RAISING THE GRADES

ABOUT THE GRADES

Infrastructure is graded based on eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation. ASCE grades on the following scale and defines these grades as:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Exceptional</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
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<tr>
<td>C</td>
<td>Mediocre</td>
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<tr>
<td>D</td>
<td>Poor</td>
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<tr>
<td>F</td>
<td>Failing</td>
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ABOUT ASCE-ALASKA

As civil engineers, we are committed to maintaining and improving Alaska’s infrastructure. Founded in 1951, the Alaska Section of the American Society of Civil Engineers (ASCE) represents about 850 civil engineers in Alaska. We understand that infrastructure is vital to our economy, health, and natural environment. With our commitment to serve and protect the public in mind, civil engineers throughout the state graded each infrastructure category according to the following eight criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation.

4 KEY SOLUTIONS

1. Have a Plan and Fund for the Future: All infrastructure owners and operators should create and fund capital replacement plans for both immediate and long-term needs.

2. Maintenance is Key for Alaska: Maintenance is the everyday work that has to be done to keep things moving, and Alaska’s infrastructure needs it. Sometimes it’s all about the basics, and maintenance is a critical component to good infrastructure.

3. Keep Up Infrastructure Improvement Efforts: Elected officials are leading efforts to improve Alaska’s infrastructure for today and in the future. But, fluctuating oil prices, impacts from climate change, and population flux cause challenges for the state. Kicking the can down the road costs Alaskans now and the bill will only increase in the future.

4. Innovate As We Replace: Alaska should support and encourage innovative solutions to infrastructure funding. The key to keeping up with rising needs is to keep replacing failing infrastructure with longer lasting and smarter solutions.

INFRASSTRUCTURE FOR ALL ALASKANS

Alaskans think about infrastructure a little bit differently than the rest of the United States. Alaska’s infrastructure is truly unique, covering a vast area of over 663,000 square miles and supporting a population of just over 730,000. For transportation systems, there is no one mode of transport in Alaska, and sometimes the route is different depending on the time of year. Some homes do not have access to indoor plumbing, and while sometimes that’s by choice, too often it’s not. Many of Alaska’s remote communities are still in need of water and wastewater systems that are safe, efficient, and sustainable, while even our most populated areas are still learning how best to handle every day solid waste in a subarctic environment.

Alaska’s infrastructure investment is crucial to our way of life and success of the economy. Historic investment at the federal level through the Infrastructure Investment and Jobs Act creates a similarly historic opportunity for state and local levels to maximize the benefits of Alaska’s infrastructure investment to last for generations to come. As Alaska legislators address budget challenges, the Alaska Report Card – developed for Alaska, by Alaskans – demonstrates the importance of continued infrastructure investment.

There are solutions to raise Alaska’s infrastructure grades! Together with the information provided in the Report Card for Alaska’s Infrastructure, it is ASCE Alaska Section’s hope that Alaska’s Civil Engineers can work together with state leaders to plan, design, build, operate and maintain safe, efficient and sustainable infrastructure for all Alaskans.
Aviation in Alaska is a huge economic engine, contributing approximately $3.5 billion annually to the state’s economy. The Ted Stevens Anchorage International Airport (ANC), Alaska’s largest airport, serves approximately 5.4 million passengers annually. ANC is also a cargo airport, and in the terms of tonnage, second only to Memphis in the U.S. and among the top five globally. With more than eight in ten of the state’s communities directly served by air, Alaska’s aviation system provides connectivity, access to jobs, and access to health care. 

Alaska’s drinking water challenges are as diverse as its geography. Urban communities in Alaska have drinking water systems similar to those in cities across the US. Services for rural communities throughout Alaska vary from piped water to no service at all. Residents in 32 rural communities do not have in-home piped water or a community water testing point and must haul water. There is an estimated need for funding in excess of $1 billion for drinking water infrastructure.

Alaska’s power generation challenges are as diverse as its geography. Most municipal systems that serve densely populated areas are well-managed and have sufficient funding to operate and maintain those systems. Conversely, rural systems suffer from a lack of funding. Alaska is estimated to have a $5-6 billion gap for preventative maintenance, and risk-based asset management is needed to improve Alaska’s wastewater infrastructure.

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Alaska’s power generation systems are generally in good/adequate condition in the larger, urbanized or highway-accessible areas of the state. Transmission systems, however, have not kept pace. In the remote areas that are not accessible on the main highway system, many energy facilities (including generation units and bulk fuel tank farms) are in fair to poor condition, with operations and maintenance being a key challenge. Policies and funding are needed to improve funding, training programs, and Railbelt grid expansion.

Alaska’s wastewater systems can be generally divided into two categories: municipal and rural. Most municipal systems that serve densely populated areas are well-managed and have sufficient funding to operate and maintain those systems. Conversely, rural communities are not served by household wastewater infrastructure, are challenged with limited access, high costs of operation and maintenance, and limited population, all of which drive up the cost per user. Training programs, grants, funding for preventative maintenance, and risk-based asset management are needed to improve Alaska’s wastewater infrastructure.

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