HIGHWAY BOONDOGGLES 5

Big Projects. Bigger Price Tags. Limited Benefits.

FRONTIER GROUP

PennPIRG Education Fund

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CONTENTS

EXECUTIVE SUMMARY

AMERICA'S AGING ROADS AND BRIDGES need fixing. Our car-dependent transportation system is dangerous, harms our communities, and is the nation's leading source of global warming pollution. And more than ever before, it is clear that America needs to invest in giving people healthier, more sustainable transportation options.

Yet year after year, state and local governments propose billions of dollars' worth of new and expanded highways that often do little to reduce congestion or address real transportation challenges, while diverting scarce funding from infrastructure repairs and key transportation priorities. ***Highway Boondoggles 5*** **finds nine new budget-eating highway projects slated to cost a total of $25 billion that will harm communities and the environment, while likely failing to achieve meaningful transportation goals.**

Highway expansion costs transportation agencies billions of dollars, driving them further into debt, while failing to address our long-term transportation challenges.

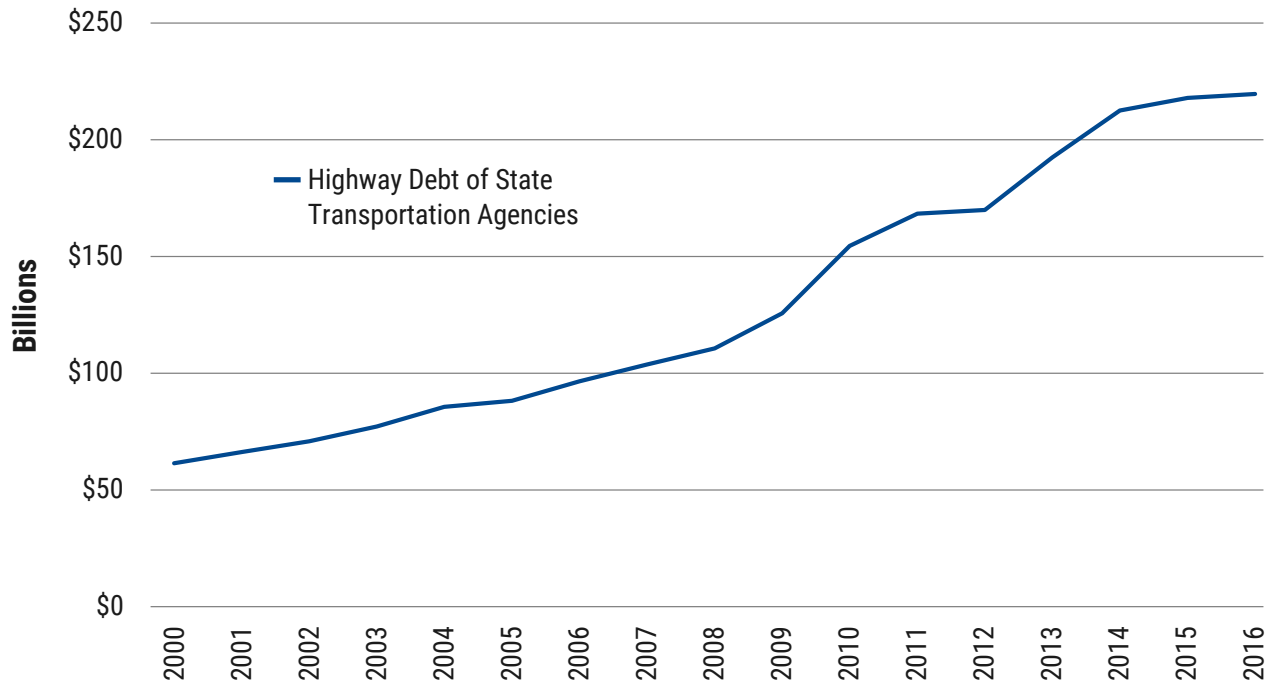
- **Highway expansions are expensive and saddle states with debt.**
    - In 2012, the latest year for which data is available, federal, state and local governments spent $27.2 billion on highway expansion projects – sucking money away from road repair, transit, and other local needs.
    - From 2008 to 2015, the highway debt of state transportation agencies nearly doubled, from $111 billion to $217 billion.[1]
    - New roadway is expensive to maintain, and represents a lasting financial burden. The average lane mile costs $24,000 per year to keep in a state of good repair.[2]
- **Highway expansion doesn't solve congestion.**
    - Expanding a highway sets off a chain reaction of societal decisions that ultimately lead the highway to become congested again – often in only a short time. Since 1980, the nation has added more than 800,000 lane-miles of highway – paving more than 1,500 square miles, an area larger than the state of Rhode Island – and yet congestion today is worse than it was in the early 1980s.[3]
- **Highway expansion damages the environment and our communities.**
    - Highway expansion fuels additional driving that contributes to climate change. In 2017, transportation was the nation's number one source of global warming pollution.[4]

- Highway expansion can also cause irreparable harm to communities – forcing the relocation of homes and businesses, widening "dead zones" alongside highways, severing street connections for pedestrians and cars, and reducing the city's base of taxable property.

A look back at five projects from past reports shows the consequences of following through with boondoggle projects and the benefits of rejecting them.

- In May 2018, local groups stopped a plan to add toll lanes along I-275 through the neighborhood of Tampa Heights, in Tampa Bay, Florida. Now, the community is thriving, with new restaurants and businesses, and even efforts to reduce traffic capacity on local roads to improve walking and biking.
- After years of devoting scarce transportation dollars to unnecessary road expansion projects, including the Portsmouth Bypass and Cleveland Opportunity Corridor covered in past reports, Ohio found itself in a deep budget hole. Now, even with new fees and taxes in place, the state is falling billions of dollars short of being able to fix aging roads and adequately fund transit.
- For years, Wisconsin's reckless highway spending strained the state budget. But in 2018, then-governor Scott Walker made an about-face, cancelling one "boondoggle" project, and announcing his support for a fix-it-first spending strategy – and dedicating modest new funding for transit and local infrastructure maintenance.

FIGURE ES-1. THE HIGHWAY DEBT OF STATE TRANSPORTATION AGENCIES HAS DOUBLED SINCE 2008 (NOMINAL)[5]



- The six-lane Dallas Trinity Parkway would have run alongside the city's most prominent natural feature, the Trinity River. But local opposition eventually stopped the project – and now Dallas is planning new parks and open spaces for the river corridor, and creating the promise of a greener, healthier and more enjoyable city.

- Prior to the closure of Seattle's old Alaskan Way Viaduct highway, critics suggested that the three-week wait until the opening of an expensive new highway would see horrible commutes and endless traffic jams. Instead, observers were surprised to see most of the traffic simply melt away – a real-life lesson that many urban highways are more disposable than they seem.

States continue to spend billions of dollars on new or expanded highways that fail to address real problems with our transportation system and will create new problems for our communities and the environment. Questionable projects poised to absorb billions of scarce transportation dollars include:

- **Complete 540; North Carolina; $2.2 billion:** North Carolina's plan to complete the southern half of a loop highway around Raleigh would generate sprawl while destroying wetlands and threatening endangered wildlife.

- **North Houston Highway Improvement Project; Texas; $7+ billion:** A massive highway project in Houston would harm communities, displace residents and destroy businesses, while sucking billions of dollars away from important transportation priorities.

- **High Desert Freeway; California; $8 billion:** In stark contrast to California's efforts to reduce state global warming emissions, L.A. County's first new highway in 25 years would lead to more driving and more pollution, along with sprawling desert development.

- **I-75 Widening; Michigan; $1 billion:** In a region that has experienced little population growth over the last 20 years, a needless widening project would exacerbate sprawl and harm the communities through which it runs.

- **Tri-State Tollway Widening; Illinois; $4 billion:** The Tri-State Tollway outside Chicago is testament to the fact that you can't build your way out of congestion. It has been widened twice, and still suffers from heavy traffic. Nevertheless, the Illinois Tollway is still moving forward with a $4 billion expansion project.

- **"Connecting Miami" Widening Project; Florida; $802 million:** Florida is widening I-395 and SR836 in Miami, highways that have long divided communities. Local groups have identified far more promising ways to benefit the neighborhood, including improving transit or even converting I-395 to a street-level boulevard.

- **I-83 Widening; Pennsylvania; $300 million:** A widening project in southern Pennsylvania is being touted as a way to improve traffic flow, but project documents reveal that traffic congestion is not a problem to begin with, and that resources would be far better spent on operational improvements to reduce crashes and improve accident response.

- **I-5 Rose Quarter Widening; Oregon; $450 million:** In Portland, a city that has taken great strides toward more sustainable transportation, an expensive highway project would constitute a step

backward to the car-dependent policies of the past. It would also likely fail to meaningfully improve safety compared with other investment strategies.

