010 ACTUAL	FY 2011 Estimates, June 2011 Update*
CENTRAL TURNPIKE		
Hooksett Barrier	74.3%	73.0%
Hooksett Ramp	88.2%	88.2%
Bedford Barrier	80.8%	80.8%
Bedford Road Ramp	90.6%	90.6%
Exit 11 (Merrimack) Ramp	90.1%	89.9%
Exit 10 Merrimack Ind. Pk. Ramp	71.6%	71.4%
BLUE STAR TURNPIKE		
Hampton Barrier	35.1%	35.1%
Hampton Ramp	71.9%	71.9%
SPAULDING TURNPIKE		
Dover Barrier	82.1%	82.1%
Rochester Barrier	81.6%	81.6%

*Estimate based on eleven months of actual FY 2011 data

Spaulding Turnpike Construction

Construction on the Spaulding Turnpike had the effect of reducing Rochester toll plaza traffic about 3.5 percent in FY 2010. FY 2011 data shows that traffic has been bouncing back; the majority of work that had reduced traffic at this location has been completed and truck traffic appears to have returned to normal levels. As in our March update, we assumed that car traffic would return to pre-construction levels by the end of FY 2012. With the assurance that current capacity will be maintained on the mainline Turnpike during construction on the Newington-Dover Spaulding Turnpike Expansion Project, we have only applied a minimal loss in traffic at the Dover toll plaza during fiscal years 2013 and 2014 (an estimated 2% loss spread over the two years, applied on top of the background growth), recovering by FY 2016. Our previous estimates had assumed a greater loss.

Open-Road Tolling (ORT)

The opening dates for Open Road Tolling at the Hooksett and Bedford Mainline Barrier have not changed since the March 2011 Update; it is still assumed that ORT at the Hooksett Barrier will begin May 31, 2013 and ORT at the Bedford Barrier will begin May 31, 2015. ORT will produce a small amount of revenue leakage, which we had previously estimated at 1%. However, because recent data at the Hampton Barrier (which now has ORT) indicates about 30% fewer “undefined” transactions, we have reduced the revenue leakage to 0.7% for this T&R forecast update.

Manchester Airport Access Road

The Manchester Airport Access Road is now expected to open on November 30, 2011, seven months earlier than scheduled. This free ramp to/from the Central Turnpike is expected to draw significant volumes from the Bedford Toll Barrier and the three Merrimack toll ramp locations. In our latest T&R models, we only changed the opening date of the MAAR, but not the share of traffic expected to divert from the toll locations.

Updated Forecasts

The aforementioned changes were applied to Jacobs' T&R model.

Toll Transaction Projections by Turnpike

The updated projections of annual toll transactions on the New Hampshire Turnpike System during the period FY 2010-2019 are presented in Table 6.

Table 6
Projected Annual Toll Transactions¹, FY 2010-2019 (in millions)

Fiscal Year	Central Turnpike	Blue Star Turnpike	Spaulding Turnpike	Total
2010 ²	51.3	34.7	20.9	107.0
2011 ³	51.7	34.9	20.9	107.6
2012 ⁴	51.2	35.2	21.3	107.7
2013 ⁵	46.4	35.6	21.3	103.3
2014	46.4	36.0	21.5	103.9
2015 ⁶	47.4	36.5	21.7	105.6
2016	48.3	36.9	22.2	107.4
2017	49.3	37.3	22.4	109.0
2018	50.2	37.7	22.6	110.6
2019	51.2	38.1	22.8	112.2

¹Projections do not include non-revenue vehicles or violators. No future toll increases are assumed.

