Integration of Engineer Groups in Support of a Light Division

By Lieutenant Colonel Peter Madsen and Major Wayne Whiteman

Future world trends indicate a more frequent and increased role for the military in humanitarian missions and disaster relief. Recent examples include protecting Kurds in Iraq, securing Haitians at Guantanamo Bay, cleaning up south Florida after Hurricane Andrew, and assisting in humanitarian efforts in Somalia. The 10th Mountain Division, Fort Drum, New York, was involved in the last three of these missions.

When faced with operations other than war, military leaders must go through a rapid mission-analysis process to determine the best force mixture to send. The decision in Florida and Somalia was to focus efforts around a light division's structure and tailor the forces that augmented the division to meet the specific needs at the moment. The strategic mobility, command and control structure, logistics support, and medical systems of the military lend themselves well to these types of missions.

Because engineers will always play a large role in humanitarian missions and disaster relief, their augmentation to the force is often significant. During Hurricane Andrew relief, the 10th Mountain and the 41st Engineer Battalion (light) were augmented by one engineer group, three engineer battalions, two combat support equipment companies, and one assault float bridge company (see chart). During Operation Restore Hope, the 10th Mountain's augmentation consisted of one engineer group, one combat heavy engineer battalion, and two combat support equipment companies.

The augmentation process can be complicated. This article addresses the integration of forces in support of a light division and the lessons learned from both of these operations.

Operational Integration

Engineer staffs in light divisions are austere. The assistant division engineer (ADE) section is authorized only four personnel by the modified table of organization and equipment (MTOE). The S3 section is authorized only seven personnel. The challenge is to form an engineer staff strong enough to direct significant engineer augmentation as an extension of the division G3. Within the 10th

Engineer Task Organization

Hurricane Andrew Relief—

Initial

41 Engr Bn (Light) (Drum)
642 Engr Co (CSE) (Drum)
937 Engr Gp (Riley)
43 Engr Bn (Cbt Hvy) (Benning)
63 Engr Co (CSE) (Benning)
841 Engr Bn (Corps Cbt) (USAR) (Florida)
586 Engr Co (ARFB) (Benning)

Final

41 Engr Bn (Light) (Drum)
642 Engr Co (CSE) (Drum)
92 Engr Bn (Cbt) (Hvy)

Operation Restore Hope—

41 Engr Bn (Light) (Drum)
36 Engr Gp (Benning)
43 Engr Bn (Cbt Hvy) (Benning)
63 Engr Co (CSE) (Benning)
642 Engr Co (CSE) (Drum)

Mountain, the 41st combines the assets of the ADE, S3, S2, and the communications sections to form engineer operations and planning cells collocated at the division main command post (DMAIN). (See a related article in the July 1992 issue of *Engineer*, "Light Engineer Command and Control.")

The engineer operations cell is located in the division tactical operations center (DTOC). This cell works closely with the division G3 and tracks current engineer operations and missions throughout the division sector. Operational reports are sent through the engineer operations cell and forwarded to the division and the engineer sections of the next higher headquarters. Brigade engineers send reports directly to engineer operations for all engineer assets working in their brigade sector. When faced with significant engineer augmentation, as was the case in the Florida and Somalia missions, the reports of other engineer units in support of the division are rolled up under the engineer group, forwarded to engineer operations, and included in the situations reports to division and higher.

The engineer planning cell is located adjacent to the DTOC within the security perimeter of the DMAIN. This cell works closely with the division G3 plans section and the operational planning group. Future engineer plans and operations are developed as part of the command estimate process. If required, liaisons from the engineer group or other engineer units can operate from this location. The engineer plans cell also serves as a briefing/meeting area for the division engineer.

Two engineer soldiers clear debris during Hurricane Andrew relief operations in south Florida.