- **Interstate 81 Widening; Virginia; $2.2 billion:** Virginia argues an expensive widening project is necessary for safety, yet recently increased speed limits along the route – a move that likely made the road more dangerous. Rather than widening, solely implementing the operational improvements included in the current plan would be a far cheaper and more effective way to improve safety.

Federal, state and local governments should stop or downsize unnecessary or low-priority highway projects. Specifically, policy-makers should:

- **Invest in transportation solutions that reduce the need for costly and disruptive highway expansion projects.** Investments in public transportation, changes in land-use policy, road pricing measures, and technological measures that help drivers avoid peak-time traffic, for example, can often address congestion more cheaply and effectively than highway expansion.

- **Adopt fix-it-first policies** that reorient transportation funding away from newer and wider highways and toward repair of existing roads, bridges and transit systems.

- **Use the latest transportation data and require full cost-benefit comparisons, including future maintenance needs**, to evaluate all proposed new and expanded highways. This includes projects proposed as public-private partnerships.

- **Give priority funding to transportation projects that reduce growth in vehicle miles traveled**, to account for the public health, environmental and climate benefits resulting from reduced driving.

- **Invest in research and data collection** to better track and react to ongoing shifts in how people travel.

Introduction

FOR THE BETTER PART OF A CENTURY, America has looked toward the car as the primary solution to its transportation challenges – and toward highway expansion as the primary way of dealing with the congestion that inevitably results from automobile dependence.

The consequences of this strategy have become increasingly clear to people across the political spectrum. Fiscal conservatives recoil at rising taxes and debt resulting from exorbitant spending on highway expansion projects that deliver few public benefits. Environmentalists, motivated by the increasing urgency of responding to climate change, increasingly see highway expansions as fueling more driving, making the nation's transportation system – already America's number one source of carbon pollution – even more polluting. Even commuters, fed decades of promises that the *next* highway expansion will solve traffic in a way that previous expansions did not, increasingly recognize the futility of highway expansion and clamor for more transportation choices.

Yet, when it comes to the spending priorities of local, state and federal transportation agencies, little has changed. State and local governments continue to spend billions each year on highway expansion projects of dubious benefit to the public.

For the last five years, U.S. PIRG Education Fund and Frontier Group have released a series of *Highway Boondoggles* reports identifying tens of billions of dollars' worth of projects – in every region of the country – that strain transportation budgets, harm the environment, and deliver little in the way of durable public benefits.

Today, transportation funding is even more scarce, maintenance and transit needs are even greater, evidence of the failure of highway expansion is even clearer, and global warming is even more urgent than it was when the first *Highway Boondoggles* report was published in 2014. But there are also signs of change. In some cases – as in examples of cancelled boondoggle projects in Dallas and Milwaukee – high-profile supporters of highway expansion publicly changed their positions. And among the broader public, as has been documented by this and previous reports, the public is subjecting highway expansion projects to more scrutiny.

In the first *Highway Boondoggles* report, we wrote that the "projects highlighted in this report illustrate a problem but also represent an opportunity – the amount of money that can be saved by cutting or downsizing these projects and others like them is more than enough to make a down payment on America's 21st century transportation needs."[6]

Today, that is still true. This report tells the story of communities that, in rejecting highway expansion, embraced promising new possibilities for the future, as well as those that have been burdened, financially and otherwise, by the decision to go through with a major highway project. It also tells the story of nine projects that pose a choice to local and state leaders – a choice between doubling down on the expensive and failed transportation investment practices of the past and making a bold shift in direction toward a more fiscally and environmentally responsible vision of the future.

The Problem with Highway Boondoggles

EVERY YEAR, THE UNITED STATES SPENDS billions of dollars expanding our existing highway network. These new highways typically impose financial, social and environmental costs – even as their claimed benefits, such as reduced congestion, often fail to materialize.

Highway Expansions Are Expensive and Saddle States with Debt

Highway expansion costs the United States tens of billions of dollars each year. In 2012, federal, state and local governments spent $27.2 billion expanding the highway system – including new roads, new bridges and widening of existing highways.[7] Those expansion projects absorbed more than one out of every four capital dollars spent on highways in 2012, a lower share than previous years, but still a massive investment.

At the same time, the traditional sources of funding for highway programs – gas taxes and other so-called "user fees" – are increasingly failing to keep up. The real value of fuel tax and vehicle tax revenue actually declined between 2000 and 2016, the result of slower growth in driving, more fuel-efficient cars, inflation, and the unwillingness of the federal government and many states to increase gasoline taxes.[8] The result has been increased borrowing for highway expenses and a growing dependence on revenue from general funds supplied by taxpayers, regardless of how much or how little they drive.

Continued highway expansion amid stagnating gas tax revenues mean that limited funding is available for other transportation needs – including needs that are increasingly urgent in the 21st century.

- **Road repairs** – As many of the roads and bridges the nation built in the mid-20th century near the end of their useful lives, local governments are struggling to meet day-to-day infrastructure maintenance needs and often defer necessary repairs. This has led to a roughly half trillion-dollar backlog of highway and bridge repair and rehabilitation.[9] As streets, roads and bridges continue to age, the cost and urgency of maintenance and repairs can only be expected to grow.

- **Transit repair and expansion** – Similarly, the nation faces a nearly $90 billion repair and rehabilitation backlog for its public transportation systems.[10] Americans also are increasingly demanding expanded access to public transportation. According to a 2014 ABC News poll, Americans favor transit improvements over road expansion as a solution to congestion by a margin of 54 to 41 percent.[11] The desire for transit access is particularly true among millennials. A 2016 poll found that 70 percent of millennials would be willing to pay more for rent or mortgages to live in close proximity to public transit.[12] And in November 2016, voters across the country approved $170 billion in new investment in transit on local ballots.[13]

- **Local needs** – Local governments also clamor for funding to expand bike lanes, improve conditions for pedestrians, fix potholes, and engage in "complete streets" transformations and other improvements to local streetscapes. Often, these improvements cost just a tiny

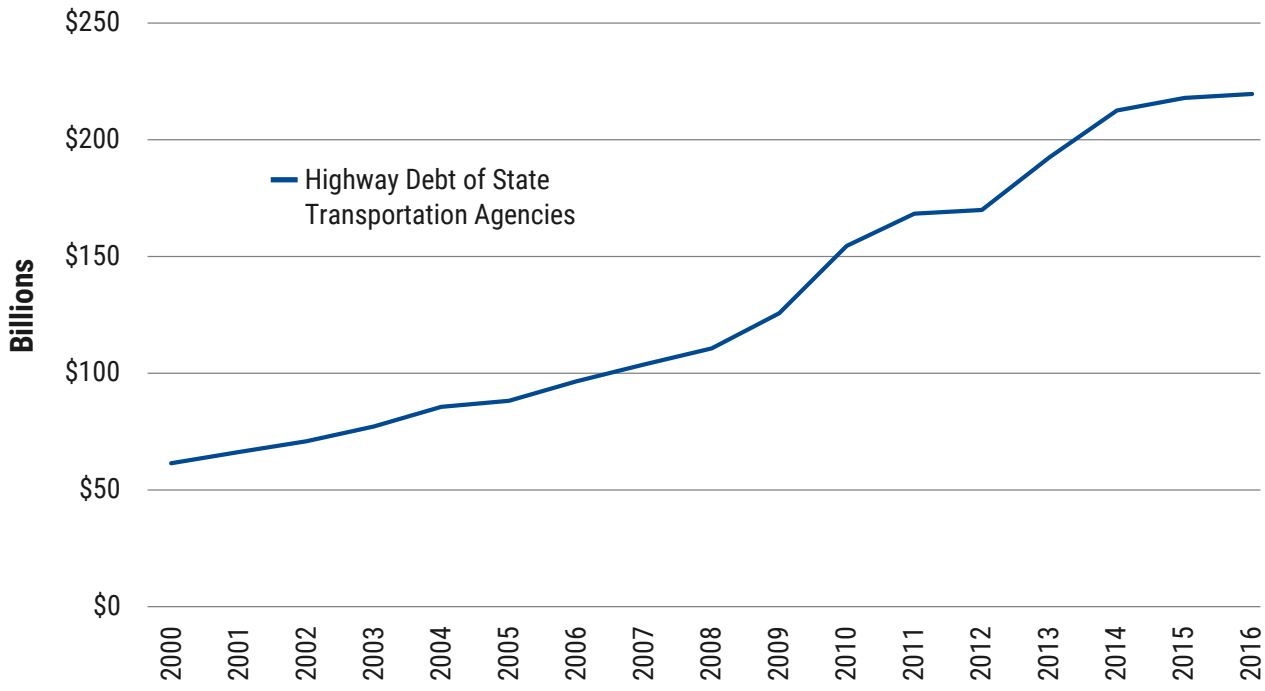
fraction of the cost of a major highway project, but deliver significant improvements in quality of life and expand the mobility options available to local residents.

