THE CASE FOR CONCRETE INVESTMENT ON INTERSTATES 80 AND 81

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Pennsylvania's I-80 and I-81 offer strong opportunities to evaluate how durable concrete pavement can improve freight reliability and deliver long-term value for taxpayers. Their substantial truck traffic, exposure to severe weather, and strategic importance make them compelling examples of where long-life pavement deserves careful consideration within an overall infrastructure investment strategy.

Both corridors connect Pennsylvania to major national markets, including the New York metropolitan area. Communities and businesses depend on these connections to move fuel, clothing, medicine, food, and other essential goods. Investing wisely means looking beyond initial construction costs to decades of reliable service, fewer maintenance closures, and less disruption.

I-80 AND I-81: SMART FREIGHT INVESTMENTS IN PAVEMENT BUILT TO LAST 50+ YEARS

Interstate 80 connects the New York metropolitan area with the Midwest and San Francisco. Across Pennsylvania, this predominantly four-lane highway traverses rural communities and challenging terrain. Severe weather and maintenance closures can disrupt freight movement, with limited practical alternatives for long-distance traffic. Its importance as an east–west route makes dependable pavement performance especially valuable. Durable concrete pavement offers an opportunity to plan for longer service between major repairs and reduce recurring disruption.

AT A GLANCE

- CONCRETE PAVEMENTS ARE BUILT TO LAST 50+YEARS
- CONCRETE PAVEMENTS ARE DESIGNED TO PROVIDE DURABILITY AND RESILIENCY
- HEALTH COMPETITION RESULTS IN LOWER PRICING ACROSS MATERIALS
- GOOD STEWARDSHIP OF TAXPAYER DOLLARS INCLUDES CONCRETE PAVEMENTS

Estimates based on available traffic data indicate **8,720–12,580 truck passages per day** at selected I-80 locations, equivalent to approximately **3.2–4.6 million trucks annually**.

Interstate 81 runs from Tennessee through Pennsylvania to northern New York. Its connection with I-78 provides access to the New York metropolitan area, making it an important inland route for freight moving between the Northeast and Southeast. In Pennsylvania, the corridor also serves distribution centers and intermodal facilities that depend on reliable highway access.

Estimates based on available Pennsylvania traffic data indicate **22,040 truck passages per day near Carlisle** and 29,940 near Harrisburg, equivalent to approximately **8.0 million and 10.9 million trucks annually**, respectively.[1] This sustained freight use, combined with seasonal weather exposure, merits pavement strategies designed for repeated heavy loading and dependable service.

Together, I-80 and I-81 provide a practical starting point for evaluating how concrete pavement designed to last at least 50 years with appropriate maintenance can protect freight movement and deliver value over generations.

BUILD FOR FUTURE GENERATIONS AND MAKE SMARTER USE OF TAXPAYER DOLLARS

A long-term approach to freight pavement investment can strengthen economic vitality, national security, and safety. On heavily traveled corridors, investment strategies should place greater emphasis on durable solutions that reduce the need for repeated short-term repairs. Concrete reconstruction, widening, and overlays offer practical opportunities to build generational infrastructure and deliver lasting value for American businesses and taxpayers.

As Congress, FHWA, and state transportation agencies consider future infrastructure priorities, ACPA encourages decisionmakers to:

PLAN FOR DURABILITY AND RESILIENCY.

Consider pavement designs that aim to provide at least 50 years of service, supported by appropriate maintenance. FHWA documents concrete pavement strategies targeting 40 or more years of initial service, providing a foundation for evaluating longer-life designs. On I-80 and I-81, those evaluations should address durable mixtures, effective drainage, sound foundations, and freeze–thaw exposure. Longer intervals between major repairs can reduce freight disruption and work-zone exposure.[2]

EVALUATE THE FULL COST OF EACH INVESTMENT.

major freight pavement investments, capturing construction, maintenance, rehabilitation, remaining pavement value, and user costs, including delays. This comparison period helps reveal long-term value; it is distinct from the pavement's intended service life. MIT research supports broader treatment choices and longer planning horizons as ways to improve network performance and value. Project-specific analysis should establish the potential benefits on I-80 and I-81.[3]

KEEP COMPETITION WORKING.

Give concrete alternatives meaningful consideration and use alternate bids where project conditions support fair comparisons. MIT research indicates that stronger competition between paving material industries can lower unit prices for both concrete and asphalt. A broader range of viable options can strengthen competition, improve taxpayer value, and help agencies select the best pavement for each project.[4]

USE PRACTICAL CONCRETE SOLUTIONS.

Match the treatment to the project. Full-depth concrete reconstruction and widening can provide durable capacity where major renewal is needed. Concrete overlays can extend service life while retaining suitable existing pavement. Restoration and diamond grinding can preserve serviceable concrete. Selection should reflect pavement condition, truck axle loading, drainage, clearances, and construction staging.[5]

Upcoming renewal projects on I-80 and I-81 offer an opportunity to put these principles into practice: confirm freight loading, evaluate concrete alternatives, and compare long-term costs and performance. This work can help inform a broader investment strategy that gives greater weight to durability, resilience, and the uninterrupted movement of goods.

Sources and traffic verification notes

1. Estimates based on the supplied traffic tables use assumed truck shares of 36% on I-80 and 33% or 41% on I-81. Annual figures equal estimated daily truck passages multiplied by 365; they represent individual locations in both directions, not unique trucks or corridor totals.
2. FHWA, Long-Life Concrete Pavements: Best Practices and Directions From the States, FHWA-HIF-07-030 (2007). Documents strategies for 40 or more years of initial concrete pavement service; it does not establish a universal 50-year service-life guarantee.
3. MIT CSHub, Making Roadway Spending More Sustainable (2021). Supports broader treatment choices and longer planning horizons. Findings concern modeled network outcomes, not demonstrated savings on these corridors or a prescribed 50-year analysis period.
4. MIT CSHub, Measuring the Impact of Competition on Paving Material Prices (2017). Indicates that increased competition between paving material industries has the potential to lower concrete and asphalt paving prices.
5. National Concrete Pavement Technology Center, Concrete Overlays and Pavement Preservation resources. These address overlays, restoration, diamond grinding, and treatment selection.