

Asphalt.

# THE ROLE OF ASPHALT IN LIVABLE COMMUNITIES

"Livable community" has become the new buzzword in urban planning and transportation circles. With the U.S. population expected to increase by 100 million over the next 40 years, effective coordination of policies related to housing, transportation, energy, and the environment will be necessary to ensure quality of life while expediting the flow of both freight and people in the safest and most cost-effective manner. There are, however, some differing ideas on what defines a "livable community".

### **DEFINING LIVABLE COMMUNITIES**

The Department of Transportation for the state of Washington, a model livability state, defines a livable future as the balance of three key societal goals: vibrant communities, vital economies and sustainable environments. For all of these goals, sustainable transportation is essential. Asphalt can and should play a fundamental role.

For much of the last century, roads have played a major role in connecting people to their jobs, schools, places of worship, and affordable housing. Transit and intercity passenger rail investments alone cannot begin to meet the nation's transportation needs. Today, 95 percent of passenger travel in America is by car, motorcycle and truck, and 93 percent of freight by value moves on our highways. The simple fact is that roads are part of the fabric of this nation. To define realistic livability objectives, it is important to:

- Recognize that 80 percent of the U.S. population lives in rural areas.
- Respect how Americans choose to travel.
- Balance environmental goals with economic goals.

"EQUATING LIVABILITY ONLY TO RIDING
TRANSIT, WALKING AND BIKING LIMITS ITS
RELEVANCE AND EXCLUDES A WIDE RANGE
OF IMPROVEMENTS AND COMMUNITY NEEDS"

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

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Now, more than ever, we must seek to achieve the maximum economic impact for our transportation investments and lay the groundwork for long-term economic growth, job creation, and prosperity. It is also essential to balance which investments yield the greatest benefits with regard to the economy, the environment, and quality of life for all communities, urban, suburban, and rural.

Asphalt is a good investment for America. Technological advances in asphalt provide cost-effective and green solutions and advance the goals of livability while protecting the investments that this country has made in our infrastructure. So, what are some of the qualities of livable communities and how does asphalt play a role?

Stimulating Local Economies — A livable community relies on a healthy local economy and good jobs. The quality of roads and other infrastructure are some of the major considerations that developers use when choosing to do business in a community. In addition, asphalt pavements are built by people who live and work in the areas that they serve. Asphalt jobs are local jobs.

Versatility — Asphalt isn't just for single-driver cars. Buses drive on asphalt. Asphalt is a proven winner for creating track beds that provide a safe base for high-speed passenger trains or heavy freight service. Asphalt bike paths and trails provide smooth, safe surfaces while managing fragile ecosystems. Asphalt pavement is also used worldwide as a practical solution to water storage, flood control, erosion, and conservation problems. Asphalt has been approved by the Environmental Protection Agency and used successfully as a primary liner for both sanitary and hazardous-waste landfills. It is also used to line drinking water reservoirs and fish hatcheries in California and Washington.

**Keeping it Safe** — Smooth asphalt roads give vehicle tires superior contact with the road. One type of asphalt surface, known as open-graded friction course, allows rainwater to drain through the surface layer and off to the sides, reducing the amount of splash and spray kicked up by vehicles. These surfaces have been shown to greatly reduce crashes and fatalities.

**Reducing Noise** — Asphalt is the quiet pavement. Quiet pavement technologies include open-graded surfaces, fine-graded surfaces, and two-layer open-graded pavements. Noise reductions of 3 to 10 decibels are common. Reducing noise by 3 decibels is about the same as doubling the distance from the road to the listener, or reducing traffic volume by 50 percent.

Improving Water Quality — Managing stormwater is a significant issue in land-use planning and development. Porous asphalt pavements allow for land development plans that are more thoughtful, harmonious with natural processes, and sustainable. These pavements conserve water, reduce runoff, promote infiltration which cleanses stormwater, replenish aquifers, and protect streams.