²Actual

³Based on more than 11 months of data

⁴Planned opening for the Manchester Airport Access Road is Nov 30, 2011

⁵ORT begins at Hooksett Mainline Barrier May 31, 2013

⁶ORT begins at Bedford Mainline Barrier May 31, 2015

Note: Data will not necessarily add to totals because of rounding

For purposes of toll revenue projection, Jacobs removed non-revenue and violation (i.e., non-toll paying) transactions from the traffic and revenue analysis. Total toll transactions are projected to increase from 107.0 million toll-paying transactions in FY 2010 to 107.6 million in FY 2011, a gain of 0.6 percent. The number of transactions is expected to then increase only a minimal amount in FY 2012, followed by a loss of 4.0 percent in FY 2013 due to the opening of the toll-free interchange from the Central Turnpike to Route 3 via the Manchester Airport access road in mid-FY 2012. When this road opens, it is anticipated that there will be traffic diversion from the three Merrimack ramp toll plazas and the Bedford mainline toll plaza. A small traffic increase of 0.6% is estimated in FY 2014 after the ramp-up in usage of the toll free interchange. Between FY 2014 and 2019, total toll transactions are estimated to grow by an average annual rate of 1.5 percent. Between FY 2010 and FY 2019, the projected average annual growth rates in paid toll transactions for the Central, Blue Star and Spaulding Turnpikes are 0.0 percent, 1.0 percent and 1.0 percent respectively, with the overall Turnpike toll transaction average growth rate at 0.5 percent.

Toll Revenue Projections by Turnpike

The revised projections of annual toll revenue on the New Hampshire Turnpike System during the period FY 2010-2019 are presented in Table 7. Note that *no future toll increases* are assumed in these estimates.

Table 7
Projected Annual Gross Toll Revenues¹, FY 2010-2019 (in millions)

Fiscal Year	Central Turnpike	Blue Star Turnpike	Spaulding Turnpike	Total
2010 ²	\$ 43.8	\$ 57.6	\$ 14.5	\$ 115.8
2011 ³	\$ 44.1	\$ 57.9	\$ 14.4	\$ 116.5
2012 ⁴	\$ 43.8	\$ 58.4	\$ 14.6	\$ 116.7
2013 ⁵	\$ 40.7	\$ 59.0	\$ 14.5	\$ 114.2
2014	\$ 40.8	\$ 59.6	\$ 14.6	\$ 115.0
2015 ⁶	\$ 41.6	\$ 60.3	\$ 14.7	\$ 116.5
2016	\$ 42.2	\$ 60.9	\$ 15.0	\$ 118.1
2017	\$ 43.0	\$ 61.6	\$ 15.2	\$ 119.8
2018	\$ 43.8	\$ 62.3	\$ 15.3	\$ 121.4
2019	\$ 44.7	\$ 63.0	\$ 15.5	\$ 123.1

¹ Does not include administrative fees or violation revenue. No future toll increases are assumed.

² Actual

³ Based on more than 11 months of data

⁴ Planned opening for the Manchester Airport Access Road is Nov 30, 2011

⁵ ORT begins at Hooksett Mainline Barrier May 31, 2013

⁶ ORT begins at Bedford Mainline Barrier May 31, 2015

Note: Data will not necessarily add to totals because of rounding

Actual toll revenues for FY 2010, the year of the Hampton Barrier toll increase and Hampton ORT, were \$115.8 million. Revenue is expected to increase 0.6 percent from FY 2010 to FY 2011, based on more than eleven months of data, to \$116.5 million. It is estimated that revenue will increase by only 0.2 percent from FY 2011 to FY 2012 due to the opening of the toll-free interchange from the Central Turnpike to Route 3 via the Manchester Airport access road in November of that fiscal year. Revenues will then drop 2.1 percent to \$114.2 million in FY 2013 as usage of the toll-free interchange ramps up. This will be followed by an increase of 0.7 percent in FY 2014 to \$115.0 million. Between FY 2014 and FY 2019, total toll revenues are expected to increase annually by 1.4 percent, or about \$1.6 to \$1.7 million per year. Toll revenues on the Central, Blue Star and Spaulding Turnpikes are expected to grow at an average annual rate of 0.2 percent, 1.0 percent and 0.7 percent respectively between FY 2010 and FY 2019, and the overall Turnpike annual revenue growth rate is estimated to be 0.7 percent.

