Statement on

Sustainable Highways

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Sustainable Highways: Oxymoron or Opportunity

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Mr. Chairman and members of the Committee, my name is Hal Kassoff. I am a Senior Vice President and Highway Market Leader with PB, a global infrastructure consulting firm with 200 offices worldwide. Thank you for the opportunity to share these thoughts with you today.

Five years ago I was asked by a colleague who was leading a company-wide sustainability initiative for buildings and transportation whether I thought the case could be made for highways as a net contributor rather than a net detractor in terms of sustainable development. I took on the assignment and began researching, writing and speaking about what I called Sustainable Highways: Oxymoron or Opportunity.

I define sustainable highways as improvements which achieve "better than before" outcomes, not only for highway purposes such as safety, mobility and structural integrity, but also for broader environmental and societal goals.

While not as advanced in sustainable development as buildings, and not as inherently sustainable as public transportation, there are several underlying reasons why the concept of sustainable highways is an idea whose time has come.

1) The first is that an increasingly demanding and politically active customer base is expecting more of us. Our customers want improved transportation *and* a healthy environment. They are not willing to sacrifice one for the other.
2) Second is that over 90% of highway improvements are on existing rather than new facilities - - a radical change from the recent era of Interstate highway construction. This offers a unique opportunity to improve communities and the environment by virtue of a second generation of highway projects that must adhere to more stringent requirements, such as for air quality, noise, wetlands, water quality, endangered species, and historic preservation, to name just a few.
3) The third factor is that for the past 7 or 8 years, AASHTO (the American Association of State Highway and Transportation Officials) has advanced the concept of environmental stewardship - - accepting responsibility for the environment as affected by transportation improvements, and seeking practical and affordable ways to enhance it. By actively promoting an approach to project development called Context Sensitive Solutions,

AASHTO provides the single most important tool to fulfill environmental stewardship and sustainability goals. And more recently, AASHTO initiated a process to define and advance a vision for sustainable transportation with the assistance of a diverse panel of professionals which I have had the honor of chairing.

4) A fourth factor is that sustainable highways make good business and economic sense from several perspectives. On a project level, they can contribute to economic efficiency in that context sensitive, sustainable highway improvements are more likely to be supported and implemented than less contextual and less sustainable alternatives which are more likely to languish in controversy. Also, from a life cycle asset management perspective, investing in increased durability and preventive maintenance means lower lifecycle costs, consumption of fewer non-renewable resources, and reduced economic losses to shippers and travelers delayed by less frequent repair and reconstruction cycles. And, it should not be overlooked, the role of highways in an ever expanding recycling industry is becoming second to none.

Opportunities for sustainable highway practices abound, from the earliest phases of planning where land use, conservation, and transportation decisions can be better coordinated, as encouraged by SAFETEA-LU, to construction, maintenance and operations where new technologies for fast-track construction, managing traffic, reducing noise, controlling emissions, and suppressing dust offer an array of possibilities. These opportunities are articulated in a variety of tools such as the Compendium of Environmental Stewardship Practices in Construction and Maintenance to a 30 page highway sustainability checklist from planning to operations - - in both of which I am proud to say PB, and I personally, have been involved.* They are evidenced by the cooperative Green Highways Partnership advanced by EPA and FHWA as well as several state DOTs.

Clearly the state of the art is advancing at a rapid pace as demands for kinder and gentler infrastructure projects increasingly prevail.

Perhaps the greatest barrier to sustainable highways lies with the motor vehicles that use them and in particular, the carbon foot print and related air quality and climate change issues that arise. A sustainable highways concept that ignores motor vehicle issues represents just part of the puzzle.

**The referenced compendium is a research report under the National Cooperative Highway Research Program (NCHRP 25-25 (4)) and can be found on the website of AASHTO's Center for Environmental Excellence at: http://environment.transportation.org/environmental_issues/construct_maint_prac/compendium/manual/*

The referenced checklist was developed by PB and recognized by AASHTO in its 2007 National Competition Award for Transportation Professionalism. The checklist may be accessed by contacting Hal Kassoff at kassoff@pbworld.com

A second barrier involves land use decisions that exploit and ultimately degrade highway service and quality of life through strip development and sprawl that discourage walking and use of alternative modes. Land use planning, zoning and utility location decisions must be made in conjunction with transportation to shape a more coherent and sustainable approach to growth.

Finally, as a way to simultaneously induce as well as measure sustainability outcomes we can apply a framework known throughout the world of sustainable development (mostly outside the United States) as the “Triple Bottom Line” - - a framework to set targets, measure progress, and evaluate whether and to what extent better than before outcomes are indeed achieved as we pursue a robust economy, a healthy natural environment, and an enhanced quality of life. The triple bottom line has the potential to offer incentives and inducements to public as well as private sector decision makers to pursue sustainability strategies and initiatives without mandating the details of how to achieve desired outcomes. I would strongly recommend research into the best ways to apply this tool in the United States.

In sum the goal of sustainable highways may at first sound like an oxymoron, but in reality represents an opportunity whose time has come.

Hal Kassoff is a Senior Vice President with PB responsible for providing leadership in emerging highway-related practice areas. Mr. Kassoff has guided the development of a workshop on Sustainable Highways which he has delivered to clients and PB professionals worldwide. He also led the team that produced the NCHRP Compendium of Environmental Stewardship Practices in Construction and Maintenance, and was recognized by AASHTO with an award for developing a Highway Sustainability Checklist. Mr. Kassoff led a team that produced PB’s reference guide for Concepts in Contextual Highway Design as well as a training seminar in Context Sensitive Solutions.

Prior to joining PB, Hal spent 25 years with the Maryland Department of Transportation, including 6 years as Director of Planning and Preliminary Engineering and 12 years as State Highway Administrator. During Hal's tenure, the Environmental Design Division was established and SHA was recognized for its aesthetic and environmentally sensitive bridges and highway designs.

Hal has been a frequent speaker and has published a number of articles on Context Sensitive Solutions and Sustainable Highways.