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**Cover:** This issue focuses on a major development in the history of Army sustainment—the establishment of the Sustainment Center of Excellence (SCoE) at Fort Lee, Virginia. The creation of the SCoE, which was mandated by the 2005 Defense Base Closure and Realignment (BRAC) Commission, has involved significant expenditures of funds, execution of major construction projects, and intricate synchronization of moves and reorganizations among many parties—all carefully coordinated to ensure that development of the SCoE is achieved without interrupting or reducing the training required by the Army's sustainment Soldiers and civilians. The cover photo is an aerial view of the heart of Fort Lee, with the new SCoE headquarters building in the foreground. Directly behind it is Mifflin Hall, which was for many years the home of the Quartermaster Center and School. The huge new Ordnance School campus can be seen under construction in the upper left corner. This is the home of Army sustainment; support does indeed start here.



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# A Fort Lee BRAC Overview

BY MARIA DANE

Establishing the Army's Sustainment Center of Excellence requires close coordination among several installations, the movement of organizations and personnel without disrupting ongoing training requirements, and completion of major construction projects while meeting mandated deadlines. By the time the dust settles in 2011, Fort Lee will be the Army's third largest training installation.

In 2005, Congress endorsed a Defense Base Closure and Realignment (BRAC) Commission recommendation that Fort Lee, Virginia, stand up the Sustainment Center of Excellence (SCoE). Today, a walk around Fort Lee offers impressive physical evidence that the installation is well on its way to fulfilling that mandate. Almost 5 million square feet of facilities (over 1 million square feet more than the Pentagon) are under construction to transform Fort Lee into the Army's SCoE. When completed, the new construction will more than double the size of the post's facilities. To date, the new SCoE headquarters building, the Army Logistics University (ALU), and the Simulation Training Center have been completed and are operational, paving the way for achieving what will be a remarkable training capability by the BRAC-directed deadline of 15 September 2011.

## BRAC-Directed Changes

The 2005 BRAC Commission report outlines what CASCOT and other agencies need to accomplish by September 2011: relocate the Ordnance Center and Schools from Aberdeen Proving Ground, Maryland, and Redstone Arsenal, Alabama, to Fort Lee; move the Transportation Center and School (minus certain specialized elements) from Fort Eustis, Virginia, to Fort Lee; consolidate the Quartermaster Center and School, already at Fort Lee, into the SCoE; and expand the Army Logistics Management College (ALMC) to become ALU.

Other BRAC-directed changes for Fort Lee affect joint and Department of Defense (DOD) organizations. Elements of Air Force transportation management training will move from Lackland Air Force Base, Texas, to Fort Lee, and Air Force and Navy culinary training will relocate from Lackland Air Force Base and Great Lakes Naval Station, Illinois, respectively, to Fort Lee to establish a joint center of excellence for culinary training. Elements of the Defense Commissary Agency (DeCA) will move from San Antonio, Texas; Virginia Beach, Virginia; and Hopewell, Virginia, to Fort Lee, and the headquarters of the Defense Contract Management Agency (DCMA) will move to Fort Lee from Fort Belvoir, Virginia.

## Principles Guiding the Transformation

To implement these BRAC 2005 congressional mandates, the Combined Arms Support Command (CASCOT) and Fort Lee are following four main guiding principles in standing up the SCoE. The first principle is to "train the load to standard," meaning that all students receive training that meets all requirements. This is the Army Training and Doctrine Command's (TRADOC's) edict and its number one mission. The commanding general of TRADOC has stated that there will be no disruption of training during the time it takes to implement BRAC.

The second principle is to minimize interruptions of training. Much emphasis is placed on minimizing delays in course start and completion dates. Several of the schools relocating to Fort Lee have adjusted their movement plans to adhere to this principle.

The third principle is to take care of employees and families. Both Major General James E. Chambers, the CASCOT commanding general, and Colonel Mike Morrow, the garrison commander, are working hard to improve the quality of life at Fort Lee. Many construction projects—including dining, lodging, transportation, fitness, and recreation facilities—are underway to take care of Soldiers and their families.

The final principle is to ensure that every CASCOT employee moving from another installation to Fort Lee to work will have a job. Since many job vacancies will arise, CASCOT leaders promise to help those workers who commit to relocate to Fort Lee and its surrounding communities. Overall, CASCOT and Fort Lee stand behind the number one mission—to train the load to standard—and the transformation of the sustainment community for the Army, all while taking care of all employees and their families.

## Coordination

Several organizations were created to lead, organize, and implement the BRAC mission at Fort Lee, including a CASCOT BRAC Office. It is currently headed by Colonel Jack Hinkley, the Special Assistant to the CASCOT Commanding General for BRAC, and Colonel Edward Gully, the Deputy Garrison Commander for Transformation. This office also includes civilians

detailed from their TDA (table of distribution and allowances)-authorized positions to work on the BRAC effort, several mobilized Army reservists, and a team of BRAC management contractors.

In addition to a centralized BRAC office, the success of the BRAC mission has also benefited from the schools sending advance parties to Fort Lee early in the process to facilitate coordination and resolve problems. The Ordnance School advance party, led by Gayle Olszyk, the deputy to the Ordnance Schools commander, relocated to Fort Lee in late 2007 and colocated with the CASCOM BRAC Office. The garrison command and the BRAC Office have established an extremely close working relationship to ensure continuity and share information across the installation.

### Course Moves

The consolidation and formation of the Army's SCoE is the most complex and expensive BRAC project within TRADOC. The schools under CASCOM will be moving the most courses of any TRADOC component, with course moves spread over a 3-year period. Sixty-one courses moved to Fort Lee in fiscal year 2009 (mostly quartermaster courses), 74 courses are moving in fiscal year 2010 (mainly ordnance and transportation courses), and 50 courses will move in fiscal year 2011 (the remaining ordnance courses). A total of 185 out of

341 CASCOM school courses, or 54 percent, will move to Fort Lee. These courses are currently geographically dispersed across the United States. (See chart below.) To accomplish this enormous task, additional temporary instructors are required to conduct simultaneous training at both losing and gaining installations. The goal is to minimize training interruption, in compliance with one of the key BRAC guiding principles.

Even with the BRAC consolidations, CASCOM school courses will still be conducted at installations other than Fort Lee. For example, the BRAC Commission acknowledged that it would not be wise to move all of the Transportation School to Fort Lee; it therefore authorized CASCOM to retain rail, watercraft, and cargo-handling training at Fort Eustis. M1 Abrams tank and M2/3 Bradley fighting vehicle multicapable maintainer training will move from Fort Knox, Kentucky, to Fort Benning, Georgia, to parallel the move of the Army Armor School. Approximately half of wheeled vehicle mechanic training will remain at Fort Jackson, South Carolina. Despite geographical dispersion, all of this training will remain an integral part of the training mission of the SCoE.

### Construction

All the course moves and personnel relocations are tied to one key factor: construction. Over \$1.36 billion

is programmed for fiscal years 2007 to 2011 to fund BRAC construction requirements at Fort Lee. This includes \$1.2 billion in Army requirements to support the establishment of the SCoE, \$47 million in DOD requirements (for the DeCA and DCMA moves to Fort Lee), and \$88 million in joint requirements (for the Air Force and Navy culinary and Air Force transportation management relocations to Fort Lee).





*An aerial view of Fort Lee shows the new Sustainment Center of Excellence headquarters building in the center. Directly to its left is Mifflin Hall, the long-time home of the Quartermaster School.*



The physical occupation of the new SCoE headquarters occurred in early 2009; the move began with the CASCOM headquarters and staff elements, which were followed by the offices of the three schools' commanding generals (Quartermaster, Ordnance, and Transportation). The new ALU and Simulation Training Center opened for business during the summer of 2009. ALU is responsible for all logistics professional military education for the Officer Education System, Warrant Officer Education System, and Non-commissioned Officer (NCO) Education System and for logistics civilian education.

The Ordnance School's moves also started in fiscal year 2009, when the Tactical Support Equipment Department relocated from Aberdeen Proving Ground. The remainder of the Ordnance School at Aberdeen and Redstone Arsenal will move during 2010 and 2011. Portions of the Transportation School will relocate from Fort Eustis to Fort Lee in August 2010 and will occupy the current Quartermaster School NCO Academy facility after it is renovated.

An effort of this magnitude requires strict adherence to tight timelines for both construction and post-construction schedules. BRAC construction projects are more time constrained and time sensitive than normal construction projects because they require design, planning, and execution to be carried out simultaneously to meet the schedules and stay within budget. Accurate timing of moves is crucial because they will occur in a "domino" fashion, with each move impacting the timing of others. Several CASCOM BRAC moves affect not only other installations (Aberdeen, Redstone, and Fort Eustis) but also the occupation of other buildings at Fort Lee.

Construction of quality-of-life facilities initially was under-resourced. However, funding and construction of those projects is catching up with the BRAC-directed growth at Fort Lee. With the average daily population of the installation increasing by approximately 113 percent, dining, lodging, transportation, fitness, and recreation facilities are essential. Temporary and permanent facilities are programmed and funded to meet the needs of the Soldiers, families, and Army civilians who work and live at Fort Lee. As with all large-scale projects, Department of the Army funding is critical to success.

### Retaining Key Personnel

The establishment of the SCoE is creating many job opportunities for civilian employees, and CASCOM leaders want to capitalize on ways to bring talented people to Fort Lee. While some installations are losing organizations and people to Fort Lee, they will gain new personnel from organizations that come in to replace those departing. Because some employees may be reluctant to relocate to Fort Lee, the potential exists for an "intellectual brain drain" that may cause shortages of qualified people in certain specialties in the SCoE.

In 2008, CASCOM employees were asked to volunteer for permanent assignments to the SCoE organization. By volunteering, employees were guaranteed a specific written job offer for a reassignment at their current permanent grade or an equivalent level. As a result of this process, CASCOM leaders learned of over 400 anticipated vacancies that the organization must quickly fill. A variety of efforts are underway to encourage employees to relocate to Fort Lee, including career fairs, community visits, early sponsorships, and permissive temporary duty visits.

Many individuals and organizations have expended countless hours to ensure that the spirit and the intent of the BRAC 2005 congressional mandates are carried out successfully. The transformation to the Army's SCoE is the most complex and expensive portion of BRAC within TRADOC. When the Ordnance School's central campus is completed, Fort Lee will be the third largest training installation in the Army. Fort Lee personnel have proven that the installation is ready to meet the challenge of becoming the "center of the logistics universe." This is a great opportunity for Fort Lee, the Army, and all those who proudly support CASCOM and its warfighters. Support Starts Here!

For more information on Fort Lee and the SCoE transformation, visit the CASCOM BRAC website at <https://www.us.army.mil/suite/page/561086>.

**MARIA DANE IS CURRENTLY ASSIGNED TO THE ARMY COMBINED ARMS SUPPORT COMMAND (CASCOM) AT FORT LEE, VIRGINIA, AND IS DETAILED TO THE CASCOM BRAC OFFICE.**

# CASCOM's BRAC Rehearsal of Concept Drill

BY COLONEL JOHN C. HINKLEY

**T**he rehearsal of concept drill—commonly referred to as a ROC drill—is an important tool in the commander's arsenal for planning and executing complex events. One such complicated undertaking that benefited from a ROC drill is the execution of the 2005 Defense Base Closure and Realignment (BRAC) Commission requirements mandated for the Army Combined Arms Support Command (CASCOM) and Fort Lee, Virginia.

For CASCOM, BRAC involves the movement of 185 different courses from four different geographically dispersed schools and over 1.3 billion dollars' worth of construction spread over a 4-year period, all aimed at creating the Sustainment Center of Excellence (SCoE). To ensure that CASCOM, its subordinate schools, and all supporting activities understood and were able to contribute to the development of the BRAC plan, CASCOM executed a 2-day ROC drill on 30 September and 1 October 2008.

Two opportunities exist to execute a ROC drill during the mission planning process: early in the

process as a "proof of concept" and a tool for fleshing out the commander's intent and guidance, and later in the plan's development as a means to walk through the plan to ensure that everyone understood it and identify any "holes." CASCOM decided to execute the latter ROC drill timing.

The drill had two parts. Day one focused on a detailed, sequential walkthrough of the fiscal year 2009 timeline of critical events by "battlefield operating system" (BOS) and subordinate school moves. Day two consisted of a series of briefings to CASCOM leaders, followed by an outbrief to the Deputy Commanding General of the Army Training and Doctrine Command (TRADOC), Lieutenant General David P. Valcourt.

## Day One Walkthrough

For each critical BRAC event during fiscal year 2009, such as the occupation of the SCoE headquarters building, the CASCOM BRAC officer and



## Methodology: What We Did



- ✓ **Synchronize critical events and timelines**  
Construction, split-ops, movements, funding, personnel, equipment
- ✓ **Identify resource requirements by activity**  
Personnel, equipment, funding, facilities
- ✓ **Identify risk areas (choke points)**
- ✓ **Identify roles and responsibilities for pre-BOD (beneficial occupancy date) and post-BOD period**
- ✓ **Identify required "external" assistance**
- ✓ **Unresolved issues**
  - Identified
  - Responsibility assigned
  - System to track milestones and report status until completion



## ROC Drill “Home Run”

**More Bases = Accomplishment  
of Previous Bases’ Tasks**

- Identify resource requirements
- Identify issues requiring external support

- Capture all resource requirements by fiscal year
- Capture issues, assign responsibility, and track milestones to completion
- Set the conditions for successful BRAC summit by working issues with TRADOC, DA, others prior to
- Effective plan ready to implement that continues to train load to standard

“Double”

- Clarify roles and responsibilities in accordance with operation order
- Synchronize events for all fiscal years (FY09-FY11)
- Validate one consolidated event synch matrix

“Triple”

“Single”

- Identify issues-FY09
- Synchronize post-BOD (beneficial occupancy date) activities

“Home Run”



*The goals of the CASCOR ROC drill, successful achievement of which leads to a “home run.”*

the lead BRAC engineer “set the battlefield” by describing the significant actions occurring in the planning, current, or post-operations phases and the important aspects of the construction effort. (Briefing slides are available at <https://www.us.army.mil/suite/doc/13116022>).

Once the battlefield was set, each BOS presented key aspects of its role in that critical event. For the BRAC Office, the BOSs were furniture, building equipment, funding, Fort Lee Garrison support elements (such as the installation transportation officer and security officer), information technology (Directorate of Information Management), and personnel (both military and civilian). Subordinate and supporting elements also briefed their parts of the plan in support of the event. Subordinate elements included the Ordnance Center and Schools (the Ordnance Mechanical Maintenance School coming from Aberdeen Proving Ground, Maryland, and the Ordnance Munitions and Electronics Maintenance School coming from Redstone Arsenal, Alabama), the Transportation Center and School coming from Fort Eustis, Virginia, and the Quartermaster Center

and School and the Army Logistics Management College, both already at Fort Lee. Supporting elements included TRADOC headquarters staff, the Army Materiel Command (AMC), the Information Systems Command, and Department of the Army (DA) representatives.

At the end of the presentations from all activities, the CASCOR BRAC officer, who functioned as the ROC drill facilitator, recapped the issues and the due-outs for that critical event. The due-outs were captured for subsequent tracking and resolution after the ROC drill. (The due-out tracker is available at <https://www.us.army.mil/suite/doc/14031736>.) This briefing sequence repeated itself for each critical event of the upcoming fiscal year (2009). Focusing on just the critical events in sequential order allowed the facilitator to keep all participants focused on the important issues and to maintain the timeline for the event. Day one ended with an overview of the fiscal year 2010 and 2011 timelines, focused on critical tasks and issues presented by the CASCOR BRAC officer and the key subordinate or supporting players of each phase.

## Day Two Briefings

The day two briefings to the CASCOM and TRADOC leaders were important for several reasons. First, they demonstrated to the CASCOM Commanding General, Major General James E. Chambers, that all parties clearly understood his intent and the BRAC 2005 requirements and that we had a plan to meet them. The briefs laid out any issues that needed a decision, further guidance, or support from the general.

Second, the DA Deputy Chief of Staff, G-3, and Assistant Chief of Staff for Installation Management (ACSIM) were not certain if Fort Lee and CASCOM needed to conduct a DA-level BRAC ROC drill, which was executed at other installations affected by BRAC. If the CASCOM ROC drill demonstrated to Lieutenant General Valcourt that CASCOM was prepared to execute BRAC, his recommendation to the DA G-3 and the ACSIM would be to eliminate the DA-level ROC drill requirement. This would benefit CASCOM by preventing scheduling conflicts among the DA ROC drill, the occupation of the new SCoE headquarters, and several other significant BRAC actions.

Both Major General Chambers and Lieutenant General Valcourt took full advantage of these outbriefs to pose questions to the gathered commanders, staffs, and supporting elements. The outbriefs focused on the ROC drill's mission, methodology (what we did, key tasks, and critical events), the schools' course move schedules, critical points, friction points, issues, where we needed assistance from TRADOC or DA, and the way ahead. (An example of the outbrief is available at <https://www.us.army.mil/suite/doc/13116023>.)

The outbrief emphasized that BRAC is a "team event" involving multiple players in support of CASCOM's efforts: the DA staff, ACSIM, the Army Installation Management Command, AMC, TRADOC, the Army Human Resources Command, the Army Corps of Engineers, other garrisons, the Marine Corps, the Air Force, and the signal and information technology community. Although not directly supporting the SCoE's BRAC efforts, the Maneuver Center of Excellence's BRAC leader was invited to participate to facilitate crosstalk between the Maneuver and Sustainment Centers of Excellence. The chart on page 5 is a slide from the outbrief that summarized the ROC drill's goals to Lieutenant General Valcourt and the senior CASCOM commanders. William Moore, who as the Deputy to the CASCOM Commander was directly involved in the entire ROC drill, validated the success of the event when he indicated that the team had "hit a home run" and had set the conditions for a successful execution of BRAC.

## Follow-Up Coordination

Actions associated with the ROC drill did not end with the outbrief. As a result of information gathered

or validated at the event, the CASCOM BRAC Office completed the command's BRAC operation order (available at <https://www.us.army/suite/folder/16742870>). Without the ROC drill, the CASCOM BRAC plan's development process would have taken longer and been less well coordinated.

Two products produced to support the ROC drill continue to be used: the due-out tracker and the decision support matrix (available at <https://www.us.army/suite/doc/16745894>). The due-out tracker captured all the tasks identified during the ROC drill that require action by an individual or activity. This document was reviewed and validated as part of the outbrief and is distributed monthly by the CASCOM BRAC Office to action points of contact for their updates. The decision support matrix (DSM), or "synch matrix," is intended to capture all critical events associated with BRAC decision points, risks, key linkages, and other specific lines-of-operation tasks or information. (Examples of lines of operation include personnel, movements, facilities, equipment, funding, information technology, and command and control.) Like the due-out tracker, the DSM is also distributed monthly to a wide range of individuals and activities for updates. Current versions of both documents are available at the CASCOM BRAC website (<https://www.us.army.mil/suite/page/561086>).

The enduring aspect of the first BRAC ROC drill is the value that it provided to the command. To take full advantage of the process, Major General Chambers directed that the CASCOM BRAC Office execute a second ROC drill in April 2009. (Documents from this drill are available at <https://www.us.army.mil/suite/folder/16183659>.) The success of the second drill resulted in the general's direction that future ROC drills be conducted on approximately a quarterly basis.

The ROC drill process is valuable and can be adapted to almost any mission. It affords everyone in attendance a greater understanding and appreciation for the plan and creates an opportunity for identifying, discussing, and resolving issues. As the plan is laid out, aspects of its synchronization, or lack thereof, become more apparent. The extreme complexity and novelty of BRAC lends itself extremely well to a ROC drill. A BRAC ROC drill goes a long way toward creating the unified effort that will make the mission a success.

*COLONEL JOHN C. "JACK" HINKLEY IS CURRENTLY ASSIGNED AS THE SPECIAL ASSISTANT TO THE CASCOM COMMANDING GENERAL FOR BRAC AT FORT LEE, VIRGINIA. HE IS A GRADUATE OF THE ARMY WAR COLLEGE.*

# Managing the Move Into the New SCoE Headquarters

BY JOHN R. WEBER

*The thought of moving into a brandnew building provided both incentive and motivation to the military and civilian personnel of the Army Combined Arms Support Command (CASCOM). Having watched the new building evolve from a mere foundation to a finished four stories, CASCOM teammates were excited by the thrill of becoming its first occupants. During the first weekend of March 2009, the dream became a reality and the moving began!*

*From a planning perspective, the move had three key phases: detailed pre-movement planning, movement execution, and post-movement operations. The imperatives that governed the move included the safety of personnel, uninterrupted mission support, and documentation of lessons learned. Given the successful execution of the movement plan drafted by Colonel Mark Talkington and John Weber, in addition to great teamwork, professionalism, and commitment on the part of all stakeholders, CASCOM and the Sustainment Center of Excellence (SCoE) team now have a new place to call "home." We are forever grateful to our leaders—past and present—and the many men and women who selflessly labored to make it happen.*

—Colonel Gwen Bingham  
Chief of Staff, CASCOM and SCoE

**T**he move of CASCOM personnel into their new home—the SCoE headquarters building—took place over a 6-week period and was conducted in a way that ensured uninterrupted mission support. The successful movement can be attributed to a carefully conceived and managed three-part process: pre-movement planning, movement execution, and post-movement operations.

## Pre-Movement Planning

In October 2008, the CASCOM Base Closure and Realignment (BRAC) Office issued CASCOM Operation Order 08–17, which set the ball in motion for movement into the new building. A group of key players was assembled, including the move czar (the lead person in charge of the entire movement operation), move captains, and representatives from the CASCOM and Fort Lee Garrison BRAC offices and the CASCOM Command Group, who proved later to be crucial in the successful and smooth move.