A detailed summary of the updated traffic, revenue, and E-ZPass forecasts by facility is presented in Table 8. Historical and updated projections of toll transaction and revenue for the entire New Hampshire Turnpike System over the period FY 1950 to 2019 are presented in Figure 2.

Figure 2
NH Turnpike System Historical and Projected Toll Transaction and Revenue Trends
FY 1950-2019

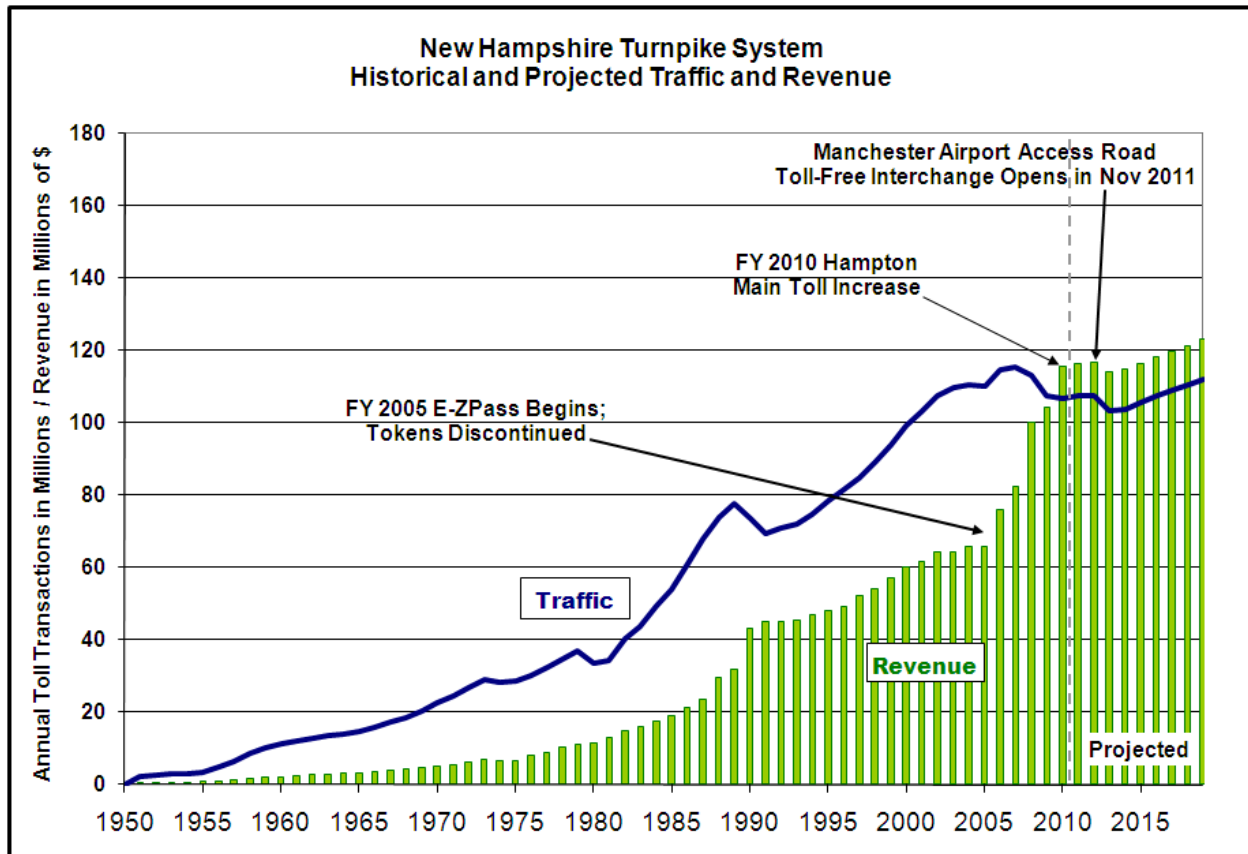


Table 8: Detailed Traffic and Revenue Projections, FY 2010-2019 (in millions)