Costly highway expansions also saddle states with debt. High spending for road expansions and other projects, combined with stagnant revenue from gas taxes and other sources, has led to ballooning state highway debt. From 2008 to 2015, the highway debt of state transportation agencies nearly doubled, from $111 billion to $217 billion.[14] As a result, the cost to retire old debt has become increasingly steep. In 2016, $14.4 billion or 6.6 percent of all highway spending was spent just to retire old debt, compared to $5.1 billion in 2000.[15]

Some states have borrowed for highways more aggressively than others. In Texas, three constitutional amendments allowed the Texas Department of Transportation to borrow approximately $18 billion over the course of a decade for highway building, while also diverting additional state tax revenue to transportation.[16] By the end of 2015, Texas had $29 billion in total highway debt, 30 times more than at the end of 2000 – and is now paying nearly $5 billion each year to service that debt, 90 times more than in 2000.[17] In 2014, Texas voters approved Proposition 1, which diverts more than $1 billion per year of state revenue to spending on road construction and maintenance.[18]

Highways built using public-private partnerships (PPPs), in which private companies build roads, often in exchange for the right to raise and collect toll revenue, are sometimes presented to the public as a way to build new highways without

FIGURE 1. THE HIGHWAY DEBT OF STATE TRANSPORTATION AGENCIES HAS DOUBLED SINCE 2008 (NOMINAL)[23]



public costs.[19] Yet while some privatized toll roads do cover their own costs, PPP projects can require new spending when they must be propped up or rescued in cases where tolls do not generate enough revenue to pay off investors or cover costs, as has been the case with State Highway 130 and the Camino Colombia toll road in Texas.[20] In deals where the public does not receive fair value for future toll revenues, PPP highways can also result in decreased long-term revenue for the state – resulting in either increased debt, or the need to raise new revenue.[21]

The new roadway created by highway expansions is also expensive to maintain, and creates a lasting financial burden. The average lane mile costs $24,000 per year to keep in a state of good repair.[22]

Highway Expansion Doesn't Solve Congestion

Building a new highway or widening an existing one is often billed as a way to reduce traffic congestion. Nearly a century of highway construction in the United States, however, suggests that it does not work. Since 1980, the nation has added more than 800,000 lane-miles of highway – paving more than 1,500 square miles, an area larger than the state of Rhode Island – and yet congestion today is worse than it was in the early 1980s.[24]

For decades, transportation researchers have understood why building and widening highways does not eliminate congestion.[25] Expanding a highway sets off a chain reaction of societal decisions that ultimately lead the highway to become congested again – often in only a short time. Businesses may choose to move or establish new locations on the outskirts of the city in order to take advantage of the new highway. People may choose to move farther away in pursuit of cheaper housing. Commuters who had left early for work in order to avoid traffic might travel at rush hour once again. People who had taken transit might get back into their cars. This "induced travel" (sometimes referred to as "induced demand") takes up additional space on highways, ultimately resulting in the return of congestion. This phenomenon is so predictable that it has been called the "Fundamental Law of Road Congestion."[26]

Highway Expansion Damages the Environment and Our Communities

Highway expansion fuels additional driving that contributes to climate change. Americans drive more per capita – and produce more carbon pollution from transportation per capita – than any major industrialized nation.[27] In 2017, transportation was the nation's number one source of carbon pollution.[28]

By encouraging more people to take to the roads, highway expansion makes it more difficult for the nation to meet its clean air and greenhouse gas emission reduction goals. In order to achieve the dramatic reductions in carbon pollution needed to prevent the worst impacts of global warming, the United States and the world must promote low-carbon forms of transportation wherever possible. Highway expansion does just the opposite.

Highway expansion can also cause irreparable harm to communities – forcing the relocation of homes and businesses, widening "dead zones" alongside highways where street life is unpleasant or impossible, severing street connections for pedestrians and cars, reducing the city's base of taxable property, and creating noise, pollution and disruption that degrade quality of life.

According to former U.S. Transportation Secretary Anthony Foxx, roughly 1 million Americans were displaced by highway construction during the first 20 years of the Interstate Highway System.[29] Many of those who were not displaced found their community life disrupted. A 2006 study found that U.S. cities would have added 8 percent to their population between 1950 and 1990 if urban freeways had not been built, compared to the 17 percent decline that occurred amidst the urban highway boom.[30]

Such displacement and disruption continues. In Houston, the North Houston Highway Improvement project threatens to displace four houses of worship, two schools, 168 single-family homes, 1,067 multifamily units and 331 businesses with 24,873 employees.[31] (See page 17.)

Build or Don't Build? Five Communities Illustrate the Consequences

THE LAST FOUR EDITIONS of *Highway Boondoggles* have highlighted 41 projects. The following stories take a look back at five of them, showcasing the choices communities face once a boondoggle has been proposed, and the consequences of the decisions they ultimately make.

In some cases – like in Ohio, which followed through with two misguided projects – states continued down a road of needless highway spending, ultimately finding themselves in a budget hole. Other cases – like two stories of successful community efforts to stop bad projects in Tampa Bay and Dallas – show that the decision to reject a highway can lead to new possibilities for community improvement.

I-275 in Tampa: A Highway Was Cancelled and a Community Is Thriving

In 2016, the Florida Department of Transportation was moving forward with a $3.3 billion plan for new toll lanes to let drivers bypass congested traffic on I-275, I-75 and I-4 in Tampa, despite acknowledging that the planned project would not solve the region's problems with congestion.[32]

The plan was not only expensive and unnecessary, but it was also set to roll through the community of Tampa Heights, destroying historic homes and businesses, centers of culture and community life, and even part of a popular water park the city spent millions to build and open in 2014. In response, community groups like Sunshine Citizens worked to stop the project by holding marches, attending public meetings, and going to the press.[33] Their work paid off: In May 2018, the Florida Department of Transportation (FDOT) announced that it was no longer intending to put toll lanes along I-275, citing "community opposition."[34]

Today, the community that was threatened is thriving. A newspaper column published in the *Tampa Bay Times* notes that "Tampa Heights is exploding" with bars and restaurants, and with more pedestrians and bicyclists than ever (although not enough crosswalks).[35] Rather than a bigger highway, the neighborhood has been working to slow traffic. Palm Avenue, which runs across I-275, was put on a "road diet" with more space for pedestrians and bicyclists, and slower speeds.[36] And Sunshine Citizens is currently building support for a project to convert the raised I-275 highway to a more people- and city-friendly boulevard.[37] In May 2019, the Hillsborough County Metropolitan Planning Organization voted to conduct a feasibility study on the project, which would turn the highway into a multimodal boulevard supporting walking, biking and light rail.

Even as Tampa Heights thrives, so far, FDOT has continued to push forward with other aspects of its expensive and disruptive "Tampa Bay Next" program. As of April 2019, the agency was considering a flurry of new highway projects in the area, including widening I-75 from six to eight or even 10 lanes, building new interchanges, and adding new highway extensions.[38]

Portsmouth Bypass and Cleveland Opportunity Corridor: Boondoggles Put Ohio in a Budget Hole

Previous *Highway Boondoggles* reports covered two Ohio projects: the Portsmouth Bypass, a $429 million project that we noted was "in an area where driving has declined and existing roads desperately need funding for repairs," and the Cleveland Opportunity Corridor, a $331 million project that critics noted was "unnecessary since there are several routes in the area that connect the two points already." At the same time, as we wrote in 2015 with regards to the Portsmouth Bypass, its costs would "encumber future budgets, eating up money that could be used in the future for education, health care and other necessities."[39]

Despite tight funds and questionable rationales, those projects moved forward. Today, after years of reckless highway spending, Ohio is struggling to fund its transportation budget. In 2018 the *Columbus Dispatch* wrote that "the incoming DeWine administration will start off the new year staring down a huge transportation-budget problem: The state has run out of money for major new road-construction projects."[40] And a 2017 spending analysis found that Ohio's annual spending on public transit was falling more than $650 million short of what was needed to meet market demand, noting that the "Ohio Department of Transportation itself has found the state's public transit network fails to meet market demand by 37.5 million rides."[41]

In recognition of the budget hole, Ohio was able to muster the political will to raise gas and diesel taxes, which will raise an estimated $865 million in revenue per year.[42] Yet even with the new revenue, Ohio still faces big transportation budget problems – problems that will only worsen if the Ohio Department of Transportation uses the new revenue for yet more highway expansion projects, as the agency has indicated it intends to.[43]

As news site *WCPO Cincinnati* asked, "will Ohio keep widening highways when it can't afford to maintain what it has already built?"[44] And while the state's long underfunded transit systems will receive some money under new legislation, fuel tax revenue in Ohio can only be spent on roads and bridges.[45] To fix its budget and achieve a better transportation future, Ohio will have to let go of wasteful and unnecessary highway projects.

