

**Heartland Corridor – Clearance Project**  
**FHWA Quarterly Status Report**  
**July 11, 2008**

<p><b>Project Description:</b> The Heartland Corridor Clearance Project will enable double-stacked international maritime and domestic containers to be transported by rail between the Hampton Roads region of Virginia and locations in the Midwest by increasing tunnel clearances and modifying other overhead obstructions in western Virginia, West Virginia, and through to Columbus, Ohio.</p>	<p><b>Background:</b> The Project is described twice in Public Law 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). At Section 1301(m)(2) it is described as: "Heartland Corridor Project including multiple intermodal facility improvements and improvements to facilitate the movement of intermodal freight from VA to OH." At Section 1702, Project No. 5072, it is described as: "Double stack clearance of tunnels on the Norfolk and Western Mainline in Virginia located on the Heartland Corridor."</p>
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Critical Issues:

Cost of materials for construction.

Budget/Costs Status: The project continues to progress as NS makes the necessary adjustments to keep the project on budget. Construction requirements are being re-evaluated to help keep the costs within budget.

<b>Federal Participation</b>							
Location	January - 07 Baseline Budget	Estimate to Complete	Expended to Date (6/30/08)	Federal Share (80%)	Federal \$ Expended (6/30/08)	Total Fed \$ Available	Federal \$ Remaining
VA	17,465,826	17,432,826	7,667,931	4,409,724	1,425,604	4,409,724	2,984,120
WV	127,804,875	127,045,875	20,855,921	16,684,736	10,927,520	78,981,107	68,053,587
FHWA/ States	1,000,000	1,000,000	573,648	573,648	573,648	1,000,000	426,352
<b>Subtotal</b>	<b>146,270,701</b>	<b>145,478,701</b>	<b>29,097,500</b>	<b>21,668,108</b>	<b>12,926,772</b>	<b>84,390,831</b>	<b>71,464,059</b>
<b>No Federal Participation</b>							
VA	3,024,314	2,925,314	1,944,014				
OH	1,103,968	1,248,968	952,404				
KY, WV, & Misc	9,284,288	10,293,467	1,405,095				
<b>Subtotal</b>	<b>13,412,570</b>	<b>14,467,749</b>	<b>4,301,513</b>				
<b>Total</b>	<b>159,683,271</b>	<b>159,946,450</b>	<b>33,399,013</b>				

Reasons for difference between Baseline Budget and Estimate to Complete:

4/19/07 - \$1,108,179 was removed on a prorated basis from both the VA and WV federal participating and WV non-participating rows. This amount was for the planning work completed prior to the MOA and is now included in the Misc. amount. This was done to better correspond with Norfolk Southern's project accounts. Estimate to Complete total is \$263,179 higher than the January 2007 baseline due to higher actual costs for planning and higher estimates for the preliminary engineering for the Ohio bridge work.

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Work Completed:

- ✓ *Project Funding:* In a Letter of Authorization from EFLHD dated June 24, 2008, Norfolk Southern was authorized Section 1301 funds in the amount of \$797,234 for the Federal share of additional preliminary engineering work in West Virginia. Total authorized to date for PE, CE, and CN is \$47,263,022 for Section 1301 and \$2,637,024 for Section 1702.
- ✓ *Preliminary Engineering:* Final plans and estimates were completed by the Railroad on June 2, 2008 for Hegers Tunnels and Slide Fences.
- ✓ *Contractor Pre-Qualification:* The selection panel reviewed the qualification statements for RFPQ 7 on July 1, 2008. One contractor submitted qualification statements in response to RFPQ #7 but did not have experience with railroad tunnel work and shotcrete.
- ✓ *Ohio Work:* Norfolk Southern completed the track relocation under overhead bridge at N-579.83, Ironton, OH.

Work-In-Progress:

- *Project Funding:* EFL has received from Federal Lands Highway Headquarters an allocation of \$924,000 for the FY 2008 Section 1702 funds to be used in Virginia. ELF sent a Letter of Authorization to the Railroad dated July 11, 2008 for the same amount.
- *Preliminary Engineering:* HMM is continuing to work on the final designs for the remaining tunnels. A project meeting was held on July 1, 2008 to discuss design options for the remaining tunnels. HMM is reviewing recommendations and will incorporate into future tunnel packages as appropriate. Some of the recommendations included reducing the number of anchor bolts, re-evaluating minimum remnant liner thickness, re-evaluating rock bolting requirements at end shift, and re-evaluating ground classification anomalies that require liner removal. Implementation of a combination of these recommendations could significantly reduce construction costs and durations. Final plans will not be assembled for the remaining tunnels until immediately before advertisement to allow for incorporation of additional lessons learned from on-going projects.
- *Tunnel Construction:* Construction is in-progress at Cowan Tunnel in Virginia. Current construction activities consist of pre-drilling roof rockbolts, liner removal, installing rockbolts, and placing shotcrete. Work is approximately 49% complete.

Construction is in-progress at Vaughan, Roderfield, Laurel, and Gordon Tunnels in West Virginia. Current construction activities consist of sidewall and crown grouting, drilling sidewall bolt holes, and portal work. Work is approximately 30% complete.

Construction is in-progress at Twin Branch 1 & 2 and Antler 1 & 2 Tunnels in West Virginia. Current construction activities include sidewall and crown grouting, drilling and installing sidewall bolts, pre-drilling roof bolts, liner removal, and portal work. Work is approximately 16% complete.

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RJ Corman was the low bidder for Hemphill 1 & 2 Tunnels in WV. A contract was awarded on May 13, 2008 for \$14,699,064. A pre-construction meeting was held on June 10, 2008 and work is scheduled to start July 19, 2008. Contractor is currently mobilizing equipment.