Barriers/Ramps	Hampton ORT Begins			Airport Rd Opens			Airport Rd 2nd Yr			Hooksett ORT Begins			Bedford ORT Begins						
	2010 Actual	10-11 Projected Growth	2011 Projected	11-12 Projected Growth	2012 Projected	12-13 Projected Growth	2013 Projected	13-14 Projected Growth	2014 Projected	14-15 Projected Growth	2015 Projected	15-16 Projected Growth	2016 Projected	16-17 Projected Growth	2017 Projected	17-18 Projected Growth	2018 Projected	18-19 Projected Growth	2019 Projected
CENTRAL TURNPIKE																			
Hooksett Barrier	24.2	0.61%	24.4	1.72%	24.8	1.96%	25.3	1.45%	25.7	2.21%	26.2	2.11%	26.8	2.01%	27.3	1.91%	27.8	1.91%	28.4
Hooksett Ramp	2.3	1.99%	2.3	1.74%	2.4	2.02%	2.4	2.11%	2.5	2.21%	2.5	2.11%	2.6	2.01%	2.6	1.91%	2.7	1.91%	2.7
Bedford Barrier	17.1	1.70%	17.4	-2.03%	17.1	-13.14%	14.8	-0.39%	14.8	2.15%	15.1	1.45%	15.3	2.00%	15.6	1.90%	15.9	1.90%	16.2
Bedford Road Ramp	2.8	0.92%	2.8	-10.86%	2.5	-53.79%	1.2	-15.13%	1.0	2.20%	1.0	2.10%	1.0	2.00%	1.0	1.90%	1.1	1.90%	1.1
Exit 11 (Merrimack) Ramp	3.3	-0.29%	3.3	-7.67%	3.1	-38.19%	1.9	-7.18%	1.8	2.20%	1.8	2.10%	1.8	2.00%	1.9	1.90%	1.9	1.90%	2.0
Exit 10 Merrimack Industrial Park Ramp	1.5	-1.52%	1.5	-7.67%	1.4	-38.19%	0.9	-7.18%	0.8	2.20%	0.8	2.10%	0.8	2.00%	0.8	1.90%	0.9	1.90%	0.9
Subtotal	51.3	0.93%	51.7	-1.10%	51.2	-9.30%	46.4	-0.03%	46.4	2.19%	47.4	1.90%	48.3	2.00%	49.3	1.90%	50.2	1.90%	51.2
BLUE STAR TURNPIKE																			
Hampton Barrier	22.0	0.51%	22.1	0.93%	22.3	1.12%	22.6	1.20%	22.9	1.20%	23.1	1.20%	23.4	1.10%	23.7	1.10%	23.9	1.10%	24.2
Hampton Ramp	12.7	0.17%	12.8	0.92%	12.9	1.11%	13.0	1.20%	13.2	1.20%	13.3	1.20%	13.5	1.10%	13.6	1.10%	13.8	1.10%	13.9
Subtotal	34.8	0.39%	34.9	0.92%	35.2	1.12%	35.6	1.20%	36.0	1.20%	36.5	1.20%	36.9	1.10%	37.3	1.10%	37.7	1.10%	38.1
SPAULDING TURNPIKE																			
Dover Barrier	13.0	-0.39%	12.9	0.79%	13.0	-0.51%	12.9	0.58%	13.0	1.08%	13.2	3.04%	13.6	0.99%	13.7	0.98%	13.8	0.98%	14.0
Rochester Barrier	8.0	0.35%	8.0	3.20%	8.3	0.99%	8.3	1.08%	8.4	1.08%	8.5	0.99%	8.6	0.99%	8.7	0.98%	8.8	0.98%	8.9
Subtotal	20.9	-0.11%	20.9	1.72%	21.3	0.07%	21.3	0.78%	21.5	1.08%	21.7	2.23%	22.2	0.99%	22.4	0.98%	22.6	0.98%	22.8
TOTAL:	107.0	0.55%	107.6	0.10%	107.7	-4.04%	103.3	0.56%	103.9	1.62%	105.6	1.72%	107.4	1.48%	109.0	1.44%	110.6	1.44%	112.2

