

Getting Marin on Track and Trail: The Seven Benefits of SMART

by Walt Strakosch, Friends of SMART

For some time it has been clear that we cannot get around traffic problems simply by adding lanes to Highway 101. The \$128 million project to close a 4.5-mile gap in the carpool lane between Lucky Drive and North San Pedro Road in San Rafael won't end rush hour traffic congestion, according to its own environmental impact study. Greater congestion will arrive when widening of the "narrows" allows cars to arrive in Novato more speedily from Petaluma and points north. Future population growth will cause even more traffic to pour into Marin County.

The Sonoma Marin Area Rail Transit (SMART) District was created in part to provide ways around this problem. SMART riders and bike-pedestrian pathway users will be able to get to the Civic Center, San Rafael, and the Larkspur Ferry without getting stuck in traffic, and without bringing more cars and parking lots into downtown. Many businesses and public agencies will benefit because they can get and keep good employees. The entire system, with passenger equipment and track upgrades can be operational by 2011, if voters approve funding for the project in 2008.

The return of railroad service to the North Bay, and the bicycle pedestrian pathway will provide seven important benefits to the residents of Marin County:

Benefit One: Get Marin Employees to Work on Time

The SMART Train and Pathway provide reliable ways for workers to arrive at their jobs without undue stress. Passenger rail service reliably operates on time because it uses a separate right-of-way that is unaffected by traffic congestion. And the pathway serves both train riders and others. Since the SMART District owns the right of way, it can assure that passenger trains have priority over any freight operations and run on schedule. The 40 thousand people in census tracts within half-mile walking distance of proposed SMART stations can easily walk between train stations and any one of 40 thousand jobs according to ABAG studies. Bus, bicycle, shuttle, and ferry boat connections will give thousands of additional people a car-free option for getting to work.

Benefit Two: Reduce traffic tie-ups in Marin

By serving more than a thousand of the auto trips that are now made daily on Highway 101 in Marin, the SMART Train will reduce traffic pressures during peak commute hours. The trail will serve thousands more, independently and in connection with the train. Removing cars from the highway not only shortens peak periods of congestion, it reduces the number of people using streets like Lincoln Avenue that parallel the freeway.

The entire train will fit within a city block, allowing traffic to move when the train is at a station. Nearby stop-lights will be coordinated with train movements so that the gates do not delay traffic. As more people use the trains, downtown areas can have less heavy

traffic and lower demands for parking. Most people who ride a train don't jump into a single-occupant car to run errands during the day; they leave the roads to those who need a car. Good transit alternatives calm the effects of congestion and shorten periods of peak traffic flow.

Benefit Three: Prevent Intolerable Future Traffic Congestion

Present plans to add carpool lanes to Highway 101 may shorten the hours of peak congestion in the corridor for awhile, but traffic is sure to worsen as more people move into the region. Within 20 years, Sonoma and Marin counties must plan for a combined population that exceeds the 809,000 now living in San Francisco. Highway congestion is perpetual, so it is important to develop high-quality transit alternatives and land-use patterns that reduce the number of cars that need to come into Marin County due to such growth.

140,000 new residents for Sonoma and Marin counties

County 2007	2030	Projected population growth		
		Growth	% Growth	
Sonoma	481,765	606,346	124,581	25.6%
Marin	<u>255,982</u>	<u>273,151</u>	<u>17,169</u>	6.7%
SMART Dist.	737,747	879,497	141,750	19.2%

Source: State Dept. of Finance (2007)

The State Department of Finance predicts a 19.2 % increase in North Bay population in the next 22 years—over 140,000 new residents. It is easy to imagine the traffic that so many additional cars would bring if there were no alternative to driving. The SMART Project is essential to avoid gridlock.

The SMART Project calls initially for twelve trains per day of two or three cars each, to operate in both directions, primarily during commute hours. There is enough capacity on the rail line for future service expansions as demand increases and funding becomes available. With additional passing tracks, up to fifty passenger trains per day could use the right-of-way. Three car, two level trains can easily fit within a city block, seating up to 540 passengers each. The eventual prospect of fifteen minute headways during rush hour means that the rail line can supply peak hour reserve capacity equivalent to added highway lanes of at a fraction of their cost .

Benefit Four: End Marin's Complete Dependency on Automobiles

It is important to break out of our near total dependence on automobiles. All of the transportation consultants that have studied the SMART corridor agree that some 5,000 riders will take advantage of the train daily during the first twenty years of operation. Seven thousand more people will use the pathway. This shift in travel habits can begin to reverse the trend toward ever more vehicles per household, which is costly, unhealthy, inefficient, and environmentally damaging.

SMART Trains may well exceed the consultant's ridership forecasts, as have many start-up rail lines:

- **The Altamont Commuter Express**, between Stockton and San Jose commenced in 1998 with a forecasted ridership of 3,000 passengers per day, but ridership kept right on climbing until it exceeded 4,000 passengers in December of 2000, and it was necessary to add a third daily train in each direction. [Source: Cong. Testimony, Oct 2001, Stacy Mortensen]
- **In Salt Lake City**, ridership on the TRAX rail line – now at an average of 20,000 people on weekdays – has exceeded forecasts by 43%. [Source: Utah Transit Authority, 2000; Denver Business Journal 2001/01/26]
- **In St. Louis**, ridership on the MetroLink rail system, with an initial forecast of 12,000 riders per day, actually served 20,000 riders per day in its first year – exceeding the forecast by 40%. After just 8 years, ridership reached the 40,000 level – exceeding the 20-year projection of 37,000. [Source: Bi-State Development Agency, 2000; Citizens for Modern Transit, 2001]
- **Denver's** Southwest LRT extension to Littleton, Colorado opened in the summer of 2000, and by the following year was carrying up to 14,000 people on weekdays – 40% above the original projections of 8,400. [Source: Denver RTD ; Denver Business Journal 2001/01/26]

Benefit Five: Grow Marin's Economy While Preserving Open Space

Train service allows the attractive character the county to be complemented with better workforce mobility. Efficient train travel gives businesses, workers, and students convenient access over the entire 70 mile corridor—a substantial advantage for a dynamic economy. The train assures continued mobility in the corridor at all hours, and encourages preservation of open space by attracting jobs and housing to the urban areas close to stations. This will preserve historic patterns of development that protect open space. It is important to have rail service in place to help maintain wise land-use initiatives.

