



2017

# INFRASTRUCTURE REPORT CARD

Good afternoon.

Thank you for the opportunity to speak with you today about infrastructure, an issue that increasingly dominates the news across the country, and has serious consequences for our nation's economy not to mention our quality of life.

I am Brian Pallasch from the American Society of Civil Engineers.

This afternoon, we'll be sharing the results of ASCE's 2017 Infrastructure Report Card and solutions to raise the grades.

As the nation's oldest engineering society, representing 150,000 civil engineers who serve as stewards of infrastructure here in the U.S. and around the globe, ASCE serves as a leading advocate for sustainable infrastructure.

As you may know, as part of this advocacy, every four years since 1998, ASCE has prepared a comprehensive assessment of the nation's 16 major infrastructure categories in its Infrastructure Report Card.

Using a simple, familiar A to F school report card format, the Report Card examines current infrastructure conditions and needs, assigning grades and making recommendations to raise them.

# 2017 Infrastructure Grades

 AVIATION	D	 PARKS AND RECREATION	↓ D+
 BRIDGES	C+	 PORTS	↑ C+
 DAMS	D	 RAIL	↑ B
 DRINKING WATER	D	 ROADS	D
 ENERGY	D+	 SCHOOLS	↑ D+
 HAZARDOUS WASTE	↑ D+	 SOLID WASTE	↓ C+
 INLAND WATERWAYS	↑ D	 TRANSIT	↓ D-
 LEVEES	↑ D	 WASTEWATER	↑ D+

America's  
Cumulative  
Infrastructure  
Grade



A EXCEPTIONAL

B GOOD

C MADIOCRE

D POOR

F FAILING

That remains true in the 2017 Infrastructure Report Card: America's cumulative GPA is once again a D+.

The cumulative grade of D+ reflects the significant backlog of needs facing our nation's infrastructure writ large, particularly in the three categories that experience a **decline** in grade this year: Parks, Solid Waste, and especially Transit, the Report Card's lowest grade at a D-.

Six categories' grades remain **unchanged** from 2013: Aviation, Bridges, Dams, Drinking Water, Energy, and Roads, with all but Bridges stalled in the D's.

Yet there are signs of progress – seven categories saw **slight improvements**: Hazardous Waste, Inland Waterways, Levees, Ports, Rail, Schools, and Wastewater.

**Where we see areas of infrastructure that improved, those benefited from:**

- Strong leadership
- Thoughtful policymaking
- Investments that garnered results.

These improvements demonstrate what can be accomplished when innovative solutions that move projects forward are implemented.

A quick look at the highest and lowest grades:

**Rail is the highest grade, rising to a B from a C+.**

- The private freight rail industry owns the majority of the nation's rail infrastructure, and has made significant investment in recent years to meet current and future needs and accommodate changing cargo trends, including investment \$27 billion in 2015 alone. This investment has led to the significant jump in grade.
- However, U.S. rail still faces clear challenges, particularly on the passenger rail side, including addressing increasingly congested corridors, meeting safety technology demands, replacing 100-year old bridges, and improving rail interconnections with other aspects of the freight network for a more efficient system.

**Transit received the lowest grade of a D-, a drop from a D in 2013.**

- Transit in America is hitting ridership records –10.75 billion trips in 2014 – yet the symptoms of overdue maintenance and underinvestment have never been clearer or, in some cases, more dangerous.
- Despite increasing demand, the nation's transit systems have been chronically underfunded, resulting in aging infrastructure and a \$90 billion maintenance backlog.
- While some communities are experiencing a transit boom, many Americans still don't have access to public transit.



The movement of goods through ports supports

**23.1 million**  
**JOBS**

**98%** of America's  
**OVERSEAS TRADE**  
passes through ports

## Ports

Grade: C+ (up)

The United States' 926 ports serve as the gateway through which 99% of overseas trade passes, responsible for \$4.6 trillion in economic activity, over a quarter of the U.S. economy.

Ships are getting bigger, and congestion at landside connections as well as limited capacity for larger ships on the waterside, increasingly hinders ports' productivity. To remain competitive globally and with one another, ports have been investing in expansion, modernization, and repair.