Barriers/Ramps	Hampton ORT Begins			Airport Rd Opens			Airport Rd 2nd Yr			Hooksett ORT Begins			Bedford ORT Begins						
	2010 Actual	10-11 Projected Growth	2011 Projected	11-12 Projected Growth	2012 Projected	12-13 Projected Growth	2013 Projected	13-14 Projected Growth	2014 Projected	14-15 Projected Growth	2015 Projected	15-16 Projected Growth	2016 Projected	16-17 Projected Growth	2017 Projected	17-18 Projected Growth	2018 Projected	18-19 Projected Growth	2019 Projected
CENTRAL TURNPIKE																			
Hooksett Barrier	\$23.4	0.47%	\$23.5	1.30%	\$23.8	1.60%	\$24.2	1.18%	\$24.5	1.99%	\$25.0	1.94%	\$25.5	2.00%	\$26.0	1.90%	\$26.5	1.90%	\$27.0
Hooksett Ramp	\$1.1	1.59%	\$1.2	1.39%	\$1.2	1.71%	\$1.2	1.85%	\$1.2	1.99%	\$1.2	1.92%	\$1.3	2.01%	\$1.3	1.91%	\$1.3	1.91%	\$1.3
Bedford Barrier	\$15.9	1.58%	\$16.2	-2.48%	\$15.8	-13.48%	\$13.6	-0.70%	\$13.5	1.83%	\$13.8	0.60%	\$13.9	2.00%	\$14.2	1.90%	\$14.4	1.90%	\$14.7
Bedford Road Ramp	\$1.2	1.16%	\$1.2	-11.61%	\$1.1	-54.11%	\$0.5	-15.58%	\$0.4	1.77%	\$0.4	1.79%	\$0.4	2.00%	\$0.4	1.90%	\$0.4	1.90%	\$0.4
Exit 11 (Merrimack) Ramp	\$1.4	0.09%	\$1.4	-8.42%	\$1.3	-38.61%	\$0.8	-7.66%	\$0.7	1.80%	\$0.7	1.83%	\$0.8	2.00%	\$0.8	1.90%	\$0.8	1.90%	\$0.8
Exit 10 Merrimack Industrial Park Ramp	\$0.7	0.28%	\$0.7	-8.13%	\$0.6	-38.47%	\$0.4	-7.53%	\$0.4	1.87%	\$0.4	1.81%	\$0.4	2.00%	\$0.4	1.90%	\$0.4	1.90%	\$0.4
Subtotal	\$43.8	0.90%	\$44.1	-0.89%	\$43.8	-6.94%	\$40.7	0.11%	\$40.8	1.93%	\$41.6	1.49%	\$42.2	2.00%	\$43.0	1.90%	\$43.8	1.90%	\$44.7
BLUE STAR TURNPIKE																			
Hampton Barrier	\$48.2	0.74%	\$48.5	0.85%	\$48.9	1.04%	\$49.4	1.12%	\$50.0	1.11%	\$50.5	1.11%	\$51.1	1.10%	\$51.7	1.10%	\$52.2	1.10%	\$52.8
Hampton Ramp	\$9.4	-0.34%	\$9.4	0.62%	\$9.5	0.84%	\$9.5	0.97%	\$9.6	1.00%	\$9.7	1.03%	\$9.8	1.10%	\$9.9	1.10%	\$10.0	1.10%	\$10.2
Subtotal	\$57.6	0.57%	\$57.9	0.81%	\$58.4	1.01%	\$59.0	1.09%	\$59.6	1.09%	\$60.3	1.10%	\$60.9	1.10%	\$61.6	1.10%	\$62.3	1.10%	\$63.0
SPAULDING TURNPIKE																			
Dover Barrier	\$9.0	-0.86%	\$8.9	0.40%	\$8.9	-0.84%	\$8.8	0.32%	\$8.9	0.87%	\$9.0	2.88%	\$9.2	0.99%	\$9.3	0.98%	\$9.4	0.98%	\$9.5
Rochester Barrier	\$5.5	0.06%	\$5.5	2.61%	\$5.7	0.49%	\$5.7	0.69%	\$5.7	0.76%	\$5.8	0.74%	\$5.8	0.99%	\$5.9	0.98%	\$5.9	0.98%	\$6.0
Subtotal	\$14.5	-0.51%	\$14.4	1.25%	\$14.6	-0.32%	\$14.5	0.47%	\$14.6	0.83%	\$14.7	2.04%	\$15.0	0.99%	\$15.2	0.98%	\$15.3	0.98%	\$15.5
TOTAL:	\$115.8	0.56%	\$116.5	0.22%	\$116.7	-2.14%	\$114.2	0.66%	\$115.0	1.36%	\$116.5	1.36%	\$118.1	1.41%	\$119.8	1.37%	\$121.4	1.38%	\$123.1

