

Welcome To The Future

And, What Will They Think Of Next?

By Jim Gauntt

Since this author began writing about crosstie markets 13 years ago, there has rarely been an anxious moment surrounding the Railway Tie Association's (RTA) forecasts or the predictions for tie demand. There is, however, a fine line that one walks when framing an economic outlook in words that will go to print and thus have a long shelf life. If one gets too aggressive or conservative in the verbiage used, it can create problems for those who rely on those forecasts for business planning. Yet, over the years, the confidence placed in the RTA econometric model has solidified, and the economic outlook for the U.S. economy has offered enough certainty that presenting a balanced outlook was not too difficult a task. (See Table 1)

Enter now a brave new world where the U.S. government has provided bailout dollars of previously unimagined amounts for a variety of unimaginable reasons and entities. These new measures have ushered the United States into uncharted economic waters. While it is certainly too early to reliably predict how this new future will play out in the long term, one thing is without doubt: the short-term economic outlook does not offer any reasons to feel elated.

On the other hand, as several members have commented lately, "I am sure glad we're in the railroad business rather than the banking or housing business." Well said. There have been times in the past where this would not have been uttered about railroading, and yet, here and now, the association's collective mind would probably agree whole-heartedly to this general statement. And, that is a good thing.

However, as any reader of past RTA forecasts knows, the railroad industry is affected by overall economic growth or contraction. So, even though railroads have some built-in stability with coal shipments and other critical traffic, with any downturn in U.S. GDP should come a softening of demand for freight and thus also ties.

With that as a preface, the following presentation of mid-2008 surveys should be looked at with pre-economic rescue eyes. That will be followed by some scenarios for tie demand in economic conditions that would be considered "deep" recession.

Class 1 Railroads

The surveys that were completed in mid-July by the Class 1 railroads paint a very rosy picture indeed (see Table 2).

These roads—UP, BNSF, NS, CSX, KCS, CP and CN—project that from 2009 through 2011 tie demand will exceed 16 million ties. Extremely strong demand from CN and BNSF, coupled with very steady high level demand from all the remaining Class 1s, make for a vibrant outlook given good economic conditions.

And that does not include what happens if and when the Canadian Pacific absorbs the Dakota, Minnesota and Eastern railroad. Sources tell RTA that beginning in second quarter 2009 and beyond, upwards of 350,000 additional ties annually extending through 2011 will begin to be sourced.

So, 16.4 million ties annually or U.S. and Canadian Class 1s over a three year period could be a reality if the economy holds.

Short Lines & Other Markets

Short line railroads have typically made up 70 to 75 percent of the smaller markets' total demand for ties. The surveys this year outline a more reserved sketch than in the past few years (see Table 3). This is probably a reflection of the loss of the short line tax credit. Nothing dampens enthusiasm like the loss of legislation (for most of 2008) that helped increase investment in infrastructure to the tune of 500,000 to 750,000 additional ties annually over the period 2005-2007.

But, these numbers still square fairly well with the overall projections RTA has made for the smaller markets. In good economic conditions, the smaller markets combined have contributed around 4.5 million to the total of ties demanded by the total market.

There is still a fair amount of industrial, government and export activity occurring for tie suppliers, so making up the difference between the short line demand at 3.3 million and 4.5 million isn't much of a stretch.

The real issue in discerning anything from the short line survey is that it doesn't capture every short line road's

Table 1 — Current Mild Recession Scenario

As published from Mid-Year Report July/August *Crossties*
New Wood Crossties (in thousands)

Year approx.	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2005	3.1%	15,029	3,776	18,805	4.5%
2006	2.9%	15,937	4,709	20,647	9.8%
2007	2.2%	15,285	5,109	20,394	-1.2%
2008	0.3%	15,163	4,725	19,888	-2.5%
2009	1.9%	15,270	4,685	19,955	0.3%
2010	1.9%	15,204	4,795	19,999	0.2%

expectation. A look at percentage of track mileage reporting illustrates this well. In 2005, the survey totals were extrapolated from 37 percent of track miles reporting. In 2006, that figure rose to 40 percent and this year to 57 percent. While this would argue for improved reliability in the results, that conclusion simply cannot be verified because not every road reporting does so every year. It is a little like

looking through a kaleidoscope where the view is constantly changing. Thus, comparing survey results from year to year may lead to flawed conclusions. So, the recommendation is to accept the results as they are tabulated each year without worrying about if they compare easily to any previous year's results.