The Division Engineer

An age-old debate is who serves as the division engineer when an engineer group is attached to a light division. The group is commanded by a colonel; the divisional battalion commander is a lieutenant colonel. The dilemma is whether to interject a senior engineer commander and his field grade staff from outside the division or leave the organic engineer section integrated with the divisional staff under the direction of the divisional battalion commander. FM 5-71-100, *Division Engineer Combat Operations*, states that the group may become the engineer headquarters for a light division when the division receives significant engineer augmentation. In special cases, the division commander may transfer division organizational responsibilities to an engineer group that has been task organized to the division on a long-term basis. Normally this is done only when the augmentation surpasses the command and control capability of the light battalion headquarters. While many factors weigh in the final decision, two important factors are the length of unit integration and the expected duration of the operation.

In a crisis response such as hurricane relief, a premium is placed on how fast engineers start work on the battlefield. The division staff relies heavily on its training, teamwork, and personal chemistry to respond effectively to emergency situations. Substituting engineer staffs during a crisis response creates problems for the deploying group headquarters and can be disruptive to the time-sensitive division staff planning.

In short-duration operations, engineers are working against a timeline, and similar arguments are true. For example, during Operation Restore Hope, Army engineers were given a defined mission to accomplish in six weeks. Redefining roles would have been disruptive when time was a critical element. It made more sense to allow the group headquarters to focus its efforts on planning and executing the engineer operation and to permit the divisional

engineer section to integrate this plan with the overall scheme of maneuver and identify future engineer requirements.

Engineer groups are flexible organizations designed to strengthen the command and control of subordinate units. As quickly as they respond to engineer requirements exceeding divisional capability, they can be withdrawn to support other sectors or commands. For example, during Hurricane Andrew relief, the 937th Engineer Group was attached to the 10th Mountain in early September but redeployed with the XVIII Airborne Corps in late September, leaving behind one combat heavy battalion.

The division commander decides who his principal engineer staff advisor will be. Regardless of his choice, the engineer group commander serves as a major subordinate commander for the division and has direct access to the CG. During Hurricane Andrew relief and Operation Restore Hope, the divisional engineer battalion commander retained staff responsibility as the division engineer. Both operations were a response to a crisis on an engineer intensive battlefield, and it made sense to leave the organic divisional engineer section in place.

Shaping the Engineer Force

Mission analysis identifies the engineer requirements that drive the force structure. Generally, the organic sapper battalion of a light division deploys with maneuver units and provides sustainment, force protection, and direct support. Augmentation engineer forces address other engineer requirements: road and airfield construction, basecamp support, utility repair, fire fighting, power generation, and more. The group staff has the capability in personnel and equipment to plan, design, manage, and support these extensive operations.

The relief operations for Hurricane Andrew and humanitarian assistance in Somalia were quite different tasks. In both operations, the mix of augmentation engineer forces and the task organization structure were tailored to meet specific requirements. For example, in Florida, the 586th Engineer Company (ribbon bridge) deployed trucks from Fort Benning without their bridge bays. These trucks hauled critical food distribution requirements and augmented the limited transportation assets of the 10th Mountain. Also, the 642d Engineer Company (combat support equipment) served as a brigade engineer headquarters in Florida and deployed only bucket loaders and dump trucks to clear debris. In contrast, during Operation Restore Hope, the entire 642d deployed and was attached to the 36th Engineer Group for road construction as part of the group's mission to revitalize Somalia's infrastructure. Force structure design and task organization of augmentation engineers are major tasks that must be addressed early in the planning cycle by the divisional engineer battalion command and staff.

Lessons Learned

The lessons learned by the 10th Mountain Division in Florida and Somalia will be applicable to future operations other than war. Analysis of each operation offer insights for future engineer planning and execution.

Reception Mission. Early reception of the engineer group into the division is critical. Key leaders and staffs must be integrated into the division's planning cycle. They should be briefed on the current situation and be familiar with the division planning and methodology. Division SOPs and report formats must be exchanged. The desired end result is division ownership of the engineer group as a major subordinate command in support of the operation.

Reception of the engineer group includes the arrival of their subordinate units, personnel and equipment in the area of operations.In most situations, the division is on the ground before the engineer group and other augmentation units arrive. The division battalion must facilitate this reception and serve as the coordinating headquarters for the smooth introduction of engineers into theater.

