



# SIZED FOR PERFECTION

Texas construction company crushes consistent RAP for hot-mix.

**T**asked with producing a recycled asphalt product for the Texas Department of Transportation (TxDOT), RK Hall Construction, LTD had Astec Mobile Screens to thank for the best equipment for the job—the ProSizer™ 2612V.

The ProSizer has been in use almost every day since RK Hall Construction received it. RK Hall Construction Foreman/Operator Chad Allensworth took the assignment of handling the unit upon delivery, and began working with RK Hall's QCQA Manager Brad Bradford to recycle existing material at all of its asphalt plants.

## RAP TO THE RESCUE

When it came to the TxDOT, the first goal was to produce a product that would be used in a Type B hot-mix for adding shoulders on State Highway 19 in Henderson County, Texas. The TxDOT's past experiences with non-processed recycled asphalt in the Athens area were not pleasant, so the utilization of the ProSizer brought excitement and enthusiasm to the office and personnel.

TxDOT Athens Area Engineer Cheryl Tiner recognized the ProSizer as new and improved technology available for the asphalt industry. Her innovative thinking proved to be rewarding, allowing the use of TxDOT RAP in the Henderson project. The

RAP was processed with the ProSizer, producing a quality project. The benefits of using RAP contribute to the protection of natural resources, and save taxpayers' money in the process. TxDOT provided RAP that was removed from Interstate 20. It was processed to a ½-inch-minus product and was incorporated into the hot-mix design at 20 percent. Two products were produced—½ inch by ¼ inch, and ¼-inch-minus. This reduced the demand for virgin liquid asphalt by nearly 2 percent, and with the virgin aggregate source so far from project, the aggregate in the RAP resulted in extensive cost savings, as well. To date, the State Highway 19 project has incorporated approximately 4,000 tons of fractionated material into the 20,000 tons of hot-mix placed on the shoulders. It's important to note that the QCQA tests have all been in the bonus range.

## UNIT ON THE MOVE

After the ProSizer processed material for State Highway 19, the unit was moved to other locations, which included Greenville, Paris, and Mount Pleasant Plants in Texas, and then onto Texarkana, Arkansas, and to RK Hall's plant in De Queen, Arkansas. After processing material in Arkansas, it was moved to locations in Sawyer, Oklahoma, and then back to Pottsboro, Texas.

"The ProSizer gets around; there's a lot of material to process



and that's good for business," says Bradford.

The processed material is currently being utilized at each of these locations in a wide range of hot-mix products. Two gradations of RAP are produced with the ProSizer, one a 3/8-inch to 1/4-inch rock and then a 1/4-inch-minus product. Each product has its own advantages and applications, but the versatility of the ProSizer provides the ability to produce a uniform product and maximize its potential for savings, while maintaining a high quality hot-mix.

### CONSISTENT RAP

The ProSizer's ability to consistently produce the perfect size RAP for use in hot-mixes adds tremendously to the cost savings for highway projects. The unique design of the ProSizer offers two passes of material for crushing. The top screen is 1/2-inch, and oversized product is closed circuited to the on-board Horizontal Shaft Impactor (HSI) crusher for further processing. The two screen decks on the unit can separate two different sizes of RAP, creating separate stock piles of material via the two on-board stacking conveyors.

### COST SAVINGS

The cost savings on the Henderson project occurred due to the fact that TxDOT had material to be

processed and recycled back into the hot-mix. The recycled product was used in conjunction with virgin aggregate. With less virgin aggregate bought, and less cost incurred from transporting virgin aggregate, the cost savings added up.

According to Tiner, making use of existing material always saves money on highway projects, and also benefits the environment at the same time.

"Whenever we can divert waste material from landfills, we are being good stewards of our resources; recycling is the best solution," says Tiner.

RK Hall Construction has processed and used approximately 20,000 tons of RAP in the past 3 months, and is committed to recycling asphalt pavement. According to Bradford, the ProSizer is the Cadillac of equipment for fractionating RAP.

"It is the future of our industry," says Bradford.

"The quality of our products must not just meet the minimum specifications, we should strive to exceed them, and be cost-effective while accomplishing it. The ProSizer is one major step forward to achieving these goals, and as an industry, we must all strive for excellence." ■

*Above: RK Hall Construction processes RAP into two sizes, 1/2 inch by 1/4 inch and 1/4 inch by zero, using the ProSizer 2612V at its Paris, Texas, location.*

*Right: The closed-circuit conveyor returns the oversize material to the on-board HSI (horizontal shaft impactor crusher) for re-sizing, and then the RAP is sent back to the screen for further sizing. The optional diverter chute allows the oversize material to bypass the HSI and be sent to an off-plant stacking conveyor for a third finished product, if desired.*



**WANT  
MORE?**

For more information on the Astec Mobile Screen ProSizer™ 2612V, contact Ron Earl at 800.545.2125, e-mail [sales@astecmobilescreens.com](mailto:sales@astecmobilescreens.com), or visit [www.astecmobilescreens.com](http://www.astecmobilescreens.com).