Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
DEC 2010		**00-00-2010 to 00-00-2010**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
North Dakota National Guard Trains on New Bridge Equipment	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Army Engineer School,Engineer Professional Bulletin,464 MANSCEN Bldg 3201 Ste 2661,Fort Leonard Wood,MO,65473**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**Same as Report (SAR)**	**2**	

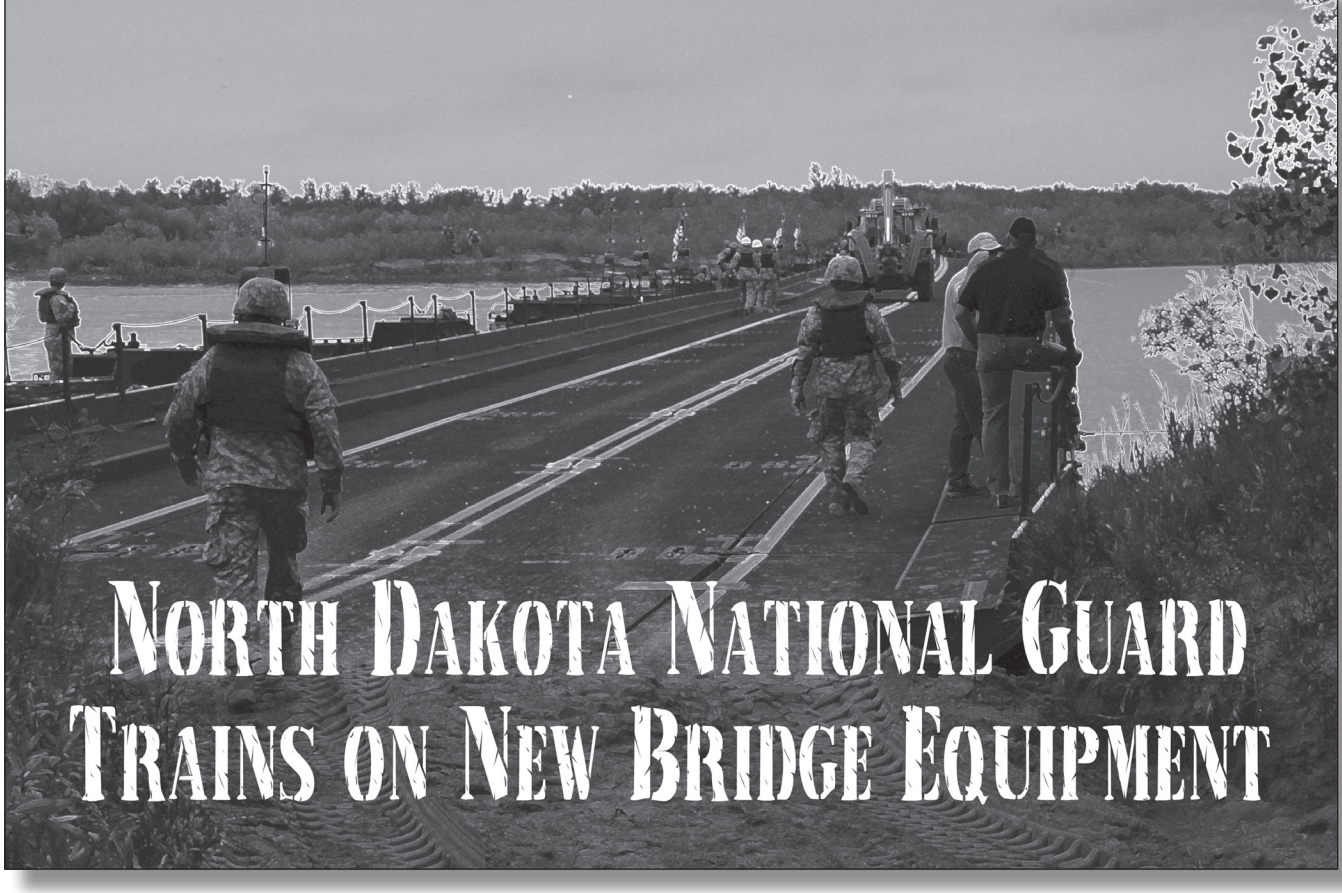

Photo by SSG Billie Jo Lorius, North Dakota ARNG Public Affairs

North Dakota National Guard Trains on New Bridge Equipment

By Staff Sergeant Billie Jo Lorius and Mr. William Prokopyk

The North Dakota Army National Guard's 957th Engineer Company (Multirole Bridge) was the first Army unit to train on a new bridge anchorage system in a fully operational scenario. The training took place on the Missouri River, south of Bismarck, during the unit's two-week annual training in June. The Missouri River was selected as an ideal location to test this system because of its width and fast-moving current.