Reducing, Reusing, Recycling — Asphalt pavements are America's most recycled product. About 100 million tons of asphalt pavement is reclaimed each year, and over 95 percent of that total is reused or recycled. One of the material's most dynamic features is that the asphalt cement can be rejuvenated, decreasing the demand on virgin materials. It is estimated that recycling of asphalt pavements saves the American taxpayer \$1.8 billion per year. It also saves hundred of acres of landfill space each year. Materials from other industries are routinely recycled into asphalt pavements instead of going into landfills. Some of the most common are rubber from used tires, glass, asphalt roofing shingles, and blast furnace slag.

Preserving for Tomorrow — Today's asphalt pavements can be designed as Perpetual Pavements, meaning that the structure remains intact indefinitely while the top layer requires periodic removal and replacement.

## **FUNDING LIVABLE COMMUNITIES**

Providing a world-class transportation sector will require the nation to balance the challenges posed by increased congestion with the need to maintain a public infrastructure valued at more than \$2.4 trillion.

Livable communities have a broad appeal, especially in America's more densely populated areas, but a well-connected highway system, maintained in good condition, is critical to the entire nation's economy. It is important to stay focused on the huge stock of infrastructure already in place.

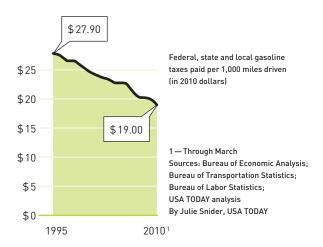
Soaring construction costs, tight budgets, and increasing needs are making it nearly impossible for the federal government and states to sustain preservation programs. Therefore, when it comes to diverting funds from America's existing public assets, there is cause for concern. The below-average state of America's roads has been well documented. A few facts stand out:

- A decaying transportation system costs our economy more than \$78 billion annually in lost time and fuel (Texas Transportation Institute).
- 21,000 individuals die each year in the U.S. as a result of poor roadway conditions (http://www. tripnet.org/RoughRoadsReport\_May2009.pdf)
- Americans spend 4.2 billion hours a year stuck in traffic (American Society of Civil Engineers: http://www.infrastructurereportcard.org/ fact-sheet/roads)

The Highway Trust Fund (HTF) was established in 1956 to ensure dependable financing for maintenance of the United States Interstate Highway System and certain other roads. Revenues in the fund are generated via a federal fuel tax of 18.4 cents per gallon on gasoline and 24.4 cents per gallon of diesel fuel and related excise taxes. The bulk of the Highway Trust Fund is composed of the "highway account".

# The federal gas tax is a classic example of a user fee — people who drive on the highways pay to construct, upgrade, and maintain those highways. Over the years, however, two things have happened to erode the public's trust in the user fee system.

Gas taxes have failed to keep pace with inflation.
 In the 2010 vacation season, drivers paid less than ever at the pump for upkeep of the nation's roads—just \$19 in gas taxes for every 1,000 miles driven, a USA TODAY analysis finds. That's a new low in inflation-adjusted dollars, and it is half what drivers paid in 1975.



Read more at: http://www.usatoday.com/money/industries/energy/2010-07-01-gas-tax\_N.htm?csp=usat.me

 Over the years, gas tax revenues have been diverted from the highway account to pay for other programs. Today, 25 percent of the Highway Trust Fund monies are diverted to non-highway spending.

Livable community initiatives should be funded by those who would benefit. **Diverting additional** revenues away from a Highway Trust Fund that is already inadequate to pay for road maintenance is simply bad policy.

### Conclusion

"Livability goals" are progressive concepts that need to be broadly defined to ensure that all of the population benefits. Second, road improvements can and already are being used to improve community livability. The environmental and sustainable qualities of asphalt fit nicely with many of the goals of livable communities. Finally, livability initiatives must not siphon money away from needed pavement preservation and infrastructure maintenance. Allowing a \$2.4 trillion capital investment to deteriorate is nothing short of irresponsible.

# For More Information, Contact Us

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