INFRASTRUCTURE
NORTHEAST OHIO’S GRADE

BRIDGES
50% or Lower  Deteriorating
C-
DAMS
D+
DRINKING WATER
C-
ENERGY
D
ROADS
D+
SCHOOLS
D
WASTEWATER
G.P.A.
D+

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 are on the following scale and define these grades as:

Exceptional, Fit for the Future
A
Good, Adequate for Now
B
Mediocre, Requires Attention
C
Poor, At Risk
D
Failing/Critical, Unfit for Purpose
F

REPORT CARD FOR NORTHEAST OHIO’S INFRASTRUCTURE

2019

4 STEPS WE CAN TAKE

1. Increase the state gas and diesel taxes to pay for necessary road and bridge projects and ensure local governments receive adequate disbursements to maintain local surface transportation infrastructure. Ohio’s fuel taxes have not been increased since 2005. By 2020, the Ohio Department of Transportation will face an annual budget shortfall of nearly $1 billion when compared to what was available in 2014. Increasing the state gas and diesel taxes will provide much-needed funding to pave roads, fix potholes, provide bridge maintenance, create safety enhancements, and more.

2. Make Northeast Ohio more economically competitive by increasing investment in infrastructure across all sectors. There have been modest population declines in the region as residents leave for opportunities elsewhere. Population decline can be slowed, and even reversed, with robust, sustained investment in our water and wastewater systems, energy grid, dams, roadways and more. Northeast Ohio would be wise to invest in the region’s backbone – its infrastructure – to incentivize businesses to relocate or stay put.

3. Plan for the future by investing in school facilities and training tomorrow’s workforce. Schools infrastructure was one of the lowest categories in the 2019 Report Card for Northeast Ohio. Properly maintained facilities improve a student’s ability to learn. Sufficient funding to repair and replace school facilities is needed. Additionally, students require training for in-demand careers in our region, including those in the drinking and wastewater operations industry.

4. Continue to invest in wastewater infrastructure to ensure the health of Lake Erie.

About the Cleveland Section
The first meeting of what would become the Cleveland Section of ASCE was called to order on October 28, 1914, its first officers were elected on December 19, 1914, and on January 6, 1915, the National Board of ASCE approved the Cleveland Section’s Constitution. Today the 700+ members of the Cleveland Section hail from counties in Northeast Ohio extending from Elyria on the west to the Pennsylvania border on the east and south to Jefferson County, with the exception of the Akron-Canton and Mansfield areas. The Section supports student chapters at Case Western Reserve University, Cleveland State University and Youngstown State University, and includes the Youngstown Branch. Two Cleveland Section members served as ASCE Society (National) Presidents: G. Brooks Earnest in 1962 and Randall S. Ovar in 2014.

How You Can Get Involved


2. Find out the condition of the infrastructure near you on the Save America’s Infrastructure app available on iTunes and...

3. Ask your elected leaders what they’re doing to make sure your infrastructure is reliable for the future. Use your zip code to find your list of elected officials at www.infrastructurereportcard.org/take-action.
The 2019 Northeast Ohio infrastructure report card evaluated our region’s bridges, dams, drinking water, energy, roads, schools, and wastewater systems’ infrastructure. Two of these infrastructure categories are in mediocre condition and five are in poor condition and already at risk. It is possible, however, to raise the grades of all categories — we make some suggestions to reach that goal.

**BRIDGES**

Northeast Ohio is home to 3,069 bridges, of which 46.3% are rated in good condition, 39.3% are in satisfactory or fair condition, and 9.7% are in poor condition. A poor condition rating means the bridge is structurally deficient and requires significant rehabilitation or replacement. In 2018-2019, the Ohio legislature paved the way for limited additional funding for the state’s transportation network by allowing counties the opportunity to increase vehicle registration revenues, imposing an additional $5 permissive fee. Proceeds must be used for planning, constructing, improving, maintaining, and repairing public roads and bridges. Cuyahoga County and Lake County have recently passed additional permissive vehicle registration fees. The counties of Lorain, Medina, and Geauga currently are also collecting permissive fees for road and bridge repairs. Overall, however, Northeast Ohio faces a funding shortfall issue, particularly to address its future needs. Infrastructure funding challenges continue to limit the number of bridges which can be repaired or replaced.

