

Recycling Asphalt Spoils

ASPEN - High up in the Colorado Rockies lies Mountain Village, a beautiful, small resort town that offers long ski seasons and great summer hiking. Winters are long with lots of snow that lasts through to late spring. Snow, ice, and intense UV light combine to take their toll on local roads. Short asphalt repair seasons together with a heavy tourist population keep the local public works department scrambling to maintain the roads. Since roads are the first thing that visitors see when entering the community, it is important to the city to keep them in visibly good shape.



For many years, the Mountain Village Metro District subbed out much of its asphalt road repairs to local contractors. During the winter, public works crews would repair potholes with cold mix and a contractor would perform permanent repairs in the summer. The cold mix would have to be dug out, the broken pothole area stabilized, and then hot mix hauled in and placed for a permanent fix. This double work was both expensive and time consuming.

A SOLUTION SOUGHT

According to Road Superintendent Scott McIntyre, Mountain Village had been spending approximately \$100,000 to \$150,000 per summer on subcontractor asphalt repair work. With a limited road repair budget, the city wanted to cut its road repair costs and still do effective repair work.



Last March, the public works department researched several ways to save on its road repair budget and finally settled on purchasing a piece of hot-in-place asphalt recycling equipment. Up until this time Mountain Village did not have a regular hot asphalt repair crew. But, if the city could do its own repairs cheaper than subcontracting the work, why not give it a try?

McIntyre said, "Asphalt for our patching had to be trucked from a long distance away and the old asphalt we removed had to be hauled away. We felt the hot recycling unit would allow us to use our old asphalt and save money on trucking and labor for placement."

After considerable research, Mountain Village ordered a Bagela Asphalt Recycler model BA7000, which can recycle up to seven tons of broken asphalt spoils per hour into 300-degree hot mix. The public works department felt that this would be enough capacity to keep one crew busy and allow it to save in direct hot mix costs and dumping costs. McIntyre said, "We also saw the value of being able to do our patching with our own crews and by our own schedule. We would not be tied to our contractors' schedule. Also, being able to use the old asphalt we were removing and not trucking it away would save us a bundle."

The Mountain Village Metro District has found the process to be easy. Old asphalt is torn out of the damaged repair area and loaded by tractor into the hopper of the asphalt recycler. From the time material is loaded to the time it comes out of the back of the unit, it takes about 10 minutes to reach 300 degrees and a nice reusable hot mix. The unit is also easy to use. According to Gary Starke, patching crew foreman, "It is very user friendly."

McIntyre says maintenance has been easy with "greasing the machine and chain once a week. After almost 200 hours, we had to replace the control module for the igniter on the heating unit. The machine was back at work in less than 30 minutes."

EXCEEDS EXPECTATIONS

According to McIntyre, the asphalt recycler was first put into operation in May 2002. "We have been using the machine almost every day since mid-May, doing what is for us, a major full depth patching project. The machine usually runs six hours a day with a crew of three or four. Our average daily output is about 25 tons. So far, we have patched about 28,000 square feet and production has exceeded our expectations." Since the asphalt recycler saves the operator approximately \$40 per ton in direct asphalt costs, dumping fees, and labor, this unit will almost be paid for within the year.

When this year's repairs are completed at Mountain Village, the affected roads will be sealed and striped to protect them and to help look more visibly pleasing. A nice, smooth, permanently repaired road that is both black and new keeps the locals and visitors happy.

Since the asphalt recycler can be used anytime and in any season, the asphalt repair work is not limited by asphalt plant closures. Permanent repairs can be performed year round and that old pile of broken asphalt has become a valuable renewable resource.