I-94 East-West: A Change of Heart in Wisconsin Frees Transportation Funds

"There are some groups out there that want to spend billions and billions and billions of dollars on more, bigger, wider interchanges across the state. I actually think we should be fixing and maintaining our infrastructure. I don't know that we need bigger and better and broader right now when we have a changing transportation system." These words were spoken in 2018 by then-Wisconsin governor Scott Walker, soon after cancelling plans to rebuild the east-west stretch of I-94 in Milwaukee following a warning from the federal government that it would withdraw authorization for the project without a new state funding plan.[46]

Walker's decision to forgo the I-94 expansion paid immediate dividends to Wisconsin's transportation system. Without including a costly boondoggle, Walker's transportation budget that year was able to include modest increases in transit funding and local infrastructure maintenance.[47]

His words also reflected a surprising, and encouraging, change of heart. Walker's transportation department had overseen expensive and unnecessary highway projects for years. In 2013, WISPIRG Foun-

dation released its report *Road Overkill*, which examined six completed highway expansion projects in the state, finding that most had failed to reach the projected traffic levels used to justify their construction.[48] One year later, WISPIRG Foundation's *Fork in the Road* examined the costs of four highway expansion megaprojects being championed by the Walker administration and highlighted better ways to spend that money.[49] And the costly and unnecessary I-94 project cancelled by Walker was covered in the first *Highway Boondoggles* report in 2014.

Today, Wisconsin still has not left highway boondoggles behind. Work still continues on a capacity expansion for another stretch of I-94, which was covered in last year's *Highway Boondoggles 4*.[50] And new governor Tony Evers' March 2019 budget proposal included new money to move forward with a $500 million widening project of I-43 north of Milwaukee.[51] But Evers also included a large transit funding increase in his budget proposal, and has stated his intention to shift money away from big highway projects toward local road maintenance projects.[52]

Dallas Trinity Parkway: Cancelling a Highway Created New Opportunity for Nature in Dallas

By ending one bad highway project, Dallas has created an opportunity to provide future generations with a greener, healthier and more enjoyable city.

In 2014, Dallas was moving forward with plans to build the six-lane Dallas Trinity Parkway. As we wrote that year, the $1.5 billion project had a number of troubling elements. Documents suggested it would fail to solve congestion. It was susceptible to flood damage. And the project was squarely at odds with the city's emerging priorities, including expanding public transit and improving quality of life.

The project also would have meant a major new highway running along the Trinity River Corridor, a wide swath of green that runs through the heart of Dallas. The Trinity River is an important ecological area, sustaining the nation's largest urban hardwood forest.[53] It is a floodplain that absorbs floodwaters and transforms into an area of wetlands during flood events. And just as the project threatened to cut off Dallas from the river, the area was becoming an increasingly important piece of life for city residents, providing them with parks, trails and other amenities.

But as plans for the highway moved forward, increasingly skeptical city leaders and residents began to speak out against the project. In August 2017, following years of work by local activists, and three years after the Trinity project appeared in the first *Highway Boondoggles* report, the Dallas City Council killed the project with a 13-2 vote.[54]

Today, with highway plans out of the picture, Dallas is beginning to look toward a future in which it can develop the river area not as a piece of road infrastructure but as a special open space that the whole city can enjoy. The Trinity Park Conservancy is planning a new series of parks along the river.[55] Planners are also looking to ensure that the river can continue to serve its natural role as protection against future floods.[56] As *D Magazine* wrote, the idea behind the new plans is for "fulfilling that very old Trinity River Project ambition of reconnecting Dallas to its river and repositioning it as a civic centerpiece, and not a barrier."[57]

Alaskan Way Viaduct: Traffic "Disappeared," Revealing an Expensive New Highway as Unnecessary

After a 2001 earthquake damaged the Alaskan Way Viaduct, an elevated highway along Seattle's downtown waterfront, the city began planning a replacement tunnel that would increase total traffic capacity.[58] In 2014, we wrote that the tunnel project not only came with an exorbitant price tag, but it was also unlikely to reduce congestion according to the state's own data. Rather, the city could create more cost-effective and sustainable transportation with a "streets-and-transit hybrid alternative, a combination of a four-lane urban-scaled street on the waterfront, one additional lane on a nearby interstate highway, and hundreds of millions of dollars in improvements to city streets and area bus service."[59]

Nevertheless, Seattle moved forward with the tunnel. After falling more than three years behind schedule and running more than $200 million over budget, the tunnel opened in February 2019. But before the tunnel opened, the closure of the old Viaduct highway provided a "real-time experiment" of what happens when a city removes an urban highway, as *Streetsblog* wrote.[60] The Viaduct was closed three weeks before the new tunnel was set to open, an event termed "Viadoom" by the local media, with predictions of interminable traffic jams in the period between the closing of the old highway and the opening of the new. But the predicted traffic never appeared.

Instead, with both highways closed, the traffic seemed to melt away. The *Seattle Times* asked: "What happened to the 90,000 cars a day the viaduct carried before it closed?"[61] There wasn't just one answer. More people commuted by bus, bike and water taxi, with transit riders benefitting from expanded service made possible by a recent boost in local public transportation investment.[62] Others changed their commutes or just worked from home. The phenomenon was induced demand in reverse: Remove highway capacity, and people find ways to drive less. As Mark Burfeind of INRIX, a traffic analytics company, told the *Times*: "For lack of a better term, the cars just disappeared."

Today, the new tunnel is up and running. Many commuters have resumed their old habits, and peak time traffic counts are already slightly higher than they were on the viaduct.[63] With the project finished, Seattle is now facing a future of more cars and traffic. But Seattle's experience of removing an urban highway – and watching traffic just disappear – should serve as a lesson for future projects in the area.

2019 Highway Boondoggles

Boondoggle (n): Work or activity that is wasteful or pointless but gives the appearance of having value.

– GOOGLE DICTIONARY[64]

AMERICA'S CONTINUED CONSTRUCTION of ever-wider highways costs tens of billions of dollars each year – money that is diverted from more pressing needs such as highway repair, transit repair and expansion, and local street improvements. These highway expansion projects often fail to do the job they are intended to perform: reducing congestion. They also create new infrastructure with high maintenance costs, and are often funded with reckless borrowing that creates a debt burden for future generations.

In this report, we identify nine highway "boondoggles" slated to cost $25 billion – projects with large price tags that are unnecessary and/or threaten to damage the communities surrounding them.

Some of these projects were originally proposed decades ago, at a time when concepts such as induced travel and the impact of driving on the global climate were less well known. Others represent more recent trends, such as the use of tolled "express lanes" to expand highway capacity in areas where widening would otherwise be politically or financially impossible.

In this report, we address three types of projects:

- New highways or relocations of existing highways.
- Projects that add new lanes to existing roads.
- Highway expansions that are unnecessarily tacked onto needed highway reconstruction and repair projects. Many highways are currently reaching the end of their useful lives and require major reconstruction. In many cases, however, highway agencies have added expansion onto these reconstruction projects, making them more expensive and disruptive than they could be.

While not every state or region is included in the list of misguided highway projects below, nearly every state has one or more highway expansion projects whose wisdom is questionable. The projects highlighted in this report are not necessarily the worst highway boondoggles in the nation, but they are representative of the costs of proceeding with disruptive projects that do not have a compelling transportation rationale.

"Complete 540," North Carolina

Estimated Cost: $2.2 billion

The proposed "Complete 540" highway through the southern suburbs of Raleigh would divide neighborhoods and encourage sprawl. Image: North Carolina Department of Transportation

North Carolina transportation officials are moving forward with plans for a new six-lane highway around the southern half of Raleigh that would cause sprawling development and troubling environmental damage. The plan is called "Complete 540," and would form the southern half of Raleigh's 540 beltway, approximately seven miles from downtown Raleigh.[65] At a cost of more than $2 billion, the highway, likely to be paid for with a mix of state funds and toll revenue, will be the most expensive in North Carolina history.[66]