In counterpoint to the more demure outlook posted by this year's collection

of short line respondents, there were rumors floating around the recent AREMA conference of the construction of a new short line road to serve a remote location in Canada. This would reportedly bring 400,000 ties to the demand table if it becomes reality any time soon.

And now, we learn that the tax credit is back. This means that 4.5 million to 5.2 million ties in the smaller markets is defi-

TABLE 2—Railway Tie Association Annual Survey*

Estimated Crosstie Requirements • Class 1 Railroads 2008-2011 Inclusive

AUTHORIZED CROSSTIES FOR 2008

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	50,695	5,900,000	0	0	100	6,000	0	251,000	0	58,000
Western U.S.	85,463	7,080,000	40,000	3,000	570,000	0	136,000	250,000	0	22,692
Canada & Canadian Owned U.S. Track	33,300	2,925,000	500,000	0	98,000	5,000	0	95,000	0	3,000
TOTAL	169,458	15,905,000	540,000	3,000	668,100	11,000	136,000	596,000	0	83,692

AUTHORIZED CROSSTIES FOR 2009

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	50,695	5,900,000	0	0	50,000	6,000	0	251,000	0	61,000
Western U.S.	85,463	7,280,000	400,000	0	800,000	0	250,000	250,000	0	22,692
Canada & Canadian Owned U.S. Track	33,300	2,850,000	275,000	0	75,000	5,000	0	85,000	0	3,000
TOTAL	169,458	16,030,000	675,000	0	925,000	11,000	250,000	586,000	0	86,692

AUTHORIZED CROSSTIES FOR 2010

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	50,695	5,900,000	0	0	0	6,000	0	251,000	0	62,000
Western U.S.	85,463	7,280,000	400,000	0	800,000	0	250,000	250,000	0	22,692
Canada & Canadian Owned U.S. Track	33,300	2,875,000	250,000	0	75,000	5,000	0	90,000	0	3,000
TOTAL	169,458	16,055,000	650,000	0	875,000	11,000	250,000	591,000	0	87,692

AUTHORIZED CROSSTIES FOR 2011

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	50,695	5,900,000	0	0	0	6,000	0	251,000	0	64,000
Western U.S.	85,463	7,280,000	400,000	0	810,000	0	250,000	250,000	0	22,692
Canada & Canadian Owned U.S. Track	33,300	2,900,000	250,000	0	75,000	5,000	0	85,000	0	3,000
TOTAL	169,458	16,080,000	650,000	0	885,000	11,000	250,000	586,000	0	89,692

*Eastern Railroads reporting - CSX Transportation and Norfolk Southern. Western Railroads reporting - Burlington Northern Santa Fe, Kansas City Southern Railway and Union Pacific. Canadian Railroads reporting - Canadian Pacific Railway (includes Soo Line) and CN/IC (includes GTW).

Volume of Wood Necessary To Produce Estimated Crosstie Requirements For Class 1 Railroads (000's omitted)

	Thousand Board Feet		
	2008	2009	2010
Crossties - U.S. & Canada	657,800	667,480	668,200
Switch Ties - U.S. & Canada	38,740	38,090	38,415
Bridge Timbers - U.S. & Canada	10,880	11,270	11,400
TOTAL BOARD FEET	707,420	716,840	718,015

nately an achievable scenario in good times.

So, add together the high-end projections for both markets, and that total is 21.6 million tie demand potential.

Whoa, Nelly!

Back to the future—er—reality. Recent appraisals of the economic outlook for the U.S. economy are looking gloomier and gloomier. Whether government bailouts happen at the pace and in the massive amounts projected or not, one has to believe there are some tougher economic times ahead. Otherwise, why any bailouts in the first place?

Will higher interest rates and increased inflation result from the massive printing of money by the Fed? Or, will such a large slowdown in economic activity occur, brought on by weak consumer spending, higher taxes and other pressures, that oil prices plummet and some additional freight can move by truck?

Will other legislative endeavors prevail? Have you heard about the efforts to increase allowable truck weights to 97,000 pounds? That’s another story, but can you imagine what would happen to

the nation’s highway infrastructure and short lines if that type of legislation is enacted? Really, is there enough money to fix our failing highways and roadway bridges now? What sense is there in adding to the burden? Furthermore, what sense is there in driving a stake in the heart of the nation’s only real freight competition to trucks in rural communities...the short line railroad network?

The main point here is that, to some degree, tough times lie ahead. So, to be as transparent as possible and take a peek into the looking glass at some possible scenarios, the oracle (RTA’s econometric model) was consulted and asked what if the worst happens? What if the industry experiences an economic contraction that is equal to the one or two worst times in American economic history since the Great Depression?

