

Just a Paver

While we can't say the weather in 2011 has been perfect, there was that awful heat wave, it has been a darn nice year to be a paver. Kelly and the asphalt division got started on Oklahoma state highway 6 in April and by the first week in May the 50,000 tons of hot-mixed asphalt production for this project was complete and the plant was coming down. And, by mid-October Brad and David with their two concrete paving divisions have about 1,500,000 square yards of concrete pavement delivered this year. With such a productive year, it should be fun to look back to some of the earliest Koss concrete and asphalt paving projects to see just how far we have come in productivity.

Today, each batch of concrete hitting the grade is twelve cubic yards. Needless to say, these batches are all delivered by large tractor trailer trucks. In the early 1900's it took about 30 batches to equal just one of today's twelve cubic yard loads! And, the age of the automobile was just beginning; dump trucks were still on the drawing board. In those days, each one of those batches was proportioned by volume in eleven cubic foot steel boxes. And delivering these batches took a train. Before paving a road, Koss crews laid 24" industrial rail lines from the proportioning plant up and down the road to be paved. Three-ton Plymouth locomotives drove ten car trains with two boxes of batch on each car, twenty batches per train. So, a train load of batch equaled two-thirds of one batch today!

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Train of Batch Headed to Paver



Unloading a Batch into Paver



Loading Train

Just a Paver *(continued from page 1)*

And just because Koss Construction waited for trucks to come along before getting into the asphalt paving business, don't think for a minute this made easy work of those early jobs. Yes, that's the base crew hard at work preparing Love Field Airport for the asphalt crew in Dallas, Texas.



Figure 1 Laying Base

And standing atop the asphalt behind this dump truck is a “paver.” Maybe this “paver” is thinking that base crew is the place to be, not this asphalt crew?

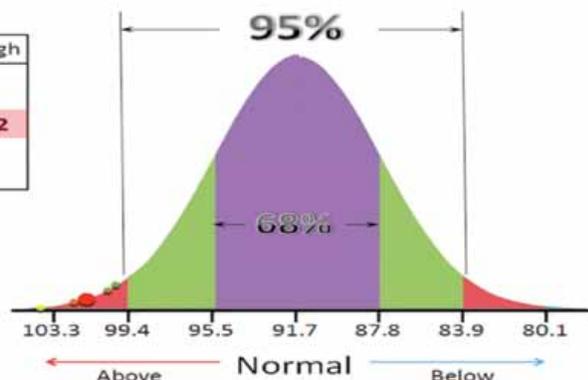


Figure 2 Laying Asphalt

That Was a Scorcher!

A statician would say our Kansas July weather was out of the norm. A Hard Roder would say it was a scorcher!

Year	Avg High
1980	104.9
1954	102.6
2011	101.2
1934	100.2
1936	99.7



Average July High Temperatures

Asphalt Division Update

As we are headed toward the end of another successful season, the Koss Construction Company Asphalt Division has a variety of different accomplishments under their belts.

This season has been quite unique to say the least, but given the down asphalt markets of the last couple of years, we can honestly say that we are fortunate to be part of such a diversified and successful team. The Asphalt Division hot-mixed asphalt (HMA) crew completed a nice rural four-lane section of SH-6 in Greer County, OK and then moved on to a project in Gray County, KS with milling, concrete pavement passing lanes, and roller compacted concrete (RCC) shoulders. That project is now complete and mobilization is underway to a large HMA project in Prairie County, AR. With over 400,000 tons of HMA on it, this project is a challenge we all look forward to.

The Milling and Recycle crews have completed numerous projects this season in Kansas, Nebraska and Iowa. One of the largest milling projects ever done by the milling crews was completed in Cass County, NE on Interstate 80 earlier this season. Some of the other challenges this season have ranged from doing Cold In-Place recycling with petro-mat that had to be removed to milling existing pavement to grade for the I-70 concrete overlays underway by the Sunflower Concrete Paving Division. On our Interstate 70 projects the tolerance for milling is very tight. The milling crews have done an excellent job of maintaining that close tolerance so the paving crew can deliver a smooth piece of pavement. We all have to work together to make these types of challenging projects a success....