The move czar served as the link between the command group and the BRAC offices, providing much-needed oversight and management. The move captains,

## PAX Moves by Directorate

Directorate Information					SCoE Move Dates																									
					MARCH																									
Directorate	Crates	Boxes	Days	PAX	7	8	9	10	11	12	13	16	17	18	19	20	23	24	25	26	27	30	31							
CMD GRP *	168	437	2	40	35	5																								
DCT *	856	175	5	177			43	50	46	38	Str																			
QA *	140	0	2	35								16	19																	
DCSRM *	188	350	3	45						2			3	15	10	15														
FDD *	236	187	3	53													22	13	18											
CDI *	36	25	2	12													5	7												
LNOs *	20	0	1	5															5											
Battle Lab *	132	63	3	45															17	15	13									
ESD/ TCM	524	388	5	131																		26	26							
ALT-IO *	84	191	2	22																										
CDD *	296	115	3	84																										
MSD *	328	67	3	83																										
HHC *	50	46	1	8																										
Historian	0	350	3																											
TOTAL	3058	2394		740	35	5	43	50	46	40	0	16	22	15	10	15	27	20	40	15	13	26	26							



both military and civilian, were the voices of their respective directorates and determined how best to relocate their directorates' personnel without disrupting operations and mission support. The move captains informed their people of the rules governing the packing of their offices, checking out on move day, and checking in at their new locations.

Working closely together, these players handled many preliminary details through weekly in-progress reviews (IPRs). They developed a movement plan that would permit CASCOM to—

- ❑ Maintain simultaneous operations in two locations (the old CASCOM and new SCoE headquarters buildings) without mission degradation.
- ❑ Manage the use of over 975 reusable shipping crates.
- ❑ Conduct walkthroughs of the CASCOM and SCoE buildings with prospective contractors.
- ❑ Disseminate data calls to the directorates.

These data calls requested equipment inventories, information on personnel relocations and their

future areas of assignment, and current Internet protocol addresses and phone numbers in an effort to streamline connectivity. Feedback from the data calls permitted CASCOM to adopt a “plug and play” transition, under which each directorate could keep its current phone numbers and maintain active email accounts and thus avert disruptions in the support they provided. Early in this phase, personnel were instructed to remove personal property from their offices and to shred or recycle all outdated material. We later learned that these actions saved time and cut costs, thereby increasing the efficiency of the contracted moving company.

Once the move contractor was selected, the contractor conducted a site visit with the CASCOM move czar, and together they developed a movement timeline. The timeline chosen was 6 weeks long. The tables on these pages show the timeline, which also was helpful in accounting for personnel during the move.

#### LEGEND

ALT-IO = Assistant Secretary of the Army  
(Acquisition, Logistics, and Technology)  
Integration Office

CDD = Concepts and Doctrine Directorate

CDI = Capabilities Development and Integration

CMD GRP = Command Group

DCSRM = Deputy Chief of Staff for Resource Management

DCT = Deputy Commander for Training

ESD = Enterprise System Directorate

FDD = Force Development Directorate

HHC = Headquarters and Headquarters Company

LNO = Liaison officer

MSD = Material Systems Directorate

PAX = Personnel

QA = Quality Assurance Directorate

TCM = Training and Doctrine Command Capabilities Manager

## PAX Moves by Directorate

Directorate Information					SCoE Move Dates													
					APRIL													
Directorate	Crates	Boxes	Days	PAX	1	2	3	6	7	8	9	10	13	14	15	16	17	20
CMD GRP *	168	437	2	40														
DCT *	856	175	5	177														
QA *	140	0	2	35														
DCSRM *	188	350	3	45														
FDD *	236	187	3	53														
CDI *	36	25	2	12														
LNOs *	20	0	1	5														
Battle Lab *	132	63	3	45														
ESD/ TCM	524	388	5	131	26	26	27											
ALT-IO *	84	191	2	22				9	13									
CDD *	296	115	3	84						31	30	23						
MSD *	328	67	3	83									31	25	27			
HHC *	50	46	1	8												8		
Historian	0	350	3													STR	STR	STR
TOTAL	3058	2394		740	26	26	26	9	13	31	30	23	31	25	27	8	0	0



*The new Sustainment Center of Excellence headquarters building was dedicated in January 2009.*

### **Movement Execution**

Actually making the move required the greatest amount of flexibility to sustain simultaneous operations between the two facilities. Move captains were indispensable in facilitating movements to meet the timeline. They ensured that predetermined numbers of personnel and equipment departed and arrived on schedule each day, labeled building areas before new personnel moved in, provided directions to directorate personnel in the new building, and supervised the unloading of equipment in the correct areas, thereby facilitating a quick turnaround for the movers.

CASCOM personnel also labeled and packed their offices' items (which included regulations, handbooks, and other pertinent documentation associated with their jobs) into reusable shipping crates before their sections' moves. This enabled the movers to load and unload crates, boxes, furniture, and other items very quickly. Larger items and computers were placed in large bins on wheels and loaded into trucks as a single unit.

### **Post-Movement Operations**

Challenges concerning security, connectivity, warranties, construction issues, and facility limitations were solved during the post-movement phase. For example, priority was given to the Chief Information Officer to solve all unresolved connectivity issues so as to minimize disruptions or delays in support. The requested punch-list of things to do (such as fixing building deficiencies) submitted by each move captain was prioritized and annotated for resolution as either a "warranty" or "installation public works" issue. Facility limitations, such as the allocation of storage and parking spaces around the building, also were addressed. Contracts were awarded for facility cleaning, and a "care and maintenance committee" was created. The pre-move building etiquette plan was further refined during building occupation and post-movement operations.

All tasks and lessons learned associated with the move were documented in after-action reviews. The results from the evaluation survey completed by the workforce, coupled with the lessons learned, were briefed to the command group and project stakeholders.

The CASCOM move into the SCoE building was deemed a success because all major objectives were met. We can attribute the successful move to meticulous planning and unwavering support by all supported and supporting stakeholders throughout each of the three phases of the operation. More importantly, the move was completed on time with no personnel injuries or major incidents. This success can be credited in large part to the professionalism, flexibility, and ability of the move team and each of the directorates to keep the lines of communication open among the CASCOM Command Group and the CASCOM and Garrison BRAC offices.

Using this strategy, CASCOM was able to maintain simultaneous operations in two locations without any degradation of mission support—a true testament to the command's motto, "Support Starts Here!" With the consolidation of its directorates and subordinate school headquarters (Quartermaster, Ordnance, and Transportation) into the SCoE headquarters building, CASCOM will be able to continue to provide outstanding sustainment support to the Army and the Department of Defense for the foreseeable future.

*JOHN R. WEBER IS A RETIRED ARMY CAPTAIN CURRENTLY ASSIGNED TO THE COMBINED ARMS SUPPORT COMMAND AT FORT LEE, VIRGINIA, AS THE BRAC MOVEMENT CZAR FOR THE SUSTAINMENT CENTER OF EXCELLENCE. HE HAS A B.S. DEGREE IN BIOLOGY FROM DELAWARE STATE UNIVERSITY AND AN M.A. DEGREE IN TRANSPORTATION AND LOGISTICS MANAGEMENT FROM AMERICAN MILITARY UNIVERSITY. HE IS A GRADUATE OF THE COMBINED LOGISTICS CAPTAINS CAREER COURSE AND IS A DEMONSTRATED MASTER LOGISTICIAN.*





*Nine facilities for ordnance maintenance training, each more than 500 feet long, are being constructed. Each of the buildings will have a large maintenance bay area that is 400 feet by 160 feet. The second largest dining facility in the Army sits in front of the training facilities (on the left side of the photo).*

## BRAC Construction at Fort Lee

BY COLONEL EDWARD GULLY

**T**he construction projects that have been planned in response to the 2005 Defense Base Closure and Realignment (BRAC) Commission report present unique opportunities and challenges for the sustainment community and Fort Lee, Virginia. This is an unprecedented opportunity to construct new facilities with enhanced capabilities that will serve the sustainment community effectively for the next 50 years. Those involved in the project must, and will, get this right.

Programmed funding for BRAC construction requirements at Fort Lee totals over \$1.3 billion for fiscal years 2007 to 2011—\$1.2 billion in Army requirements, \$47 million in Department of Defense (DOD) requirements, and \$88 million in joint requirements. The Army funds support the creation of the Sustainment Center of Excellence and the moves of the Ordnance and Transportation Schools to Fort Lee. Joint funds support the moves of the Air

Force transportation management school and the Air Force and Navy culinary schools. DOD funds support the moves of the Defense Contract Management Agency and the Defense Commissary Agency to the installation.

Fort Lee awarded its first BRAC contract in June 2007. All programmed BRAC construction is slated to be completed by September 2011. The durations of awarded contracts range from 18 months (in the case of the Sustainment Center of Excellence headquarters building) to 25½ months (in the case of a five-building contract for the Ordnance School campus). All of the 35 contracts are running on accelerated timelines, and “float time” is almost nonexistent within the construction schedule. Most of the construction contracts are “design-build,” meaning that both the design and construction are included in the contract duration.





*Base closure and realignment construction at Fort Lee includes the construction of five-story barracks with company operations facilities, like the ones seen here for the Ordnance School. Each barracks will be capable of housing 624 Soldiers or 936 at surge conditions.*

Over 4.9-million square-feet of facilities will be built, making the new construction over 1-million square-feet larger than the Pentagon and more than doubling the square footage of Fort Lee's pre-BRAC facilities. BRAC construction at Fort Lee includes the following projects.

**Barracks.** The construction of six five-story barracks with company operations facilities is underway. Each will be capable of housing 624 Soldiers or 936 at surge conditions. Combined, the barracks will provide

housing for 3,744 Soldiers or 5,616 at surge conditions. Contractors completed the first barracks 18 months after the contract was awarded.

**Dining facilities.** The second largest dining facility in the Army, which has the capacity to seat 1,512 Soldiers and support a throughput of 3,600 Soldiers in 90 minutes, has been built to support the Ordnance School. This facility was constructed in 18 months. An additional smaller dining facility, to support the Air Force





*A new addition to the Defense Commissary Agency headquarters at Fort Lee provides 75,800 square feet that includes office space, a cafeteria, multipurpose rooms, and a warehouse. The addition will help accommodate over 200 employees who will move to Fort Lee from San Antonio, Texas, and Virginia Beach and Hopewell, Virginia.*

and Navy BRAC-related moves, is in the early stages of construction near the new Soldier Support Center.

**Soldier Support Center.** A \$25 million Soldier Support Center was recently completed and transferred to the installation. It will improve “one-stop” capability for consolidated in-and-out processing for all Soldiers assigned to Fort Lee and thus provide the necessary capacity to support the increased population created by the BRAC moves.

**Training facilities.** Nine facilities for ordnance maintenance training, each more than 500 feet long, are being constructed. Each of the buildings will have a large, high-bay area that is 400 feet by 160 feet. Fort Lee is also constructing several highly specialized training facilities, including a training area for welders, engine laboratories (including one for M1 Abrams main battle tanks), laser training laboratories, several classified open-storage-capable classrooms and laboratories, an explosive ordnance disposal range, and a simulation and training support center.

**Army Logistics University.** The university includes 167 classrooms and can seat more than 4,000 students. The anticipated average daily student load is approximately 30-percent greater than that of the Army Command and General Staff College’s Lewis and Clark Center at Fort Leavenworth, Kansas.

Because of the aggressive timelines, multiple contractors are sharing the same sites. For instance, nine contractors—construction and privatized-utilities contractors—have been working in the same area concurrently on the new Ordnance School campus. This presents significant synchronization challenges.

The facilities are being constructed to published standards; in some cases, this represents significant increases in training capabilities. Installation planners are effectively leveraging technology with an eye to the future. For example, wireless Internet will be available in the bay areas, and local area network connections and data will be available at all student desktops. These facilities also have many reconfigurable, dividable classrooms for varying class sizes and large bay areas that can support multiple platforms.

As of late summer 2009, the Sustainment Center of Excellence headquarters, the Army Logistics University, the Simulation Training Center, the first barracks, and the first ordnance training facility (the Tactical Support Equipment Department) were complete and occupied. So far, the results have been very encouraging, and Fort Lee is indeed on track to “get this right.”

**COLONEL EDWARD GULLY IS THE DEPUTY GARRISON COMMANDER FOR TRANSFORMATION AT FORT LEE, VIRGINIA.**



*The Ordnance Center and Schools' new campus at Fort Lee, Virginia, is currently under construction. The building on the right will be the second largest dining facility in the Army.*





# The Ordnance School Moves to Fort Lee

BY LIEUTENANT COLONEL ANNJANETTE ELLISON

**T**hroughout the summer, members of the Army Ordnance Center and Schools' command and staff moved from Aberdeen Proving Ground, Maryland, into their new headquarters at the Sustainment Center of Excellence (SCoE) at Fort Lee, Virginia. On 11 September 2009, the Ordnance School ceremoniously uncased its colors at the SCoE and paid solemn tribute to their fallen comrades, formally establishing itself at its new home.

The uncasing of the ordnance colors at Fort Lee signifies the start of a new era for the Ordnance Center and Schools. This new era is also marked by the establishment of the school's new headquarters at the SCoE headquarters (located across from the Quartermaster Museum) and the new 300-plus-acre Ordnance School campus adjacent to Fort Lee's main gate. Another 200 acres is reserved for the school's North Range, which is located near the Petersburg Federal Correctional Complex. A new state-of-the-art Ordnance Museum will also augment the new Ordnance School campus.

The new Ordnance School campus, which greatly increases the school's footprint, will house the Ordnance Mechanical Maintenance School (OMMS) and Ordnance Munitions and Electronics Maintenance School (OMEMS). OMMS will transition from Aberdeen Proving Ground to Fort Lee over the next year. Its mission is to provide military skills training to students in mechanical maintenance fields and prepare students to repair a variety of military vehicles and equipment. OMEMS, whose mission is to provide ammunition management, explosive ordnance disposal (EOD), and electronics and missile maintenance training, will begin moving from Redstone Arsenal, Alabama, to Fort Lee once its training buildings are completed in 2011.

In late September, the entire Ordnance School, along with the Army Logistics University, Army Quartermaster Center and School, Army Transportation School, Soldier Support Institute, and other organizations, affixed the new SCoE patch to their uniforms, formally recognizing the activation of the SCoE. At this time, OMMS began teaching students at the new Tactical Support Equipment Department (TSED) building (also known as Rozier Hall) on the new campus.

The TSED building is one of many state-of-the-art facilities that will help educate and train ordnance Soldiers, Airmen, and Marines and provide a strong foundation for the success of ordnance technicians in the military and beyond. In late November 2009,

the Ordnance School conducted a ribbon-cutting ceremony for the TSED building, officially dedicating it (like its predecessor at Aberdeen Proving Ground) to the late Major General Jackson E. Rozier, a stellar retired ordnance officer and former Chief of Ordnance. The TSED ribbon cutting and dedication in November marked the first ceremony hosted by the Ordnance School on the new campus.

As other buildings are completed and occupied on the new campus, the Ordnance School and Fort Lee Garrison staff will conduct additional ribbon-cutting events to mark these momentous occasions. Like the TSED building, many of the buildings and rooms on campus will be dedicated to honor other notable ordnance men and women, most of whom previously had buildings and rooms named for them at Aberdeen Proving Ground.

The EOD Land Warfare Center of Excellence is the EOD Department located with the SCoE and the Ordnance Center and Schools at Fort Lee. The EOD Department achieved initial operating capability on 1 October 2009 and will be fully functional within a year, pending the Department of the Army's approval of its concept plan. The Ordnance School will teach EOD classes at Fort A.P. Hill, Virginia (approximately 65 miles north of Fort Lee), and maintain its mission to train Soldiers, Airmen, and Marines in EOD.

The new Ordnance Museum, which is scheduled to be completed in 2012, will host the Ordnance School's historic collection of tanks and vehicles. Unlike the museum at Aberdeen Proving Ground, this new museum will store these macro-artifacts inside a climate-controlled facility. The museum has already successfully shipped 60 macro-artifacts to Fort Lee and positioned them near Railroad Avenue while their new home is being built.

The Ordnance School's new state-of-the-art facilities allow ordnance Soldiers, Airmen, and Marines to remain at the cutting edge of technology. As the school's experienced and dedicated staff trains students in the new facilities, the students and the Ordnance School staff will be at the forefront of this fabulous transformation to begin a new era for the Ordnance Corps. Go Ordnance!

*LIEUTENANT COLONEL ANNJANETTE ELLISON IS THE CHIEF OF CURRENT OPERATIONS OF THE ARMY ORDNANCE CENTER AND SCHOOLS. SHE HAS A B.S. DEGREE FROM MORGAN STATE UNIVERSITY AND M.S. AND M.B.A. DEGREES FROM THE UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE. SHE IS A GRADUATE OF THE ARMY COMMAND AND GENERAL STAFF COLLEGE AND THE ARMY MANAGEMENT STAFF COLLEGE.*

# The Ordnance Mechanical Maintenance School BRAC Office

BY JOHN ANTAL

**T**he Ordnance Mechanical Maintenance School (OMMS) is in the process of moving from Aberdeen Proving Ground, Maryland, to Fort Lee, Virginia. This move is the result of the 2005 Defense Base Closure and Realignment (BRAC) Commission report that recommends consolidating the Army logistics schools at Fort Lee. OMMS established a BRAC office to coordinate the move, and the office has faced many challenges. The move has been complicated by several overlapping factors.

The OMMS move was not a simple relocation from one site to another because no movement could begin until there was somewhere to move. The new Ordnance School campus first had to be built. The new home of the Ordnance Corps at Fort Lee is being built on a former field training exercise site. The site, which used to be a large forested area, is separated from the main post by a state highway. Various buildings have been completed or are nearing completion, and a few have recently been turned over to the Ordnance Center and Schools.

*The new Ordnance School campus at Fort Lee, Virginia, is shown here under construction. The campus includes (left to right) the Tactical Support Equipment Department building, instructional facilities, a dining facility, and barracks.*





New construction at Aberdeen Proving Ground for incoming tenants could not begin until some existing buildings were vacated or demolished. Tenant organizations at Aberdeen Proving Ground sent requests to the garrison to move into other Ordnance School buildings upon OMMS's departure. Some were very anxious to acquire this added space as their missions continued and expanded on post. Tenants continue to request tours of OMMS facilities to determine possible uses for the space.

To accommodate all interested parties, the OMMS BRAC Office serves as the move coordinator and liaison for these activities and to answers their many requests and accomplish overlapping tasks. Before turning a building over to the garrison, the BRAC Office has to develop mitigation plans, especially if the building occupants are not scheduled to proceed to Fort Lee for some time.

The completion of these projects is still a couple of years away, so construction continues on both installations as the BRAC deadline approaches. In an effort to keep the Aberdeen Proving Ground projects on target, relocation from various buildings within the new construction area had to be negotiated. For example, the Tactical Support Equipment Department's (TSED's) power generation equipment repair training used to be conducted in Buildings 5220, 5221, and 5222. However, these buildings were slated for demolition during phase 2 of Aberdeen Proving Ground's construction. TSED's tactical pause (to accommodate its move to Fort

Lee) was not scheduled to start until after construction at Aberdeen was to begin, so an alternate site had to be found to house the power generation equipment repair training. As a solution, tents and trailers for the training were constructed at an alternate location.

Marine Corps personnel working at Aberdeen Proving Ground had similar issues. Their building, Building 5223, was located in the same phase

2 construction area. The garrison found an alternate location for the Marine supply function. After some minor modifications and improvements, Building 4021 became the Marine's temporary office location until they eventually move into Building 5043 after TSED's departure. In each case, the overall benefit to the Army was considered before any action was taken and the solution focused on avoiding interruptions in the training mission.

This juggling of buildings will continue as the Advanced Automotive and Recovery Department prepares to vacate additional buildings in the 5200 block. This will increase the working area turned over to the contractor for new construction and provide a larger safety zone for troop movement in and around the training facilities.

All construction will be complete at both Fort Lee and Aberdeen by the BRAC deadline of September 2011. By then, the Ordnance Munitions and Electronics Maintenance School will relocate from Redstone Arsenal, Alabama, to form a consolidated Ordnance School campus at Fort Lee.

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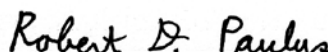
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Robert D. Paulus, 20 August 2009.



# The Tactical Support Equipment Department's Move to the New Home of Ordnance at Fort Lee

BY GARY F. NEUSER

**T**he Army Ordnance Mechanical Maintenance School's (OMMS's) technical training departments are moving from Aberdeen Proving Ground, Maryland, to Fort Lee, Virginia, by the end of 2011. The Tactical Support Equipment Department (TSED) moved into its new facility on 24 April 2009 and was the first of the OMMS departments to occupy the new Ordnance School campus at Fort Lee.

TSED, which started training in its new facility in September, was the first tenant at the new, sprawling 200-acre Ordnance School site. The actual movement of training equipment, training aids, and vehicles commenced in late August, and the delivery and installation of new furniture, fixtures, and automation and audiovisual equipment are complete.

## TSED's Mission

TSED's mission is to train Soldiers and Marines on the technical skills needed to operate, maintain, troubleshoot, and repair ground support equipment. The department is organized into four training divisions and provides advanced individual training and professional military education for military occupational specialty (MOS) 91C (utilities equipment repairer), 91D (power generation equipment repairer), and 91J (quartermaster and chemical equipment repairer). TSED also conducts training for two additional skill identifier (ASI) courses: ASI C9 (mast and electric power plant maintenance) and ASI H2 (laundry systems specialist [maintenance]).

