

What you will see in the work zone

The work zone will feature many vehicles. Motorists should be aware of work trucks entering and leaving the work-zone site. Work trucks will use the open travel lane at various times to maneuver from one location to another within the work zone.

The speed limit in the work zone will be 55 mph.

Several dozen workers will be active in the work zone on a regular basis.

When work is going on, next to the travel lane behind the orange safety drums there will be up to a 10-inch drop in the areas where the road sub-surface material is being milled out and processed.

At night, the work zone will continue to be fully active. Motorists and nearby residents should expect lights focused on the work area. Noise in the area should not exceed levels found in traditional night-time paving operations.

As part of the recycling aspects of this project, three unique pieces of construction equipment will be used, all manufactured by Wirtgen.

These are:

Right Lane – Reclaimer: This machine will stabilize the 12" sub-base underneath the 10" of asphalt which is milled off and trucked to the Mobile Cold-Recycling Plant located nearby for reprocessing.

Right Lane – Mobile Cold-Recycling Plant: This machine will reprocess the milled material at a site away from the road. A stabilizing agent is added, and the asphalt is reapplied to the roadway.

Left Lane – Cold Recycler: This machine mills the top 5 inches of the left lane, reprocesses the material, adds a stabilizing agent and reapplies the newly recycled material to the roadway.



'Reclaimer' (Wirtgen)



'Mobile Cold-Recycling Plant' that performs "cold central-plant recycling" (Wirtgen)



'Cold Recycler' (Wirtgen)



I-81 In-Place Pavement Recycling Project will rehabilitate I-81 which is deteriorating.

Citizen Information Meeting

I-81 In-Place Pavement Recycling Project Augusta County

Tuesday, March 15, 2011, 4 - 7 p.m.
Riverheads High School
19 Howardsville Road
Staunton, VA 24401

Public Meeting

Welcome to the Virginia Department of Transportation's (VDOT) citizen information meeting on improvements to Interstate 81 southbound just south of Staunton in Augusta County.

This citizen information meeting is being held to provide an opportunity for citizens or organizations to review the impacts and benefits of this project.

VDOT strives to ensure that all members of the community have the opportunity to participate in public decisions on transportation projects and programs affecting them.

VDOT representatives are present to discuss the project and answer your questions.

The Contractor

Lanford Brothers Company of Roanoke is a specialty contractor providing turnkey service in the mid-Atlantic region since 1960.

Bridge repair, asphalt and concrete milling, guardrail, highway signs and latex overlays are specialty areas.

The corporate headquarters of Lanford Brothers Company is located in Roanoke, Virginia, in the Botetourt Industrial Park.

The Commonwealth Transportation Board awarded the I-81 In-Place Pavement Recycling Project to Lanford Brothers on December 8, 2010. The contract is valued at \$7,641,953.24.

Project Overview



interstate 81 Southbound Lanes - Augusta County

Cost - \$7.6 million

Purpose - This project will rehabilitate and pave a portion of I-81 where the subsurface material has deteriorated.

From - Mile Marker 214.0

To - Mile Marker 217.66

Total length - 3.7-mile long

Improvements – I-81 In-Place Pavement Recycling Project will perform major pavement rehabilitation with specialized machinery that recycles material extracted from existing road and reuses it on-site.

PROJECT DESCRIPTION

This section of I-81 is more than 40 years old. The pavement structure, up to nearly two feet below the surface, has deteriorated from high traffic volumes and their accompanying heavy loads.

Fatigue cracking has weakened the pavement structure from bottom to top. The symptoms can be addressed by milling the existing surface and repaving it, but the underlying condition remains. The cause of this extensive wear can only be remedied by reworking all the material down to the subgrade.

The fatigue cracks also allow a direct path for water to seep down to the pavement foundation. The water saturates the subgrade, further reducing its load-carrying capacity. This can lead to deep rutting (surface depressions) within the wheel paths that can affect skid resistance and even steering ability.

VDOT is using three innovative pavement recycling methods to rebuild this part of I-81 that will reduce construction time by two-thirds, save VDOT millions of dollars and recycle existing road material back into the new pavement.

The construction work on this “in-place pavement recycling project” is expected to take two months to complete; the entire project will take eight months and cost \$7.64 million.

Traditional methods could take up to two years and cost more than five times the contracted amount. VDOT would have had to widen the southbound lanes, including the bridges, to allow two-lane traffic during the reconstruction. The savings derive primarily from the reduction in time and reuse of materials already in place within the pavement.

The right lane must be restored from the asphalt driving surface down through its foundation (a combination

of compacted aggregate and subgrade soil). Since most heavy traffic loads use the right lane, it has more damage than the left lane. Unless the foundation under the right lane is rebuilt, simply repaving the surface is a temporary fix.

The project will strengthen and re-compact the 12-inch foundation in the right lane using “full-depth reclamation.”

VDOT’s research division, the Virginia Center for Transportation Research and Innovation, studied three pilot projects employing this process. An upcoming report on this project documents the results from these pilots and recommends using full-depth reclamation on other pavement projects where major structural problems exist.