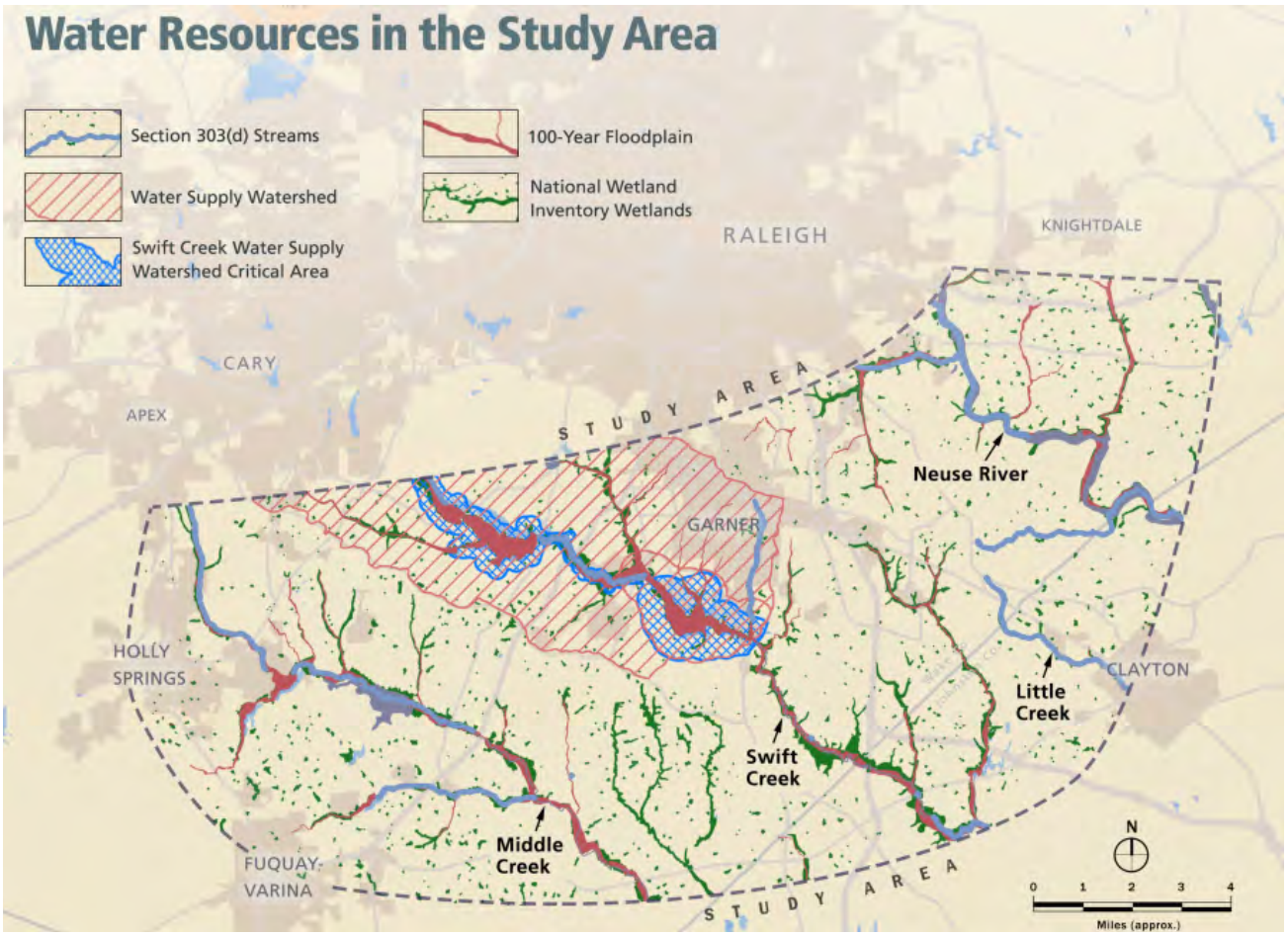
According to the Southern Environmental Law Center (SELC), Complete 540 would encourage "unplanned growth to sprawl out of Raleigh and into Southeast Wake County." Those changes would be consistent with the impacts of other bypass highways around U.S. cities, including in the Southeast. A 2000 study, *Economic Impact of Freeway Bypass Routes in Medium Size Cities*, concluded that negative impacts of bypass routes "include increases in sprawled, low density commercial and residential development entailing high environmental and infrastructure costs."[67] That study included an assessment of the I-295 bypass around Richmond, Virginia, which found that "relocations of retailing, local industries, offices, and residents facilitated by the outer belt have weakened the city's downtown business district. . . Without the bypass, local planners agree there would have likely been more redevelopment at high densities in the downtown area."[68]

Even in the suburban towns it is meant to help, the state has concluded that Complete 540 "would have negative impacts on existing neighborhoods."[69] The highway will bi-

sect at least two neighborhoods, Woodcreek and Deerfield Park, and cut through land owned by six churches.[70] It will also cross over the scenic Neuse River Trail, "a 28-mile pedestrian and bicycle path that is part of Raleigh's Capital Area Greenway System."[71]

Environmental groups have raised extensive concerns and filed legal challenges over the project's environmental impacts. According to SELC, Upper Neuse Riverkeeper, the Center for Biological Diversity, and Clean Air Carolina, which jointly filed complaints against the project, it will "pave over 70 acres of wetlands, destroy more than 55,000 feet of streams, and cut through the area's few remaining green spaces."[72] The project will also destroy critical habitat for federally listed threatened mussel species.[73] In an attempt to compensate for the potential devastation of a threatened species, the state has proposed spending $5 million to grow mussels in a lab for five years.[74]

The highway expansion conflicts with North Carolina Governor Roy Cooper's commitment to fight climate change. In October, 2018 Governor Cooper signed Executive Order 80, committing North Carolina to reduce greenhouse gas emissions by 40 percent and meet the targets established in the Paris Climate Accord.[75] According to a state estimate, the highway would increase driving by more than 484 million vehicle miles traveled in 2040.[76]



The "Complete 540 project would pave over dozens of acres of wetlands and destroy habitat for threatened mussel populations. Image: North Carolina Department of Transportation

North Houston Highway Improvement Project, Texas

Estimated Cost: $7+ billion

The North Houston Highway Improvement Project will expand already vast swaths of highway through the middle of Houston, displacing homes and businesses and dividing communities.

Image: Texas Department of Transportation

Houston, the nation's fourth-largest city, is fast-growing and sprawling, and as of 2012 had more highway lane-miles per person than all but two cities in the country.[77] The city's overreliance on cars has created big problems for residents. Long trips on congested highways mean that Houston workers have the second-most expensive commutes in the country.[78] The metro area's roads are also the deadliest in the nation, and according to the *Houston Chronicle* the "death toll is the equivalent of three fully-loaded 737s crashing each year at Houston's airports, killing all aboard."[79] Vehicle pollution is also harming air quality in Houston, which in 2019 was ranked ninth-worst in the country for high smog days by the American Lung Association.[80]

Improving Houston's transportation system means reducing reliance on cars. But today state officials are moving forward with a massive and expensive project that would result in more concrete and asphalt through the middle of Houston.

The North Houston Highway Improvement Project (NHHIP) would involve widening and rebuilding nearly 25 miles of highway and numerous interchanges, with much of the project taking place in the middle of the city. As the *Houston Chronicle* wrote, the "most radical changes come downtown, where relocating I-45 to the central business district's east side also means remaking every freeway it touches — Interstate 10, Interstate 69 and Texas 288." And the project comes with the high price tag of $7 billion before even accounting for right-of-way costs.[81]

The miles of new highway created by the project will widen barriers between neighborhoods, crisscross over parkland, and make transportation more difficult for com-

muters without access to a car.[82] The project will require expanding the right-of-way of the existing highway by hundreds of feet. Some sections through downtown Houston will grow from 220 feet to 570 feet, resulting in highways nearly as wide as the length of two football fields.[83] Communities could potentially benefit from green spaces built on caps over sunken sections of highway. However, as the project's Draft Environmental Impact Statement notes, the "green space cap is conceptual and not part of the proposed project, and it would require separate development and funding."[84]

The state's own documents contain stark language on the harm that the project will do to Houston's communities:[85]

- The project's "proposed recommended" routes would displace four houses of worship, two schools, 168 single-family homes, 1,067 multifamily units and 331 businesses with 24,873 employees.[86] "Potential impacts to community resources include displacement of residences and businesses, loss of community facilities, isolation of neighborhoods, changes in mobility and access, and increased noise and visual impacts. . . All alternatives would require new right-of-way which would displace homes, schools, places of worship, businesses, billboards, and other uses."

- "All [build] alternatives would result in displacements that would reduce the size of the communities and potentially affect community cohesion… Proposed alternatives that include elevated structures may create physical barriers between neighborhoods or affect the existing visual conditions of the communities."

- The project's "[c]onversion of taxable property to roadway right-of-way and displacements of businesses that are significant sources of sales tax revenue would have a negative impact on the local economy." And while at present the downtown area and surrounding neighborhoods "are experiencing various degrees of redevelopment," the state notes that "growth trends indicate redevelopment would continue independent of the proposed improvements to project facilities."[87]

- The project will "cause disproportionate high and adverse impacts to minority or low-income populations." And the project's "[d]isplacement of bus stops could affect people that do not have access to automobiles or that are dependent on public transportation."

Even as it harms Houston, the project will also likely fail to achieve its basic goal of reducing congestion. When it comes to congestion impacts, Houston can look to its own Katy Freeway as an example of the phenomenon of induced demand. Following that highway's $2.8 billion widening, 85 percent of commute times actually increased.[88]

Even as the NHHIP would further reinforce Houston's dependence on cars, some parts of Houston's own local government are working for the opposite goal. Houston's Complete Communities program is working to improve neighborhoods, including with programs for safer streets and bike lanes.[89] The city's Walkable Places project is working to "create more vibrant, walkable streets that support alternative modes of transportation."[90] And Houston is creating big plans for a fast and reliable transit system for the future.[91]

Houston can achieve a more sustainable, affordable, and better functioning transportation system – but only by avoiding harmful and costly expenditures like the North Houston Highway Improvement Project.