TSED's Maintenance Theory and Application Division provides Soldiers and Marines the basic knowledge

and skills needed to perform in their respective technical training phases. The Utilities Division (for MOS 91C) is part of an inter-service training review organization, which trains both Soldiers and Marines on various maintenance tasks for refrigeration equipment. This division is also responsible for managing the Environmental Protection Agency-mandated Sections 608 and 609 of the Clean Air Act of 1990 and the associated Refrigerant Technician Certification Program.

The Power Generation Division (for MOS 91D) trains Soldiers on power generation equipment and administers the ASI C9 course. Finally, the Quartermaster and Chemical Equipment Division (for MOS 91J) trains Soldiers on the maintenance tasks related to heaters, pumps, water-purification systems,

*A Tactical Support Equipment Department instructor trains utilities equipment repair Soldiers how to troubleshoot a 36,000 BTU air-conditioner.*



*Quartermaster and chemical equipment repair Soldiers train on a 600-gallon-per-hour reverse osmosis water purification unit.*

decontamination systems, and smoke generator systems. That division also teaches the ASI H2 course.

### TSED Construction

In November 2007, Hensel Phelps Construction Company was awarded the contract to build the new state-of-the-art TSED facility. This 272,000-square-foot, \$50 million facility is complete, and training started in late September 2009. The new training facility accommodates 115 staff members, a daily maximum capacity of 750 students, and training equipment and materials valued at over \$13 million.

At Aberdeen Proving Ground, TSED was spread over eight different buildings. TSED personnel have very much been looking forward to having the entire department under one roof.

### Moving to Fort Lee

Most of the military and civilian personnel who make up the TSED staff and faculty arrived between mid-August and mid-September. Some of those who arrived early split their time between Aberdeen Proving Ground and Fort Lee, as their respective missions and situations dictated. Given the relatively high percentage of civilian personnel moving (nearly 80 percent volunteered to move), only a small number of civilian job vacancies at TSED have been announced.

TSED's technical training mission continued at Aberdeen Proving Ground until 28 August, at which time a "tactical pause" occurred to facilitate the movement of personnel and equipment. Although most TSED technical training was on hold for a 4-week period, Soldiers continued to receive instruction on basic knowledge and skills, warrior tasks, and battle drills.

During the tactical pause, many Soldiers also participated in a 5-day field training exercise at Tactical Training Base Wolverine, located at the Edgewood area of Aberdeen Proving Ground. About 700 TSED Soldiers and Marines were in "hold-under" status when they arrived at Fort Lee. To serve this hold-under population, trainers implemented accelerated training schedules and second shifts augmented by contract instructors. This will allow TSED to return to normal operations sometime in February 2010.

### The Future

The school's Advanced Automotive and Recovery Department, Weapons and Metalworking Services



Department, and Wheel, Track, and Automotive Department will follow TSED to Fort Lee in 2010 and 2011. Also in 2011, the Ordnance Munitions and Electronics Maintenance School from Redstone Arsenal, Alabama, will begin merging with elements from OMMS to form a total of five technical training departments at the new Ordnance School campus at Fort Lee as part of the establishment of the Sustainment Center of Excellence.

Of the five technical training departments of the reorganized Ordnance School at Fort Lee, TSED is the only existing department that will remain intact. All basic knowledge and skills instruction for all five technical training departments will ultimately be consolidated into the Armament and Electronics Department.

Initial planning is underway for TSED's ribbon-cutting and dedication ceremony for what is to be Rozier Hall, named after the late Brigadier General Jackson E. Rozier. Born in nearby Richmond, Virginia, Brigadier General Rozier was a former commanding general of the Ordnance Center and School. The ceremony is tentatively scheduled for 20 November 2009.

TSED personnel, along with the OMMS Base Closure and Realignment (BRAC) Office, have been involved in the planning efforts since shortly after the BRAC announcement in May 2005. The compiling of detailed space and functional requirements for TSED's training mission was a daunting task. An enormous amount of data was collected for equipment specifications, classrooms, and administrative offices to accurately capture the construction and design requirements for the new TSED facility at Fort Lee.

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# The 16th Ordnance Battalion Relocates to Fort Lee

BY MAJOR GREGORY FEND

**F**ield Manual Interim 3-35, Army Deployment and Redeployment, defines deployment as “the movement of forces to an operational area in response to an order.” By that definition, the unit moves that are taking place in response to the 2005 Defense Base Closure and Realignment Commission (BRAC) report can be called “deployments.” This year, the Army Ordnance Center and Schools, the 61st Ordnance Brigade, and the 16th Ordnance Battalion are deploying from Aberdeen Proving Ground, Maryland, to Fort Lee, Virginia.

These moves require all the mission analysis, staff coordination, command emphasis, and installation support that an operational unit deploying to a theater of operations would require. Personnel and equipment are relocating, units are establishing new operations areas, advance parties have begun to prepare for receiving the main body, leaders are conducting predeployment site surveys, and procedures akin to reception, staging, onward movement, and integration are being developed in anticipation of the arrival of advanced individual training (AIT) students.

The 16th Ordnance Battalion’s deployment to Fort Lee has presented a unique set of challenges. The battalion and the 61st Ordnance Brigade had to develop a movement plan that would support the Army Combined Arms Support Command commander’s intent of continuing to train students and minimizing the move’s impact on students, cadre, and families. To meet this goal, commanders and trainers developed the concept of a “tactical pause,” in which the AIT Soldiers at Aberdeen Proving Ground would continue to focus on tactical training while the staff and faculty prepared their equipment for movement to Fort Lee. To minimize the impact on their families, cadre members were able to conduct their permanent change of station moves during the school summer-break months and then return to Aberdeen Proving Ground in a temporary duty status to continue the mission until the students relocated in September 2009.

The departments that train the 16th Ordnance Battalion Soldiers, the Tactical Support Equipment Department and the Weapons Metal Service Department, are not moving concurrently. This prompted the battalion to establish split-based operations at Aberdeen Proving Ground and Fort Lee, which will continue for approxi-



*The 16th Ordnance Battalion has begun training at the Tactical Support Equipment Directorate’s new building, lower right, at the Ordnance School campus at Fort Lee, Virginia.*

mately 1 year. The battalion’s B and C Companies make up the first force package of the BRAC deployment. In order to support operations simultaneously in two geographically dispersed locations, the battalion has established a command and control cell at Fort Lee until its colors and headquarters relocate.

One way that the leaders and staff have mitigated some of the challenges associated with split-based operations is through the use of collaborative technology. The battalion has established a unit webpage within Army Knowledge Online, where both elements of the unit can share planning documents, provide tasking information, and collaborate on upcoming events. Through Defense Knowledge Online, the unit also uses Defense Connect Online, a version of Adobe Connect that allows real-time audiovisual presentations and whiteboard collaboration. The 16th Ordnance Battalion is in the process of purchasing additional cameras and microphones that will allow for better quality web conferencing capabilities.

As the 16th Ordnance Battalion continues its deployment to Fort Lee, the unit will refine its plan. Lessons learned from the initial planning phase and the establishment of B and C Companies at Fort Lee will provide the battalion’s leaders with information that can improve the upcoming moves of the rest of the battalion. In the spirit of collaboration and using the principles of knowledge management, the 16th Ordnance Battalion will share its plans, analyses, and after-action reports with other units preparing to deploy to Fort Lee, including the 143d Ordnance Battalion, the Ordnance Munitions and Electronic Maintenance School from Redstone Arsenal, Alabama, and the Army Transportation School.

**MAJOR GREGORY FEND IS THE EXECUTIVE OFFICER OF THE 16TH ORDNANCE BATTALION, 61ST ORDNANCE BRIGADE.**



# The Logistics Branch Officer Lifecycle Model

BY LIEUTENANT COLONEL VICTOR S. HAGAN

**F**unctional Area (FA) 90 was created in 1993 within the operations career field to support the development of multifunctional logisticians. Since then, the FA 90 designation has represented multifunctional logistics officers. This article provides a framework that these officers, who now belong to the Logistics branch, can use to guide their career choices.

The Logistics (LG) branch, established on 1 January 2008 by the Secretary of the Army in General Orders 2007-06, is made up of officers from captains who have completed the Combined Logistics Captains Career Course (CLC3) to colonels. The LG branch has two types of officers. The first type of officer holds a primary area of concentration (AOC) of 90A (multifunctional logistician) with a secondary AOC that corresponds to the officer's basic branch of Quartermaster (92A or 92F), Ordnance (91A), or Transportation (88A). The second type of officer holds a primary AOC of 89E (explosive ordnance disposal [EOD] specialist) and a secondary AOC of 91A until the officer's volunteer statement is revoked; then EOD captains transition to 90A with a secondary AOC of 91A.

The LG branch is not an entry-level branch. Second lieutenants enter one of the three functional logistics branches: Quartermaster, Ordnance, or Transportation. Traditionally, once these officers complete Basic Officer Leader Course (BOLC) phases II and III, they are assigned to logistics units where they serve as platoon leaders, executive officers, or assistant battalion-level staff officers to gain troop-leading experience and enhance their technical and tactical knowledge.

Officers selected for promotion to captain attend CLC3, which is a four-phase resident course designed to prepare officers for company command and for multifunctional logistics assignments on battalion- and brigade-level staffs. As part of the graduation ceremony, officers are inducted into the Logistics branch.

Once captains complete a company command assignment, they serve as logistics staff officers in both the operating and generating forces. Select groups of captains attend advanced civil schooling or serve on Army, joint, interagency, intergovernmental, and multinational staffs, which enhance and broaden their understanding of Army and multifunctional logistics operations.

Between their 9th and 12th years of service, LG officers selected for promotion to major attend Intermediate Level Education. This prepares field-grade officers for their next 10 years of service by providing leadership

training focused on warrior ethos and warfighting for Army, joint, multinational, and interagency organizations executing full-spectrum operations. Logistics majors are primarily staff officers who serve as battalion support operations officers and battalion executive officers and on brigade and higher logistics staffs.

Lieutenant colonels in the LG branch primarily serve in key staff and joint positions in sustainment brigades, expeditionary sustainment commands, theater sustainment commands, and division, corps, Army, and joint staffs. A select group of lieutenant colonels is selected for battalion-level commands. After successful command time, these officers are assigned to Army and joint, interagency, intergovernmental, and multinational organizations to serve in key logistics staff positions. Some officers also attend a senior service college or participate in fellowship programs. While battalion command time is not mandatory for promotion to colonel, it may enhance the officer's potential for assignment to a brigade-level command.

LG colonels serve primarily in staff assignments at the operational and strategic levels. These officers serve in key staff and joint positions in expeditionary sustainment commands, theater sustainment commands, and corps or higher staffs. Although no specific mandatory military education requirement exists for colonels, attendance at a senior service college or completion of the Army War College Distance Education Course identifies those officers with exceptional promotion potential for positions of increased responsibility at the next higher grade. A few will receive the privilege of commanding brigade-level organizations. Success at the brigade level will provide an opportunity to compete for brigadier general.

This article is not intended to serve as a roadmap or prescription for success. It is merely a framework for officers to use in developing a career timeline. Before developing a personal timeline, LG officers should read Department of the Army Pamphlet 600-3, *Commissioned Officer Professional Development and Career Management*, and consult with mentors, family members, and their career branch assignment officer to ensure a complete picture is created. The timeline should be reviewed and updated periodically to ensure validity.

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# Civilian Logistics Career Management

BY ELLEN SAVEDGE AND LIANA ANGELO

Imagine waking up in the morning, grabbing your coffee, and driving to work with a smile on your face because you genuinely love your job. These days, many people are concerned with just finding any job. But at the Department of the Army (DA) Civilian Logistics Career Management Office (CLCMO), our mission is to help build challenging, successful careers that last a lifetime. CLCMO provides life-cycle career management services aimed at developing multifunctional logisticians who are capable of operating and leading in a joint environment. The office performs its mission as the Executive Agent for the DA Deputy Chief of Staff, G-4, Functional Chief's Representatives for the supply management (CP-13), materiel maintenance management (CP-17), and transportation and distribution management (CP-24) career programs through the leadership of William Moore, Deputy to the Commanding General of the Army Combined Arms Support Command and Fort Lee.

## Recruiting Logistics Management Interns

The seed to grow a career in logistics starts in the recruiting process. We recruit, hire, train, and distribute approximately 75 interns each year from the 2-year DA Logistics Management Intern Program. Information about the program is provided through brochures, briefings provided at numerous Army conferences, Basic Officer Leader Courses (BOLCs), college and university career fairs, college campus Reserve Officer Training Corps offices, and Internet-based electronic recruiting. One of the best recruiting tools is word-of-mouth. After reading this article, readers are encouraged to become one of CLCMO's valuable recruiters.

Linda Sawvell leads the recruiting process in Rock Island, Illinois. CLCMO receives hundreds of résumés and transcripts during a recruiting season. Its well-trained staff looks at each individual's past strengths and potential for the future. Everyday is busy with résumés, referrals, phone calls, and emails. The CLCMO staff looks forward to transforming the many résumés into real people by

getting to know applicants through telephonic and personal interviews. A panel of senior Army leaders interviews the best-qualified individuals. This process has served the Army well, resulting in approximately a 15-percent selection rate of applicants.

## Training Logistics Management Interns

Individuals enter the DA Logistics Management Intern Program as general schedule (GS) employees in the grade of GS-7 with a target grade of GS-11. After one successful year, they are promoted to GS-9. After another successful year and their reassignment to their permanent positions, they are promoted to GS-11 or an equivalent pay band.

During the first 18 months of the 2-year program, interns are assigned to CLCMO. Our supervisory intern program managers develop schedules for each class of interns and provide individual mentoring and supervisory guidance. Throughout the program, the logistics management interns receive training from the Army Logistics University, the Army Transportation School, contracted courses, and on-the-job training at Department of Defense (DOD) activities.

**Basic Officer Leader Course.** The key component of the training program is the Quartermaster, Ordnance, or Transportation BOLC. Each logistics management intern participates in one of these BOLCs, including the field exercises, to gain a personal understanding of their ultimate customer—the Soldier in the field. Equally important, having interns participate in BOLC gives lieutenants a personal understanding of the Army team and the value of Army civilian team members. In BOLC, military-civilian relationships are built that last a career and a lifetime.

In addition to BOLC, logistics management interns receive formal training in the functional areas of supply, materiel maintenance, and transportation as well as interpersonal communication, contracting, and financial management skills.

**On-the-job training.** Each logistics management intern receives hands-on training at an Army activity, generally an installation directorate of logistics. Interns also complete on-the-job training at a non-Army

THE COMPETITION FOR POSITIONS THROUGHOUT DOD HAS NEVER BEEN FIERCER. VETERANS LEAVING MILITARY SERVICE ARE WELL QUALIFIED FOR MANY OF THE LOGISTICS POSITIONS IN DOD.

DOD activity (including the Navy, Air Force, and Defense Logistics Agency) to understand the working relationship Army logisticians have with fellow DOD agencies. As the number of interns hired annually has increased significantly, the training platforms must increase as well. CLCMO is looking to expand training venues in the current agencies and through partnerships with the Defense Commissary Agency and others.

**Worldwide assignment.** Upon completion of the 18 months of formal training while assigned to CLCMO, logistics management interns are reassigned to another Army activity worldwide. Individuals entering employment under the intern program must sign a mobility agreement consenting to move to where the Army needs them. The follow-on assignment for the intern is determined approximately 5 months before their permanent change of station.

### Competitive Professional Development Program

The DA Logistics Competitive Professional Development (CPD) Program, also managed by CLCMO, develops high-potential individuals to become sought-after logisticians through a variety of training and career-enhancing assignments paid for through the Army Civilian Training, Education, and Development System. Career progression is determined by an individual's potential, demonstrated knowledge, and skills.

The competition for positions throughout DOD has never been fiercer. Veterans leaving military service are well qualified for many of the logistics positions in DOD. The military career management system mandates functional and leadership training and a variety of assignments throughout a service member's career with progressively greater responsibility. Competition is a good thing since selecting officials want the best person for the job on their team. It is up to individuals to prepare for their career goals. The CPD staff can help individuals achieve civilian career goals through several programs.

**University education.** College education is critical to the success of today's and tomorrow's leaders. For DA civilians who are interested in leadership positions, but do not have a bachelor's degree, it is essential to pursue a degree. They should first choose an accredited college or university that is local or online. Through the Academic Degree Training Program, CPD can pay for courses and books for employees who intend to pursue a degree. Based on command approval, students may attend classes part-time or full-time. Funding is also available for single job-related courses.

**Leadership and management programs.** Numerous functional and multifunctional leadership and

management courses are offered online through Army, public, or private schools. Many programs (including the costs for materials, tuition, and travel) can be funded through the CPD Program. Courses include the Theater Logistics Studies (TLog) Program, offered by the new Army Logistics University; the Leadership for a Democratic Society course, offered by the Federal Executive Institute; and the Harvard Executive Fellows Program, offered by Harvard University.

**Certification.** Another avenue of professional development is Defense Acquisition University Life Cycle Logistics certification. Certification is based on education, training, and experience as outlined in the Defense Acquisition University catalog found at [www.dau.mil](http://www.dau.mil). For non-acquisition workforce employees, some of the requirements for certification can be funded through the CPD Program. Pursuing certification opens the door to other career opportunities.

**Developmental assignments.** Developmental assignments also help to build a desirable résumé. Multifunctional developmental assignments of 6 months to 1 year are offered with the DA Deputy Chief of Staff, G-4, and the Joint Staff J-4, among others. The Office of the Secretary of Defense Supply and Transportation Fellows Program is a year-long assignment with rotations through the various

### POINTS OF CONTACT FOR THE CIVILIAN LOGISTICS CAREER MANAGEMENT OFFICE

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support agency staff offices. Assignments with the U.S. Central Command and the U.S. Northern Command are currently under development.

**Training with industry.** Those who regularly work with industry partners may pursue a training-with-industry assignment. Training-with-industry participants have worked at FedEx, United Van Lines, US Airways, Boeing, and Landstar. Announcements for training-with-industry assignments are distributed with application instructions through career program managers.

**Army Civilian Education System.** The Army Civilian Education System (CES) provides a leadership development ladder through the Army Management Staff College Foundation, Basic, Intermediate, Advanced, and Continuing Education for Senior Leaders courses. Information on Army CES courses is available on the college's website, <http://www.amscl.belvoir.army.mil/ces>.

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CAREER MOVES.

**Senior service college.** Education for DA civilians culminates with a senior service college, which is the apex of the Army Civilian Education System. Attendance at a senior service college prepares civilians for positions of greatest responsibility in DA and provides advanced-level educational opportunities for those who have completed training through the CES Advanced Course or equivalent training. According to the Army Management Staff College website, Army equivalents of the Advanced Course include Sustaining Base Leadership and Management, the Army Command and General Staff College's Intermediate Level Education, the Warrant Officer Senior Staff Course, and the Sergeants Major Course.

Leaders who attend a senior service college, such as the Army War College, must have an understanding of complex policy and operational challenges as well as the national security mission. Applications for senior service college are accepted annually. Information and application procedures can be found on the Army's civilian personnel website at [www.cpol.army.mil/library/train/catalog](http://www.cpol.army.mil/library/train/catalog).

Professional development opportunities are announced and distributed quarterly through career

program managers. These prospects exist to enhance an individual's skills, knowledge, and potential. Civilians who reach out to take advantage of those opportunities are better candidates for their next career moves.

### Career Referral

CLCMO seeks to create a workforce of logisticians capable of operating and leading throughout DOD. To support this goal, CLCMO's policies for the recruitment of vacancies at the GS-12 through GS-15 levels include seeking candidates from across DA and DOD. To support this recruitment, the payment of permanent-change-of-station (PCS) expenses should be offered; otherwise, by default, the result is local merit promotions. CLCMO has long supported an Army-wide policy to mandate the offer of the payment of PCS expenses. Activities like the Army Training and Doctrine Command, the Army Installation Management Command, and the transportation and distribution management career program have this policy in place, to their benefit.

To help logisticians network in the pursuit of career management assistance, the new Logistics Future Oriented Relevant Career Enhancement (LOGFORCE) tool has been developed. This online tool will continue to be enhanced to provide access to mentors, vacancy announcements, career road maps and guidance, career program managers, and online networking with other logisticians. LOGFORCE also provides visibility of the logistics workforce from entry to senior levels.

LOGFORCE was demonstrated with initial operating capability at the Civilian Logistics Career Management Planning Board in August. The tool is now available for use through Army Knowledge Online at <https://www.us.army.mil/suite/page/600124>.

More information on the programs mentioned in this article is available at the CLCMO website at <http://www.cascom.army.mil/CLCMO/>.

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*THE AUTHORS THANK JUDY GORMAN, LINNEA KERINS, AND ROBERTA HERMANN FOR THEIR CONTRIBUTIONS TO THIS ARTICLE.*

# Sustaining Our Army Then and Now

BY BRIGADIER GENERAL RICHARD P. MUSTION

In one form or another, the sustainment warfighting function described in Field Manual (FM) 3-0, Operations, has been an essential feature of the Army's operational past since at least World War I. The sustainment concept was institutionalized in March 1942 as part of a massive Army reorganization that accompanied the entry of the United States into World War II. Driven by Chief of Staff of the Army General George C. Marshall, the reorganization aimed to reduce the number of officers and organizations that had immediate access to him. The resulting reorganization restructured the Army into three major commands: the Army Ground Forces (AGF), the Army Air Forces (AAF), and a command initially called the Services of Supply (SOS)—the Army's sustainment command. Everything that did not fit clearly into the AGF or the AAF went to the SOS. Lieutenant General Brehon B. Somervell was selected to command the SOS organization.