The asphalt layer under the driving surface will be restored using “cold central-plant recycling.” Stockpiled milled asphalt from the road is processed in an on-site mobile plant for reuse under a new hot-mix asphalt overlay.

As the damage to the left lane is less severe, it only requires treatment to the surface and underlying asphalt layers. “Cold in-place recycling” uses a machine to pulverize the asphalt layer on the road, then strengthen and re-compact this reconstituted material on top of the foundation before a new asphalt overlay is put down.

This project also will save fuel because it reduces the need to transport as much new and old materials. It will increase safety for drivers and road workers, because in-place recycling reduces the distance materials need to be transported thus reducing work-zone congestion. This section of rebuilt pavement will be stronger from bottom to top, extending its service life and reducing the need for such complex maintenance for many years.

Flaggers will control traffic 24 hours-a-day at Route 654 and Route 11. Law enforcement will be at the school entrance 7-9 a.m. and 2-4 p.m. Flaggers will control traffic at the school entrance with a law enforcement presence that will heighten awareness and defensive driving.

There will be eight changeable message signs (CMS). CMS signs will be strategically placed to ensure motorists have time to make route and travel decisions. Fewer travelers in the work zone area reduce congestion and traffic conflicts that may cause crashes. Two new portable cameras will be placed in the work zone. Two CB Wizards will be placed to alert truck drivers of the work zone site, what lane to use and other needed information. One on-site tow truck will be placed during day-time hours to ensure disabled vehicles are quickly removed from the area. Outreach was performed in meetings with community emergency responders and all local Virginia State Police officers.

There will be no lane closures during weeks containing high traffic volumes on I-81. These periods are Virginia Tech graduation, Easter, and Memorial Day.

Traffic Management

The VDOT traffic management plan for the I-81 In-Place Pavement Recycling Project will employ various traffic control strategies. The project extends southbound from mile marker 214 to mile marker 217.66.

The allowable lane closure times run March 25 to June 9, 24 hours-a-day for a five-day period, beginning at 9 p.m. on Fridays and ending at 7 a.m. the following Thursday.

The primary detour route takes traffic off of I-81 and follows Route 654 to Route 11. Traffic travels south on Route 11, passing by the entrance to Riverheads High School and Riverheads Elementary School just prior to re-entering I-81.

Tractor trailers will stay on I-81, traveling through the work zone and passenger vehicles will be encouraged to use the primary detour on Route 11.

To address the challenges of placing interstate traffic volumes on the secondary road and then in front of a major school complex with young drivers, VDOT is utilizing a variety of traffic control measures.

I-81 Lane closures

The dates of the I-81 lane closures are listed below. It should be noted that if the contractor finishes the work early some of the later weeks may not be needed for closure.

March 25, 9 p.m. to March 31, 7 a.m.
April 1, 9 p.m. to April 7, 7 a.m.
April 8, 9 p.m. to April 14, 7 a.m.
April 15, 9 p.m. to April 21, 7 a.m.
April 29, 9 p.m. to May 5, 7 a.m.
May 6, 9 p.m. to May 12, 7 a.m.
May 20, 9 p.m. to May 26, 7 a.m.
June 3, 9 p.m. to June 9, 7 a.m.

Motorists may wish to avoid traveling through this work zone during peak traffic volumes which occur between 7 a.m. and 8 p.m.

Travel planning resources

Project information, maps and updates are available on the Web at www.Virginial-81Pave.org.

Traffic alerts and traveler information can be obtained by dialing 511. In areas where 511 is unavailable, dial 1-866-MY511VA (866-695-1182) (TTY/TDD users, call 711). Traffic alerts and traveler information also are available at www.511Virginia.org. Email alerts for specific roads and times can also be obtained by signing up on the 511 website using the My 511 Control Room tab.

On Twitter follow @I81VA for 511 alerts for the I-81 corridor in Virginia

Citizens can also email stauntoninfo@vdot.virginia.gov or call the VDOT customer service center at 800-FOR-ROAD (800-367-7623) for information.

Location Map



Route 800 closures

Residents and travelers on Route 800 (Folly Mills Station Road/Springfield Lane), which is just off of Route 654 and Route 11, should be aware of road closures. Only the Route 11 intersections will be open during the I-81 single-lane closure times. All other connections to this road will be closed

Detour routes

Primary Detour

Tractor trailer trucks will stay on I-81 traveling in the left lane through the single lane work zone. Passenger vehicles will turn right off of I-81 onto the primary detour. Traffic will leave I-81 southbound at exit 217 onto Route 654 (White Hill Road) westbound to Route 11 (Lee Jackson Highway). Motorists will turn left onto Route 11 southbound and re-enter I-81 at exit 213.

Secondary Detour

In the event of significant backups in the work zone a secondary detour will be used. For the secondary detour traffic leaves I-81 southbound at exit 221 onto I-64 eastbound. Motorists will exit I-64 at exit 94 onto Route 340 (Stuarth Draft Highway) near Ladd, which is just west of Waynesboro. Motorists will head south on Route 340 to Route 11 (Lee Jackson Highway), turning left onto Route 11 southbound and travel down to the Fairfield area turning right onto Route 710 (Sterrett Road) and re-entering I-81 southbound at exit 200.