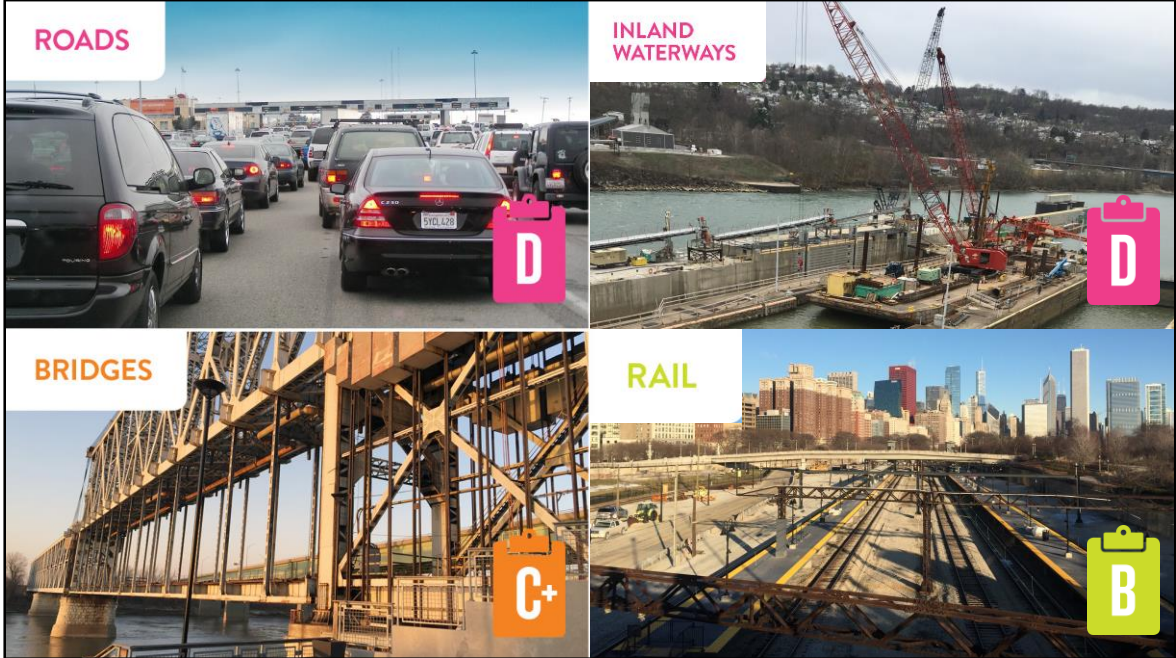
One example highlighted recently in an ASCE State Report Card is the Georgia ports system. Ports earned a B- in 2019, up from a C+ in 2014. The capacity of Georgia's ports has increased over the past five years. Today, the Port of Savannah is the busiest export port in the U.S. and is competitive in a post Panama expansion global marketplace. However, critical to the success of Georgia's ports will ensure adequate capacity on roads, rail, and inland waterways to and from the ports.

Other thoughts:

Ports are no longer "outside" the surface transportation network – instead, in policy

and through financial support, they are identified as important nodes in the overall system.

A question we face as we look at the expiring FAST Act – will the bill’s new program, INFRA, be included in a subsequent reauthorization? How much funding will it receive? With an increasing share of HTF dollars coming from general fund money, will Congress increase or remove the cap on how much INFRA funding can go toward non-highway projects? Doing so would benefit ports.



## Roads

Grade: D (same)

- America's roads are often crowded, frequently in poor condition, chronically underfunded, and are becoming more dangerous.
- More than two out of every five miles of America's urban interstates are congested and traffic delays cost the country \$160 billion in wasted time and fuel.
- Americans on average waste 43 hours a year stuck in traffic – that's one of your two weeks of vacation.

## Bridges

Grade: C+ (same)

- Over 188 million trips are taken every day across the country's 56,007 structurally deficient bridges – that's 9.1% of bridges.
- Structurally deficient doesn't mean they are unsafe but it does mean they require more repair and more frequent inspection.
- Fortunately, the number of structurally deficient bridges is decreasing – in 2013, it was 11% – but the overall condition of American bridges has been stagnant and the backlog totals \$123 billion.