## Army Service Forces

In March 1943, the War Department staff renamed the SOS the "Army Service Forces" (ASF) because they thought the word "supply" did not accurately reflect the broad range of activities that had been assigned to the command. At the War Department level, the ASF was a consolidation of logistics, personnel, and administrative functions. Under ordinary circumstances, these functions were the responsibility of the War Department G-4 and G-1, who relied on the technical and operational support of the Finance, Judge Advocate General's, and Adjutant General's Departments; the Chaplain Corps; Inspector General; Provost Marshal General; and Chief, Special Services.

Nothing about the ASF organization was simple or uncomplicated. As recorded in the Army's official history of the organization, the ASF was without "direct precedent" and unusual "in the variety of tasks entrusted to it. . . . [I]t was a hodgepodge of agencies with many and varied functions." From the beginning until it was disestablished in 1946, "the ASF struggled constantly to build a common unity of purpose and organization." Lieutenant General Somervell, a career logistician, admitted never liking the part of the reorganization that gave him responsibility for personnel. He gave most of his attention to the monumental task of procurement and supply.

However "hodgepodge" it may have been, the ASF survived the war, fulfilling its massive responsibility of supporting the millions of U.S. Soldiers located all over the globe in multiple theaters of operations. One unifying factor that kept Somervell on task and held the ASF together was the obligation to sustain warfighting commanders and the Soldiers who served them. If unity of purpose was lost to the ASF organization, the ASF gained from efficiencies resulting from the unified effort to sustain our Soldiers at war.

## Combat Service Support Group

Following World War II, the Army began establishing combat development agencies as a way for each branch of the Army to integrate new technologies and tactical organizations into the combat Army. Ultimately, all combat development agencies were realigned under a unified Combat Developments Command (CDC) in 1962 as part of an extensive reorganization of the Army. The CDC established two combat development "integrating agencies" modeled after the mission and functions of the AGF and ASF of World War II. One agency integrated the development of combat and combat support functions, and the other, the Combat Service Support Group, acted as integrator for what we today would call the sustainment function.

The combat development agencies of the Adjutant General's, Finance, Judge Advocate General's, and Chaplain branches were joined with the various logistics combat development agencies of the Quartermaster, Ordnance, and Transportation branches to form the Combat Service Support Group, headquartered at Fort Lee, Virginia. Corresponding with the larger Army reorganization, the Army Command and General Staff College adopted the concept of combat service support to identify the varied, yet related, functions that together defined the sustainment mission. In its essence, the Combat Service Support Group represented a reconstitution of the sustainment concept embedded in the ASF of World War II. The CDC managed the Army's total combat development effort until the end of the Vietnam War.

## Personnel Issues During the Vietnam War

Following the Vietnam War and the gut-wrenching realization that many of the Army's most serious operational issues were related to the "personnel system,"



senior leaders of the Army began to question the ASF model that had framed the sustainment concept since the beginning of World War II. Early in the Vietnam War, it had taken the wife of an Army battalion commander embroiled in the Battle of Ia Drang Valley to convince senior Pentagon officials that yellow-cab delivery of casualty notification telegrams to Soldiers' next-of-kin was deeply insensitive and destructive of homefront morale. The draft, used to sustain manpower levels in the Vietnam War, had embittered many who objected to conscription on principle and others who believed it forced into service a disproportionate number of poor, working-class, and minority members of U.S. society. Racial problems in society at large had been magnified in the military by the collapsing public support for the war. Drug and alcohol abuse among military personnel was rampant.

Replacement and rotation policies that caused constant personnel turbulence had undermined unit integrity and the commitment of Soldiers to one another and the mission. Perceived failings of command in Vietnam gave rise to the study of military leadership and the historical and ethical foundations of the military profession. Together with the dissolution of the draft, the advent of the all-volunteer Army, and the commitment to more thoroughly integrate women into the force, the personnel lessons of the Vietnam War created a highly charged environment conducive to a full-scale assault on the Army's personnel system.

### **Army Training and Doctrine Command**

Emerging from the many discussions concerning the personnel lessons learned from the Vietnam War were plans to establish a "clearing house" (an administrative center or school complex) that would form the center of gravity for an Army-wide personnel system. The opportunity to establish an agency of this kind came with Operation Steadfast, the 1973 reorganization of the Army that disestablished the Continental Army Command and the Combat Developments Command. From Operation Steadfast came two new commands, the Army Training and Doctrine Command (TRADOC) and the Army Forces Command.

TRADOC, as the name implied, became responsible for Army training, doctrine, and combat developments. At the core of the new TRADOC organization were three mid-level "integrating centers" for combat developments: the Combined Arms Center (CAC) at Fort Leavenworth, Kansas; the Logistics Center (LOGC) at Fort Lee; and the Administration Center (ADMINCEN) at Fort Benjamin Harrison, Indiana. CAC and LOGC were essentially re-creations of former Combat Developments Command operating agencies; ADMINCEN was a new organization altogether.

### **ADMINCEN**

Based partly on lessons from the Vietnam experience, planners intended ADMINCEN to become the collection point for all matters related to the Army's personnel system and the human dimension of military operations. It was a kind of doctrinal "think tank" and training ground that directly extended from the mission of the Army G-1 and its associated branches and specialties.

Considerable resistance to ADMINCEN was voiced by members of the Operation Steadfast study group, who balked at the idea of elevating personnel doctrine, training, and combat developments to near-equal status with the combined arms and logistics missions. However, the Continental Army Command commander, General Ralph E. Haines, Jr., directed that ADMINCEN be included in the detailed plan of reorganization. The establishment of ADMINCEN reflected the view of General Haines and other senior military officials that a refashioned personnel system was critical to restoring public confidence in the Army, recovering from the war's assault on Soldier morale and unit cohesion, and building an all-volunteer force.

Chief of Staff of the Army General Creighton W. Abrams, Jr., testifying before the Senate Appropriations Committee in March 1974, called the management of human resources the Army's "single most important function. . . . Unless we run our people programs well, the Army itself will not be well." Likewise, Lieutenant General Bernard W. Rogers, then the Army's Deputy Chief of Staff for Personnel, began to take a hard look at the way the Army managed its people. He said that the Army's personnel system should "provide in the right place at the right time the required number of qualified, motivated people to accomplish the Army's mission, and to provide for their maintenance and care as well as that of their dependents."

### **ADMINCEN Evolution**

As the Army's focal point for personnel and personnel systems, ADMINCEN became the proponent for a new category of military operations called personnel service support (PSS). In July 1973, the ADMINCEN was activated at Fort Benjamin Harrison. The Personnel and Administration Combat Development Activity, ADMINCEN'S combat development activity, assumed responsibility for integrating the doctrine, organization, and equipment developments of the Adjutant General's, Finance, Chaplain, Judge Advocate General's, Medical Service, and Women's Army Corps. The Personnel and Administration Combat Development Activity's integrating mission also included the Defense Information School (for public affairs) and the Army School of Music (for Army bands).

THE SUSTAINMENT WARFIGHTING FUNCTION IS THE RELATED TASKS AND SYSTEMS THAT PROVIDE SUPPORT AND SERVICES TO ENSURE FREEDOM OF ACTION, EXTEND OPERATIONAL REACH, AND PROLONG ENDURANCE. . . . SUSTAINMENT IS THE PROVISION OF THE LOGISTICS, PERSONNEL SERVICES, AND HEALTH SERVICE SUPPORT NECESSARY TO MAINTAIN OPERATIONS UNTIL MISSION ACCOMPLISHMENT. INTERNMENT, RESETTLEMENT, AND DETAINEE OPERATIONS FALL UNDER THE SUSTAINMENT WARFIGHTING FUNCTION AND INCLUDE ELEMENTS OF ALL THREE MAJOR SUBFUNCTIONS.

—FM 3-0, OPERATIONS

The three-center model, which was the basis for TRADOC's organization, constituted a restructuring of the sustainment model that had been in place since the Army reorganized for World War II. Instead of the one-piece model, Operation Steadfast institutionalized a two-piece model—one piece to address logistics functions and another for personnel and administration.

Much like ASF of old, ADMINCEN became a magnet for every developmental mission and program that did not fit clearly into either combat and combat support (CAC's focus) or logistics (LOGC's focus) mission areas. Also like ASF, ADMINCEN struggled from the beginning to build a commonly held vision and understanding of purpose and mission. During the command's 17-year history, it went through no less than 10 major reorganizations, each hoping to build a unity of purpose that had eluded it from the very beginning. In 1980, ADMINCEN reorganized into the Army Soldier Support Center as a result of the mandate to manage and develop programs related to the human dimension of military operations.

### **Soldier Support Institute**

The collapse of the Soviet Union and the end of the Cold War in the late 1980s brought immediate demands from Congress and the public at large to radically reduce the defense budget and take advantage of the "peace dividend." Those demands essentially called for the demobilization of the Nation's defense structure that had been built to deter Soviet and Communist aggression around the world. The war against Iraq in 1990 and 1991 interrupted the debate but did little to alter the political intent to reduce deficit spending and shift public funds formerly allocated for defense to other areas.

TRADOC's initial response to the reality of post-Cold War military budgets was to "reengineer" its combat development program. A significant piece of the plan called for eliminating the Army Soldier Sup-

port Center by consolidating it with LOGC at Fort Lee. The resulting organization, the Army Combined Arms Support Command (CASCOM), like the Combat Service Support Group before it, assumed responsibility for the combat, doctrine, and training developments of the Army's logistics and personnel and administrative functional areas. The Soldier Support Center was reduced to a "schools" center, the Army Soldier Support Institute, which included the Adjutant General, Finance, and Recruiting and Retention Schools and a Noncommissioned Officer Academy.

### **CASCOM**

The May 1990 CASCOM organization plan went through four phases and took 4 years to complete. Under phase 1 of the plan, people and funds supporting the PSS integrating mission were transferred to CASCOM. The final phase of the project called for the transfer of combat and training development programs of the Ordnance Center and Schools at Aberdeen Proving Ground, Maryland, and Redstone Arsenal, Alabama, and the Transportation School at Fort Eustis, Virginia, to Fort Lee to be consolidated with like assets from the Quartermaster School. The Ordnance and Transportation Schools, however, continued to provide classroom instruction at their original locations. The consolidation marked the elevation of LOGC from an integrating center to an agency responsible also for capability and training developments for the logistics community (the Ordnance, Transportation, and Quartermaster Schools).

Since the Soldier Support Institute was in the process of moving from Fort Benjamin Harrison to Fort Jackson, South Carolina, under a Defense Base Closure and Realignment (BRAC) Commission mandate, the combat and training development assets of the Soldier Support Institute were exempted from the move to Fort Lee. The people and programs that would have moved to Fort Lee were already committed to moving to Fort Jackson and the multimillion dollar facilities that were being constructed there to receive them.



### Problems With Integration Under CASCOM

Senior leaders of the Army's personnel and finance communities were also concerned that capability and training development support for the Adjutant General and Finance Schools would largely disappear in an organization committed largely to the Army's logistics mission. Many of the Army-wide personnel programs formerly sponsored by the Soldier Support Center began to flounder with the transfer of the PSS integrating mission to CASCOM.

At issue was the family of human resource programs belonging to no particular branch of the Army but closely connected to the Army's Deputy Chief of Staff for Personnel. The Soldier Support Center in the early 1980s, for instance, sponsored the development and integration of the Army's new manning system and the follow-on regimental system intended to strengthen unit cohesion and the bonds of affiliation that tied Soldiers to particular units and Army branches. Much of the justification for the establishment of the Army Community and Family Support Center in 1984 resulted from the Soldier Support Center's sponsorship of an expanded Army Community Services program and various studies and programs related to the impact of Soldiers' service and sacrifice on Army families.

Under the transfer of the integrating function, statutory responsibility for human resources had been vested with CASCOM, the responsible agent for integrating both logistics and personnel issues across the Army. However, one of the first issues to confront the

commandant of the Adjutant General School in 1994 was whether the Army's Adjutant General's Corps ought to assume responsibility for equal opportunity (EO) and other related human resources programs. Knowing that the Army's Deputy Chief of Staff for Personnel needed a TRADOC advocate for human resources, the Adjutant General School commandant absorbed the EO mission into the Adjutant General's Corps' doctrine, training, and combat developments program. In taking responsibility for other human resources programs, the Adjutant General's Corps, as the technical proponent for the Army's personnel system, had broadened its mission to include responsibility for "people" programs and other human-dimension programs that were formerly a part of the Soldier Support Center's capabilities development integrating mission.

### CSS Doctrine

In 1993, TRADOC published its first attempt at post-Cold War operational doctrine: FM 100-5, Operations. The 1993 version of FM 100-5 listed six critical logistics functions that together constituted combat service support. Of the six, two addressed the former PSS functional area. The chapter titled "Manning the Force" described personnel readiness management, replacement management, and casualty

*A Soldier with the 147th Adjutant General Postal Company from Kaiserslautern, Germany, inspects a box that a Soldier is sending home from Iraq.*



*A Soldier who serves as a debt management and special action noncommissioned officer for the 101st Finance Company, 10th Sustainment Brigade Troops Battalion, files his daily paperwork.*

management. The chapter titled “Sustaining Soldiers and their Systems” included health service support, personnel services, financial services, public affairs, and religious and legal support.

For leaders and Soldiers belonging to the personnel and administrative areas of the Army mission, the interchangeable use of the terms “logistics” and “combat service support” validated previous predictions about CASCOM’s narrow focus on logistics. Sustainment functions falling within the combat service support functional area but outside the logistics domain had become afterthoughts.

### The Sustainment Warfighting Function

The most recent version of Army operational doctrine, FM 3–0, Operations, resolves previous exclusionary problems caused by definitions by rescinding the terms “combat arms,” “combat support,” and “combat service support,” which described the three functional areas represented in planning and conducting a military operation. In their place, the FM names eight elements of combat power: leadership, information, movement and maneuver, fires, intelligence, command and control, protection, and sustainment. These are believed to be a more accurate reflection of the contemporary, if not the past, operating environment.

Together, the eight elements of combat power point to a new and broader understanding of combined arms operations. Instead of the narrow combination of weapon systems, the new definition applies leadership and information and selected warfighting functions in a “synchronized and simultaneous” fashion to achieve the “full destructive, disruptive, informational, and constructive potential” of combat power.

Sustainment, one of the six warfighting functions, has replaced combat service support as the approved concept used to describe the collective tasks and related logistics, personnel services, and health services systems essential to support the operational Army in the fulfillment of a given mission. From a branch and specialty perspective, sustainment involves the combined functions and capabilities provided by the Adjutant General’s, Chaplain, Finance, Judge Advocate General’s, Medical Service, Ordnance, Quartermaster, and Transportation Corps. Based on recent experience, our new doctrine is a candid admission that successful military operations in the full-spectrum environment of the 21st century require a measured, combined, and focused application of the various elements of combat power. Regardless of size and scope, the sustainment community’s ability to provide commanders at the right time



and place with all the logistics, personnel, and health services support necessary for mission accomplishment is essential to the success of any future operation.

On 9 January 2009, officials at Fort Lee, Virginia, dedicated the new Sustainment Center of Excellence (SCoE). Established as the result of BRAC decisions, the SCoE represents a further consolidation of CASCOM, the Army Logistics University (formerly the Army Logistics Management College), and the Army Quartermaster, Transportation, and Ordnance Schools. As part of the BRAC plan, the students, faculty, and staff of the Ordnance Mechanical Maintenance School at Aberdeen Proving Ground, the Ordnance Munitions and Electronics Maintenance School at Redstone Arsenal, and the Transportation School at Fort Eustis will move to Fort Lee. The new organization represents a complete consolidation of the logistics community’s doctrine, training, and combat development programs.

SCoE is indeed about the future of logistics and the logistics branches, but it is also about the other elements of the sustainment function—the branches and missions that make up the personnel services and health service support functions. Based on our new doctrine, SCoE also represents our best opportunity in years to unify the effort as well as create a common understanding of purpose that bridges the diverse programs and missions that make up the Army’s total sustainment community. Much of our success as a community will depend on ensuring the proper alignment and integration of non-logistics units and personnel that are currently being added to our theater and expeditionary sustainment commands and sustainment brigades. They, too, are critically necessary for freeing commanders for action, extending operational reach, and prolonging the endurance of our Soldiers, who respond to any and all threats that compromise the safety and well-being of the American people.

*BRIGADIER GENERAL RICHARD P. MUSTION IS THE ADJUTANT GENERAL OF THE ARMY, ARMY HUMAN RESOURCES COMMAND, AT ALEXANDRIA, VIRGINIA. HE PREVIOUSLY SERVED AS THE COMMANDER OF THE ARMY SOLDIER SUPPORT INSTITUTE AT FORT JACKSON, SOUTH CAROLINA.*



# Fort Lee Prepares to Host the Sustainment Center of Excellence

BY MATTHEW MONTGOMERY

**E**stablishing the Sustainment Center of Excellence at Fort Lee, Virginia, will result in major changes to the look and feel of the installation. Once all base closure and realignment (BRAC) moves are complete, Fort Lee expects to nearly triple its daily population.

Increasing from an average daily population of 17,000 to more than 48,000 in less than 6 years requires major improvements, renovations, and revitalization projects. To succeed, these endeavors require communication and strong working relationships among the many different agencies, organizations, and tenant units residing on the installation. Success also depends on the solid community partnerships Fort Lee has with its neighboring communities.

“We have a lot of construction taking place, and we rely heavily on our community partners and the strong teamwork here at Fort Lee to make things happen,” said Colonel Michael G. Morrow, Fort Lee Garrison Commander. “The economic impact after [BRAC] construction is complete will result in local economy growth of more than \$1.7 billion by 2013. We have an amazing group of people that are forward thinking and have worked hard to address potential problems with solid solutions.”

## New and Renovated Facilities

Through its strong partnerships, Fort Lee has successfully bridged the gap in shortfalls, planned for future growth, and reduced strain on the installation. Plans for future growth include increasing childcare capacity by opening one new child development center and planning for the construction of two others. The installation is also planning a new 1,000-room temporary lodging facility that will be built by February 2012 to support the military and civilians students attending the Army Logistics University (ALU). ALU, which opened a 350,000-square-foot facility in July, will serve an average of 2,200 students per day. Part of the BRAC construction includes a new campus for the Ordnance School. The plan is to make the campus all-inclusive in order to provide the best service and support to the Soldiers attending the



school. The campus will include softball fields, running tracks, a shoppette, a barber shop, and a troop medical and dental clinic. The dining facility on the Ordnance School campus will be the second largest in the Army, capable of feeding more than 1,500 Soldiers at every meal.





*A 218,579-square-foot facility was built to house the Sustainment Center of Excellence headquarters (above, building in center foreground; at right, the headquarters entrance). The facility is located adjacent to the Quartermaster and Women's Army Museums. The new Ordnance Museum is planned for construction in the same vicinity. (Photos by Albert Cruz, BRAC Construction Office)*







*The Army Logistics University (ALU) campus contains the new ALU facility (center), the Simulation Training Center (center foreground), and the existing Army Logistics Management College building (right). The 350,000-square-foot ALU building houses the Logistics Leader College, the Logistics Noncommissioned Officer Academy, and the Army Logistics Library. A 1,000-room hotel is projected for construction in 2012. (Photo by Albert Cruz, BRAC Construction Office)*

Numerous other projects are currently under construction. These include a new shoppette and an expanded gas station that will double the number of gas pumps available, increase the number of car care bays, and have a Popeye's chicken restaurant. Fort Lee also has plans for additional expansion in 2013, including new swimming pools, two new gyms (one on the new Ordnance school campus and one on the ALU campus), two chapels, and a two-company fire station. Renovations of the two existing gyms and the Kenner Army Health Clinic are also planned.

### **Tenant Activities**

In addition to the installation growth, two tenant organizations are also experiencing major growth and structural changes. The Defense Commissary Agency, which operates 255 commissary stores worldwide, is expanding its building to move more than 200 employees back onto the installation to comply with BRAC requirements.

The Defense Contract Management Agency (DCMA) is responsible for ensuring that Federal acquisition programs are executed on time, within cost, and according to performance requirements. DCMA currently has headquarters operations in California, Massachusetts, and Virginia. It will move most of its headquarters operations to Fort Lee and will occupy a building that formerly housed the Army Combined Arms Support Command, which moved to the new 218,579-square-foot Sustainment Center of Excellence headquarters earlier this year.

With support from the entire Team Lee family, Fort Lee is transforming into a state-of-the-art training facility and a home for Soldiers and their families that is second to none.

**MATTHEW MONTGOMERY** IS A PUBLIC AFFAIRS SPECIALIST FOR THE **FORT LEE PUBLIC AFFAIRS OFFICE**. HE IS A GRADUATE OF THE **MARINE CORPS COMBAT CORRESPONDENT COURSE**.

# BRAC's Impact on Transportation Training

BY JOHN C. RACE, JR.

In May 2005, the Defense Base Closure and Realignment (BRAC) Commission recommended, and the President subsequently approved, the following BRAC actions:

- ❑ Realign Fort Eustis, Virginia, by relocating the Transportation Center and School to Fort Lee, Virginia.
- ❑ Realign Aberdeen Proving Ground, Maryland, by relocating the Ordnance Mechanical Maintenance School to Fort Lee.
- ❑ Realign Redstone Arsenal, Alabama, by relocating the Ordnance Munitions and Electronics Maintenance School to Fort Lee.
- ❑ Consolidate the Transportation Center and School and the Ordnance Center and Schools with the Quartermaster Center and School, the Army Logistics Management College (ALMC), and the Army Combined Arms Support Command (CASCOM), all of which were already at Fort Lee.

- ❑ Establish a Combat Service Support Center (now known as the Sustainment Center of Excellence (SCoE)) at Fort Lee.