Well first, let the record show that the last issue of *Crossties* published a mild recessionary scenario. The result? Tie demand stays right about where it is now for the next several years. (Table 1)

But that was before the latest series of crises. If you read the gloom-and-doomers then it isn’t possible to look at

the worst case and not believe it won’t occur. So, what is the worst economic contraction in the past century besides the Great Depression?

Try 1945-1947. In those years the economy saw the following negative growth rates:

GDP%

- 1945: -1.1%
- 1946: -11.0%
- 1947: -0.9%

Were that unbelievable scenario to occur once again, and in exactly that way from 2008-2010, what could we expect out of the economic model RTA currently uses. Well, it’s ugly...

Model Predicted Tie Demand In The Above GDP Scenario

- 2008: 19,469,000
- 2009: 15,582,000
- 2010: 13,818,000

Let’s not go there. In fact, there are many reasons not to go there. One of these reasons was the unwinding of the war machine from World War II. Absorbing and then realigning the ▶

TABLE 3—The Railway Tie Association* 2007 Regional & Short Line Crosstie Survey

Tie Categories	2007 Usage	2008 Projected	2009 Projected	2010 Projected
New 7" Ties	1,077,514	1,104,177	1,117,841	1,208,146
New 6" Ties	705,174	810,694	764,054	838,880
Sub-Total New	1,782,689	1,914,871	1,881,894	2,047,026
Relay 7" Ties	463,007	344,131	334,081	314,813
Relay 6" Ties	16,364	30,211	28,028	13,170
Sub-Total Relay	479,371	374,342	362,109	327,983
Industrial 7" Ties	712,251	879,734	1,002,495	893,185
Industrial 6" Ties	118,044	104,543	118,921	111,252
Sub-Total Industrial	830,295	984,277	1,121,416	1,004,436
Grand Total All Wood Ties	3,092,355	3,273,490	3,365,419	3,379,445
Switch Ties	79,643	86,550	91,314	89,907
Bridge Timbers	35,249	45,245	41,780	44,845

***In cooperation with the American Short Line and Regional Railroad Association.**
 Note: Calculation based on survey responses from 139 roads, representing approximately 56% of operating trackage.

The Railway Tie Association wishes to thank the American Short Line and Regional Railroad Association for its expertise and assistance in conducting the Short Line Survey used in developing the tables for this report.

nation's infrastructure after the greatest world conflict in history took time. Reemploying 10,000,000 demobilized American troops, which occurred over a very short time frame, was a monumental achievement. Couple these factors with a less resilient and diverse national economic structure and double digit inflation rates during that time period, and it could be postulated that this worst case would be almost impossible to occur again.

So, what was the next worst economic contraction over a three-year period since WWII? Well, turns out there haven't been three consecutive calendar years of economic contraction since 1948. But that doesn't stop consultation with the oracle. The idea was to take years where economic contraction occurred that were close to each other 1980, 1982, and then 1980 (again) to "create" a second worst scenario. 1981 actually had modest positive growth so, to create a second worst case three-year recession scenario this is the technique used.

GDP%

1980: -0.2%
1982: -1.9%
1980: -0.2%

Model Predicted Tie Demand In The Above GDP Scenario

2008: 19,732,000
2009: 18,623,000
2010: 17,741,000

That's the closest the inputs could get to three really bad years in a row when it comes to economic contraction in the U.S. economy.

In that scenario, tie demand also goes down. But, not in an unmanageable way. Remember that in 2004 this industry sold only 17,749,000 ties. That's just four years ago. True, contraction is more painful than expansion, but even in this "manufactured" second worst case scenario tie demand reverts simply to a level that has been visited in very recent times.

So, are we predicting this? No, not, unh, unh...don't like the odds of any firm forecast at this point in time. But, could it happen? Yes. Could it be better than this? Most definitely (er, maybe).

The issues are plainly there and easy to see, just like it is when one sees the trees and not the forest. In other words, the big picture is out of focus for even the best prognosticator's vision at this time. Maybe industry members should be thankful that it is. Or, maybe they should simply prepare for the worst and then be grateful if it is less "bad"

than what is expected, which is usually the case.

