



I-65 Pavement Repairs

Owner: KYDOT

On August 10, 2006 Safety Grooving & Grinding, L.P. began one of the toughest jobs it has ever performed. The job was a section of I-65 in Bullitt County, Kentucky just south of Louisville. Although the job was rather routine grinding, the state of Kentucky wanted all the work complete in just 50 days. This time frame created numerous logistical issues in trying to patch and grind 350,000 SY. Working closely with Costello Industries, we devised a plan that enabled us to begin grinding the first day of the contract. Utilizing six PC-6000 4' grinders for the first 21 days of production kept us on schedule with Costello's time frame. Rick Brockman and his crew did an excellent job of communicating and scheduling the work each night. With numerous activities to complete in a short time frame, the schedule changed nightly. Everyone being on the same page really helped maximize our production. After a short Holiday break in the job, we had enough square yards cut that we were able to resume the job with just three machines. The total job took just 39 nights to complete.



The State of Kentucky did its own profilographing. For informational purposes only, Safety Grooving & Grinding felt it necessary to run our own light-weight Profilograph. We used a single point laser light-weight machine to run a before and after grinding trace. In most cases we improved the sub-lots 60% to 80%.

Overall the job went extremely smooth. Our main superintendents Tony Yenick & Steve Miller with a Combined 65 years experience in grinding provided us the knowledge to complete such a fast paced job with minimal complications. This job was all about timing. We were fortunate to work with Costello Industries which did an excellent job of keeping all the patching work done ahead of us.



**General Contractor:
Costello Industries**



Safety Grooving & Grinding, L.P.

CPR – REBUILT TO LAST



Bullitt County, KY Road Repair

>>>DIAMOND GRINDING, FULL-DEPTH PATCHING & JOINT RESEALING

BULLITT COUNTY, located just south of the city of Louisville, is one of the fastest growing counties in Kentucky. Louisville is Kentucky's largest city and home to the famed Kentucky Derby. Interstate 65 is a primary route through this region.

Constructed in the mid to late 1970s, the 52-mile, high traffic corridor of I-65 near Louisville was showing signs of deterioration. This section of the road carries about 88,700 vehicles per day, with truck traffic consisting of 39 percent of that total. The Kentucky Transportation Cabinet (KTC) recognized the need for repair as the International Roughness Index (IRI) for I-65 was approximately 150 inches per mile with a significant amount of sunken panels in the road, creating low spots, dips and an overall bumpy ride. The KTC chose to rehabilitate this roadway using full-depth patching, diamond grinding, spall repair and joint sawing and resealing. The project utilized 400 full-depth repairs, 2,800 spall repairs, 700,000 linear-feet of joint resealing and the diamond grinding of 365,000 square-yards of pavement.

Most of the sunken panels were removed and replaced with new concrete, re-establishing a level pavement surface. Diamond grinding followed to remove high spots and provide a safe, smooth and

quiet surface. After grinding, the existing joints were patched, widened and resealed to reduce infiltration of water and incompressibles into the joint reservoir.

The team had to overcome a number of challenges, which included record precipitation, unprecedented tornados and flash floods. Additionally, unexpected repairs and patch removal resulted in delays to the contractor's schedule. Further, production rates were hampered not only by diamond grinding removal of amounts in excess of 3/8-inches in some areas, but also by the required three-mile lane closures.

Beginning on August 9, work was completed on October 2, 2006 — ahead of schedule and under budget. Chosen as the American Concrete Pavement Association's Gold Award Winner for Concrete Pavement Restoration in 2007, the \$1.2 million grinding project cost a total of \$6,565,754. The average IRI was improved by 60 percent, measuring 60 inches per mile and it is estimated that taxpayers will receive another eight to nine years of service from the road. As a result of this project, KTC chose to award more than 1.5 million square yards of rehabilitation grinding in 2009 as a cost effective pavement preservation treatment.

TEAM MEMBERS

- Kentucky Transportation Cabinet (Owner)
- Costello Industries, Inc. (Prime patching contractor)
- Faulkner Construction, LLC (Concrete supplier)
- Safety Grooving and Grinding (Diamond grinding)
- Huff Sealing (Joint sealing and spall repairs)
- Diamond Products, Diamond B, Sanders Saws (Diamond blade suppliers)
- Crafcro, American Highway Technology (Material suppliers)