Since then, much work has been done to accomplish the commission's recommendations in order to comply with the mandated completion date of 2011. But BRAC 2005 raises many questions for transporters. What do the BRAC recommendations mean to transportation training? How will they affect who and how we train our transportation Soldiers and civilians? What exactly is a SCoE? How will transportation training be affected by the formation of the Logistics Corps?

## Realigning Training

The bottom line is that transportation training will continue to be relevant and rigorous and conducted to standard. By the end of fiscal year 2011, transportation training will be conducted at three installations: Fort

## What Will Remain at Fort Eustis?

- Transportation watercraft, cargo-handling, and rail training and OES intermodal training exercises
- Courses and facilities:
  - 880A/881A Marine Deck and Engineer Warrant Officer Basic and Advanced Courses (56 students per year)
  - NCO Academy technical tracks
  - 88H30 and K/L30/40 (91 students per year)
  - 88H10 cargo specialist (495 students per year)
  - 88K10 watercraft operator (117 students per year)
  - 88L10 watercraft engineer (93 students per year)
  - 88P/T/U10 railway courses (39 students per year)
  - 19 functional courses (643 students per year)
  - Watercraft /cargo-handling/rail-related classrooms/shops/laboratories
  - Maritime Simulation Center
  - Landship
  - Cargo-handling equipment training area
  - Technical/intermodal training exercises at Fort Eustis
    - Transportation Basic Officer Leader Course (TBOLC) Phase 3 (696 students)
    - Transportation Officer Basic Qualification Course (TOBQC) (10 students)

### LEGEND

FY = Fiscal year  
NCO = Noncommissioned officer  
OES = Officer Education System



**1534 students  
at Fort Eustis  
using FY 2009  
projections**





Eustis, Fort Lee, and Fort Leonard Wood, Missouri. As shown in the chart on page 33, Fort Eustis will continue to be the home of Army watercraft, rail, and cargo-handling training. That means that advanced individual training (AIT) for watercraft operators (military occupational specialty [MOS] 88K) and watercraft engineers (MOS 88L), cargo specialists (MOS 88H), and railway equipment repairers (MOS 88P), railway section repairers (MOS 88T), and railway operations crewmembers (MOS 88U) will continue to take place at Fort Eustis. Motor transport operator (MOS 88M) AIT has been consolidated at Fort Leonard Wood. The Noncommissioned Officer Education System (NCOES) Advanced Leader Course, formerly known as the Basic NCO Course (BNCOC), for watercraft, rail, and cargo specialist MOSs will be taught at Fort Eustis, as will the maritime functional and warrant officer courses. The Senior Leader Course—formerly known as the Advanced NCO Course (ANCOC)—for MOSs 88K and 88L will remain at Fort Eustis, but the Senior Leader Course for all other 88-series MOSs will relocate to Fort Lee.

The aviation maintenance AIT courses currently being taught at the Army Aviation Logistics School will also remain at Fort Eustis.

## Training Locations

So what is moving to Fort Lee, and will there still be a Transportation School? The easy answer to the first question would be to say that everything not mentioned above as staying at Fort Eustis or Fort Leonard Wood is going to Fort Lee, but it isn't quite that simple. Before any further discussion of training is presented, we need to understand the SCoE components involved in transportation training. Those components are the Army Logistics University (ALU), warrior training, the Capabilities Development and Integration Directorate, and the Transportation School.

ALU is an expansion of ALMC. (ALMC is now one of several colleges constituting ALU.) ALU's physical facilities include the ALMC building and a newly constructed instructional facility; a new Simulation Training Center has been built next door.

ALU will conduct all Officer Education System (OES) courses, three deployment functional courses, and the NCOES courses not staying at Fort Eustis (in other words, the 88H, 88M, and transportation management coordinator [88N] Senior Leader Course and Advanced Leader Course). Those courses will be conducted in separate ALU colleges or in the Logistics

## What Will Move to Fort Lee?

- Transportation Center and School
- Classroom-based courses:
  - Transportation Basic Officer Leaders Course (TBOLC) (696 students)
  - Transportation Officer Basic Qualification Course (TOBQC) (10 students)
    - Technical/intermodal training exercises at Fort Eustis
    - Tactical training exercises at Fort A.P. Hill
  - Combined Logistics Captains Career Course/Reserve Components Captains Career Course Phases 2 and 4 (442 students)
  - 882A Mobility Warrant Officer Basic and Advanced Courses (65 students)
  - NCO Academy
    - 88H40 (22 students)
    - 88K40 and 88L40 (30 students)
    - 88M30/40 (493 students)
    - 88N30/40 (247 students)
  - 88N10 Transportation Management Specialist (624 students)
  - 10/2 Functional courses (1863 students) (includes MTTs)
  - Nonwatercraft/rail-related facilities
    - Deployment and Distribution Training and Simulation Center
    - Movement Tracking System classroom
    - Library
    - Aircraft mockups

**~4822 students  
to Fort Lee  
using FY2009  
projections**

### LEGEND

FY = Fiscal year  
MTT = Military training team  
NCO = Noncommissioned officer  
Orange indicates Army Logistics University courses

NCO Academy. Transportation instructors will teach the courses, but they will not be part of the Transportation School as they are now, even though the Deputy Commanding General and Commandant of the Transportation School will serve as the director of the ALU.

Warrior training for 88N AIT Soldiers is planned to take place at Fort A.P. Hill, Virginia. The focus of the warrior training has been, and will continue to be, the warrior tasks and battle drills taught in basic training and reinforced in AIT. All AIT Soldiers in training at Fort Lee will spend up to 5 days at Fort A.P. Hill going through situational training exercises, close-quarters marksmanship training, and convoy live-fire exercises. Planning is also underway to incorporate at least 10 hours of technical training. Transportation training will be focused on those tasks associated with operating a forward logistics airfield and will require the Soldiers to build and document 463L pallets, weigh and mark vehicles, and load the pallets and vehicles onto C-130 aircraft or other modes of transportation. While 88N Soldiers will train at Fort A.P. Hill, cargo specialist (88H) and watercraft (88K and 88L) Soldiers will continue to conduct their warrior training at Fort Eustis. MOS 88M AIT Soldiers will conduct their warrior training at Fort Leonard Wood.

There *will* be a Transportation School at Ft. Lee. The planned home of the school is Building 2300, the former home of the Quartermaster NCO Academy. That building will be renovated so that MOS 88N AIT, the Mobility Warrant Officer Basic and Advanced Courses, and 10 deployment functional courses can be taught there.

The Transportation School will also be colocated with five Air Force courses that are moving to Fort Lee from Lackland Air Force Base, Texas. It is important to note that these courses (two apprentice-level and three functional courses) will be *colocated* with Army Transportation School courses and not *consolidated* with them. Once all courses have moved to Fort Lee and all parties have gained experience on how the Air Force courses compare to Army courses, some consolidation of the courses may occur; however, it is too early in the process to say what portions of courses can be brought together.

One other training element may become part of the SCoE at Fort Lee. The Joint Deployment Training Center (JDTC) currently provides training on numerous joint systems, such as the Joint Operations Planning and Execution System (JOPES), Global Combat Support System (GCSS), and Joint Flow and Analysis System for Transportation (JFAST). The JDTC provides training to the Transportation School's Mobility Warrant Officer Basic and Advanced Courses and the Captains Career Course. Moving the JDTC to the SCoE would add even more synergy to the joint aspects of transportation training.

The chart at left summarizes the training that is moving to Fort Lee. Transportation training will be conducted either at the Transportation School or at ALU. The Transportation School OES classes

(Transportation Basic Officer Leader Course, Captains Career Course, and others) and NCOES courses will all be taught at the ALU campus. Three Transportation School functional courses will be taught at ALU as well: the Defense Advanced Traffic Management Course, the Strategic Deployment Planning Course, and the Mobilization/Deployment Planning Course. The school's Deployment and Distribution Exercise and Experimentation Center will be located in the Simulation Training Center.

### Training the Logistics Corps

The establishment of ALU at Fort Lee supports the formation of a Logistics Corps. The three major logistics branches will have colocated or consolidated training within the ALU campus. Lieutenants will continue to hold functional positions, but their training may be provided by Transportation, Quartermaster, or Ordnance officers. Transportation lieutenants will still receive convoy training at Fort A.P. Hill and will still participate in the transportation technical and tactical exercise "Red Ball Express" at Forts Eustis and A.P. Hill. There will be one Logistics NCO Academy at ALU, and the Combined Logistics Captains Career Course will be taught at one location instead of at multiple sites. Transportation functional courses will become part of the ALU's course listings.

Transportation training development will continue as it is today, executed by the training developers who were consolidated into one CASCOT directorate in 1994. Now, however, they will be located at the same installation as their quartermaster and ordnance counterparts instead of 75 miles away. The close proximity of instructors and training and combat developers can only make the formation of and support for the Logistics Corps even more transparent to the Transportation Corps and the Army as a whole.

Transportation training definitely will be impacted by BRAC 2005 and the realignments directed by it. We will train in three major locations, but we will retain a Transportation School and our great Transportation Corps branch. Officers, warrant officers, NCOs, and civilians will receive the same great instruction they have in the past. Our training organization may not look the same, but the content of that training will remain relevant, rigorous, and conducted to standard.

All of these movements and colocations are scheduled to be completed by late fiscal year 2010. Regardless of when the move begins, the staff and faculty of the Transportation School continue to refine plans to efficiently execute required moves of personnel, equipment, and supplies so that all training is conducted on schedule.

*JOHN C. RACE, JR., IS THE ASSISTANT COMMANDANT OF THE ARMY TRANSPORTATION SCHOOL.*



# The Army Logistics University Is Open for Business

BY COLONEL SHELLEY A. RICHARDSON AND LIEUTENANT COLONEL TIM GILHOOL



**O**n 2 July 2009, the Army celebrated the ribbon cutting for the new Army Logistics University (ALU) education building at Fort Lee, Virginia. Since then, ALU opened its doors, achieved its initial operating capability, and continues to evolve. With the opening of the new facilities, ALU began hosting the first of many Quartermaster and Ordnance Basic Officer Leader Course (BOLC) Phase III classes (soon to become BOLC Basic), and the Quartermaster Warrant Officer and Noncommissioned Officer (NCO) Academy courses started operating under the ALU aegis. Many internal movements across the installation and from Aberdeen Proving Ground, Maryland, mark the largest transformation in sustainment education the Army has experienced, and logistics leaders now conduct their professional military education on one campus.


## ALU's Vision and Capabilities

The vision of ALU is to be the premier trainer and educator of sustainment leaders. At ALU's grand opening event, Representative J. Randy Forbes of the 4th

Congressional District of Virginia stated, "This is not just a University. . . . You are sitting right now on the logistics capital of the world! If we don't realize that, we will come to realize that as each day passes."

ALU's new fully furnished, 350,000-square-foot education building sits on a 46-acre walking campus, which also includes Bunker Hall (the Army Logistics Management College [ALMC] building) and the new Simulation Training Center. Civilian and military students will eventually study, eat, sleep, exercise, and recreate on the campus after the addition of a multistory 1,000-room billeting facility (to be operated by the Family and Morale, Welfare, and Recreation office) and a temporary gymnasium. The ground breaking for these facilities is scheduled for 2010.

The new education building is a four-story L-shaped structure with 167 reconfigurable classrooms, raised flooring that allows for computer network access in any desk configuration, a multipurpose room, state-of-the-art automation, and web-based video teleconferencing education equipment. Twenty computer laboratories house



*The Army Logistics University's new education building while it was under construction earlier this year.*

ALU is also home to *Army Sustainment*, the Army's professional bulletin that provides sustainers with a venue for disseminating information on sustainment plans, policies, tactics, techniques, and procedures. As ALMC grew to become ALU, the bulletin evolved from *Army Logistician* (focused solely on logistics) to *Army Sustainment*. The magazine's expanded focus follows the mission of the Sustainment Center of Excellence by including not only traditional logistics articles but also articles about contracting as a logistics enabler, health service support, and personnel services, which are all part of sustainment.

After ALU's establishment, professional military education for logisticians began migrating to the campus according to the 2005 Defense Base Closure and Realignment (BRAC) Commission report timelines.

Along with the movement of education locations, curricula and teaching methods for sustainment leaders are being revised to align with the Army's evolving leader development strategy, Field Manual (FM) 3-0, Operations, and FM 4-0, Sustainment.

battle command systems, Standard Army Management Information Systems (STAMISs), and personal computers for hands-on training in the Battle Command Sustainment Support System, Force XXI Battle Command Brigade and Below, Property Book Unit Supply Enhanced, Standard Army Retail Supply System-2AC/B, Standard Army Maintenance System-Enhanced, Command Post of the Future, and Movement Tracking System.

The education building includes a book store, barber shop, snack bar, and food court with Subway and Einstein Brothers bagels restaurants. The education building also houses a new two-story combined Logistics Research and Community Library, which contains 60 individual work stations, the ALMC and Fort Lee library collections, an embedded community reading area, and a world-class research team. Ultimately, the library will have a language and listening laboratory with 15 work centers and the research collections will include the Ordnance School collection (which will be added to the library in late 2009) and the Transportation School collection (joining the library in the summer of 2010).

### Officer Education

Now that ALU has achieved its initial operating capability and the new and expanded facilities are open, relocated officer education courses are underway.

**BOLC.** ALU began hosting the first of many Quartermaster and Ordnance BOLC III classes. Transportation BOLC III classes will not move to Fort Lee until the summer of 2010. One change to lieutenant education is an initiative being worked in support of Army Force Generation (ARFORGEN). BOLC II (the warrior skills portion of BOLC that is currently taught at Fort Benning, Georgia, and Fort Sill, Oklahoma) is being shortened and moved to the branch schools. ALU will train the three logistics branches' lieutenants in one common fieldcraft-focused phase before their branch-focused training. This new version of BOLC II and BOLC III, called BOLC Basic (or BOLC B), is projected to begin as early as February 2010 and was not part of the initial student projection figures when the first BRAC decisions were made in 2005.

## MOSs Taught at ALU's Noncommissioned Officer Academy

	Quartermaster	Ordnance	Transportation
<b>Advanced Leader Courses</b>	92A, 92F, 92G, 92L, 92M, 92R, 92S, 92W, 92Y	89B, 89D, 91W, 91E, 91F, 91G, 91K, 91C, 91D, 91L, 91A, 91B, 91P, 91H, 91J, 91M, 91X, 91Z 94A, 94D, 94E, 94F, 94H, 94J, 94K, 94L, 94M, 94N, 94P, 94R, 94S 94T, 94Y	88M, 88N
<b>Senior Leader Courses</b>	92A, 92F, 92G, 92L, 92M, 92R, 92S, 92W, 92Y	89B, 89D, 91 and 94 series combined Senior Leader Course	88H, 88K, 88L, 88M, 88N

### LEGEND

ALU = Army Logistics University

MOS = Military occupational specialty

= Currently at ALU

= Projected to arrive at ALU in fiscal years 2010 and 2011

### ***Combined Logistics Captains Career Course.***

The common core phase of the Combined Logistics Captains Career Course is transitioning to a new experiential learning model designed to create more realistic adaptive learning scenarios and timelines for decisionmaking. The new common core phase will be implemented in late 2009 and will be followed by preparations for adapting the course's multifunctional phase to the new teaching method. New blocks of instruction in contract management, property accountability, unit maintenance operations, and deployment preparation are all part of the new common core for all captains, not just logisticians.

***Pre-command courses.*** The Sustainment Center of Excellence runs eight different versions of battalion- and brigade-level pre-command branch or technically focused courses. Five of them are conducted at ALU; of those five, four are specialized by functional-type commands and one is designed for tactical sustainment commanders. The other three are run by the Transportation School and the Soldier Support Institute. In concert with the Combined Arms Center's review of the

Command Team Enterprise and the efficiencies created by relocating the three logistics branch schools to Fort Lee, ALU is exploring several options to make the best use of the time and capabilities available on the installation that will best prepare sustainment leader teams for their new command roles.

### **NCO Education**

The Army's new Advanced Leader and Senior Leader Courses for many logistics military occupational specialties (MOSs) will ultimately be trained at the consolidated Logistics NCO Academy at ALU. (See chart above for a list of the MOSs that will be taught at ALU.) Currently, all quartermaster MOSs have completed their moves to the ALU education building and initiated classes. The 4-week consolidated Ordnance Senior Leader Course has also moved and began classes in November 2009.

Modularity, forward support companies, and larger support operations sections in support battalions have revealed that Army senior NCOs need multifunctional skill sets. Major portions of the 2-week resident



Support Operations Course (with the pre-requisite distributed learning portion) and the Contracting Officer's Representative Course are now embedded within the Senior Leader Courses. The availability of the STAMIS and battle command laboratories will allow these courses to optimize training opportunities and send more aware and multifunctional NCOs back to their units.

### **Warrant Officer Education**

Education for quartermaster, ordnance, and transportation warrant officers is under the umbrella of ALU's Technical Logistics College. Warrant officer education will remain inherently branch-focused (versus multifunctional) in nature.

Army warrant officers hold the last vestige of in-depth technical expertise on Army systems. Technical learning will remain the highest priority in the training of warrant officers in the Logistics Corps. To ensure that the warrant officers gain quality technical expertise, each of the logistics branch schools will retain ownership and responsibility for all technical training and certification, and all instructors assigned to the Technical Logistics College will be attached to their respective branch schools to implement that training and education. Warrant officer students will be assigned to ALU under the accountability of the ALU student battalion.

The Technical Logistics College will provide the conduit for the pursuit of higher learning for all

*An Army Logistics University faculty member trains Soldiers in one of the classrooms in the new education building.*



warrant officers within the Logistics Corps. Higher learning consists of training for known or unforeseen requirements beyond individual occupational technical training expertise and may not be needed for all warrant officers in the Logistics Corps. The Technical Logistics College will also teach common core subjects.

The Technical Logistics College will retain education records for all logistics warrant officers in the Warrant Officer Education System. As higher learning requirements develop, the Technical Logistics College will analyze requirements with the assistance of the Army Combined Arms Support Command and the ALU education team. Through ALU's partnerships with civilian institutions of higher learning, the Technical Logistics College will develop programs specifically designed for warrant officers in the Logistics Corps.

### Civilian Education

Department of the Army (DA) civilian logistics, acquisition, and operations research programs are all housed within ALMC. Many civilians either come to ALMC for their courses or receive them where they work through on-site courses conducted by ALMC instructors. Civilians in logistics, acquisition, and operations research career programs may attend the following transition courses.

**DA Logistics Intern Studies Program.** The DA Logistics Intern Studies Program is currently a 16-week program (soon to be a 25-week program) that prepares new supply, maintenance, and transportation interns for developmental and permanent logistics assignments throughout the Department of Defense, including the Army Materiel Command (AMC), Defense Logistics Agency, U.S. Transportation Command, Army Forces Command, Army Installation Management Command (IMCOM), and other agencies.

**Operations Research Systems Analysis Military Applications Course.** Also geared towards military personnel, the Operations Research Systems Analysis Military Applications Course (ORSA-MAC) is a rigorous 14-week math-focused program in which graduates earn the equivalent of 21 graduate credit hours in operations research. New civilian interns work alongside military officers in the ranks of captain and major who are transitioning into the operations research systems analysis (ORSA) career field (functional area 49). The course culminates with a group study project that requires them to demonstrate multiple analytical and briefing skills to a senior audience.

ORSA-MAC is going joint! Effective in fiscal year 2010, ORSA education for new functional area 49 military personnel and DA civilians in the 1515

(operations research analyst) career program will see more joint examples in their problem sets. Air Force instructors and students will be joining the class.

**Army Acquisition Basic Course.** Currently undergoing a major revision, the Army Acquisition Basic Course educates the Army's functional area 51 (acquisition) officers and civilians pursuing program management or contracting career fields. This program is taught at ALMC's Huntsville, Alabama, site on the University of Alabama-Huntsville campus.

Many other 1- to 4-week functional courses within the above mentioned career fields and others are available both as residence courses at ALU or, by request, as on-site courses for organizations that can fully fill classes of students and show a need for these classes based on the DA G-3 structured manning decision review (SMDR) course reviews that are conducted each fall.

### Contracting Instruction for Laymen

ALU has several courses designed to prepare non-acquisition professionals to work with contracts and contractors. Prospective students can request them through their training offices or attend one of ALMC's scheduled classes.

**Performance Work Statements Course.** The 3-day Performance Work Statements (PWS) Course teaches requiring activity or organization personnel how to write a PWS so that they get what they want from a contract.

**Contracting Officer's Representative Course.** The 5-day Contracting Officer's Representative (COR) Course prepares CORs for their responsibilities. The course provides training required by the Defense Contract Management Agency or the Army Contracting Command, whose contracting officers then certify the CORs for their particular contract work.

**Operational Contract Support Course.** The 2-week Operational Contract Support Course prepares individuals who are assigned to tactical and operational unit staffs (brigade through theater Army) and will be responsible for assisting in planning and integrating contracted support during deployed operations. This is not a career development course but a "how to" course for preparing acquisition requirements packages and managing a unit's overall COR responsibilities for basic service and supply contracts. Graduates will learn through practical exercises how to prepare PWSs, independent government cost estimates, and purchase requests and the proper conduct of performance oversight techniques that are necessary to ensure mission success. The additional skill identifier (ASI) 3C is awarded to course graduates.

**Other acquisition and contracting courses.** The Army Acquisition Basic Contracting Course, Army

Intermediate Contracting Course, and Contracting Laboratories are under revision to prepare the Army's contracting military officers, NCOs with the MOS 51C (acquisition, logistics, and technology contracting NCO), and civilians with the right skill sets to meet requirements established by Gansler Commission findings and the needs of this evolving career field.