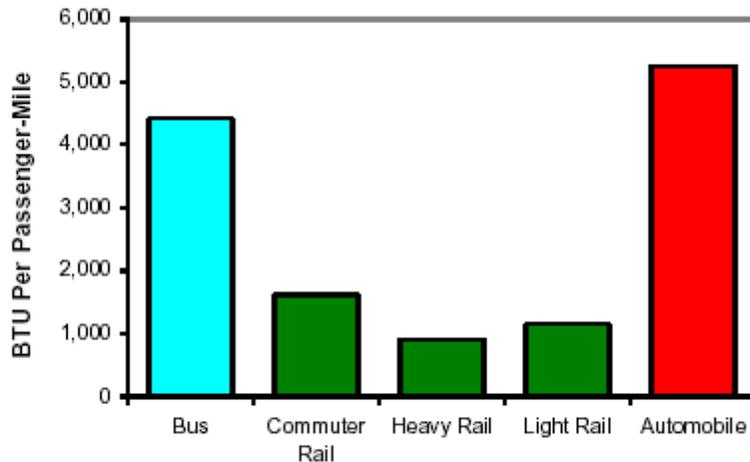
Rail stations give superior access for infill housing and walkable commercial zones, attractive to a growing number of people who prefer not to live in sprawling tract homes. The train will also increase transportation options, giving families the ability to spend less on their cars. Studies show that nationwide, most families spend about one-fifth of their income on automobiles--the largest family budget item next to their home. A recent study by the Brookings institute details the ways that families can reduce costs by living close to rail stations and relying on transit for routine travel. The benefits of compact walkable zones extend to businesses that can reduce investments in parking and to cities that can extend the life of existing street and parking facilities.

Benefit Six: Cut Costs, Energy Use & Emissions to the Atmosphere

Restoring rail service is estimated to cost less than \$6 million per mile (in 2006 dollars), whereas additions of carpool lanes to Highway 101 are costing \$30 to \$45 million per mile. Operating costs for trains are lower than for buses, because trains carry more people farther and faster, using less labor. SMART adds less than a dollar to the average \$100 per week that Marin residents spend on transportation.

Trains also produce much less air pollution than cars and buses. A commuter who shifts to SMART instead of driving a single-occupant vehicle on Highway 101 will reduce emissions of carbon dioxide and nitrogen oxides by a factor of three to five; and the cut in particulate emissions can be enormous--a factor of five to twenty! Shifting commuters from buses to SMART should cut emissions by about half. [See, *Comparison of SMART Emissions with Other Modes* (2007), a rail research report by Willard Richards.]

Figure 27 Transit Energy Consumption (Shapiro, Hassett, and Arnold)



Rail travel consumes much less energy than bus or automobile travel.
 [source: Rail Transit in America, by Todd Litman October 2004].

The above chart shows how much less energy rail services consume nationally compared to highway transportation (and SMART will be much more energy-efficient than most railroads). Reduced energy consumption saves money and represents a cut in greenhouse gas emissions. Rail service has an advantage due to the low rolling resistance of steel wheels on steel rails. The SMART Project forecasts a reduction in carbon dioxide emissions of 124 thousand pounds per day (Final EIR for SMART Project, p. 4-37).

Benefit Seven: Improve Bus Ridership in Marin

Rail service has a unique power to attract people to ride both trains and buses, due to the speed, convenience and comfort of train travel. More transit riders lead to more frequent bus services and higher bus ridership.

Nearly four times as many people enjoy riding trains as buses, according to two recent studies. A recent survey of employees in the North Bay found 24% of respondents favoring a commute by train, but only 6% favor using the bus. Currently, 92% of those in the survey drive to their job site; 29% identify congestion on Highway 101 as the most significant challenge in getting to work on time. [See, North Bay Council Employee Travel Survey, 2006.]

A recent UC Davis survey of 1,358 Bay Area respondents found that 426 (31.4%) liked commuting by train, and 112 (8.2%) liked commuting by bus. When the neutral and negative opinions of commuters were considered, 966 (71.2%) either liked or were neutral about riding trains, whereas 862 (63.4%) said they disliked riding buses. [See,

“When is Getting There Half the Fun?” David T. Ory and Patricia L. Mokhtarian, *Transportation Research* 39A(2-3), 2005, pp. 97-124]

When trains carry riders in the congested corridor, buses can be used more intensively on local connecting routes, resulting in better schedules throughout the day, to the benefit of all riders. Cities like Sacramento, St. Louis, and Los Angeles have all seen that establishing new rail systems leads to increased bus ridership.

Conclusion

The re-establishment of railroad transportation and creation of a bicycle and pedestrian pathway is an immense benefit to communities in Marin County. Train service and the pathway will enable people to get to work on time and in comfort, relieving traffic pressures. People will have more choices about when and how to use cars, bicycles, and bus services. Trains and the pathway are also good for the economy and the environment. Like libraries, parks, and water works, trains and pathways are important community assets. It is time to have these assets in Marin.

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