Paving SH-6 in Greer County, OK

Road Work Ahead

While we are hard at work completing our work for this season, and already looking forward to scheduled work for next season, its human nature to look even further ahead as to what work is coming.

The Kansas Department of Transportation is scheduled continue the expansion of US-54 in Kingman County with almost eight miles of divided four-lane highway. The T-Works program created by the Kansas Legislature will ensure that this and other projects will be funded to keep



the Kansas highway system one of the best in the nation. The Oklahoma Turnpike Authority is moving ahead with a couple of large projects to expand the Creek & Kilpatrick Turnpikes to add capacity to their system.

The abilities of our people, equipment and organization are second to none. It is these abilities that have secured us work for the upcoming season, as well as give us a great opportunity at securing work for the future.

Sooner Concrete Paving Division Update

The Sooner Division started the 2011 construction season in January to finish a four mile project on US 59 in LeFlore County, Oklahoma. This project adds two new lanes and reconstructs the existing two lanes to create a new four-lane facility between Poteua and I-40. The subgrade crew was the first out of the gate to begin trimming and lime stabilization. While subgrade stabilization on the two lanes constructed in 2010 had been adequate for the new pavement, the grade under the reconstruction lanes required additional stabilization. Geogrid reinforcement and additional thickness of aggregate base were designed and constructed in short order. Cement treated base and concrete paving began mid-March and concluded in mid-May.

In May, the Division moved to Reno and McPherson County, Kansas to continue building the expansion of K-61. This project includes just under 1,200,000 square yards of concrete pavement, base, and stabilized subgrade. This too is an expansion of a two lane highway to a four lane highway. One and a half miles of the new roadway in Reno County crosses the sand dune formations found just north of Hutchinson. Koss started surfacing in Reno County first. In order to deliver granular base and concrete batch, Koss resorted to using 30 ton off road trucks to navigate the sandy haul road.

In June, Koss took delivery of a new Rex Model S 12 yard



Off-Road Truck Dumping a Concrete Batch in Reno County, KS

batch plant to be utilized on the two contracts in McPherson County. Those projects in McPherson County will be open to four lane of traffic in late-October, 2011. This final traffic switch will allow K-61 commuters to enjoy unrestricted four-lane travel from Interstate 135 to McPherson and Reno County line. The Sooner Division will complete the balance of 2011 in Reno County with the final phases of this twenty-two mile project scheduled for next spring.

Sunflower Concrete Paving Division Update

The Kansas paving division kicked off the 2011 season mid March in Garden City, Kansas. With much success from the previous year, crews were eager to continue the pattern of excellence by paving out the remaining 238,700 SY on US 50. With a very tight schedule the project was opened before the scheduled completion date of July 1st.

During phase two of the four-lane reconstruction work in Garden City, the paving crew started the widening and passing lane improvements on US 50 near Ingalls, Kansas. This project consisted of over 60,000 square yards of concrete paving constructed under traffic, often using a pilot car.

A gap in the paving schedule with the Ingalls project provided the window needed for the paving crew to finish the remaining re-alignment work on US 54 near Cunningham, Kansas. Our grade and base crews completed the remaining cement treated and granular base, and the paving crew finished off the last 30,000 SY of this project.

The paving crew then mobilized to the 6" overlay work on I-70 west of Salina. Paving commenced on July the 11th. These projects consist of milling existing asphalt pavement and paving a 6" bonded concrete overlay. Paving was done at 30'



Saw Crew at Work on I-70 Overlays

wide followed by the 10' shoulder placement. Joint spacing is 6' x 6' panels. The two projects paved this year total almost 750,000 SY and should be ready for traffic by the end of the year. The company was recently awarded two more contracts along this stretch of I-70 for a total continuous length of 31 miles. Our hats are off to our saw crews as they deliver almost 4,000,000 lineal feet of sawed joints on these projects!