High Desert Freeway, California

Estimated Cost: $8 billion

The High Desert Freeway has the potential to encourage sprawl in fragile desert ecosystems, where development could alter the landscape and strain scarce water resources. Image: California Department of Transportation

California officials are moving forward with plans for the "High Desert Freeway," an $8 billion, 63-mile freeway 40 miles north of downtown Los Angeles that would connect the cities of Palmdale and Lancaster with Victorville, Apple Valley and Adelanto. L.A. County's first new highway in 25 years would lead to more driving and more pollution, along with sprawling desert development.[92]

The plan – building a massive highway to connect mid-sized exurbs of Los Angeles – has inherent problems. The highway's numerous offramps as it runs through rural, undeveloped areas suggest its potential to encourage sprawl in fragile desert ecosystems, where development could alter the landscape and strain scarce water resources.[93] And while officials have not yet found full project funding, the high cost of the highway may mean less money for other state or local transportation priorities.[94]

The project will also increase California's global warming emissions, an impact in direct opposition to state goals. When it comes to taking on global warming, in most ways California is on the cutting edge. The state has more solar panels and more electric vehicles than any other in the country, by far. In 2018, California adopted legislation requiring the state to generate 100 percent of its electricity using clean energy sources by 2045.[95]

But for California to truly become a low-carbon state, it must work to reduce driving. Transportation is responsible for 46 percent of state carbon dioxide emissions, and the 151 million metric tons of on-road transportation emissions released in 2016 were more than the total, economy-wide emissions of states like Georgia, North Carolina and New Jersey.[96] While electric vehicles are an important tool to reduce transportation emissions, electrifying the existing 35 million vehicle fleet will take time, and walking, biking and transit can cut emissions immediately and play a role in the state's long-term emissions reduction strategy.[97]

According to the California Air Resources Board, to hit 2030 climate goals the average

Californian needs to reduce driving by 1.6 miles per day.[98] The High Desert Freeway will achieve the opposite. According to the most conservative scenario in the project's Final Environmental Impact Statement, building the new highway would increase driving by at least 2.5 million vehicle miles traveled each year and increase annual carbon dioxide emissions by 240,000 metric tons per year, equivalent to burning 262 million pounds of coal.[99]

In a nod to California's climate goals, the project's environmental impact statement claims the project will have emissions benefits, as a result of helping passengers use future rail routes and its inclusion of "green energy features." Neither claim makes sense. First, the document claims a benefit of providing "improved access and connectivity to" the proposed XpressWest high-speed rail route, which would be on a route parallel to the proposed highway.[100] Such a rail route could, on its own, be an effective way to promote low-carbon travel. In contrast, the highway would promote sprawling development less amenable to rail travel, and will also compete with, not provide service to, those rail stations. The document also claims the highway project will contribute "to state greenhouse gas (GHG) reduction goals through the use of green energy features."[101] Yet it is unclear how green energy features like solar panels would benefit from the construction of a highway, or why existing highways could not provide similar building opportunities.

Interstate 75, Michigan

Estimated Cost: $1.4 billion

The Detroit area, where population has shrunk over the past 20 years, suffers from costly sprawl, roads and bridges that are in poor condition, and a woefully inadequate transit system.[102] Such a situation seems to call for reinvestment in the current system, not road expansion. Nevertheless, Michigan is currently undertaking project to expand the capacity of Interstate 75 through suburban Oakland County, north of Detroit – a project that is both unnecessary and will exacerbate the region's problems.[103] Although some sections of the project have already begun, as of April 2019, the $1.4 billion last segment of the project, which stretches from M-102 to north of 13 Mile Road, was not slated to begin construction until the fall of 2019.[104]

In describing the need for the project, the Michigan Department of Transportation (MDOT) has pointed to population growth in Oakland County as the reason the area needs a larger highway. But even in Oakland County, one of the few areas of the region that has not seen recent population decline, projected growth is slow and spread out: Current projections show the whole county adding fewer than 100,000 people between 2015 and 2045, across an area nearly four times as large as Chicago.[105] The current growth rate projection of 7.7 percent from 2000 to 2030 is also far also lower than the 12.7 percent growth rate MDOT cited in it is justification for the project, published in 2005.[106] And according to a *Streetsblog* analysis, shifting demographics and travel preferences in Oakland County "will likely shift perceptions" resulting in more, not less, support for transit in the coming years.[107]

Michigan argues that the highway is necessary in part because "Oakland County residential development is too dispersed to support a high level of transit service." However, such logic risks creating a vicious cycle of road development and sprawl: If the only way to meet the transportation needs of sprawl is by building more roads, that will in turn encourage more sprawl, which will once again require more roads.[108] In contrast, more transit and support for transit-oriented development could lead to less dispersed neighborhoods that could support greater transit use over time.

According to some supporters of the expansion, the resulting sprawl would not be such a bad thing. As Brooks Patterson, the executive of Oakland County, wrote in an online essay, "let me state it unequivocally: I love sprawl. I need it. I promote it."[109] But sprawl imposes high costs on society. Sprawl leads to loss of open space, more air pollution and water overconsumption.[110] And low-density development requires far more spending on infrastructure including roads, sewers and power lines – all of which must be maintained.[111] According to one study, sprawl costs the U.S. economy $1 trillion each year.[112]

For Southeast Michigan, the cost of highway expansion – and the sprawl it will promote – will also make it harder to pay for important transportation priorities that already face an uncertain future. Through 2045, the Southeast Michigan Council of Governments (SEMCOG) estimates the region needs to spend $20.9 billion on transit, but will have only $9.2 billion available.[113] SEMCOG also notes that estimated spending through 2045 will "not be sufficient to restore Southeast Michigan pavement to a state of good repair."[114]

The I-75 expansion will also likely fail to provide meaningful congestion relief. In arguing that a transit line will not sufficiently reduce traffic, MDOT explains the reason why: induced travel. As MDOT writes, "demand in the I-75 corridor exceeds capacity, so any diversion to transit would be quickly replaced by others wishing to use I-75."[115] Just as with transit, new road capacity will also be filled by new driving. The phenomenon is known as the "Fundamental Law of Road Congestion"– traffic grows to fill the available space. Yet while MDOT uses the phenomenon of induced travel to argue against transit, it does not consider induced travel in its road expansion analysis, merely noting that "the tools to analyze induced travel are not fully developed at this time" and that "there is no requirement to account for this at this time."[116]

Despite the project's supposed economic benefits for communities along the route north of Detroit, some of those communities oppose the project. In 2013, the city of Royal Oak, through which the southern section of the Modernize 75 project runs, adopted a resolution opposing the highway expansion project. The resolution declared that the highway expansions of I-75 (and a separate project on nearby I-94) "threaten significant negative impacts to the communities they traverse, including displacement of residents, destruction of local tax base, loss of property value, increases in traffic noise, aggravated air pollution, and continued disinvestment…"[117] The resolution also declared that the money for the project "would be far better spent addressing our region's desperate need for a comprehensive regional transit system to meet the needs of residents." [118]

Tri-State Tollway Widening, Illinois

Estimated Cost: $4 billion

The Tri-State Tollway (I-294), which runs through the western Chicago suburbs up to O'Hare Airport, is a testament to the fact that you can't build your way out of congestion. Despite already having been widened twice, in the 1970s and 1990s, the Illinois Tollway is currently moving forward with a $4 billion project to widen the road from four lanes in each direction to five and in some places six lanes.[119] Although some construction has already started, main construction is expected to take place between 2021 and 2025.[120]

The highway's own history of widening suggests that it will not achieve its intended goal of reducing congestion, yet "congestion relief" is exactly what the Illinois Tollway argues the project will accomplish.[121] As Chicago's Active Transportation Alliance notes, "roadway expansion in urban areas like ours only exacerbates traffic congestion in the long run by inducing more driving that over time fills in additional road space."[122]

In and around Chicago, the more than 1,000 lane-miles of new highways and arterials added since 1996 have been associated with more traffic and more sprawl, with negative impacts for communities and residents. Between 1980 and 2017, the number of vehicle miles traveled in the region grew nearly four times as fast as population.[123] As a result, from 1990 to 2015, the number of hours lost to congestion per commuter rose by nearly 40 percent.[124] Highway expansion has also encouraged sprawling development. A study by the Center for Neighborhood Technology found that from 2000 to 2010 Chicago "saw a decline in development around transit relative to growth in the broader region" resulting in higher transportation costs and reduced access to jobs.[125]

As reported by the *Chicago Sun-Times* in 2017, the village president of Hinsdale, a community along the route, worried that the widening could have a "devastating impact" on property values and noise levels.[126] In a letter he read aloud at a community event he noted that "despite this potential to cause serious damage to Hinsdale, the Tollway Authority had put forth no hard evidence to justify widening I-294 through Hinsdale."[127]

In the Chicago area, new and expanded highways have failed again and again to relieve congestion. As the region builds its transportation system of the future, there is no reason to think that applying the same flawed logic to the same transportation problems will work this time.