E-ZPass Market Shares

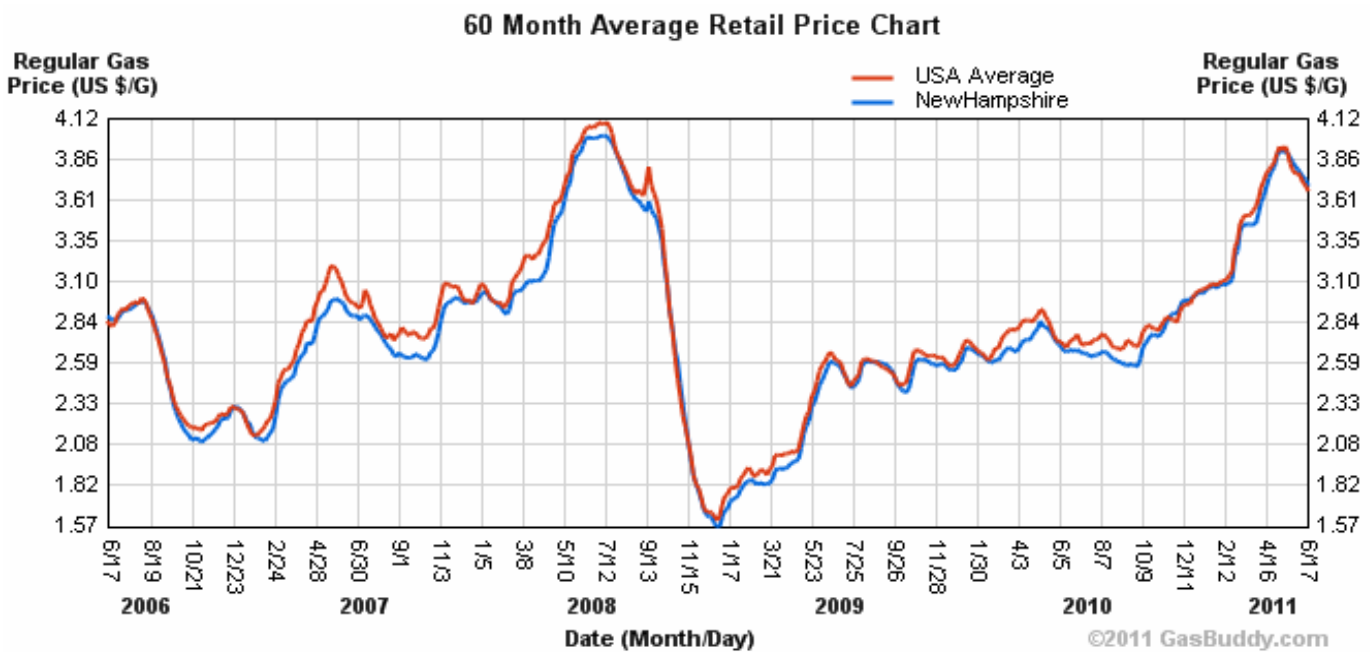
Barriers/Ramps	2010 Actual	10-11 Projected Increase	2011 Projected	11-12 Projected Increase	2012 Projected	12-13 Projected Increase	2013 Projected	13-14 Projected Increase	2014 Projected	14-15 Projected Increase	2015 Projected	15-16 Projected Increase	2016 Projected	16-17 Projected Increase	2017 Projected	17-18 Projected Increase	2018 Projected	18-19 Projected Growth	2019 Projected
CENTRAL TURNPIKE																			
Hooksett Barrier	56.3%	1.88%	58.2%	2.51%	60.7%	2.04%	62.7%	1.49%	64.2%	1.10%	65.3%	0.71%	66.0%	0.00%	66.0%	0.00%	66.0%	0.00%	66.0%
Hooksett Ramp	58.5%	1.02%	59.5%	2.23%	61.7%	1.81%	63.5%	1.32%	64.9%	0.98%	65.8%	0.63%	66.5%	0.00%	66.5%	0.00%	66.5%	0.00%	66.5%
Bedford Barrier	64.9%	1.04%	66.0%	2.13%	68.1%	1.73%	69.8%	1.27%	71.1%	0.93%	72.0%	0.60%	72.6%	0.00%	72.6%	0.00%	72.6%	0.00%	72.6%
Bedford Road Ramp	73.0%	0.03%	73.0%	2.27%	75.3%	1.84%	77.1%	1.35%	78.5%	0.99%	79.5%	0.64%	80.1%	0.00%	80.1%	0.00%	80.1%	0.00%	80.1%
Exit 11 (Merrimack) Ramp	70.6%	1.26%	71.9%	2.57%	74.4%	2.09%	76.5%	1.53%	78.0%	1.12%	79.2%	0.72%	79.9%	0.00%	79.9%	0.00%	79.9%	0.00%	79.9%