PERSONNEL NEWS

Jerry Froese has joined our company as a Project Manager. Jerry has been a familiar name as the primary point of contact in recent years with a construction staking firm that we work with often. He has adapted quickly to his responsibilities and will soon have a demonstration of stringless technology on a project.

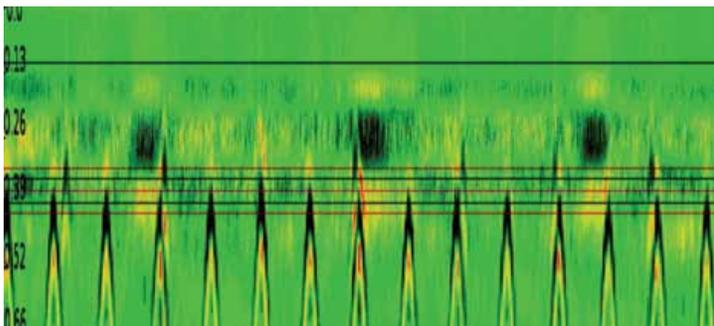
Koss Introduces GPR for Real Time Monitoring Inserted Steel

The most efficient way of placing reinforcing steel is with automated mechanical insertion systems. The concern has always been insuring that the inserted steel is in the proper location. The technology exists to develop the process or quality control tools we need for controlling this insertion process, but unfortunately this technology has not been applied to the actual production phase where we need it. It is for this reason Koss Construction is not inserting dowel bars in our concrete paving process.

We are inserting tie bars and have for years been using a pachometer (similar to a metal detector) to monitor steel location and depth. We can do this because the steel locations are parallel to the travel of the paving equipment. Koss developed this quality control tool applied to tie bar insertion, which is as simple as a pachometer transmitter riding the burlap drag over the longitudinal joint locations. This equipment works but is limited in the amount of real time information it can provide.

This year Robert Kennedy and Brad Pohlmeier have deployed Ground Penetrating Radar (GPR) equipment on our paver for real-time monitoring of inserted tie bars. Improvements in GPR technology over the last few years has made this equipment much more user friendly and is now a valuable and reliable tool for real time quality control monitoring of inserted steel. The GPR allows us to not only monitor the depth of the steel being inserted but also allows us to monitor tie bar spacing and location in relation to the established saw joints. Information is stored and can easily be transferred to a laptop for further review or data summary if necessary.

We are currently using the GPR equipment on the 6" bonded overlay projects on I-70 in Ellsworth and Lincoln County Kansas. Collected data shows over 98% of the inserted tie bars are in compliance with the established depth tolerance.



Automatic External Defibrillators (AEDs)

Statistics have shown that over 700 lives are lost every day to sudden cardiac arrest in the United States. Two out of every three sudden cardiac deaths occur before a victim can reach a hospital. Once a victim has suffered a cardiac arrest, every minute that passes before returning the heart to a normal rhythm decreases the chance of survival by 10 percent.