More information about these courses is available through our course directors, who can be contacted through the ALU website.

### Newly Revised Logistics Courses

Many logistics courses have been revised recently to better serve ALU students' needs.

**Installation Logistics Management Course.** The 2-week Installation Logistics Management Course has undergone a complete revision in response to input from the sponsor, IMCOM. The course continues to be dynamic, with the curriculum keeping pace as installation missions and functions transition between IMCOM and AMC. The course's target audience includes all personnel involved in installation logistics support.

**Combat Service Support Automation Management Office Course.** The Combat Service Support Automation Management Office (CSSAMO) Course includes a distributed learning phase and an 18-day resident or on-site phase. This course covers setup, operation, and troubleshooting of 10 logistics STAMISs for CSSAMO personnel.

**Theater Logistics Studies Program.** The Theater Logistics Studies (TLog) Program is an 18-week resident program that trains operational-level logistics planners who will serve in theater sustainment commands and expeditionary sustainment commands and within corps and Army component command G-4 shops. TLog graduates earn 12 graduate credits toward a cooperative degree program for a master's degree in logistics management from the Florida Institute of Technology. The credits are also accepted by many other institutions of higher learning.

### Still to Come

Although the ribbon has been cut and hundreds of Soldiers and civilians have arrived at the university, ALU will not finish its organizational transformation until the final BRAC moves are complete in fiscal year 2011. In late 2010, ALU will begin receiving and integrating leader education elements of the Army Transportation Center and School, including warrant officer and NCO professional military education courses and the Transportation BOLC. By the fall of 2010, the 71st Transportation Battalion will be integrated with ALU's current provisional student battalion.

ALU's newly formed Directorate of Education and Outreach is aggressively pursuing partnerships with

civilian academic institutions to provide continuing or degree-granting education to our newest students. Partnerships associated with the National Logistics Curriculum (an agreed-upon series of programs that have military logistics applicability and lead to advanced degrees from civilian and military institutions) have been established with the University of Tennessee, University of Texas-Dallas, Florida Institute of Technology, University of Kansas, University of North Dakota, LOGTECH at the University of North Carolina, Wright State University, and Pennsylvania State University.

Other institutions, including Webster University, Virginia State University, Longwood University, the College of William and Mary, and Virginia Commonwealth University, may also become partners. In the long term, ALU will pursue degree-granting status and, as courses are better aligned with deployment timelines and ARFORGEN, the option of elective courses as follow-on training and education to prescribed professional military education.

All of these changes are happening with an ongoing mission to educate, mentor, certify, and train the sustainment leaders of today and the future. As such, ALU is expanding its role in the development of our professional staff through a robust Staff and Faculty Training Division. This internal staff of professional educators will ensure that the most current methods in adult education are explored and made available to each of the four colleges' instructors and professors. We view this effort as the front line of our institution as we ensure that ALU instructors are relevant, current in their knowledge of the latest techniques, and professional.

As an institution, ALU is supremely conscious that our instructors and students support an Army at war. In an era of persistent conflict, the need is greater than ever for a single institution for educating and researching the methods that will enable sustainment success and ensure the Army's logistics leaders know how to support, survive, and win. The Army Logistics University will be that place.

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# Sustainment Center of Excellence Simulation Training Center

BY LIEUTENANT COLONEL MARY HALL

**T**he idea for the Simulation Training Center (STC) at Fort Lee, Virginia, stemmed from the congressionally mandated 2005 Defense Base Closure and Realignment Commission report and the need to develop a technology-based facility to provide individual and collective training, simulations, and exercises to sustainment formations around the world. Completing the STC required combining multiple organizations into a single structure and using technology to synchronize the STC with the Sustainment Center of Excellence (SCoE) doctrine, training, and education environment and with other organizations outside of Fort Lee. The resulting STC increases the Army Combined Arms Support Command's (CASCOM's) ability to rapidly respond to and support the Army's warfighting needs.

## STC's Missions

The STC helps sustainment Soldiers and trainers to capitalize on state-of-the-art training and simulation technologies. The STC is the SCoE's focal point for assessing doctrine on the deployment, employment, and sustainment of forces; validating the horizontal and vertical interoperability of logistics systems; and developing simulation-driven training for digital systems within the training and operational environments.

The STC provides synchronous and asynchronous computer-based delivery of digitized training and distributed simulation and gaming packages. This training supports approximately 500,000 sustainment Soldiers worldwide. (Sustainment Soldiers make up 51 percent of the total Active and Reserve component force.)

The STC sets the conditions for training and simulation developers to ensure that joint and Army logisticians and warfighters have access to more and enhanced real-time information and training with faster, seamless operation of collaboration, video, messaging, and data networking.

The STC employs a "digital hub" approach for the efficient and effective design, development, and deployment of joint and Army maneuver sustainment training. The STC uses online, interactive wargaming simulations for individuals and groups through a globally accessible center of excellence that supports live, virtual, and constructive exercises as well as actual military operations.

## Supporting Organizations

The following organizations and their missions, functions, and capabilities enable the STC's operations.

**Command Post Exercise Sustainment Division and Deployment Process Modernization Office.** The Command Post Exercise Sustainment Division and the Deployment Process Modernization Office conduct sustainment-focused collective training exercises for battalion- to theater-level sustainment headquarters units preparing to deploy. The training exercises are conducted at Fort Eustis, Virginia, and Fort Lee and will be consolidated into the STC in the summer of 2010.

**Fort Lee Battle Lab Collaborative Simulation Environment.** The Fort Lee Battle Lab Collaborative Simulation Environment (BLCSE) is an Army Training and Doctrine Command (TRADOC) initiative that was developed in September 2003 to support concept development and experimentation for the TRADOC battle labs throughout the sustainment community of practice, including the CASCOM Sustainment Battle Lab. The BLCSE uses a closed, distributed, simulation-rich environment and allows combat and materiel developers to collaborate and validate innovative warfighting concepts and technologies. The BLCSE operates in a secure mode for data, voice, and video collaboration.

**Logistics Exercise and Simulation Directorate.** As a subordinate organization of the National Simulation Center, the Logistics Exercise and Simulation Directorate serves as a combat developer and provider of worldwide logistics battle command training exercises. It provides exercise support to the institutional and operational Army to assist commanders in preparing Soldiers for successful execution of their sustainment missions.

**Deployment and Distribution Training and Simulation Center.** The Deployment and Distribution Training and Simulation Center conducts deployment, movement control, and distribution training exercises in support of the Army Transportation School's officer, mobility warrant officer, and noncommissioned officer programs of instruction.

**Distribution Management Exercise Office.** The Distribution Management Exercise Office provides training and conducts exercises in support of the operational-level sustainment cycle. The training is modeled after the contemporary operational environment and



*The Simulation Training Center at Fort Lee, Virginia, is located on the new Army Logistics University campus.*

focuses on applying critical planning and analysis processes to improve the students' ability to successfully plan and execute sustainment distribution operations.

***Distributed Learning Support and Integration Division.*** The Distributed Learning Support and Integration Division provides quartermaster, transportation, and ordnance training developers in the SCoE the ability to deploy cutting-edge, instructionally sound distributed learning and educational programs to sustainment Soldiers worldwide.

***Knowledge Management Office.*** The mission of the Knowledge Management Office is to develop, adopt, and implement Department of Defense, Army, and TRADOC knowledge management practices, techniques, and technologies within the SCoE staff, faculty, and schools and to stimulate knowledge creation, sharing, and utilization throughout the Army global sustainment community.

The virtual and distributed planning, operations, rehearsal training, and simulation that the STC provides significantly increase the agility of maneuver sustainment processes and dramatically improve the responsiveness of support to Soldiers and leaders deployed in joint and multinational environments. Economies of scale are realized through the operational efficiencies that come from support provided to unit, institutional, and individual training domains.

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# BRAC and Quartermaster Reorganization

BY PATRICIA A. SIGLE

**U**nder the recommendations of the 2005 Defense Base Closure and Realignment (BRAC) Commission, the Army Quartermaster Center and School is remaining at Fort Lee, Virginia, and welcomes to the installation its sister branches, Ordnance and Transportation. The BRAC process is the driving force behind all of the construction now underway at Fort Lee and all of the movement of courses, headquarters, Soldiers, and families there.

The headquarters of the Quartermaster Center and School, located in Mifflin Hall since 1961, moved across the street into the Sustainment Center of Excellence (SCoE) headquarters building in early May 2009 and will soon be joined by the Ordnance Center and Schools headquarters (now at Aberdeen Proving Ground, Maryland). The Transportation Center and School headquarters will move next year from Fort Eustis, Virginia.

No decision has been made yet about the future of Mifflin Hall. Many options are being considered, ranging from demolishing the venerable headquarters to turning it into the new home of the School of Music. Mifflin Hall also contains a 500-seat auditorium that is used by many units on post to conduct everything from award ceremonies to graduations and town hall meetings. Brigadier General Jesse R. Cross, the 50th Quartermaster General, has made it a priority to find the right solution for the future of this great facility.

## Logistics Training

At the time that the BRAC 2005 recommendations were approved by Congress, no one knew that General Martin E. Dempsey would be selected to command the Army Training and Doctrine Command (TRADOC). Under his leadership, TRADOC is reorganizing, and his command guidance for this reorganization fits perfectly with the reorganization of training for the Logistics Corps (which encompasses officers of the Quartermaster, Ordnance, and Transportation branches) at Fort Lee.

Based on the TRADOC lines of operation, the commanding general of the Army Combined Arms Support Command (CASCOM) designated each of his school commandants to be the deputy commanding general for one of the lines of operation. The commandant of the Quartermaster Center and School (the Quartermaster General) will be the CASCOM Deputy Commanding General for Initial Military Training for all schools under the CASCOM umbrella. (The other lines of operation are capabilities development and integration and leader development, training, and doctrine).

With guidance and direction from the TRADOC Deputy Commanding General for Initial Military Training, the Quartermaster General will have the challenge of reviewing all initial military training tasks, determining opportunities to improve that training, ensuring consistency with warrior training and battle drills, and conducting a complete review of initial military training with the aim of improving training opportunities. He

*A petroleum laboratory specialist conducts a quality assurance test on fuel in Iraq.*





*Mifflin Hall served as the headquarters for the Quartermaster School commandant from 1961 to 2009. Named for the first Quartermaster General, Major General Thomas Mifflin (1744–1800), it is located adjacent to the new Sustainment Center of Excellence headquarters building. The future of Mifflin Hall is under review.*

will also be tasked with achieving effective outcome-based training that replicates likely challenging battlefield conditions. His final charge will be streamlining the throughput of students within the training base while establishing and maintaining standards.

Brigadier General Cross has wasted no time in instituting training for likely battlefield conditions. He summoned representatives to Fort Lee from the other sustainment schools for a working conference on a combined logistics exercise for Advanced Individual Training (AIT), Basic Noncommissioned Officer Course (BNCOC), and Basic Officer Leader Course (BOLC) students that will be called the “Log Warrior Combined Exercise.” Realistic battlefield training will not be an easy task, but Brigadier General Cross and his team are up to the challenge of training our Soldiers for what they are likely to see and experience in their follow-on assignments.

### **The Army Logistics University**

The first priority of the TRADOC commander and staff is leader development through training, education,

and experience. Fort Lee now features a new institution that will greatly improve the process of leader development, the Army Logistics University (ALU). Non-commissioned officers (NCOs), warrant officers, and officers will receive instruction at the new ALU complex in state-of-the-art classrooms and training facilities.

The word “university” brings to mind higher-level education featuring a mix of different people and areas of study. That is how ALU will be viewed: a higher level of military education that combines NCOs, warrant officers, and officers in the same training and education environment where cross-fertilization will occur. This will create a great training environment for the Logistics Corps and the Army. So while each school commandant may have transferred training responsibilities to ALU, the Army will undoubtedly gain more rounded, educated Soldiers and leaders from the change.

### **Joint Training at the Quartermaster School**

Under BRAC 2005, the Quartermaster School was selected to become the Joint Culinary Center of Excellence for all of the armed services. It will train





*Soldiers place remains in a mobile integrated remains collection system. The Army Quartermaster Center and School is now the host to the Joint Mortuary Affairs Center.*

Army, Marine Corps, Navy, and Air Force food service personnel in culinary skills, both basic and advanced. Construction is underway to increase the size of Fort Lee's culinary training facilities to accommodate all of the offices and training laboratories required for this consolidation.

Although it was not suggested in the BRAC report, the Army's Deputy Chief of Staff, G-4, and the Department of Defense saw the value of creating the Joint Mortuary Affairs Center at the Quartermaster Center and School. Currently, the Quartermaster School's Mortuary Affairs Center serves as the adviser to the Army G-4 and trains Army officers, enlisted personnel, and civilians and Marines as specialists in mortuary affairs. The Joint Mortuary Affairs Center will serve as the joint training and doctrine integrating center for mortuary affairs. The joint center will also provide assistance and interpretation of joint doctrine for implementation in joint theaters of operations.

Mortuary affairs planning and training will now include mission and support requirements for civil and

military authorities. The Joint Mortuary Affairs Center will continue to provide advice and assistance as needed during contingency operations and mass-fatality events. There is no higher calling than to ensure that our fallen heroes are returned to their families with dignity and honor.

This is a time of major change for the Quartermaster Center and School as it becomes part of the SCoE. The Soldiers and civilians of the Quartermaster Center and School welcome their counterparts from the Ordnance and Transportation Schools to Fort Lee and look forward to working more closely with them to improve logistics training for all Soldiers.

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# Marine Corps Joint Training at the Sustainment Center of Excellence

BY LIEUTENANT COLONEL KEITH A. BEVERLEY, USA (RET.)

**T**he Marine Corps Detachment (MCD) Fort Lee, Virginia, was established in 1983. Its mission is to mentor and train assigned and attached Marines to standard in order to develop “whole Marines” capable of meeting Marine Corps wartime requirements. Because of the Base Closure and Realignment Commission (BRAC) decision in 2005, MCD Aberdeen Proving Ground (APG), Maryland, and MCD Redstone Arsenal (RSA), Alabama, will relocate to Fort Lee during fiscal years 2009 to 2011 and become part of MCD Fort Lee. The Marine Corps schools that are part of MCD APG and MCD RSA are affiliated with the Army Ordnance Center and Schools, which are also moving to Fort Lee as a part of BRAC.

The U.S. Marine Corps (USMC) Training and Education Command has operational and tactical control over MCD Fort Lee. However, the detachment is attached to the 23d Quartermaster Brigade, Army Quartermaster Center and School, at Fort Lee for day-to-day operations. The MCD Fort Lee commander is also the Marine Corps representative to the Army Combined Arms Support Command and the Quartermaster Center and School.

The Marine Corps, with congressional approval, recently increased in size to 202,000 personnel, which in turn increases the student loads at MCD Fort Lee, MCD APG, and MCD RSA.

## MCD Fort Lee Mission

MCD Fort Lee trains entry-, career-, and advanced-level enlisted and officer Marines in personnel retrieval and processing (mortuary affairs), airborne and air delivery (parachute rigging), bulk fuel, and food service. Marine captains also attend the Combined Logistics Captains Career Course at the Army Logistics University.

*MCD Fort Lee provides Marines with individual and joint training opportunities. In these photos, Marines learn to provide meals in the field, using the back of a high-mobility multipurpose wheeled vehicle to prepare tray rations, work on establishing a training plan using computer systems, and learn to prepare food for presentation in a dining facility or officer's mess.*





In addition to training Marines, the Marine Corps Bulk Fuel School, Marine Corps Food Service School, Marine Corps Airborne and Air Delivery School, and Marine Personnel Retrieval and Processing School are the centers of excellence for their military occupational specialties (MOSs). As centers of excellence, they are responsible for writing and updating USMC, joint, and multiservice doctrine and providing input on MOS issues, such as organizational changes, billet assignments, and MOS roadmaps. The schools also work with the Marine Corps Systems Command on new and modified equipment. Once MCD APG and MCD RSA relocate to Fort Lee, MCD Fort Lee will also be responsible for the training of and doctrine development for the maintenance and ammunition MOSs.

### Transition

The Marine Corps will use BRAC strategies to transfer personnel and equipment from APG and RSA to Fort Lee effectively and efficiently. Examples of these strategies include establishing a combined table of organization and equipment, defining new command and control relationships, constructing new facilities, and forming an integrated staff.

As MCD Fort Lee gains command and control of two additional MCDs, it will increase from 82 permanent personnel to more than 190 military and civilian personnel. The annual detachment budget will increase from \$400,000 to more than \$800,000. MCD Fort Lee will grow from 4 departments to 6; its programs of instruction will increase from 14 to 32; and the annual student throughput will increase from 1,200 to more than 3,500. Once BRAC actions are complete, MCD Fort Lee will become the third largest training command in the Marine Corps, following the USMC Recruit Depots and the USMC Schools of Infantry.

### Quartermaster Training Responsibilities

Fort Lee will become the home of three joint training centers: consolidated transportation management, joint mortuary affairs, and joint culinary arts. MCD Fort Lee will have instructors in the joint mortuary training center and the joint culinary training center and will also provide instruction in aerial delivery and field services.

**Joint mortuary affairs training.** The Quartermaster Center and School is the executive agency for joint mortuary affairs. It provides continuous, sustainable, and global mortuary affairs support for the Department of Defense. All mortuary affairs training and doctrine development are conducted at the Joint Mortuary Affairs Center, which serves as a center of excellence. It also serves as the Department of Defense training and doctrine integrating center for all services and trains more than 250 military personnel annually.

**Joint culinary training.** The Army and Marine Corps have been training their food service students together at Fort Lee since 1999. The Navy and Air

Force culinary training programs will relocate to Fort Lee by 2010. The Army Center of Excellence-Subsistence (ACES) at Fort Lee will become the Joint Culinary Center of Excellence (JCCoE). JCCoE will have two divisions: the Army Center of Excellence, Subsistence, Directorate of Operations and the Joint Culinary Training Division (JCTD). MCD Fort Lee will conduct culinary training through JCTD. JCTD will be responsible for developing, managing, and overseeing basic and advanced food service training for all branches of the Armed Forces. Although food service operations differ among the services, the core skills are the same for all food service personnel. The core skills will be covered in joint classes, and the services will cover service-specific skills individually.

**Aerial delivery and field services.** MCD Fort Lee assists the Quartermaster School Aerial Delivery and Field Services Department in developing airdrop-rigging and sling-load doctrine and resident and nonresident training support materials. MCD Fort Lee teaches the Multimission Parachute System course.

### Ordnance Training Responsibilities

The team from MCD APG will continue to serve as the USMC Training and Education Command Ground Ordnance Maintenance Center of Excellence once it becomes a part of MCD Fort Lee. MCD Fort Lee will provide training in ground ordnance maintenance, refrigeration, and metalworking. It will coordinate all ground ordnance maintenance functions and provide technical subject-matter expertise. MCD Fort Lee will remain focused on all phases of the acquisition life-cycle management of ground ordnance maintenance and weapon systems. MCD Fort Lee also will provide ammunition training by applying the most effective and innovative maintenance and ammunition concepts and strategies available.

MCD Fort Lee will face a number of exciting changes and challenges as it grows in size and responsibility when the detachments from APG and RSA arrive. As it increases its student load and the scope of its MOS functions, MCD Fort Lee anticipates not only increasing but improving its service to Marines and the military community at large.

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*THE AUTHOR THANKS LIEUTENANT COLONEL JOSEPH F. MONROE, COMMANDER, MCD FORT LEE, FOR HIS ASSISTANCE IN PREPARING THIS ARTICLE.*

All military service members take the oath of enlistment or oath of office and swear “to support and defend the Constitution of the United States against all enemies, foreign and domestic.” The Government further defines this mission periodically by publishing strategies, such as the National Security Strategy of 2006 and the 2005 National Defense Strategy of the United States of America. The Army began a significant transformation when the 2004 National Military Strategy of the United States of America established three military objectives: “to protect the United States against external attacks and aggression; prevent conflict and surprise attack; and prevail against adversaries.”<sup>1</sup> To meet these objectives, the Army transformed itself into an expeditionary organization with a modular force structure.

## The Sustainment Brigade

To ensure effective, efficient support, the sustainment brigade maintains visibility of the distribution system, its contents, and the theater operational environment. This visibility involves transparency of the operational environment's main supply routes and sustainment operations. Sustainment brigade commanders combine transparency of the distribution system with clear lines of command and control to channel assets as they move throughout the area of operations. These distribution functions are distributed through lower level organizations within DOD. The sustainment brigade will normally have multiple combat sustainment support battalions (CSSBs) assigned to provide distribution and supplies to the brigade combat teams (BCTs) and the supporting brigades operating within the sustainment brigade's operational environment.

The sustainment brigade operational integrated framework provides effective and efficient logistics support for the sustainment brigade area of interest. Sustainment brigade planners have the capacity to market their products and services by identifying, prioritizing, and modifying routes for personnel, equipment, and supplies moving throughout the distribution network.

Sustainment brigades are the Army's sustainment production operators in the theater of operations. Their activities are push-and-pull logistics, financial services, health service support, and

1. Diagram of a single-span beam of length  $l_1$  with a point load  $P$  at the right end. The support reaction is  $X_1$ . The diagram shows the beam profile and the reaction force.

2. Diagram of a two-span beam with spans  $l_1$  and  $l_2$ . It has a point load  $P$  at the right end. The support reactions are  $X_1$  and  $X_2$ . The diagram shows the beam profile and the reaction forces.

3. Diagram of a two-span beam with spans  $l_1$  and  $l_2$ . It has a point load  $P$  at the right end. The support reactions are  $X_1$  and  $X_2$ . The diagram shows the beam profile and the reaction forces.