As for now? One concern for the situation: "what will they think of next?" And, how much more government intervention will be necessary (or even possible), and forced on the American taxpayer, to get the country back on the right track. §

TABLE 4 –Tie Production, Purchases & Inventory (000's omitted)

Year	Month	Tie Production	Annual Production Rolling Total	Tie Inventory	Change In Inventory	Tie Purchases	Annual Purchases Rolling Total	Inventory To Sales Ratio
2004	Jan	1,615	17,541	14,022	596	1,019	17,301	0.81
	Feb	1,470	17,868	14,129	107	1,363	17,487	0.81
	Mar	1,927	18,540	14,140	12	1,916	17,943	0.79
	Apr	1,583	18,598	14,254	113	1,470	17,699	0.81
	May	1,497	18,656	14,284	30	1,467	17,521	0.82
	Jun	1,876	19,166	14,384	100	1,776	17,820	0.81
	Jul	1,532	19,121	14,343	(41)	1,573	17,914	0.80
	Aug	1,656	19,190	14,243	(100)	1,755	17,943	0.79
	Sep	1,789	19,328	14,342	99	1,691	18,006	0.80
	Oct	1,655	19,258	14,728	386	1,269	17,933	0.82
	Nov	1,373	19,253	14,865	136	1,236	18,046	0.82
	Dec	1,366	19,338	15,015	150	1,216	17,749	0.85
2005	Jan	1,273	18,996	14,898	(117)	1,390	18,120	0.82
	Feb	1,270	18,797	14,707	(191)	1,461	18,218	0.81
	Mar	1,451	18,320	14,410	(297)	1,748	18,051	0.80
	Apr	1,421	18,158	13,951	(459)	1,880	18,460	0.76
	May	1,502	18,162	13,984	33	1,469	18,462	0.76
	Jun	1,793	18,079	13,988	5	1,788	18,475	0.76
	Jul	1,590	18,137	13,927	(62)	1,651	18,553	0.75
	Aug	1,860	18,341	14,143	216	1,643	18,441	0.77
	Sep	1,882	18,434	14,699	556	1,326	18,077	0.81
	Oct	1,774	18,553	14,691	(8)	1,782	18,590	0.79
	Nov	1,786	18,966	14,904	213	1,572	18,926	0.79
	Dec	1,661	19,261	15,531	626	1,035	18,745	0.83
2006	Jan	1,734	19,721	15,747	217	1,517	18,872	0.83
	Feb	1,674	20,125	15,890	142	1,532	18,943	0.84
	Mar	2,128	20,803	16,178	288	1,840	19,035	0.85
	Apr	1,744	21,126	15,981	(197)	1,941	19,097	0.84
	May	2,405	22,030	15,711	(269)	2,674	20,302	0.77
	Jun	1,981	22,218	15,573	(139)	2,120	20,633	0.75
	Jul	1,609	22,237	15,606	33	1,577	20,559	0.76
	Aug	2,169	22,547	16,002	396	1,773	20,688	0.77
	Sep	1,967	22,632	16,317	316	1,651	21,014	0.78
	Oct	1,724	22,583	16,586	268	1,456	20,688	0.80
	Nov	1,713	22,510	16,654	68	1,645	20,761	0.80
	Dec	1,599	22,449	16,646	(7)	1,606	21,333	0.78
2007	Jan	1,609	22,324	16,367	(280)	1,889	21,705	0.75
	Feb	1,426	22,076	15,936	(430)	1,857	22,029	0.72
	Mar	1,768	21,716	16,537	601	1,167	21,356	0.77
	Apr	1,633	21,604	16,280	(257)	1,890	21,305	0.76
	May	1,863	21,063	16,074	(207)	2,070	20,700	0.78
	Jun	1,942	21,023	16,745	671	1,271	19,851	0.84
	Jul	1,611	21,025	16,270	(475)	2,086	20,361	0.80
	Aug	2,126	20,981	16,561	291	1,835	20,423	0.81
	Sep	1,593	20,608	16,397	(163)	1,757	20,528	0.80
	Oct	1,914	20,797	16,730	333	1,581	20,653	0.81
	Nov	1,611	20,695	16,382	(348)	1,959	20,966	0.78
	Dec	1,375	20,471	16,816	434	942	20,302	0.83
2008	Jan	1,723	20,585	16,897	81	1,642	20,055	0.84
	Feb	1,552	20,711	16,610	(287)	1,839	20,037	0.83
	Mar	1,416	20,358	15,918	(692)	2,107	20,978	0.76
	Apr	1,600	20,326	15,762	(157)	1,757	20,844	0.76
	May	1,517	19,980	15,255	(506)	2,023	20,798	0.73
	Jun	1,517	19,555	14,719	(537)	2,053	21,581	0.68
	Jul	1,707	19,651	14,679	(39)	1,747	21,242	0.69
	Aug	1,786	19,312	14,608	(72)	1,858	21,265	0.69

NOTE: The information in this chart is calculated from reported production and inventory numbers by RTA members. This represents more than 95% of the U.S. and Canadian market for wood crossties.