**DAMS**

Dams support Northeast Ohio’s recreation, irrigation, flood control, and drinking water needs. There are 618 dams in the NOACA region out of 5,737 statewide. Most of these structures are constructed of earth and/or concrete. Almost 90% of the dams in Northeast Ohio are privately owned, while just 74 out of the 618 are public and managed by municipalities, counties, or government agencies. Our region’s dams are aging. Approximately 70% of the 618 dams in the NOACA region are over 50 years old, meaning they’ve reached their design life. It is estimated that the repair cost for Ohio’s state-owned deficient dams is nearly $300 million and that over $12 billion is needed to repair all non-Federal deficient dams in the State of Ohio alone. The NOACA Region has approximately 250,000 students. A recent survey by the Cleveland Section of ASCE indicates 52% of schools in the region have not undergone significant renovations over the past 40 years, and only 57% of school districts have buildings that meet current state and/or federal standards. Funding from the Ohio Facilities Construction Commission (OFCC) is offered to schools based on an eligibility ranking system; those schools with the highest eligibility are ranked as #1. Within the NOACA region, school district eligibility rankings range from #1 to 606 out of 607 school districts statewide, with an average ranking of 447. OFCC’s available funding spiked in 2008 from a tobacco settlement, resulting in four years of over $800 million available per year to K-12 schools, but over the past five years construction disbursements have dropped to an average of approximately $375 million per year. Resilience is another concern: 91% of school buildings are designated to serve as emergency shelters, but only 27% of school buildings have backup power systems, only 57% comply with state and/or federal health and safety codes and only 36% are constructed to withstand a natural disaster of the type common to northern Ohio.

**ENERGY**

One third of energy consumed in Northeast Ohio is generated outside the region, and the region’s aging distribution networks, built in times of population expansion prior to the 1960s, require continuous care and improvement. Upgraded and/or new transmission lines are needed to bring replacement power into the constrained region as energy demands continue to increase. At present, the only investments in electric transmission lines in Northeast Ohio are for routine maintenance, and ongoing natural gas pipe replacement plans are not intended to increase capacity. The permitting and siting of new transmission lines, both for electricity and oil & gas, is a lengthy process that encounters significant public opposition and regulatory hurdles. While NEE energy companies are reliable caretakers of the existing system, the uncertain regulatory climate discourages long-term investment decisions and the aging energy infrastructure remains vulnerable and stretched thin. Investments are lacking in redundancy, and to prepare the network for the future while protecting it from major natural or human disasters. Energy infrastructure in Northeast Ohio is at risk.

**SCHOOLS**

Northeast Ohio is home to 67 school districts and approximately 250,000 students. A recent survey by the Cleveland Section of ASCE indicates 52% of schools in the region have not undergone significant renovations over the past 40 years, and only 57% of school districts have buildings that meet current state and/or federal standards. Funding from the Ohio Facilities Construction Commission (OFCC) is offered to schools based on an eligibility ranking system; those schools with the highest eligibility are ranked as #1. Within the NOACA region, school district eligibility rankings range from #1 to 606 out of 607 school districts statewide, with an average ranking of 447. OFCC’s available funding spiked in 2008 from a tobacco settlement, resulting in four years of over $800 million available per year to K-12 schools, but over the past five years construction disbursements have dropped to an average of approximately $375 million per year. Resilience is another concern: 91% of school buildings are designated to serve as emergency shelters, but only 27% of school buildings have backup power systems, only 57% comply with state and/or federal health and safety codes and only 36% are constructed to withstand a natural disaster of the type common to northern Ohio.

**WASTE WATER**

There are over 5,000 miles of underground pipes in Northeast Ohio connecting homes and businesses to 45 publicly-owned wastewater treatment plants. On a dry day, capacity in the system is double the average daily volume generated. However, the region is home to 860 communities with combined sewer systems (CSS), or sewers designed to collect rainwater runoff and sewage in the same pipe. The size and capacity of CSS are the limiting factor during rainfall events, and when the stormwater combines with the wastewater in the sewers, there simply is not enough capacity and the system must relieve itself, either through discharges into receiving waters or basement flooding. The Northeast Ohio Regional Sewer District has identified over $3 billion of capital improvements needed to mitigate the combined sewer overflow issues in the region, plus another $3 billion to address “non-CSO” (combined sewer overflows) contributing water quality issues, including basement flooding, failing septic systems and illicit sanitary discharges into the environment. In general, much of the wastewater infrastructure in the region is aging, and approximately 25% of the sewer pipes in NE Ohio are over 80 years old.