Connecting Miami Project (I-395/SR836/I-95), Florida

Estimated Cost: $802 million

Rendering of a proposed park under the expanded I-395 highway project, showing parkgoers strolling just feet from high-speed traffic. Image: Florida Department of Transportation

In Miami, highways slice through almost every section of the city, cutting neighborhoods off from one another, and creating sprawl that threatens the surrounding environment.[128] Those highways include I-395 and SR836, which were originally built through the segregated black community of Overtown, destroying much of the community and forcing thousands from their homes.[129]

In 2012, Congress for a New Urbanism suggested a remedy to help the community finally recover as a neighborhood: converting the highway to a street-level boulevard. That year, the group included I-395 on its list of "the top opportunities in North America to replace aging urban highways with boulevards."[130] Yet today, Miami is instead doubling down on highways by undertaking a five-year, nearly billion-dollar project to rebuild and add capacity to large sections of I-395 and SR-836.

The Florida Department of Transportation and the Miami-Dade Expressway Authority are marketing the "Connecting Miami" project as a community enhancement project, pointing to the raised road height that "will allow for the connection of Overtown, Downtown Miami, Omni, and Edgewater to each other by a contiguous trail," and the project's signature skyline bridge (which the *Miami Herald* describes as resembling a "high-tech tarantula").[131]

But project images and details make it clear that truly significant community improvement from the project is likely a pipe dream. Project renderings of the I-395's proposed underdeck park show the unlikely scenario of people happily strolling just feet from high-speed traffic under I-395. The usability of the park will also depend on the city being able to fund continued maintenance, including for the park's extensive lighting and other ambitious design elements.[132] On the other side of the interchange, SR 836 will be converted to a raised double-decker highway, creating a giant concrete wall through the city.

In the I-395 environmental impact statement, the only note of any community benefit is the "savings in time and fuel provided by the increased capacity" – yet those benefits, if they materialize at all, would primarily go to those people driving over the neighborhood rather than those living in it.[133] A project analysis from 2007 estimated that 10 families or individuals, and five businesses, would have to relocate for the I-395 section of the project.[134]

For the nearly billion dollar project cost, Miami could undertake far better options to improve the district surrounding I-395.[135] The city or state could invest in street safety, transit, parks and more, in line with the county's long-range plan, which suggests an "emphasis on rapid transit, land use, densification, connectivity, [and] multimodal mobility."[136] One project that could benefit the community by the Connecting Miami project would be the creation of a dedicated bus lane on the MacArthur Causeway, which connects the area with South Beach, and could save the corridor's 15,000 daily bus riders 6 to 10 minutes each way during peak traffic conditions.[137] Miami also needs funding to accelerate progress on Miami's SMART Plan for a "world-class transit system" of bus rapid transit and rail.[138]

Today, decades after being cut in half by a highway, the Overtown neighborhood is showing signs of renewal. As one project document states, an infusion of Caribbean immigrants "along with recent efforts to direct Community Redevelopment Authority funding to this area, is beginning to create new businesses that meet the ethnic needs, such as small groceries, restaurants and shops along NW 3rd Avenue."[139] Miami has the chance to help the community finally recover some of what it lost decades ago – but only by focusing on real community needs, and by forgoing expensive and unnecessary highway projects.

I-83 Widening, York County, Pennsylvania

Cost: $300 million

Pennsylvania is moving forward with a plan to spend $300 million to widen I-83 in York County from four to eight lanes. But project documents fail to show how the project will solve any problems or bring clear benefits to the region.

According to the project website, aside from the vague primary goal of achieving "a more functional and modern roadway," the main goal of the project is to "improve future traffic flow."[140] But the initial project study conducted for PennDOT notes that "the existing I-83 mainline corridor as well as the ramp merge and diverge areas operate with reasonable free-flow operations."[141] The study also found the road in decent condition, with "no significant defects … noted during a field inspection conducted in July of 2017."[142]

The study's only mention of bad congestion in the corridor is that resulting from traffic incidents, which "cause long-lasting gridlock given the high volume of traffic."[143] These findings suggest that improving operations, including incident management, would be a better and cheaper strategy than expanding capacity. Indeed, the I-83 Master Plan notes that "[a]ny improvements made to this corridor should consider and evaluate" new strategies to improve system management and operations. These include new incident detection cameras to fill coverage gaps in the existing system, "speed management, and queue warning systems," road weather information systems, and more.

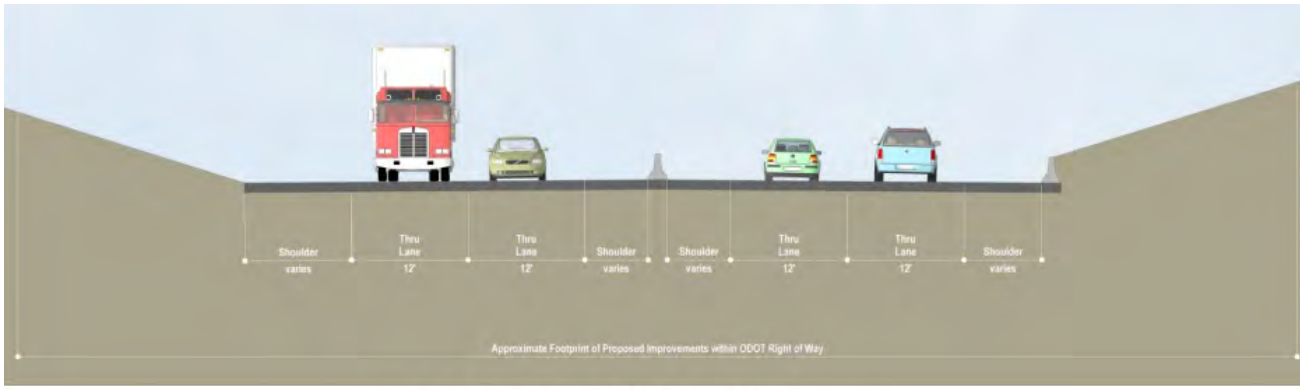
For a rural and suburban highway outside of a major metropolitan area, a low-cost strategy of improving operations rather than making massive capital investments

makes sense. It would also align with strategies preached by the Federal Highway Administration (FHWA). According to the FHWA, using so-called "transportation systems management and operations" strategies can help "make the most of the infrastructure already in place," and the FHWA has sought to help transportation agencies reorient "from construction to management of the transportation system."[144]

By forgoing road expansion, and instead opting for a cheaper and likely more effective focus on better management and operations, Pennsylvania could both save money and better serve the needs of the region.

I-5 Rose Quarter Widening, Oregon

Cost: $450 million



Existing Lane Configuration

The "I-5 Rose Quarter Improvement Project" would widen the urban freeway to more than 120 feet, bringing more driving and pollution to Portland. Image: Oregon Department of Transportation

Portland, Oregon, has made bold moves toward becoming a good place to get around without a car. New funding will soon create new bus rapid transit routes.[145] The city has a widely used bikeshare program.[146] The city has plans to remove parking spaces and use the space for new bus, streetcar, and bike lanes.[147] Portland has also set a goal of 25 percent of trips to be made by bicycle by 2030, and from 2000 to 2015 the share of people who commute by bike increased from less than 2 percent to 7 percent.[148]

But even as Portland shifts toward a safer and more sustainable transportation system, the state is planning a $450 million project to widen and add new lanes to I-5 through Portland's Rose Quarter. The project will increase the number of lane-miles of freeway in the project area by 50 percent, with extra-wide shoulders that could fit an even higher-capacity freeway in the future.[149] If built, the project will mean more driving, more pollution, and a step backward for the city.

According to the state, the project is needed because of poor safety, high congestion and poor street-level service for bicyclists and pedestrians.[150] But there is little evidence that the first two needs will be served well by the project. And the local advocates and official city advisors who have long pushed for better streets argue that street-level plans are both inadequate and outweighed by the adverse impacts of a bigger highway.

Project documents claim that I-5 in the Rose Quarter "experiences some of the highest vehicle crash rates in Oregon."[151] Yet according to Oregon Metro, a regional government agency, the state has not actually proven that the section of road in questions is particularly unsafe, and has not provided "information on how the project area compares for serious crashes."[152] Indeed, other ODOT highways in Portland have higher crash rates.[153] Metro also notes that the state has not explained how the project "will reduce the number and severity of serious crashes occurring."[154] The state's crash analysis cites driver behavior as a primary factor in all crashes, but as Metro writes, it is "not clear how the design solutions in the Build Alternative will address behavior."[155]

When it comes to the goal of increasing traffic flow and improving freight traffic, the strategy for expanding I-5 through the Rose Quarter is to fix what has been termed a "bottleneck" in the highway.[156] But according to local think tank *City Observatory*, Portland's own history of fixing an I-5 traffic bottleneck exemplifies why the strategy is likely to fail. After a nearby 2010 project to widen I-5 between Lombard Street and Victory Boulevard, the widened highway simply delivered "more traffic, faster, to the next bottleneck in the system."[157] As a result of changes to traffic flow, congestion (along with the crash rate) actually increased.[158] A better solution for reducing congestion along I-5 could be congestion pricing, which an ODOT study concluded could lead to "major improvements in travel times."[159] Despite ODOT's own finding, the agency does not appear to have seriously considered pricing as an alternative to the widening project.