AAR Class 1 Statistics For 2007

2007 was another superior year for wood tie installations by Class 1 railroads in U.S. track, as these compilation charts illustrate.*

Table 5 reveals the new construction activity by Class 1 roads and Table 6 the ties installed for ongoing maintenance applications. Both categories of railroad activity show modest drops in installations from the peak year of 2006. This is in keeping with observed tie production trends reported in the last several issues of *Crossties* magazine. Relay wood ties were down across the board. The trend of increasing installation of "maintenance" concrete ties continued in 2007. New construction concrete ties returned to 2005 levels. Approximately 40,000 more composite ties were installed in 2007 than in 2006 (168,061 total reported in 2007).

RTA is ever grateful for the ongoing cooperative relationship with AAR and especially to AAR's Clyde Crimmel for his efforts in preparing these tables found exclusively in *Crossties* magazine. §

TABLE 5—For Calendar Year 2007
Crossties Laid In Addition Statistics For Class 1 Railroads In The U.S.

District & Railroad	Treated wooden crossties laid in addition (number)		New crossties laid in replacement other than wooden (number) (12)	Switch and bridge ties laid in addition (board ft.) (13)
	New Ties (10)	Second-hand ties (11)		
Eastern District				
CSX	41,860	19	(c) 176	13,689
Grand Trunk Western (CN)	0	0	0	0
Norfolk Southern	59,592	0	0	25,241
Total Eastern District	101,452	19	176	38,930
Western District				
Burlington Northern Santa Fe	32,118	0	(c) 386,326	39,060
Kansas City Southern	1,520	0	0	184
Soo Line (CPR)	0	0	0	0
Union Pacific	93,428	1,575	(c) 122,615	(f) 218,142
Total Western District	127,066	1,575	508,941	257,386
Total United States	228,518	1,594	509,117	296,316

*Source: R-1 Annual Reports to the Surface Transportation Board

(c) Concrete ties. (f) Includes 126 concrete ties which were assigned 65 board feet per tie.

TABLE 6—Crossties Laid In Replacement Statistics For Class 1 Railroads In The U.S. In 2007

District & Railroad	Treated wooden crossties laid in replacement (#)		New crossties laid in replacement other than wooden (#) (3)	Track maintained by reporting railroad		Crossties per mile (1967) (6)	New crosstie replacement avg.		Switch and bridge ties laid in addition (board ft.) (9)
	New Ties (1)	Second-Hand Ties (2)		Miles occupied by crossties (a)	Total crossties (b)		% renewal to all ties (7)	# laid per mile (8)	
Eastern District									
CSX	3,117,975	0	(c) 1,872	30,766	91,928,808	2,988	3.39%	101	7,154,749
Grand Trunk Corp. (CN)	669,410	0	0	10,199	32,177,845	3,155	2.08%	66	1,040,675
Norfolk Southern	2,591,316	179,091	0	30,059	92,461,484	3,076	2.80%	86	10,146,730
Total Eastern District	6,378,701	179,091	1,872	71,024	216,586,137	3,049	2.95%	90	18,342,154
Western District									
Burlington Northern Santa Fe	2,579,599	0	(c) 127,654	39,832	123,280,040	3,095	2.20%	68	2,786,730
Kansas City Southern	477,751	0	(c) 149	3,904	12,488,896	3,199	3.83%	122	197,138
Soo Line (CPR)	290,443	0	0	2,544	7,680,336	3,019	3.78%	114	629,159
Union Pacific	3,391,451	913	(d) 657,813	43,316	129,081,680	2,980	3.14%	93	(e) 6,339,358
Total Western District	6,739,244	913	785,616	89,596	272,530,952	3,042	2.76%	84	9,952,385
Total United States	13,117,945	180,004	787,488	160,620	489,099,089	3,045	2.84%	87	28,294,539

Note: 249,597 second-hand, other-than-wooden ties, not shown on this page, were laid in replacement in 2007.

*Source: R-1 Annual Reports to the Surface Transportation Board

(a) Total mileage operated at the end of year, excluding mileage under trackage rights. (b) Based on crossties per mile of track in 1967, the last year reported. (c) Concrete ties. (d) 489,752 concrete ties, and 168,061 non-wooden-non-concrete ties. (e) Includes 504 concrete or steel switch ties, all assigned 65 board feet per tie.