

New Jersey Infrastructure Receives a C-

The New Jersey Section of ASCE recently released the *2007 Report Card for New Jersey's Infrastructure*, giving the state's built environment an overall grade of C- and warning that a wide funding gap will need to be closed just to keep pace with demand.

The intent of the survey is to provide a more detailed picture than that given in ASCE's most recent national assessment, which in 2005 gave the country's infrastructure an overall grade of D. ASCE maintains that such tragedies as the collapse in Minneapolis of the Interstate 35W bridge are likely to become more common unless more funding is dedicated to maintenance and repairs. The New Jersey assessment is also intended "to raise public awareness of the impact [that] crumbling infrastructure is having on our daily lives, and the many issues and decisions that face our state as we strive to maintain and improve our infrastructure," states a press release by the New Jersey Section.

The section assembled a committee of eight practicing engineers to review available records and analyze the condition of the state's built environment. Its mission was to "prepare an assessment of [the] infrastructure in order to build support for dedicated and consistent sources of funding to provide adequate infrastructure facilities which are in a state of good repair," states the press release.

The highest grade on the report card went to the energy category, which received a C+. The report warns, however, that the state will need to increase its energy capacity to meet growing demand within the next few decades. Drinking water, along with ports and navigable waterways, earned only a C, and dams received a C-. The lowest grade on the card, a D, was meted out to roads, bridges, wastewater, and aviation.

New Jersey's roads traverse a total of approximately 36,000 mi (57,924 km). The report states that the roads are among the worst in the country, costing motorists \$3.2 billion in extra vehicle repairs and operating costs each year because of

poor road conditions. Approximately 49 percent of the state highway system is deficient because of roughness and surface "distress," the report states, a figure that promises to remain stubbornly high because of a lack of funding. The backlog of road segments awaiting repair poses a formidable challenge.

On the basis of the data gathered, the roads category should have received an F, according to the report. However, "the grade [was] raised to reflect the success of improving roadway safety trends, and the policies the state continues to pursue, which is promoting safety on our roadways. Therefore ASCE has adjusted the grade given to the New Jersey state roads upwards to a D."

The report also states that of the 6,420 bridges in New Jersey, 36 percent are structurally deficient or functionally obsolete, which is above the national average of 25 percent. What is more, the funding program for bridges is anything but adequate. "At least \$1.7 billion would be required to eliminate the deficient [bridge] backlog over the next ten years," the report states.

It is projected that \$15 billion will be needed to repair New Jersey's wastewater infrastructure, according to the report. Without improvement or other intervention, the report says, the demand for sewage treatment will exceed current capacity by 2016. On the basis of budget projections for fiscal year 2008, federal funding for the New Jersey Clean Water State Revolving Fund will be roughly half what it was in 2004, whereas the number of applications for new projects this year is about 30 percent higher than the number last year.

Air traffic is projected to grow 4.3 percent within the next decade. However, as the report notes, "Newark Liberty International Airport ranks first in the nation for delayed arrivals, and third in the nation for the most delayed airport departures." The aviation category's grade of D was assigned on the basis of two factors: safety and the state's ability to handle current and projected passenger volumes.

BOSTON SECTION'S TV BROADCASTS RAISE THE STATURE OF ENGINEERING

acquainting viewers with civil engineering and the state of our nation's infrastructure

was one of the goals of October's *Civil Engineering Today*, a monthly television broadcast produced by the Boston Society of Civil Engineers Section's Public Awareness and Outreach Committee. Last month's discussion was the 16th

broadcast over the Boston Neighborhood Network (BNN), a public access network in the city.

"We had been trying to find a way for the longest time to talk to people and bring in all kinds of guests so the public can know what is going on and find out about infrastructure," says Reed Brockman, P.E., M.ASCE, a civil engineer in the

Boston office of DMJM Harris and one of four members of the committee that hosts the program. The other members are Ana Cristina Fragoso, A.M.ASCE, an engineer in the Boston office of Parsons Brinckerhoff; Raul Arauz, A.M.ASCE, an engineer with Marchionda & Associates, L.P., of Stoneham, Massachusetts; and Arthur Bonney, an engineer with the Boston office of HDR.

In discussing the development of the nation's infrastructure, Brockman and Bonney voiced the hope that young people would consider careers in civil engineering. One means of nurturing such interest, they explained, was participation in the Future City Competition, which forms part of Engineers Week. In this nationwide contest, students in the seventh and eighth grades design a city using SimCity 3000 software, developed by Maxis, and construct a model. "We can open young minds up to engineering, letting them

discover for themselves how creative, helpful, and fun the civil engineering world is," Brockman says of the competition.

In an earlier program that explored the role of women in civil engineering, three women engineers were invited on the program to discuss their engineering careers and recount their experiences. Other programs have dealt with prominent engineering projects, among them Boston's Central Artery/Tunnel Project, or "Big Dig."

According to Brockman, the hosts do not know exactly how many people watch the program, but on occasion they have had viewers call in with questions and have discovered that people from as far away as Seattle have viewed their programs on BNN's Web site, www.bhntv.org. He says that the program will run indefinitely and expects that past episodes will retain their value to the civil engineering community.

ASCE Honors Retirees

Joan Obser, James McArdle, and Anne Obser, three of ASCE's most valued and experienced staff members, were honored on October 26 at the Society's headquarters, in Reston, Virginia. Altogether the honorees had rendered 135 years of service to ASCE. Patrick J. Natale, P.E., F.ASCE, the Society's executive director, presented them with service awards, and some of those who have worked with the three looked back with fondness as they paid tribute to their professionalism and long years of service.

Joan joined ASCE on January 27, 1958, at the age of 19 and stayed for a total of 49 years. She was hired as a file clerk and began her career by processing member applications in the records department. She went on to hold various positions in the membership and publications divisions as well as working in the mail room. Joan witnessed significant changes during the course of her career, including the arrival of the Society's first computers, which eliminated some of her more labor-intensive tasks. In 1995 she became an order fulfillment representative in the publications division.

McArdle was hired as a mail clerk on October 26, 1959, at the age of 16. Just eight months later he was promoted to stock clerk, then to addressing machine operator, and then to duplicating operator. He remembers riding his bike three hours to and from ASCE during a transit strike in New York City in 1962. He particularly enjoyed his work in helping to plan and organize various Society conferences. His last position with ASCE, which he began in 1999, was that of senior office manager.



ASCE's executive director, Patrick J. Natale, P.E., F.ASCE, congratulates the three retirees, who together rendered 135 years of service to ASCE. The honorees, from left, are James McArdle, Anne Obser, and Joan Obser.

Anne Obser, Joan's sister, began her career with ASCE in the membership division on October 6, 1969. During her tenure she worked in customer service, records, and information processing and was regarded by many as the foremost expert on the Society's membership information database. In 1999 she began working as a senior manager of office services, and in February of this year she became an administrator in the customer service division.

All three retirees are from Brooklyn, New York, and moved with ASCE in the late 1990s from New York City to Reston. Joan and Anne have chosen to remain at their home in Sterling, Virginia, whereas McArdle will be returning to New York. His home there is near the Hudson River, and he expects to be busy with renovation work and interior decorating.