A DAY IN THE LIFE: Bridge Specialists

On December 15, 1967 at approximately 5 p.m., the U.S. 35 bridge, connecting Point Pleasant, West Virginia and Kanauga, Ohio, suddenly collapsed into the Ohio River. At the time of failure, 37 vehicles were crossing the bridge span, and 31 of those automobiles fell with the bridge. Forty-six individuals perished, and nine were seriously injured. From 1928 when it was built, to the time of the disaster, the “Silver Bridge” (dubbed this because aluminum flakes were mixed with the paint to give it a silver color) had never been safely inspected. Indeed, around the country, there was no established federal standard for bridge inspections.

Ohio legislators acted quickly by instituting a statewide law that established a bridge inspection standard in 1968, with strict guidelines mandating all bridges with 10-foot spans or greater, be inspected annually. In 1971, almost four years after the Silver Bridge collapse, the federal government adopted the National Bridge Inspection Standards (NBIS) that stated all bridges with spans of 20 feet or greater be inspected bi-annually. “The majority of states still follow the federal guidelines but in Ohio, we still go by our more stringent inspection standards,” said Mike Malloy, District 12 Bridge Engineer.

In District 12, there are 899 bridges that must be inspected annually, and that daunting task is the responsibility of District 12 Bridge Specialists Dave Everett, Andrea Persanyi, Ken Banaszak, and Mike Sutak. Using an inspection report form, the BR-86, they inspect and document their findings on all the components of each bridge using a number system. From the bridge decks and drainage structures, to the abutments, piers, and back walls, and all approaches and joints, nothing escapes the experienced eye of the inspection team.

With 25 years in the bridge department, Everett is the senior member of the team. Over the years Everett has seen how modern technology has brought bridge inspection into the new millennium. “When I first started, we only had 35 millimeter cameras, which was a pain because the film had to be dropped off to be developed. Then we went to Polaroid cameras which gave you an instant photograph, but the quality wasn’t that good,” he said. “Digital cameras were a huge improvement because you not only get immediate feedback, but you can take as many high-quality pictures as you want.”

All four of the team are Bridge Specialist 2’s which means they have gone through extensive training to achieve that designation. A federal examination has to be passed, climbing classes, confined space entry training, and five years of apprenticeship as a Bridge Specialist 1 are the necessary requirements. “We’ve even had heat straightening and welding training, as well as learning how certain forces such as tension and compression can affect a bridge. Our training is ongoing,” said Banaszak.

Persanyi is one of less than a dozen female Bridge Specialists in the state with 14 years of experience. “Sitting on top of a pier 200 feet high and seeing the change in seasons is a lot of fun,” she said. “Also, boating while inspecting bridges in Geauga County is great.”

Speaking of boating, the team has the use of two row boats, a 12-foot aluminum and a 10-foot plastic flat-bottomed boat, which can be outfitted with an electric motor. These can be utilized when their inspections take them under bridges over small bodies of water. For the bridges that are too high to inspect by climbing or by using a towable lift, they will call for the “Reach-All”. The Reach-All, which is scheduled out of Central Office, is a truck that has a telescoping boom that will reach out, over, and under the bridge 50 to 60 feet. The bucket on the Reach-All can accommodate three people. Their inspections have detected tilted bearings, deteriorated abutments, and stress cracks in support beams, as well as delaminated concrete on the underdeck, commonly called “spalls”. They are also required to make confined space entries, continued on Page 3.
In the Making: Around District 12

Events

District 12 Blood Drive

District 12 will once again be holding a blood drive on Tuesday, April 3 from 9 a.m. to 2 p.m. Over 30 employees donated during the January 23 blood drive. Please contact Jill Powers, Roadway Services, at 216.584.2195 to reserve your spot today! Participants will also receive a coupon for $5.00 off any live plant, redeemable at your local Ohio Wal-Mart store.

Keep Ohio Beautiful

(Left) State Rep. Lorraine Fendt speaks at Painesville Garage as District 12, in conjunction with the cities of Wickliffe and Mentor, kick off Keep America Beautiful. To participate contact Ed Rahel at 216.584.2200.

Get to know Lake County!