Exit 10 Merrimack Industrial Park Ramp	74.7%	0.41%	75.1%	1.62%	76.7%	1.31%	78.0%	0.96%	79.0%	0.71%	79.7%	0.45%	80.2%	0.00%	80.2%	0.00%	80.2%	0.00%	80.2%
Subtotal	61.7%	1.37%	63.0%	2.34%	65.4%	1.90%	67.3%	1.39%	68.6%	1.02%	69.7%	0.66%	70.3%	0.00%	70.3%	0.00%	70.3%	0.00%	70.3%
BLUE STAR TURNPIKE																			
Hampton Barrier	58.7%	3.81%	62.5%	1.45%	63.9%	1.17%	65.1%	0.86%	66.0%	0.63%	66.6%	0.41%	67.0%	0.00%	67.0%	0.00%	67.0%	0.00%	67.0%
Hampton Ramp	62.7%	2.01%	64.7%	1.95%	66.7%	1.58%	68.2%	1.16%	69.4%	0.85%	70.3%	0.55%	70.8%	0.00%	70.8%	0.00%	70.8%	0.00%	70.8%
Subtotal	60.2%	3.15%	63.3%	1.63%	64.9%	1.32%	66.3%	0.97%	67.2%	0.71%	67.9%	0.46%	68.4%	0.00%	68.4%	0.00%	68.4%	0.00%	68.4%
SPAULDING TURNPIKE																			
Dover Barrier	62.4%	2.46%	64.9%	1.82%	66.7%	1.47%	68.2%	1.08%	69.2%	0.79%	70.0%	0.51%	70.5%	0.00%	70.5%	0.00%	70.5%	0.00%	70.5%
Rochester Barrier	60.6%	2.68%	63.3%	2.32%	65.6%	1.89%	67.5%	1.38%	68.8%	1.02%	69.9%	0.65%	70.5%	0.00%	70.5%	0.00%	70.5%	0.00%	70.5%
Subtotal	61.7%	2.54%	64.3%	2.00%	66.3%	1.63%	67.9%	1.20%	69.1%	0.88%	70.0%	0.57%	70.5%	0.00%	70.5%	0.00%	70.5%	0.00%	70.5%
TOTAL:	61.2%	2.18%	63.4%	2.04%	65.4%	1.66%	67.1%	1.21%	68.3%	0.90%	69.2%	0.58%	69.8%	0.00%	69.8%	0.00%	69.8%	0.00%	69.8%