4. Diagram of a two-span beam with spans  $l_1$  and  $l_2$ . It has a point load  $P$  at the right end. The support reactions are  $X_1$  and  $X_2$ . The diagram shows the beam profile and the reaction forces.

5. Diagram of a three-span beam with spans  $l_1$ ,  $l_2$ , and  $l_3$ . It has a point load  $P$  at the right end. The support reactions are  $X_1$ ,  $X_2$ , and  $X_3$ . The diagram shows the beam profile and the reaction forces.



human resources. Sustainment brigades also provide sustainment to divisions or BCTs at the tactical level and corps and theater forces at the operational level.

The sustainment brigade plans, prepares, executes, and assesses sustainment operations within its operational environment. In addition to planning and coordinating for current operations, the sustainment brigade coordinates and supervises the implementation of policies and directives relative to the support of future operations. The sustainment brigade, along with operational planners, develops plans and orders to ensure continuous sustainment. Production levels constantly change in response to fluid battle demands.

### Supporting Relationships

Sustainment brigade operations involve interdependent support between higher headquarters and subordinate units. The sustainment brigade's higher headquarters are the theater sustainment command and the expeditionary sustainment command. The theater sustainment command is the central command and control headquarters for Army sustainment units in a theater of operations and the senior Army sustainment headquarters for the theater Army or a combined joint forces command.<sup>2</sup> The theater sustainment command establishes command and control of operational-level theater opening, sustainment, distribution, and redistribution in a specific operational environment by employing one or more expeditionary sustainment commands.

The expeditionary sustainment command provides command and control for operations that are limited in scale and scope and provides support augmentation. The expeditionary sustainment command also oversees theater distribution and sustainment operations in accordance with theater sustainment command plans, policies, programs, and mission guidance.<sup>3</sup> The expeditionary sustainment command executes a higher headquarters command and control function for the sustainment brigade.

CSSBs are multifunctional organizations that make up most sustainment brigades. A CSSB includes up to eight companies and is "modular and task organized to support TO [theater opening], TD [theater distribution], area sustainment, or life support missions."<sup>4</sup> The brigade support battalion (BSB) is the sustainment unit that is organic to the BCT. Forward support companies are attached to BCTs' maneuver battalions and provide combat sustainment support functions.

### Operations Management

The sustainment brigade includes two sections: the operations section and the support operations section

(SPO). The operations section deals with products and services within the sustainment brigade, and the SPO handles products and services external to the sustainment brigade.

The operations section's primary responsibilities include training, operations, plans, force development, and modernization. Using a maneuver control system, the operations section prepares and issues warning orders and fragmentary orders to support sustainment operations; monitors the operations of higher, lower, and adjacent units; and monitors close and rear production operations. The section also coordinates with supported units to synchronize future operations and to shift from one operation to the next without losing momentum and unit integrity. The operations section plans for, uses, and optimizes automation for mission planning, course-of-action development, rehearsals, operational planning, and after-action reviews. For example, the section uses the Movement Tracking System to track convoy operations.

The SPO is the principal staff for organizing support for units within the sustainment brigade operational environment. The SPO also supervises sustainment operations and is the key interface between supported units and the theater sustainment command. The SPO provides products and services such as "planning, preparation, and [command and control] of the execution of all sustainment operations in the sustainment brigade's [area of operations], to include theater opening, distribution, and sustainment operations."<sup>5</sup>

### Operations Strategy

The operations strategy of the sustainment brigade operational integrated framework is flexible and responsive. The organization's strategy provides an overarching framework for prioritizing its activities and using its resources to gain a competitive advantage in its marketplace.<sup>6</sup> The operations strategy is determined by brigade leaders and is designed to provide command and control of theater opening, distribution, and sustainment within an assigned area of operations.

To fully implement the operations strategy, the sustainment brigade must coordinate completely with support elements. The units must synchronize operational plans to provide sustainment at the proper time and place and ensure force protection of sustainment assets within the supported unit's battle plans.

The operations strategy is composed of competitive priorities, including cost, quality, time, flexibility, service, environment, and information use. Competitive priorities are defined as functions that provide an organization with a specific competitive edge.<sup>7</sup> The cost must be within the

<sup>2</sup> *Field Manual Interim 4-93.2, The Sustainment Brigade*, Department of the Army, Washington, DC, 2009, p. 1-2.

<sup>3</sup> *Ibid.*, p. 1-3.

<sup>4</sup> *Ibid.*, p. 1-4.

<sup>5</sup> *Ibid.*, pp. 2-15-2-16.

<sup>6</sup> Mark Davis and Janelle Heineke. *Operations Management: Integrating Manufacturing Services*, 5th ed., McGraw-Hill/Irwin, New York, 2005.

<sup>7</sup> Davis and Heineke.

predetermined sustainment brigade budget set forth by higher headquarters. The quality for the sustainment brigade operations strategy must be of the highest standard because the customers expect and rely on quality products and services. Delivery of these products and services depends on the factor of time and is one of the important elements of the sustainment brigade operations strategy.

Regarding flexibility, the sustainment brigade operations strategy must adapt to any situation in any area in the world. Flexibility relies on improvisation, which gives the sustainment brigade the ability to adapt operations and plans to changing situations and missions. Improvisation includes using materials that are on hand to create, invent, arrange, or fabricate what is needed. More than ever, this requires the sustainment brigade operations strategy to adjust quickly and use any means possible to maintain momentum.

Service is a functional role of the sustainment brigade operations strategy, and the majority of sustainment brigade activities involve services. The environment of the area of operations is a contributing factor for the transportation, supply, maintenance, and distribution of the sustainment brigade's services and products. The terrain, climate, and local population must be taken into consideration while implementing the sustainment brigade operations strategy.

The competitive priority of information is a function of command and control. As an integral component of the joint and Army sustainment marketplace, the sustainment brigade executes information use by employing satellite and network-based communications that enable command and control, visibility of the distribution system, and identification of support requirements. The distinctive competency of the sustainment brigade operations strategy is that the sustainment brigade provides command and control for multifunctional sustainment operations and staff supervision of life-support activities and distribution management, including movement control.

### **Supply Chain Strategy**

The supply chain strategy of the sustainment brigade operational integrated framework provides the cyclic channel of distribution for sustainment brigade products and services. A supply chain comprises the systems and processes involved in transforming raw materials into finished products and making them available to customers. Like supply chain strategies in the corporate world, the sustainment brigade supply chain strategy encounters two diametrically opposing forces: the need to support combat maneuver forces better, more responsively, and at a lower cost and the need to reduce the sustainment footprint of the Army's future forces.

The sustainment brigade and its higher headquarters are exploring how to better support BCTs by using some fundamental supply chain concepts, such as information

and communication technologies and order management, logistics, and transportation improvement concepts.

Using the technology from the supply chain strategy, sustainment brigade personnel will achieve situational awareness, be able to track the status of supplies for individual units, and better predict the needs of combat units. Technology systems that provide sustainment brigade leaders an enhanced situational awareness will provide instantaneous supply status, predict component failures, and even provide two-way messaging. Technology systems in both combat and logistics vehicles will monitor inventory levels, customer unit locations, and equipment distribution status and be able to transmit this information to sustainment leaders.

### **Logistics Strategy**

"Logistics is the focal point for the sustainment brigade supply chain strategy. Logistics is the science of planning, preparing, executing, and assessing the movement and maintenance of forces. In its broadest sense, logistics includes the design, development, acquisition, fielding, and maintenance of equipment and systems."<sup>8</sup> Logistics for a sustainment brigade is slightly different from logistics for a corporation because the sustainment brigade's focus is on mission completion rather than quarterly earnings.

The logistics section of the sustainment brigade supply chain strategy has seven components and seven essential success factors. The seven components of the logistics section are the same for the sustainment brigade as they are for businesses: suppliers, procurement, manufacturing, order management, transportation, warehousing, and customers. The sustainment brigade's seven essential success factors of logistics are customer needs, information and communication technologies, deployment within and outside the continental United States, joint interoperability, DOD regulations, environment factors (including enemy forces), and mission requirements.

The opportunities to improve the flow of the supply chain play a more important role than opportunities for disintermediation. Sustainment brigade personnel who have situational awareness of the onhand inventory will help brigade leaders to configure responsive sustainment resupply requirements to their resupply organizations. Sustainment brigade leaders use enhanced situational awareness technologies and decision support tools, such as embedded diagnostics, automated testing, and data analysis, to better dictate requirements with fewer sustainment brigade supply chain assets. Disintermediation is not likely to improve the sustainment brigade supply chain because intermediation opportunities stimulate the flow system in the supply chain.

### **Aligning Manufacturing and Services**

Aligning manufacturing and services in the sustainment brigade operational integrated framework entails

<sup>8</sup> *Field Manual Interim 4-93.2*, p. 4-1.



the related functions and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. The endurance of Army forces is primarily a function of the sustainment brigade. Sustainment determines the depth to which Army forces can conduct operations and is essential to retaining and exploiting the initiative. The sustainment brigade's approach to aligning manufacturing and services is to provide the logistics, personnel services, and health service support necessary to maintain operations until mission accomplishment.

The sustainment brigade receives added support from strategic, operational, and tactical organizations. No standardized service factory model exists for the sustainment brigade. However, for guidance purposes, the service factory model of the sustainment brigade replicates the doctrinal organization chart. The customer activity cycle follows push-and-pull sustainment methods to stimulate action continuously. Then, the use of technology provides the transparency needed to execute sustainment support services and the customer activity cycle.

### Product Development

The new product development process of the sustainment brigade operational integrated framework is conducted by higher headquarters and other organizations within DOD. The roles of the new products system are conducted by the higher headquarters and other DOD organizations; therefore, the designated personnel integrate sustainment brigade services and products into operations. Higher headquarters and other DOD organizations implement the idea generation approach by soliciting ideas from personnel and lessons learned from sustainment brigade operations.

For a new product development process, the sustainment brigade uses its higher headquarters and other DOD organizations to manage the new product and service development process. The new product and service development process for the sustainment brigade operational integrated framework usually proceeds in the following way:

- ❑ The idea is generated by personnel.
- ❑ The idea is turned into a concept.
- ❑ The concept goes through an analysis.
- ❑ If the concept passes the analysis, then doctrine is written and executed during operations.
- ❑ After-action reviews and lessons learned are applied to the product or service to improve customer service.

### Processes

The processes of the sustainment brigade operational integrated framework are standard for providing sustainment support to customers. The key product processes incorporate management restraints such as time, cost, and

procedural sequences. Services result from higher headquarters actions and DOD affiliated venues. The products and services are distributed through lower-level organizations such as battalions, companies, and platoons.

The process performance measurements consist of productivity, capacity, quality, speed of delivery, flexibility, and process velocity. All of these measurements are priorities except for velocity, which is not a priority because internal measures are in place to continually stimulate velocity. Benchmarks set the future standard for processes in the sustainment brigade operational integrated framework. The benchmarks are cost, time, and sequential steps to reach the end state.

The sustainment brigade must strive for products and services that are inexpensive, take less time to provide, and involve fewer sequences, while still reaching total quality. Meeting these goals will enable a full spectrum of qualitative sustainment brigade support to customer organizations for their operational integrated framework.

### Quality

The sustainment brigade operational integrated framework relies on quality management. Quality is sometimes viewed as a means to reduce the number of customer complaints being received.<sup>9</sup> But customer organizations depend on quality sustainment from the sustainment brigade. The quality metrics are time, location, quantity, and specificity. These metrics are put in place to meet the higher headquarters' intent. The sustainment brigade has a staff that is educated and experienced in quality management concepts to promote quality support.

Sustainment brigade personnel have increased their knowledge base for an effective approach to qualitative sustainment support. Their knowledge base stems from the Army-wide implementation of the Lean Six Sigma concept. The intent of implementing Lean Six Sigma in the sustainment brigade is to promote efficiencies in sustainment support. The sustainment brigade and its higher headquarters reinforce quality management by rewarding personnel for their quality-management efforts. The sustainment brigade also uses quality tools, such as checklists, diagrams, and charts, in situational reports and briefings to leaders.

### Production

Production is the successful accomplishment of the sustainment brigade's mission. The sustainment brigade uses many principles to reduce or eliminate waste and inefficiencies on the way to production. The principles of efficient sustainment—"integration, anticipation, responsiveness, simplicity, economy, survivability, continuity, and improvisation"<sup>10</sup>—are critical to the success of generating combat power, strategic and operational reach, and endurance. "While these principles are

<sup>9</sup> Davis and Heineke.

<sup>10</sup> *Field Manual 4-0, Sustainment*, Department of the Army, Washington, DC, 2009, p. 1-1.

independent, they are also interrelated when used in planning and executing sustainment brigade operations.”<sup>11</sup>

Plans should be simple to reduce complexity and confusion, and “when the execution of plans does not proceed as expected, commanders may improvise procedures to meet mission requirements.”<sup>12</sup> The sustainment brigade marries the principles of efficient sustainment to Lean Six Sigma, checks and balances, and transparency of its support to customer organizations. These principles will synergize just-in-time production and inventory, pre-positioned stock, and push-and-pull sustainment to stimulate productivity.

### Facilities

Facilities provide the infrastructure for the command and control of the sustainment brigade operational integrated framework. The sustainment brigade uses qualitative factors to locate manufacturing and service facilities, and these factors are determined by higher headquarters. However, the local infrastructure, worker education and skills, product requirements, and political and economic stability contribute to establishment of the facilities. The quantitative factors are also directed mainly by the higher headquarters, but distribution and facility costs and exchange rates contribute to the establishment of facilities as well.

The sustainment brigade and its higher headquarters determine the method of evaluating prospective facility locations and planning, and the sustainment brigade can make recommendations for its own central location. Satellite locations (based on areas of interest) are also established to support the most effective sustainment operations. The sustainment brigade’s facility layout is based on the operational environment and the mission that it must perform.

### Aggregate Planning Approach

The SPO plans branch and other designated personnel in the sustainment brigade plan and analyze demand variations, the production planning strategy, risk implications of the planning strategy, yield management planning, the master production schedule, and material requirements planning. The plans branch develops support plans for future operations in concert with the operations manager of the supported units. The branch recommends and incorporates all technologies and automation, combat unit requirements, unit historical data, the current and future replenishment posture, mobility data, and the commander’s guidance into the development of the support plan.

The SPO and the brigade operations manager develop the operation order and associated logistics annexes to all plans and orders using the Battle Command Sustainment Support System. The SPO plans branch also maintains the running estimate and uses interoperable automation and communications to manage all requirements for elements associated with tasking control for external support operations.

### Inventory Management and Customer Focus

Inventory management in the sustainment brigade operational integrated framework is characterized by identifying and managing inventory needs and the inventory model, which are identified and managed by the SPO and other designated personnel in the sustainment brigade. Inventory management is also characterized by the use of technology. The network operations and information management directorate and other designated personnel in the sustainment brigade analyze the role of technology in inventory management for sustainment operations in the designated operational environment.

Focusing on the customer is the foundation for all sustainment brigade support. To provide good service, the sustainment brigade forms strategic plans, operational plans, tactical plans, and operation orders that are all focused on customer satisfaction.

The sustainment brigade operational integrated framework can manage theater opening, theater distribution, and sustainment operations. Each sustainment brigade provides support within an assigned operational environment and is a multifunctional organization providing support for multiple brigade-sized units. It is tailored and task organized and uses subordinate battalions, companies, platoons, and teams to perform specific functions. The sustainment brigade is primarily concerned with the continuous management and distribution of supplies and the execution of human resources, financial management, and maintenance support to provide operational reach to maneuver commanders.

To fully implement the sustainment brigade operational integrated framework, the sustainment brigade may require augmentation in those areas where it lacks expertise and capabilities. For example, the sustainment brigade’s higher headquarters may augment the sustainment brigade with transportation units to enable it to oversee and execute port clearance and terminal operations if the sustainment brigade is given the theater-opening mission. Likewise, a sustainment brigade may serve as the senior joint sustainment headquarters in an operational environment when provided augmentation commensurate to the mission.

The sustainment brigade must stand ready to implement its operational integrated framework. This full dissection of the sustainment brigade operational integrated framework has addressed the situations that operations managers and designated personnel encounter while conducting their operation plans or other related plans.

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<sup>11</sup> Ibid.

<sup>12</sup> Ibid.



# Iraqi Transportation Network

BY LIEUTENANT COLONEL MICHAEL J. FALK, USAR

**W**hile deployed to Iraq in 2009, the 3d Sustainment Command (Expeditionary) (ESC) worked with coalition forces, the local Iraqi community, and business leaders to set up the Iraqi Transportation Network (ITN). This program strengthened the nation's trucking industry and reduced the number of coalition convoys on highways throughout the Iraq theater of operations.

ITN is an all-Iraqi consortium of tribally-owned trucking companies that move cargo across Iraq for Iraqi Security Forces and coalition forces. ITN's goals are to establish a robust Iraqi trucking industry, improve intertribal and provincial relations, and open new trade opportunities among Iraqi regions. As business expands, greater regional cooperation will be encouraged, which will, in turn, increase civil capacity.

ITN was designed in 2007 as a tribal engagement project. The first contract was awarded early in 2008. The plan was to set up Iraqi-owned and -operated commercial ground transportation companies. ITN provided tribal involvement with each trucking firm and formed the basis for an Iraqi logistics system capable of providing robust support to both military and commercial customers. ITN drivers completed more than 5,900 missions, without incident or loss of cargo, over a year and a half.

Once ITN vehicles arrive at a forward operating base, a force protection company escorts them from the entry control point to the central receiving and shipping point. When ITN convoys are ready for movement, they are escorted back to the entry control point.

## Advantages

With hard work and positive attitudes, local tribal members are providing a reliable, effective, and timely transportation network. ITN puts the Iraqi Security Forces a step closer to self-sustainment and provides an economic base on which the Iraqis can build. As one of many transitional initiatives in Iraq, ITN is critical to establishing a durable Iraqi logistics system. For example, before ITN was formed, one canning business could not operate at full capacity because no transportation network was available to move its goods to local markets.

Another advantage of ITN is that it reduces the number of military convoys on the road. This reduces the risk to coalition personnel and equipment because ITN convoys do not need a military escort outside of the wire. Coalition convoys, however, need up to seven escort vehicles when moving cargo within the area of responsibility. ITN trucks are not required to use the same routes or travel at the same speeds as coalition convoys, so it takes ITN convoys half as long to make deliveries.

ITN currently has some restrictions on what it is permitted to move. However, it moves a variety of cargo, such as construction materials, water tanks, shower trailers, and water bottles. In the future, ITN will be the building block for commerce, as well as a transportation support system for coalition forces and the Iraqi Army.

## Challenges

One major challenge to implementing additional ITN enhancements, such as truck stops, is the requirement to meet with the local sheiks and their entourages. These key leaders are a part of each tribe and

*A driver for the Iraqi Transportation Network watches as containers are loaded onto his truck.*



federation of tribes in the provinces. Coalition forces must identify meeting locations that are both secure and do not infringe on existing tribe or federation political arrangements.

Another challenge is screening drivers to identify those who meet all coalition forces' base-entry requirements. ITN partners must determine the staffing and equipment requirements needed to process driver applications quickly. They also must determine the best locations for possible application centers and develop contract requirements for current and future state operations.

The Multi-National Corps-Iraq staff standardized the reporting and command and control systems needed to track the flow of convoys across Iraq. The 3d ESC support operations section (SPO) planned, coordinated, and monitored the movement of all ITN trucks from the time they entered the base until they exited it. The SPO also conducted ongoing reviews of ITN to improve the network. Two suggested improvements from these reviews included the use of the Iraqi railroad system and development of the truck-stop concept. These improvements will help build up ITN by assisting in distribution management along the major routes in Iraq.

With the truck-stop concept, ITN will set up oases much like U.S. truck stops and eliminate the need for an ITN holding area at coalition bases. ITN trucks will be able to drop their cargo and move to a truck stop to receive their next mission. This will move products to the marketplace more efficiently, optimizing time and cost sharing while increasing reliability and economic growth.

### **Iraqi Railroad**

In February 2009, ITN tested the Iraqi railroad concept by conducting a proof of principle. ITN used the Iraqi railroad to successfully move cargo from Taji to the Port of Umm Qasr; this was the first time since 2004 that the railroad was used to move cargo. A 20-car train owned and operated by the Iraqi government carried 40 containers to the port. The operation was an important step in linking Iraqi trucking, railroad, and port operations.

The railroad is critical to the rebuilding effort in Iraq. Using the Iraqi railroad to move more cargo during the withdrawal of U.S. troops will decrease the number of coalition trucks on the road. Iraq has a geographic advantage that will allow it to function as a central hub for moving cargo from the port at Umm Qasr to Turkey, Syria, and Jordan. The successful use of the railroad will be a critical component of Iraq's transportation infrastructure.

### **Future Operations**

The 3d ESC developed comprehensive tools to standardize how its subordinate commands tracked ITN

convoys across multiple battlespace boundaries. The 3d ESC coordinated the sustainment functions associated with integrating ITN into other "Iraqi First" initiatives, like the Iraqi railroad program and the truck-stop concept. The 3d ESC staff also explored using ITN as a part of its lift support in future responsible withdrawal missions. This included the possibility of using ITN for Iraqi Army or civilian sector missions as well as coalition forces transport.

Another significant opportunity for ITN is the potential to build the economy. The ITN program could have a major effect on the growth of Iraq as it starts moving toward a steady state and Iraq becomes a strategic partner. By expanding local distribution networks, ITN will link local markets to the distribution chain, provide a more balanced import and export market, and promote business growth.