On the streets around I-5 in the Rose Quarter, improvements for walking and biking are indeed badly needed. But current proposed plans for city streets have been criticized for being inadequate improvements for those on bike or foot. Portland's official walking and biking advisory committees both oppose the project.[160]

Portland's Bicycle Advisory Committee wrote that "the Build Alternative would fail to achieve the stated project goals and objectives, especially in critical areas related to bicycling, but also including the resulting conditions for walking and transit. . ." *City Observatory* noted that the "freeway widening project creates a bike- and pedestrian-hostile environment" in which wider turning radiuses would encourage faster vehicle speeds through crosswalks.[161] And Metro observed that the "width of Broadway between Williams and 1st is shown as five (5) one-way motor vehicle lanes, which is incompatible with a multimodal, mixed-use environment,

and may increase in poor driver behavior."[162] Local groups like Bike Portland have challenged the street-level alterations included in the I-5 project, which make up just a small fraction of total costs, as being used by the Oregon DOT for "green-washing, bike-washing, and safety-washing yet another massive investment in automobile-oriented infrastructure."[163]

An expanded highway will also likely increase carbon emissions, hindering Portland's ability to achieve its emission reduction goals. ODOT's own environmental assessment actually projects that the project will result in slightly reduced emissions compared to a "no build" option.[164] Yet an analysis by *City Observatory* found the opposite, estimating the project will increase annual greenhouse gas emissions by 4,700 to 7,900 tons as a result of increased driving.[165] Local researchers have noted they are unable to assess the validity of ODOT's findings, because the state has not made underlying traffic data available.[166] Portland has set a goal of reducing carbon emissions by 80 percent from 1990 levels by 2050, and a corresponding objective of reducing per capita vehicle miles traveled by 30 percent by 2030.[167] The proposed I-5 expansion would make it harder to achieve both goals.

Even as the Oregon Department of Transportation seems to be overstating the ability of expanding I-5 to achieve its transportation goals, the agency seems to be understating its environmental impacts. At a public hearing, critics of the project presented evidence that ODOT failed to fully account for increases in traffic and pollution that would result from the project.[168]

Interstate 81, Virginia

Estimated Cost: $2.2 billion

Virginia's I-81 corridor runs through the Shenandoah Valley and primarily rural areas in the western part of the state. Aiming to increase freight capacity and improve safety, Virginia is moving forward with a plan to widen and rebuild sections of the highway.[169] A recently adopted, $2.2 billion "I-81 Corridor Improvement Plan" consists of 63 individual projects including lane additions, shoulder widenings, and curve improvements, along with operational improvements and some funding set aside for rail and transit enhancements.[170]

Officials have pointed to safety problems as a key reason for the need to expand the highway, which are largely the result of heavy truck volumes.[171] Yet in 2010, state officials raised speed limits to 70 mph along much of I-81 – a move that likely exacerbated the corridor's safety issues.[172] According to one national study, rising speed limits were responsible for nearly 37,000 deaths in the U.S. from 1993 to 2017.[173]

State officials have noted that the bulk of congestion problems in the corridor are "non-recurring" – resulting from crashes and construction incidents that vary in location, as well as long-distance travel on holidays.[174] As a result, simply expanding the highway will not solve the corridor's problems. The Corridor Improvement Plan does include operational improvements that could substantially improve safety and traffic conditions in the corridor for less than 10 percent of the cost of the total plan. Identified solutions include better speed enforcement, new traffic cameras, change-

able message signs, expanded safety service patrols, and more emergency clearance services.[175] According to state documents, 70 percent of people polled at public meetings related to the project supported additional speed enforcement.[176]

Better options also exist for increasing freight capacity, including improved freight rail service.[177] The state is already investigating increasing capacity of the freight rail route that runs parallel to I-81, building off of the significant environmental and economic benefits that have resulted from its previous investments in freight rail in the I-81 corridor.[178] Among other things, the state has noted that these investments have "helped to reduce emissions and costs that stem from accidents, congestion, and pavement maintenance," and that through "benefit cost analysis, the Virginia Department of Rail and Public Transportation calculated an annual economic benefit [of the rail investment] to Virginia of $1.2 billion, saving nearly $34 million in annual pavement maintenance costs" by reducing vehicle travel.[179]

The I-81 widening project will also impose societal and environmental costs, including impacts on historic civil war landscapes, increased air and water pollution, and if the highway is tolled, impacts on communities that would experience new truck traffic from trucks avoiding tolls.[180]

Conclusion

BOONDOGGLE HIGHWAY PROJECTS continue to absorb billions of dollars of scarce public funds while delivering few benefits. But cities and states can choose a different path. From Tampa to Milwaukee to Dallas, cities and states that have rejected boondoggle highway projects have opened up new opportunities to build vibrant, sustainable communities and freed up resources to reinvest in true transportation priorities.

Officials at all levels of government – local, state and federal – should reexamine proposed highway expansion projects in light of changing transportation needs and adopt a series of other policy changes to prioritize real transportation improvements. Specifically, they should:

- **Invest in transportation solutions that reduce the need for costly and disruptive highway expansion projects.** Investments in public transportation, changes in land use policy, road pricing measures and technological measures that help drivers avoid peak-time traffic, for instance, can often address congestion more cheaply and effectively than highway expansion.

- **Adopt fix-it-first policies** that reorient transportation funding away from highway expansion and toward repair of existing roads and investment in other transportation options.

- **Use the latest transportation data and require full cost-benefit comparisons for all projects, including future maintenance needs**. This includes projects proposed to be completed via public-private partnerships.

- **Give priority funding to transportation projects that reduce growth in vehicle-miles traveled**, to account for the public health, environmental and climate benefits resulting from reduced driving.

- **Invest in research and data collection** to better track and react to ongoing shifts in how people travel.

- **Revise transportation forecasting models** to ensure that all evaluations of proposed projects use up-to-date travel information, reflect a range of potential future trends for housing and transportation, and incorporate the impact of all transportation options, from public transit, biking and walking, to newer options such as carsharing, bikesharing and ridesharing.

Appendix: Status of Previously Covered Boondoggles

Status	Project	Year Included in Boondoggles Report
Cancelled[181]		
	Dallas Trinity Parkway, Texas	2014
	I-94 East-West Expansion in Milwaukee, Wisconsin	2014
	710 Tunnel, California	2016
Completed[182]		
	Alaskan Way Viaduct, Washington	2014
	I-11, Nevada	2014
	I-77 Express Lanes, North Carolina	2016
	Portsmouth Bypass, Ohio	2016
	Route 20 Widening, Iowa	2016
On Hold[183]		
	Illiana Expressway, Illinois and Indiana	2014
	Tesoro Extension, California	2014
	Paseo del Volcan Extension, New Mexico	2016
Study and Review[184]		
	Effingham Parkway, Georgia	2014
	I-11, Arizona	2014
	I-26 Connector, North Carolina	2014
	Mon-Fayette Expressway: Route 51 to I-376, Pennsylvania	2016
	Puget Sound Gateway, Washington	2016
	Tampa Bay Express Lanes, Florida	2016
	Illinois State Route 53/120	2017
	Interstate 30, Arkansas	2017
	Interstate 73, South Carolina	2017
	Interstate 75 North Truck Lanes, Georgia	2017
	Interstate 84 Expansion, Connecticut	2017
	Madison Beltline, Wisconsin	2017
	"Traffic Relief Plan," Maryland	2018
	I-49 Inner City Connection, Shreveport, Louisiana	2018
	Interstate 35 Expansion, Austin, Texas	2018
	LBJ East Expansion, Dallas, Texas	2018

Status	Project	Year Included in Boondoggles Report
Under Construction[185]		
	C-470 Express Lanes, Colorado	2014
	Cleveland Opportunity Corridor, Ohio	2014
	State Highway 249 Extension, Texas	2016
	Texas: State Highway 45 Southwest	2016
	Widening I-70 in Denver, Colorado	2016
	Interstate 4 "Beyond the Ultimate," Florida	2017
	Interstate 405 Improvement, Orange County CA	2017
	Interstate 66 Expansion "Within the Beltway," Virginia	2017
	I-285 & SR 400 Interchange Rebuilding, Atlanta, Georgia	2018
	I-94 North South Expansion, Wisconsin	2018
	North Spokane Corridor, Spokane, Washington	2018
	Pennsylvania Turnpike Expansion	2018
	U.S. Highway 101 Expansion, San Mateo, California	2018
Under Revision[186]		
	Widening I-94 Through Detroit, Michigan	2014
	Widening I-95 Across the State, Connecticut	2016

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