A pre-bid meeting for track relocation at Big Sandy No. 2 Tunnel is scheduled for July 23, 2008.

- *Bridge Construction:* A pre-bid meeting for steel modification on bridges at Maybeury, Farm, and Sprigg, WV is scheduled for July 18, 2008.
- *Ohio Construction:* Steel modifications are underway at Bridge N-683.96, Ashville, OH. Estimated completion date is July 24, 2008. This is the last of the bridge and track work to be completed in Ohio.
- *Historical Preservation:* TRC Solutions has completed the field work for the cultural resource documentation. Documentation has been submitted to the WV, VA, KY and OH SHPOs. TRC is currently working on the text for historical markers and signing to be installed as agreed to in the Memorandum of Agreement.

Contracts:

Preliminary Engineering:	Hatch Mott MacDonald (NS)
Construction Engineering:	STV / Ralph Whitehead Associates (NS)
Cultural Resource Documentation:	TRC Solutions (EFLHD)
Cowan Tunnel:	Johnson Western Gunitite (NS)
Vaughan, Roderfield, Laurel, and Gordon Tunnels:	Johnson Western Gunitite (NS)
Antler 1 & 2 and Twin Branch 1 & 2 Tunnels:	LRL Construction (NS)
Hemphill 1 & 2 Tunnels:	R.J. Corman (NS)

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Project Schedule/Status: Project is generally on schedule. Norfolk Southern has reviewed the schedule and is working to make adjustments to ensure that both the project and train operations are maximized. This review is resulting in the acceleration of the design of the remaining tunnels with the possible acceleration of the construction of the remaining tunnels. The acceleration of the construction schedule will be dependent on what the Railroad feels the construction market is capable of supporting. With the addition of a third contractor, the capacity appears to be available for the accelerated construction schedule. Construction requirements and methodologies are also being reviewed to determine if changes can be made to increase production.

Milestones:

Activity	Planned	Actual
Advertisement of PE Contract:		June 29, 2006
PE Pre-Bid Meeting:		July 6, 2006
MOA w/ States Signed		July 11, 2006
PE Selection Panel		August 2, 2006
MOA w/ Railroad Signed		August 8, 2006
Award of PE Contract		Sep 29, 2006
EFLHD Receipt of FY 05 & 06 Funding	Nov-06	Feb 1, 2007; Mar 27, 2007
Advertisement of CE Contract:	Dec-06	Feb 1, 2007
EFLHD Receipt of FY07 Funding	Jan-07	Jun 6, 2007; Oct 25, 2007
Award of CE Contract	Mar-07	April 10, 2007
Completion of NEPA Document	Apr-07	June 13, 2007
EFLHD Receipt of FY08 Funding	Jan-08	Apr 7, 2008; Jul 2, 2008
EFLHD Receipt of FY 09 Funding	Jan-09	
<b>Ohio Bridges</b>		
Final Design Completed	Apr-07	July 20, 2007
Award of Construction Contract	Jul-07	November 12, 2007
Completion of Construction	Dec-07	
<b>Cowan Tunnel</b>		
70% Design Completed	Mar-07	March 5, 2007
Final Design Completed	Apr-07	June 20, 2007
Award of Construction Contract	Jul-07	September 18, 2007
Completion of Construction	Apr-08	
<b>Eggleston 1&amp;2, Pembroke (by NS forces)</b>		
Final Design Completed	Jun-07	Dec-2007
Completion of Construction	Dec-07	Apr-2008
<b>Roderfield, Laurel, Gordon, Vaughan</b>		
70% Design Completed	Apr-07	March 5, 2007
Final Design Completed	May-07	June 20, 2007
Award of Construction Contract	Aug-07	November 28, 2007
Completion of Construction	Jul-08	
<b>Antler 1&amp;2, Twin Branch 1&amp;2</b>		
70% Design Completed	Sep-07	April 20, 2007
Final Design Completed	Nov-07	August 30, 2007

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Award of Construction Contract	Feb-08	January 21, 2008
Completion of Construction	Jul-09	
Cooper		
70% Design Completed	Apr-07	March 5, 2007
Final Design Completed	May-07	
Award of Construction Contract	Aug-07	
Completion of Construction	Apr-08	
2008 Tunnels and Bridges		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	
Award of Construction Contract	Feb-08	
Completion of Construction	Jul-09	
Hemphill 1 & 2 Tunnels		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	March 10, 2008
Award of Construction Contract	Feb-08	May 13, 2008
Completion of Construction	Jul-09	
Maybeury, Farm, and Sprigg Bridges		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	May 5, 2008
Award of Construction Contract	Feb-08	
Completion of Construction	Jul-09	
Bid Sandy #2		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	April 4, 2008
Award of Construction Contract	Feb-08	
Completion of Construction	Jul-09	
Hugers Tunnels		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	June 2, 2008
Completion of Construction	Jul-09	
Slide Fences		
70% Design Completed	Sep-07	August 2007
Final Design Completed	Nov-07	June 2, 2008
Completion of Construction	Jul-09	
2009 Tunnels and Bridges		
70% Design Completed	Jul-08	August 2007
Final Design Completed	Sep-08	
Award of Construction Contract	Dec-08	
Completion of Construction	Jun-10	

**Conclusion:** The project is in full swing with contracts being awarded, additional solicitations being issued for construction bids, and designs being completed. Lessons learned during the early phases of construction are being utilized to refine the designs of the remaining tunnels. There continues to be good cooperation between all parties involved.

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<i>Contacts:</i>	
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