Coalition forces must seek ways to incorporate this tribal trucking consortium into their routine distribution operations. Sustainment units need to find ways to use ITN to support the responsible withdrawal of materiel as the coalition forces footprint decreases in the months ahead. Coalition leaders must continue to encourage tribal and federation leaders to develop new ITN companies in their areas to support current and future business opportunities. This will be even more critical as coalition forces restructure into fewer bases that are farther away from major population centers in Iraq.

Key stakeholders at the Multi-National Division-Iraq and Iraqi Army levels must work now to integrate new opportunities with training initiatives that will increase the capabilities of the ITN program. ITN must become proficient in new materials-handling procedures and agreements such as those required for integration into the Global Freight Management System. Senior contracting agencies should continue to review and update existing ITN contracts that will expand opportunities and provide coalition forces commands with greater access to this support organization.

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**THE AUTHOR THANKS LIEUTENANT COLONEL DAVID C. COOK AND CAPTAIN CAREY W. MENIFEE FOR THEIR HELP IN WRITING THIS ARTICLE.**



## ***Transportation and Logistics: One Man's Story.***

Jack C. Fuson, U.S. Government Printing Office, Washington, DC, 1994, 227 pages.

Lieutenant General Jack Fuson (1920–2004) entered the U.S. Army under unusual circumstances during World War II. In *Transportation and Logistics: One Man's Story*, Fuson recalls a fascinating story of how the Army adapted to rapidly changing circumstances and demands during a series of wars and police actions over his 35 years of service, which ended with his retirement in 1976. Every logistician would profit from reading this tightly written account of Fuson's career.

Fuson began his service in May 1942 and participated in the birth and development of the Engineer Amphibious Command. The command was created out of nothing more than a vague mission statement. The Engineer Amphibious Command matured as it served in the Southwest Pacific Theater in support of General Douglas MacArthur's "leapfrogging" campaign from Australia toward the Philippines.

At the end of World War II, Fuson went to Korea to help to reestablish the transportation infrastructure beginning at Inchon. He then returned to the United States, but after a few years was again called to Korea. At this point in his story, Fuson introduces the reader to the various tasks logisticians must complete. He describes facing these challenges with limited facilities that demand imaginative use of available materials and a host of innovations.

Fuson also presents an interesting perspective of his assignment to the Deputy Chief of Staff for Logistics, Department of the Army. Under Lieutenant General William P. Yarborough in the years before the Vietnam War, the Army was realizing that reorganization was long overdue; as a consequence, Project 80 was launched. According to Fuson, among the changes that took place under Project 80 "was the loss of the Technical Services' traditional birth-to-death responsibility for the commodities under their control." This turned out to be a bad decision, and Fuson elaborates on how it was bad for several pages. This chapter is one of the more interesting to us today as our present Army again pursues reorganization.

The chapters titled "War in Vietnam," focusing on the operation of the Port of Saigon; "Logistics in Washington," where he describes becoming Chief of Transportation; and "Logistics in the Pacific," outlining an exercise in combined logistics operations management, provide numerous insights into the professional challenges that present-day logisticians will face while dealing with allies.

Fuson describes investigating a case at the Port of Vung Tau where the Army was blamed for its failure to move ships expeditiously. He found that the loading-unloading mechanism in use was human labor. The average Vietnamese laborer could handily move the standard 40-pound bag of rice to and from the appointed places, but an efficiency-minded purchasing agent had discovered that it was cheaper to buy rice and fertilizer in 80-pound bags. The Vietnamese were simply unable physically to handle this size burden, and the movement of goods within the port ground to a near-halt until mechanized equipment could be emplaced to handle the "oversized" containers.

After serving briefly in the U.S. Army Pacific headquarters, Fuson returned to Vietnam as the Military Assistance Command, Vietnam, J-4 with the principal mission of managing the retrograde of about 2-million tons of Army materiel and supplies worth an estimated \$5 billion. Transporters in particular, but logistics planners as well, can glean several pertinent lessons from this section of the book.

"Persistent Transportation Logistics Problems" is how Fuson concludes his memoir. He begins with a critique of the vital function of in-transit visibility. Noting the ability of the commercial world to track and deliver on time across the world, he includes comments on traffic management, movement control, amphibious doctrine, retrograde planning, early deployment of support personnel, distribution, and leadership.

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***Ethics Education in the Military.*** Paul Robinson, Nigel De Lee, and Don Carrick, ed., Ashgate Publishing Company, Burlington, Vermont, 2008, 208 pages.

Over 150 years ago, Karl Von Clausewitz wrote, "Moral elements are among the most important in war." In editor Paul Robinson's foreword to *Ethics Education in the Military*, he makes the case that the demands of ethics education in the Armed Forces are increasing because of greater public scrutiny and the use of the military as a force for good in humanitarian missions. The book, edited by Robinson, Nigel De Lee, and Don Carrick, examines military ethics by comparing ethics training instituted by several different militaries throughout the world. The editors use case studies written by subject-matter experts to examine the theoretical basis for the common elements and the quality of ethics education and training.

The authors describe the importance of moral elements as the basis for ethics education. In many cases, the basis of ethics training at various Western nations' military academies are moral elements comprising of common values and virtues. Not surprisingly, most militaries share common values and virtues, such as loyalty, integrity, "mission first," and discipline.

Colonel Yvon DeJardins of the Canadian Armed Forces explains how the Canadian Department of Defence uses three guiding principles as the basis of the Defence Ethics Program: respect the dignity of all persons, serve Canada before self, and obey lawful authority. These principles are used in conjunction with the six obligations—integrity, loyalty, courage, honesty, fairness, and responsibility—to identify essential ethical values that help individuals deal with increasingly complex issues.

Describing the development of public and organizational ethical language in the British military, Stephan Deakin names Christianity as the source of ethics at the Royal Military Academy Sandhurst and within the British Army. Similarly, basic values of Christianity form the basis for "The Basic Values Document" of the Norwegian Defence Force (NDF).

Although not associated with a religion, the Code of the Bushido, with its "nine typical virtues," forms the basis for military ethics training in the Self Defense Forces of Japan. When asked about how one could impart ethics education without a religious upbringing, Dr. Inazo Nitobe, former Under-Secretary General of the League of Nations, responded, "not until I began to analyze the different elements that formed my notions of right and wrong, did I find that it was Bushido that breathed them into my nostrils."

Many of these experts identify the need to train not only career officers but also career soldiers. Soldiers and officers in the United States, Canada,

Australia, Norway, and others nations receive introductory ethics education early in their careers. The NDF uses "dilemma intervention" to activate soldiers' own values when they confronted by various dilemmas. According to Tor Arne Berntsen and Raag Rolfsen, who are NDF ethics training experts, all conscripts and lower-level officers go through this. The Royal Australian Air Force Officer Training School includes lessons on definitions of values, morals, and ethics as well as the process of ethical decisionmaking. The Australian Army's Recruit Training Battalion begins ethics training by introducing recruits to critical thinking about themselves, the military, and social environments. The quality of these programs is the basis for the quality of soldiers' judgments.

In the most compelling and perhaps controversial chapter of *Ethics Education in the Military*, Jeffery Wilson looks at the ethics curriculum of the U.S. Army. He describes how the Army has improved ethics training since the advent of the all-volunteer force. The codification of the seven Army Values, the Code of Conduct, and the West Point Honor Code all contributed to the Army's ethical renaissance. (The reader may wonder why West Point needed an honor code when Wilson later describes the institution's ethical superiority.)

*Ethics Education in the Military* should interest those teaching in military schools, especially those with students from other countries. Military leaders of all grades should also find this book interesting as the military faces greater scrutiny and is expected to uphold a set of values accepted by both military personnel and the community they serve.

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### Review a Book for *Army Sustainment*

*Army Sustainment* is looking for military scholars willing to select, read, and review nonfiction books related to the sustainment warfighting function. This includes recently published books that can contribute to the education and professional development of military sustainers and published stories from Soldiers who have worked in logistics, medical logistics, contracting, transportation, ordnance, quartermaster, financial management, and human resources. The reviews will appear in the magazine's "Reading and Reviews" column and should have approximately 800 to 1,000 words. Writers can submit their reviews by emailing a Microsoft Word attachment to [julianne.cochran@us.army.mil](mailto:julianne.cochran@us.army.mil). The email should include the reviewer's name, the name of the author, and the title of the book reviewed. Writers can also reserve the opportunity to review a particular book by emailing a request with their name, the name of the author, and the title of the book reviewed to [julianne.cochran@us.army.mil](mailto:julianne.cochran@us.army.mil).



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### Army Depot Awarded 2009 Secretary of Defense Maintenance Excellence Award

Red River Army Depot, Texas, received top honors in the 2009 Department of Defense (DOD) Maintenance Awards, winning the Robert T. Mason Depot Maintenance Excellence Award for the Army's Mine Resistant Ambush Protected (MRAP) Vehicle Program. The maintenance award winners were announced 17 August.

DOD presents the awards annually to recognize outstanding achievements in military equipment and weapon systems maintenance. The MRAP vehicle program was recognized for providing exceptional and responsive support for the fielding and sustainment of

MRAP vehicles through embedded maintenance support teams at numerous sites in Iraq. The 1st Squadron, 3d Armored Cavalry Regiment, at Fort Hood, Texas, won one of two field-level maintenance awards in the large [unit] category. The unit was recognized for its service to the Multi-National Division-North in Iraq.

Representatives from the other services received the other five awards. The Navy's *USS Harry S. Truman* from Norfolk, Virginia, won the other award for the large category. The Navy's *USS Frank Cable*, home ported in Apra Harbor, Guam, and Marine Aviation Logistics Squadron 16, at Marine Corps Air Station Miramar, California, won awards in the medium category. The Air Force's 31st Munitions Squadron, at Camp Darby, Italy, and the 6th/927th Aircraft Maintenance Squadron, at MacDill Air Force Base, Florida received awards for the small category.

The awards were presented at the Secretary of Defense Maintenance Awards banquet on 28 October during the 2009 DOD Maintenance Symposium and Exhibition in Phoenix, Arizona.

### Ordnance Center and Schools Uncases Colors at Fort Lee

*Brigadier General Lynn A. Collyar, the Chief of Ordnance and Commanding General of the U.S. Army Ordnance Center and Schools, and Command Sergeant Major Daniel A. Eubanks, Regimental Command Sergeant Major of the Ordnance Center and Schools, formally uncase the organization's colors on 11 September 2009 outside of the new Sustainment Center of Excellence building at Fort Lee, Virginia. This event marked the move of the Ordnance Center and Schools' headquarters from its 92-year home at Aberdeen Proving Ground, Maryland, to its new state-of-the-art training facilities at Fort Lee. (Photo by Julianne Cochran, Army Sustainment)*



### Senior Leaders Plan Reset and Readiness Changes

In support of the Army Enterprise, senior leaders Army-wide for the first time used the same criteria to analyze the readiness of Soldiers, units, and equipment at the Reset rehearsal of concept (ROC) drill held in Atlanta, Georgia, on 17 June. More than 70 general officers and civilian leaders participated in this large-scale strategy session to discuss Soldier readiness and identify recommendations for reducing combat strain by rebalancing combat cycles.

The ROC drill culminated an operational-level process review aimed at improving the Army's readiness cycle. Traditionally, individual organizations perform readiness analyses by using separate review criteria. For the ROC drill, subject-matter experts from across the Army analyzed operational-level readiness and processes within their organizations using standardized criteria. The results were brought to the drill,



where leaders reviewed the readiness of the Soldier life cycle from start to finish.

Each of the four Army Enterprise organizations—for readiness, human capital, services and infrastructure, and materiel—presented their results on readiness issues, such as training, equipment, manning, counseling, reintegration, health, and systems analysis. Conducting multiple analyses during the same event and jointly reviewing the results generated strategy-rich discussions on the opportunities and limitations of each organization's efforts. The analyses created a great leveling field, allowing the four core organizations and multiple program offices to present their views, raise their concerns to strategic leaders, and address the needs of their "customers" as they relate to the readiness cycle. Leaders approved 24 recommendations and multiple organizational-level tasks that will improve processes.

The Army Enterprise is a new functional model developed as part of an organizational improvement campaign. This model quickly moves initiatives across and down functionally aligned business units. The Army Enterprise identifies clearer communication channels, more concise deployment strategies, and cleaner operational process improvements.

Army leaders say that the strain of accelerated deployments and the threats that are coming in multiple shapes and sizes from multiple angles are overextending the force—making Soldiers, families, and communities restless from the stress of multiple deployments. To combat these challenges, senior leaders asked academic and corporate leaders to help assess the overall health of the Army. The diagnosis from these leaders is that the Army is not broken; it just needs to monitor itself better, continue exercising regularly, and adopt a new lifestyle to relieve the stress and restore balance to the force.

## U.S. Drawdown Moves to Second Phase in Iraq

Multi-National Corp-Iraq (MNC-I) is in the second phase of drawdown operations to reduce the number of personnel, equipment, and bases in Iraq.

Lieutenant Colonel Tammie Pettit, MNC-I logistics planner, outlined how the drawdown started and will continue at an MNC-I conference at Camp Victory, Iraq, on 15 August. Nonessential equipment was identified during phase 1. In phase 2, that equipment is being retrograded, transferred, and redirected where U.S. and Iraqi forces need them. In phase 3, the focus will be on safety operations such as route security, additional drawdown, and support for redeploying units.

The drawdown includes a plan to transform nearly 200 bases into 6 multiclass supply support activities that will each have additional smaller bases. The hub-and-spoke facilities are slated to be completed by September

2010. The initiative works toward the larger goal of a complete withdraw from Iraq by December 2011.

## Force Structure Changes Will Transform Sustainment Units

In August, the Army announced a number of activations, deactivations, and realignments affecting sustainment units across the Army.

Sustainment units that will activate at Fort Bragg, North Carolina, include the 44th Medical Brigade, 49th Quartermaster Tactical Water Distribution Platoon, 738th Engineer Support Company, and 919th Engineer Support Company. The 247th Quartermaster Company will activate at Fort Carson, Colorado, and the 79th Ordnance Company will activate at Fort Irwin, California.

*(continued on next page)*

### RECENTLY PUBLISHED

***Field Manual (FM) 4-0, Sustainment***, is the Army's new keystone doctrine for sustainment and replaces the 2003 edition of FM 4-0, Combat Service Support. Sustainment—one of the six warfighting functions established by FM 3-0, Operations—includes "the major sub-functions of logistics, personnel services, and health service support." FM 4-0 provides a comprehensive outline of the many elements and services that are a part of sustainment and guidance on how the sustainment community supports full-spectrum operations. It also outlines how sustainment is planned, prepared, executed, and continuously assessed. The manual addresses modularity and roles and responsibilities for providing sustainment in unified actions. FM 4-0 is only available in digital format and can be accessed at Army Knowledge Online through the tab "My Doctrine."

***FM 4-02.2, Medical Evacuation***, has been updated. The evacuation priority timetable in the medical evacuation support section (chapter 4, section 1) has been changed to reduce the amount of time Priority I patients can wait to be evacuated. Previously, Priority I status applied to "emergency cases that should be evacuated as soon as possible and within a maximum of 2 hours in order to save life, limb, or eyesight, to prevent complications of serious illness, or to avoid permanent disability." The maximum time limit is now 1 hour, which requires senior leaders and senior medical personnel on the scene to use this rating to classify individuals who are to be evacuated as soon as possible.

Sustainment units inactivating include the 186th Quartermaster Company, 600th Quartermaster Company, 612th Quartermaster Company, and 44th Medical Command at Fort Bragg; the 196th Quartermaster Detachment and 106th Transportation, Headquarters and Headquarters Detachment at Fort Campbell, Kentucky; and the 557th Maintenance Company at Fort Irwin.



*Above: A Soldier from the 240th Quartermaster Battalion, 49th Quartermaster Group, uses the Tactical Fuels Manager Defense system to account for fuel used by units during Southbound Trooper 2009. Below: Soldiers also use the tactical automated tank gauge to measure the amount of fuel inside collapsible fabric tanks.*



Sustainment units that will realign into modular formations include Fort Bragg's 503d Ordnance Company, 11th Quartermaster Company, 364th Quartermaster Supply Company, 647th Quartermaster Company, 127th Quartermaster Company, and 528th Medical Detachment; Fort Campbell's 305th Supply Company, Fort Carson's 230th Finance Company, and Fort Irwin's 669th Maintenance Company.

The 101st Combat Support Battalion will also be converting to support the conversion of the 1st Brigade, 1st Infantry Division, to a modular heavy brigade combat team at Fort Riley, Kansas.

These force structure changes are expected to be completed by 2011 as part of integrated force structure changes that support the Army's transformation requirements and the "Grow the Army" initiative.

### New Fuel Management Equipment Tested

The 240th Quartermaster Battalion, 49th Quartermaster Group, at Fort Lee, Virginia, became the first Army unit to employ the Tactical Fuels Manager Defense (FMD) system and tactical automatic tank gauge (TATG) in a field environment. Soldiers used the new petroleum management equipment during Exercise Southbound Trooper IX at Fort Pickett, Virginia. (Southbound Trooper is a Canadian Army Reserve exercise conducted annually with U.S. Forces to prepare for joint international full-spectrum operations.)

FMD is an automated petroleum inventory-management system designed to efficiently capture petroleum usage and inventory data at the unit level. The Atlanta, Georgia-based company Varec Inc., a subsidiary of Science Applications International Corporation (SAIC), engineered FMD to replace the existing tactical petroleum management process, which does not provide a level of detail that allows for an accurate view of the Army's fuel consumption.

FMD uses queries that can report consumption statistics by vehicle, exercise, or date. This allows planners to more accurately predict fuel requirements and report fuel consumption data.

Automating fuel forms and establishing responsibility for account discrepancies make fuel accountability less subject to fraud. Good accountability also results from accurately gauging the amount of product distributed.

TATG replaces the manual four-point reference method as the primary gauge for the amount of fuel in a collapsible fabric tank. The four-point reference method uses a stick and string to measure the height of the fabric tank. The recorded height is verified against a strapping chart, which is used to convert feet and inches to gallons.

The Army Petroleum Center and Varec, Inc., helped to bring TATG on line and provided technical assistance during Southbound Trooper. In the exercise, TATG gauged the amount of fuel within .5 percent of the receipt meter, while the manual four-point method had a 10- to 12-percent difference from the receipt meter. TATG is also capable of recording

gross and net quantities of fuel based on density and temperature.

In addition to using FMD and TATG, Soldiers used a portable hand-held device to document receipts and issues by aircraft tail number on the flight line. This device interfaces with the FMD system to transfer all the data and generates any required reports.

## PROFESSIONAL DEVELOPMENT

### Sustainment Center of Excellence Developing Mobile Education Applications

The Sustainment Center of Excellence (SCoE) at Fort Lee, Virginia, is developing mobile education tools for Army portable devices on the Army's secure online environment. The Lifelong Learning Branch of the Army Combined Arms Support Command Training Directorate's Distance Learning Support and Integration Division, which specializes in Internet and distance learning development, has a new project team focused on developing mobile sustainment education software. The project includes the first suite of military iPhone applications for Fort Lee, Virginia.

The SCoE applications suite will give students easy access to course materials, locations and descriptions of classes, up-to-date military news articles, Army and SCoE podcasts, and Army reference materials, such as ebook-based technical manuals, field manuals, and Department of the Army pamphlets.

The SCoE suite will have a mapping application that will, using a phone's global positioning system (GPS), provide driving and walking directions to buildings, floors, and rooms across Fort Lee. This tool can also link to a student's course schedule, providing access to course information and walking directions to the location of that course.

"Podcaster" will give students access to video-based courseware, statements from commanding generals, and "lessons learned" leadership interviews.

The suite also will have a link to Army Sustainment, where students can access the latest articles and eventually provide live feedback to article content.

Although all mobile device application creation is currently being done through an Apple vehicle, the applications will eventually be available for all phones, mobile devices (such as eBook readers), and video gaming systems. The hope is that by covering as many platforms as possible, the Lifelong Learning Branch can immediately meet the educational needs of the Soldiers. The first set of applications is slated for availability in March 2010.

The Lifelong Learning Branch project team is comprised of Matt MacLaughlin, project manager/branch chief; Diane Jenkins, analyst/beta tester; and Christopher

Lawson, developer/designer. Readers interested in finding out more about the project can send an email to [leescoemobile@conus.army.mil](mailto:leescoemobile@conus.army.mil).

### Army Training Network Has New Tools

The Army Training Network (ATN) now includes links to more than 40 new training products. Launched in April to accompany the newly revised Field Manual 7-0, Training for Full Spectrum Operations, and to replace FM 7-1, Battle Focused Training, ATN is the Army's website for trainers and trainers-to-be. It features training management how-tos, training doctrine, answers from the experts, and links to training tools, such as training support packages.

Soon, ATN will also include videos on how to conduct company- and battalion-level training meetings, and plans are in the works to link the site to information from the Army Training Help Desk and the Battle Command Knowledge System's Warrior Knowledge Base. The website is located at <https://atn.army.mil>.

### New Pilot Program Provides Intermediate-Level Education to Logistics Warrant Officers

The Army Command and General Staff College at Fort Leavenworth, Kansas, now has a pilot program that allows warrant officers to attend intermediate-level education (ILE), which has historically been offered only to commissioned field-grade officers. The 10-month course trains officers to be adaptive leaders and critical thinkers prepared for full-spectrum Army, joint, interagency, intergovernmental, and multinational operations.

Five warrant officers, including one quartermaster and two ordnance warrant officers, became the first graduates of the program in June. The College also has two quartermaster and two ordnance warrant officers on staff in the Department of Logistics and Resource Operations. Warrant officers interested in attending ILE should contact their assignment managers at the Army Human Resources Command.