



**James M. Jeffords Center's
*Vermont Legislative Research Service***



Infrastructure Maintenance

It is generally accepted that a well maintained infrastructure is an essential part of the commercial economy and private commuter experience. Increasing trends in road traffic, especially increasing freight shipments, emphasize the importance of healthy road systems.¹ Constrained by budget shortfalls that are plaguing the nation,² many states are looking for cost efficient and innovative ideas in order to more efficiently maintain their current infrastructure. These strategies include increased public sector involvement, initiating preventative maintenance strategies, and developing new techniques and technologies for maintaining infrastructure. Vermont is no exception to these chronic budget shortfalls and need for innovation, facing a projected \$180 million shortfall in 2012.³ This is roughly equal to the entire amount spent by VTrans on maintenance activities in 2010: \$180 million.⁴

Public Private Partnerships

The U.S. Department of Transportation (DOT) defines a Public Private Partnership (PPP) as, "a contractual agreement formed between

as well as carefully considering whether to utilize the private sector for an infrastructure related project.⁷



Figure 1: States with Legislation enabling Public Private Partnerships.⁸

Source: Jaime Rall, et al.,

the government money on infrastructure related projects; however, this is not always possible. Without specific attention to policymaking, and oversight of the project

private sector, citing both cost and quality of work as problems.¹⁴ What distinguishes this failure from the contemporary private sector reprisal is the scope of the legislation. The previous legislation which enabled the state to outsource its maintenance operations was found to be politically motivated and lacking oversight.¹⁵ In contrast the 2009 bill is more stringent in its oversight of PPPs – incorporating an oversight commission, competitive procurement standards, and approval from the Department of Transportation Board of Directors.¹⁶ Massachusetts' experience highlights the need for competent legislation and oversight as a prerequisite to successful private sector involvement.

Louisiana

The Louisiana Department of Transportation and Development (DOTD) outsources many of its highway maintenance activities to the private sector citing "statutory and political limits placed on their staff size, operating budget, and project costs," as justification for this decision.¹⁷ Outsourced activities include pavement stripping and surface repair among others. DOTD has noted that the quality of work performed through these contracts has improved as oversight has increased with each successive cycle.¹⁸

Preventative Maintenance Strategies

U.S. DOT defines preventative maintenance as "a planned strategy of cost effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system."¹⁹

Preventative

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corrosion) and as effective as 125 dollars spent in the final phase (general corrosion).²²

A study done by the Pioneer Institute studied the cost effectiveness of preventative bridge maintenance compared to repair and rehabilitation later in a bridges life. They assert "for any asset, it is expected that there is a 40 percent drop in quality over 75 percent of its lifetime, followed by a more precipitous drop in the final quarter of the asset's life."²³ The institute explains, "[t]reating maintenance as a discretionary expense, combined with a diffusion of responsibility and outright inability to monitor asset condition, results in a massive and growing maintenance backlog."²⁴

New Techniques

California

The California Department of Transportation (Caltrans) recently implemented a cost effective system to repave dozens of roadways. This system entails paving a thin, relatively cheap layer of asphalt over existing roadways. It is estimated that this will extend the life of these roads by over a decade as well as freeing funds for other projects. With the as

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needs and capabilities, different programs can be more desirable and/or efficient. Public Private Partnerships have shown to lessen the financial burden for states to maintain their infrastructure, but must be implemented