An assembly area or base of operations must be identified. An engineer base may require motor parks, tentage, field latrines, and a mess operation to support the arriving personnel while they await equipment. If equipment arrives into theater before the personnel, divisional engineers may need to receive it to avoid congestion at the railhead or port. (During Restore Hope, divisional engineers off-loaded the ship bearing group equipment and MILVANS when the personnel arrived later.) Depending on the size of the augmenting force, this can be a significant mission and can detract from other efforts.

Reception also includes activities such as the alignment of maintenance support and the opening of supply accounts within the division. The two most significant challenges are communications support and Class IX repair parts for commercial engineer equipment. These problems must be addressed before deployment to facilitate integration into the division and early execution of the engineer plan.

Selling the Engineer Plan. Mission analysis identifies the engineer requirements. The division engineer recommends the assignment of missions to subordinate engineer forces and the G3 tasks these missions to subordinate

commands. Then the engineer group must develop its plan for execution. Often the division engineer may be involved in war gaming the courses of action, and may even be asked for a recommendation. Once the group commander selects the plan for execution, the division engineer must sell the engineer plan.

The first step in selling the plan is to get the support of the division commander. The division staff is then brought on line and the G3 integrates the engineer plan with maneuver operations. The G4 acquires necessary logistics support, and signal aligns necessary communications support while other staffs play their appropriate roles. The plan should then be layed out and briefed in detail for subordinate maneuver and support commanders.

Expanding support and awareness of the engineer plan will facilitate its execution. Besides briefs to key leaders, other methods worked well during Restore Hope and Hurricane Andrew. Brigade engineers from the divisional engineer battalion kept maneuver commanders informed on execution and progress. Daily staff meetings at division headquarters and periodic engineer meetings at the higher headquarters served similar purposes. Public affairs also assisted in selling the engineer plan, especially when the plan significantly impacted on the public or nongovernmental organizations.

Making the Plan Work. Brigade engineer efforts will dramatically influence the success of an engineer group in support of a division. By coordinating direct support in the brigade sector, they promote the mission of the brigade commander while allowing the group engineer the flexibility to shift engineer effort as priorities change.

The division engineer influences the engineer effort by grasping the engineer multipliers as they become available on the battlefield. For example, after Hurricane Andrew, volunteer assets from municipal public works departments throughout the southeast came into south Florida. With very little coordination but a lot of cooperation, they teamed up to haul debris in one brigade sector. This allowed the brigade engineer to free up critical haul assets for use in another sector.

When deployed overseas, tapping into the capabilities of the Corps of Engineers (primarily through contracting) or the DOD logistics capabilities contract can save troop effort and enhance success. In Somalia, engineers gained a unique experience working with civil affairs and psychological operations (PSYOPS) teams. Leaflet drops, print media, coordination meetings with local elders, and the hire of local laborers facilitated the engineer effort. In operations other than war, engineer multipliers are many, and the division engineer has the best vantage point to identify them.

End State and Mission Creep. An important part of the engineer plan is the end state. Engineer requirements in operations other than war often greatly exceed the forces or time available. Identifying standards for construction, repair, and troop support is key. The scope of work and proposed completion date are essential elements of the plan. The engineer end state should be synchronized with the maneuver plan.

A key factor in creating engineer success is avoiding mission creep. Every plan under execution will be challenged with new or expanded missions that may or may not have to be done. However, each new mission expends time and resources. The key is understanding the division commander's and the next higher commander's intents as they apply to the engineer effort. The division engineer can then make mission assessments, understand impacts, and advise the G3 on which missions to accept or decline. The engineer group should focus on executing the engineer plan; the division engineer staff should address mission creep.

Future Operations

The past several years have demonstrated that Army units can be very successful in operations other than war. In these situations, engineers are always a key player. During Hurricane Andrew relief operations and Operation Restore Hope, engineer groups played a key role in support of the 10th Mountain Division's efforts. The division engineer and engineer group relationship is critical to the quick integration of augmentation engineer forces and organization for execution. From the perspective of the division engineer, significant lessons were learned regarding the reception of the group and the development and promotion of the engineer plan. Early identification of the roles and responsibilities is critical. Given the professionalism and initiative of our leaders, coupled with trained and ready soldiers, engineers will always succeed.

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