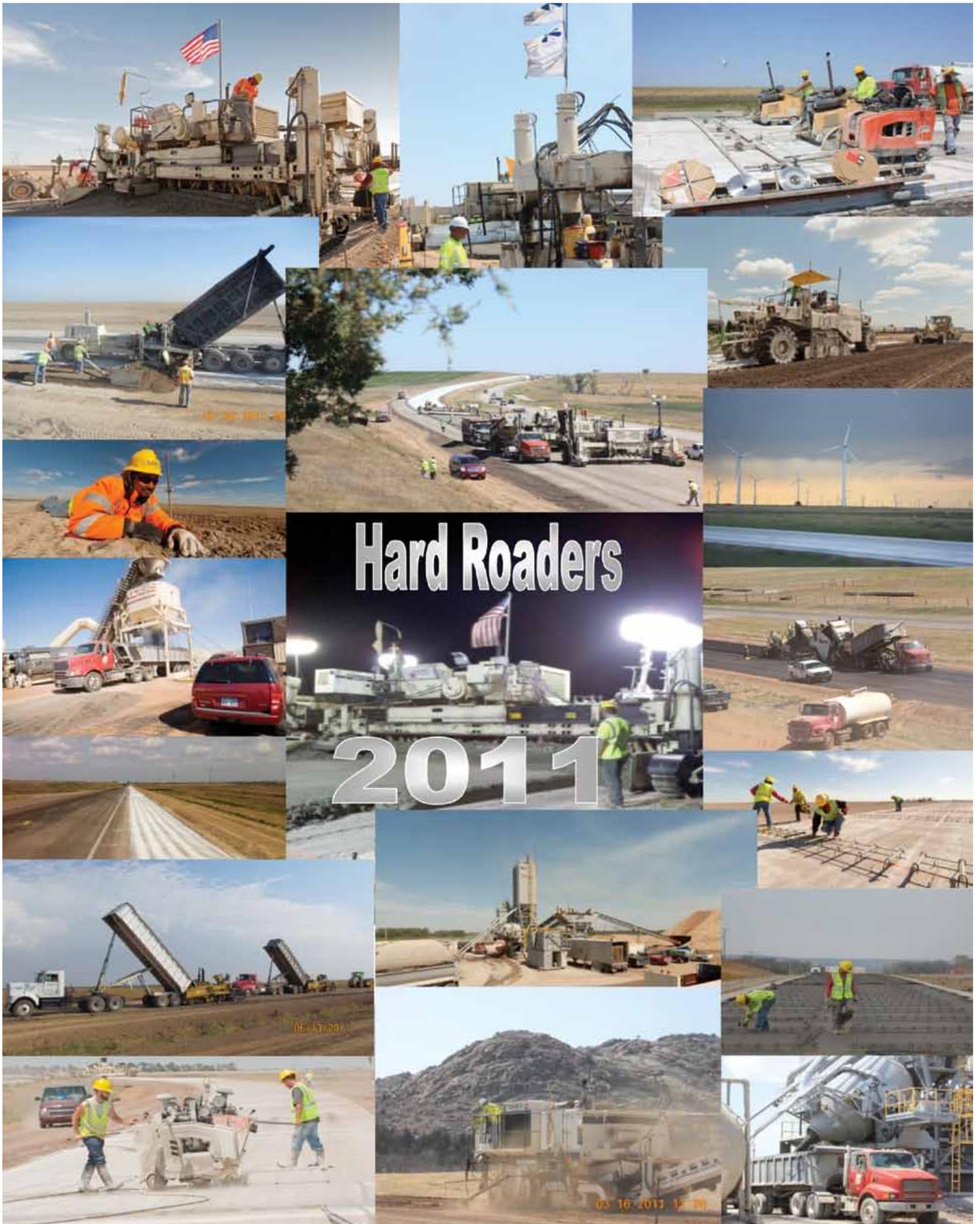
Most of Koss Construction's jobsites are located in rural areas where response time from first responders for incidents such as cardiac arrest is critical. In remote areas, a response time of 15-20 minutes or more could be a reality as the minutes tick away for a person who has collapsed from cardiac arrest.

To provide enhanced first aid care to employees on our jobsites, Koss has purchased Automated External Defibrillators (AEDs) for each of the Field Offices, the Pauline Construction Office, and the Topeka Corporate Office.

An Automated external defibrillator is a device that automatically analyzes the heart rhythm and, if it detects a problem that may respond to an electrical shock, that permits a shock to be delivered to restore a normal heart rhythm. Thanks to their small size and ease of use, AEDs have been installed in many settings (such as schools and airports) and serve a role in expanding the number of opportunities for life-saving defibrillation.

Key personnel at all locations have been trained in the use of the AED in the event of an emergency. Additional training will be accomplished during the supervisory meetings at the beginning of the 2012 construction season, where all supervisory and salaried field personnel will be trained in the operation of AED's in conjunction with the first aid/CPR training session. This training and refresher training will be completed every two years.

The old adage "Prepare for the worse and hope for the best" is appropriate in this instance. It is noteworthy that the recommendation that these tools and training be secured by the company came from a couple of Hard Roaders – thank you.



Please visit our website at <http://www.kossconstruction.com>