Other Considerations

As mentioned previously in this memorandum, there were several factors that contributed to traffic being lower than Jacobs' last estimate for FY 2011. These include a spike in gas prices in the spring and bad weather in the winter months.

Figure 3 presents New Hampshire and national gasoline prices for the past 60 months. The price of gasoline had reached historically high levels in the summer of 2008, contributing to a decline in vehicle miles traveled nationwide. Gas prices decreased after the summer of 2008 to approximately \$1.50 per gallon in the winter months, then increasing to, and remaining within, the \$2.50-\$2.75 range from May of 2009 through October of 2010. Prices then increased sharply starting in February 2011, spiking at almost \$4.00 at the end of April, about \$1.30 more than April of last year. By the week of June 17th, average prices dropped to below \$3.70, and are continuing to decline.

Figure 3: Price of Regular Gasoline per Gallon over the Past 60 Months



The effect of the spike in gas prices on NH Turnpike traffic can be seen when we compare this year's May traffic to last year's: traffic was down about 1.9 percent this May. However, considering that traffic for the first half of FY 2011 was nearly 3 percent higher than the first half of FY 2010, the actual effect of the high gas price on Turnpike traffic might be closer to 4 percent.

Limits

It is Jacobs' opinion that the traffic and gross toll revenue estimates provided herein are reasonable and that they have been prepared in accordance with accepted industry-wide practice. However, given the uncertainties within the current economic climate, it is important to note the following assumptions which, in our opinion, are reasonable:

- This report presents the results of Jacobs' consideration of the information available as of the date hereof and the application of our experience and professional judgment to that information. It is not a guarantee of any future events or trends.
- The traffic and gross toll revenue estimates will be subject to future economic and social conditions, demographic developments and regional transportation construction activities that cannot be predicted with certainty.
- Jacobs' traffic and gross toll revenue estimations only represent our best judgment and we do not warrant or represent that the actual gross toll revenues will not vary from our estimates.
- We do not express any opinion on the following items: socioeconomic and demographic forecasts, proposed land use development projects and potential improvements to the regional transportation network.
- The standards of operation and maintenance on all of the system will be maintained as planned within the business rules and practices.
- No other competing projects, tolled or non-tolled are assumed to be constructed or significantly improved in the project corridor during the project period, as to negatively impact traffic, except those identified within this report.
- Major highway improvements that are currently underway or fully funded will be completed as planned.
- The system will be well maintained, efficiently operated, and effectively signed to encourage maximum usage.
- No reduced growth initiatives or related controls that would significantly inhibit normal development patterns will be introduced during the estimate period.
- There will be no future serious protracted recession during the estimate period.
- There will be no protracted fuel shortage during the estimate period.
- No local, regional, or national emergency will arise that will abnormally restrict the use of motor vehicles.

In Jacobs' opinion, the assumptions underlying the projections provide a reasonable basis for the revenue projections and operating expenses. However, any financial projection is subject to

uncertainties. Inevitably, some assumptions used to develop the projections will not be realized, and unanticipated events and circumstances may occur. There are likely to be differences between the projections and actual results, and those differences may be material. Because of these uncertainties, Jacobs makes no guaranty or warranty with respect to the projections disclosed in this Study.