## **Inland Waterways**

Grade: D (up)

- 25,000 miles of inland waterways and 236 locks form the freight network's "water highway," delivering about 14% of all domestic freight.
- Yet most locks and dams on the system are well beyond their 50-year design life, and nearly half (49%) of vessels experience delays.
- Investment in the waterways system has increased in recent years but upgrades on the system still take decades to complete.

## **Rail**

Grade: B (up – jumped from C+)

- U.S. rail network consists of 160,000 miles of track, 100,00 rail bridges, and 800 tunnels, carrying approximately one-third of U.S. exports, delivering 5 million tons of freight, and transporting 84,600 passengers each day.
- The private freight rail industry has made significant investment in recent years, including investing \$27 billion in 2015 alone.
- However, challenges persist for Amtrak and others on the passenger rail side, including addressing increasingly congested corridors and meeting safety technology demands.

# Investment Gap

2016–2025 (10 years)

Infrastructure Systems	TOTAL NEEDS	ESTIMATED FUNDING	FUNDING GAP
SURFACE TRANSPORTATION	\$2,042	\$941	\$1,101
WATER/WASTEWATER INFRASTRUCTURE	\$150	\$45	\$105
ELECTRICITY	\$934	\$757	\$177
AIRPORTS	\$157	\$115	\$42
INLAND WATERWAYS & MARINE PORTS	\$37	\$22	\$15
DAMS	\$45	\$5.6	\$39.4
HAZARDOUS & SOLID WASTE	\$7	\$4	\$3
LEVEES	\$80	\$10	\$70
PUBLIC PARKS & RECREATION	\$114.4	\$12.1	\$102.3
RAIL	\$154.1	\$124.7	\$29.4
SCHOOLS	\$870	\$490	\$380
<b>TOTALS</b>	<b>\$4,590</b>	<b>\$2,526</b>	<b>\$2,064</b>

**\$2.0**  
trillion  
needed



FUNDING GAP | CURRENT FUNDING

The grades in these 16 categories are cause for concern and reflect the fact that America’s infrastructure bill is long overdue.

In addition to grading the nation’s infrastructure, every four years, ASCE estimates the investment needed in each infrastructure category to maintain a state of good repair and earn a grade of B.

The most recent analysis reveals the U.S. has only been paying about half of its infrastructure bill for some time and failing to close that gap risks rising costs, falling business productivity, plummeting GDP, lost jobs, and ultimately, reduced disposable income for every American family.

Between 2016 and 2025, the estimated Investment Gap totals just over \$2.0 trillion.

Even though Congress and some states have recently made efforts to invest more in infrastructure, these efforts do not come anywhere close to what’s needed; we’ve simply failed to invest for too long and now are struggling to catch up.



Failing to close this infrastructure investment gap brings serious economic consequences. According to ASCE’s latest economic study, *Failure to Act*, prepared in 2016, if we do not address the infrastructure investment gap:

\$3.9 trillion in U.S. GDP will be lost by 2025;  
 Businesses will lose \$7 trillion by 2025; and  
 2.5 million jobs will be lost in 2025.

On top of that, each American family is already losing \$3,400 in disposable income each year – more than \$9 a day – due to poor infrastructure. That’s income we could be saving or spending on other things that make our lives better, but instead are spending on car repairs, wasted time and gas, and increased costs for goods.

With about \$4 a day – the price of a nice cup of coffee – we can solve this.

So what do we do about the poor state of our nation’s infrastructure and this widening investment gap?



## Principles for Infrastructure Investment

Investments must provide **substantial, long-term benefits** to the public and the economy

The cost of a project over its entire life span—including **designing, building, operating, and maintaining** the infrastructure—must be taken into account

Projects should be built **sustainably and resiliently**

Federal investment should leverage **state, local, and private investment**, not replace these other critical sources of infrastructure funding

ASCE is encouraged by the signs from President Trump and leaders in Congress to potentially work together on this bipartisan issue that will contribute to significant gains for the American economy and families.

As ASCE and its members of engaged with the Administration and Congress, we have emphasized that any federal legislation must meet the following fundamental criteria:

- Investments **must provide substantial, long-term benefits** to the public and the economy;
- The **cost of a project over its entire lifespan** – including designing, building, operating, and maintaining the infrastructure – must be taken into account;
- Projects should be built **sustainably and resiliently**; and
- Federal investment should **leverage state, local, and private investment**, not replace these other critical sources of infrastructure funding.