The TAC is also pleased to recognize a very unique project at one of our General Aviation airports. Representatives from McMinn County Airport (Athens), please come forward.

While they are making their way forward, let's look at something that got everyone's attention at Athens, started folks scratching their heads and thinking, required a lot of engineering planning and some on-the-fly flexibility and creativity, eventually ended up with some major excavation, and this spring should result in a fully completed drainage improvement and paving project to preserve a taxiway.

On July 6, 2015, a single engine Cessna, taxiing north on the parallel taxiway, hit a sinkhole which had just opened, causing damage to the aircraft, but fortunately no injuries to the pilot and passengers. Note in this first photo the size of the sink-hole—significant enough for the damage it caused, but relatively insignificant when compared with what you will see in a moment.

Members of the airport management, their consulting engineers PDC, and the Aeronautics Division all put their heads together, and one of the major concerns was what had caused the hole to develop at that location—there had been some history of sinkholes nearby on the field and during a previous runway extension project—and whether the runway itself was in jeopardy. A geological study was put into gear—sometimes you can study way too much, but in this case you will see that this study was necessary and certainly enlightening. Led by experts from S&ME, electrical connectivity measurements, sound-wave research, and test borings were employed in efforts to determine the potential for a similar sinkhole to affect the main runway. Eventually it was decided no major potential for runway issues could be determined. The focus turned to fixing the taxiway and the drainage that was believed to be a contributing factor.

Many hands became involved. Here was a very good use of safety and maintenance funding. Drainage improvements were made to help keep ground water from aggravating any potential similar void areas, and then the actual sinkhole was excavated to prepare for the final closing. These photos show the extent of that excavation—what once appeared to be a relatively small hole quickly became a huge hole with multiple throats, the deepest eventually capped at 50 feet. We didn't lose a track-hoe, but you can see the hole easily could have swallowed one. Getting the equipment in and out of the hole was challenging—the equipment operators were very brave and skilled. Here are some gee-whiz quantities and numbers: over 13,000 cubic yards of material removed, 10,000+ yards of fill, 2100 tons of stone and 1350 tons of large keystone rock, 4700 square yards of geogrid, 3300 yards of filter membrane, and 4000 linear feet of impermeable drainage ditch. The 60-day project cost almost \$650,000, but even with all the unknowns and challenges, the excavation project came in under budget.

Early this spring the taxiway will be repaved and Athens should be back in business. Everyone from the Mayor to the Airport Manager to the Consulting and Geological Analysis teams to the Aeronautics Division Engineering and Project Management personnel, and most certainly the excavation team from McKinney Excavating participated in what definitely has been an unusual project. The TAC, for 2017, is pleased to recognize McMinn County Airport for a Special Project of the Year recognition.