The training began with a weeklong 40-hour stretch of classroom instruction on the improved ribbon bridge (IRB), followed by a practical exercise with the equipment and bridge. The 210-meter bridge span was left in place overnight and observed on Friday before the Soldiers and trainers disassembled it. Not only was the 957th training on new equipment, but they were also uniquely part of an important operational assessment of a new anchorage system that has never been used to bridge waters with currents as fast as the Missouri River over a span of 200 meters. Observing the assessment was the North Dakota adjutant general, who said that the Soldiers' feedback will enable program managers to incorporate final adjustments to the anchorage system before final production and distribution to military bridging units.

Photo by LTC Rick J. Smith, North Dakota ARNG Public Affairs

This close-up shows the main component of the new "thrust and shore guy" cable system used to anchor the IRB installed on the Missouri River.

After the bridge span was emplaced, several tests were performed. First, the forward lateral movement of the bridge was tested by driving a 35-ton common bridge transporter truck across it, loaded with an MKII Bridge Erection Boat (BEB). Crossing at top speed, the truck then performed an emergency "braking stop." During a total of ten crossings, minimal forward movement of the system was observed.

Photo by William Prokopyk, North Dakota Army National Guard Public Affairs

Soldiers of the North Dakota Army National Guard's 957th Engineer Company (Multirole Bridge) secure the improvised ribbon bridge on the Missouri River.

Side deflection of the bridge was also tested. After ten MKII BEBs were attached on the downstream side of the bridge, they applied full reverse-throttle thrust to induce a tremendous side load pull. Little side deflection, shore guy cable movement, or loosing was observed, and only minimal adjustments to the cabling were required. Preliminary observations of these evaluations indicated that this new anchorage system successfully accomplished its designed mission. The 957th and the state of North Dakota—strategically selected for this assessment—played a critical role in determining the system's mission effectiveness and safety.

Following removal of all the equipment, the 957th and the various agencies responsible for evaluating this bridging system conducted a detailed after action review. Suggestions for adjustments and improvements to the hardware—as well as the operational employment and disassembly tactics, techniques, and procedures—were discussed and will be considered for inclusion before final production and delivery to the force. Once deemed ready, the new anchorage system is targeted for immediate movement and delivery to Afghanistan to address urgent warfighter operational needs for improved anchorage capability.

The new "thrust and shore guy" cable system is designed for use with the IRB. It is targeted to fully replace the older "overhead tower system," the 1950s vintage anchorage technologies currently used when employing the older bridge system now in use by the military. The system was designed for the IRB but is desired and targeted for multiple dry- and wet-gap systems. This new anchorage system will be more permanent and is easier and faster to install—which is paramount for Soldiers employing it in warfighter operations. The system was designed by General Dynamics European Land Systems–Germany. Overseeing the event and providing data collection efforts and additional safety oversight were members from various government offices and agencies. Supporting agencies include Product Manager Bridging; Tank-Automotive and Armaments Command (TACOM); TACOM Research, Development and Engineer Center (TARDEC); the Maneuver Support Center of Excellence, and the National Guard Bureau.

Staff Sergeant Lorius is the deputy public information officer for the North Dakota National Guard. She has a bachelor's in English and writing from Dickinson State University and a master's in management from the University of Mary.

Mr. Prokopyk is the strategic communication specialist for the North Dakota National Guard and is retired after nearly 27 years as a United States Army Corps of Engineers officer. He has a bachelor's in civil engineering technology from Youngstown State University and a master's in operational sciences from the Air Force Institute of Technology.