Lake County is home of the U.S.A.’s largest arborium - Holden Arboretum. It is also the location of the largest art gallery in the country - Gallery One. Lake County also has the largest nursery district in Ohio as well as the longest beach - Headlands Beach State Park. It is also home to some 640 lane miles maintained by ODOT District 12.

“Not only have the equipment and facilities been improving, but the quality of newly hired personnel.”

Randy Lefelhoc, Lake County Transportation Manager

Dave Paponetti, County Manager for Lake County and Randy Lefelhoc, Transportation Manager, both agree that the unique character of the County presents a real opportunity to excel in both Snow and Ice operations as well as other maintenance functions. The maintenance crews in Lake County do all the grass mowing of general system routes as well as all litter pick-up in the county. In addition the painting of all auxiliary markings as well as almost all guardrail repair is handled by the crews. Ditching is also done almost exclusively by the maintenance staff.

Lefelhoc, a 33-year veteran who will be retiring in April, has seen improvement within the organization almost continuously over the years. According to Randy, “Not only have the equipment and facilities been improving, but the quality of newly hired personnel.” Lefelhoc feels that training has made veteran employees also better able to do their jobs. “The HT series has been great, but I would also like to see additional training on our core functions such as equipment operations.”

A majority of Snow and Ice operations are done on secondary roads with little or no lighting and ditches on both sides of the road. Skill in handling the equipment is a requirement. Both Paponetti and Lefelhoc were quick to point out that the employees in Lake County make it possible to consistently achieve high scores in maintenance OPI’s as well as having an outstanding safety record. Almost 50 percent of maintenance personnel in Lake County have 15+ years with ODOT.

Salt: In our own back yard

Getting to the bottom (literally) of salt’s journey from mine to road

On average, District 12 uses about 90,000 tons of road salt per winter. While that amount of salt is distributed throughout the three-county area and used by drivers as efficiently as weather conditions allow, many of us may not be aware how the road salt makes its journey from underground to the storage dome. A brief history of how the salt is acquired may put one of our most critical snow and ice tools into better perspective.

Morton Salt began test drilling on the southern shores of Lake Erie in the 1950’s and discovered a massive salt bed measuring approximately 100,000 square miles, extending north to Ontario, Canada and south to West Virginia. This seam of salt estimated to be 320 million years old, started at a depth of 1,492 feet below the surface, was 20-25 feet thick and 95 percent pure sodium chloride.

Morton negotiated with state officials for 600 acres of surface land in Lake County as well as 6,000 acres of underground mineral rights. They began actual shaft sinking operations in 1956. Shaft sinking is a process used to drill a large hole to put in the two elevators. The welder that is the people and supply carrier and the other being the Hoist, is used to bring the finished product to the surface.

In 1959, Morton’s Fairport Mine went into production to supply ice control salt in the northeastern portion of the United States for the growing national highway system. The facility supplies ice control salt to the Northeast Ohio area through the mine.

The salt is mined from panels in a square room and pillar pattern. Each panel has nine entries and crosscuts are made to connect the entries. The mining sequence starts with mining the ore body. The salt is mined from panels in a square room and pillar pattern. Each panel has nine entries and crosscuts are made to connect the entries. The mining sequence starts with mining the ore body.

The Underground Works, Inc. uses conventional mining methods to mine the salt from the ore body. The salt is mined from panels in a square room and pillar pattern. Each panel has nine entries and crosscuts are made to connect the entries. The mining sequence starts with mining the ore body.

The highest point in the area is Myers Hill at 412 feet above sea level. Lake Erie is the catalyst for classic lake affect snow storms here in northeast Ohio every winter. Ironically, 2,000 feet below its surface is the means by which our snow and ice crews battle its fury.

A DAY IN THE LIFE: Bridge Specialists can’t from reverse

Even though the collapse of the Silver Bridge was a disaster, the resulting bridge inspection standards established statewide, and federally, have no doubt been instrumental in preventing future catastrophes from occurring. Our intrepid team of Bridge Specialists are working diligently to make sure the 899 bridges in District 12 are regularly inspected and certified to be safe for the motoring public in our three-county area.

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