

MODULAR ENGINEER STRUCTURE IN DIVISIONS

By Colonel Jeffrey R. Eckstein

I recently completed a deployment to Iraq as the Division G7 and the Division Engineer for the 25th Infantry Division, which served as the Multinational Division–North (MND–N) headquarters at Contingency Operating Base (COB) Speicher and covered an area equivalent to the size of Pennsylvania. The division converted to the modular structure and deployed after a mission rehearsal exercise and, during the tour, it commanded and controlled four to six modular brigade combat teams (BCTs). From my perspective, I think the modular engineer force structure is about right. I offer the following observations based on my 15 months in Iraq.

Staff Organization

The engineer expertise on the division staff in the modular structure resides in the two tactical command posts (TACs), the division operations center, and the Division Engineer cell. By the modified table of organization and equipment (MTOE), engineers support other sections within the headquarters and are not a staff section such as the G1 or G4. We did not operate this way. The Division Engineer section became the G7 Reconstruction, not the Information Operations (IO) section. The IO section was part of G3. The MTOE engineers assigned throughout the division headquarters worked within the G7. The exception was the engineer planner, who remained a member of the G5.

The G7 included the engineers, the traditional G9 section, and several civil affairs personnel. The figure on page 62 depicts the areas of G7 responsibility. The G7 section coordinated reconstruction efforts at the division level, as well as the traditional engineer and civil-military operations functions. Placing all of the engineer personnel within the G7 allowed the engineer section to battle-track, coordinate engineer support, provide resources to the BCTs, and execute nonstandard missions, as assigned. The G7 provided personnel to the division operations center and executed the traditional roles of maintaining situational awareness of the current fight, providing engineer input for the staff battle drills, and briefing the commander. The G7 also coordinated with the assigned engineer brigade headquarters and corps for additional engineer capability, as required for the mission or as requested by the BCTs.

Resourcing in Iraq is requirements-based. Many of the resources required by engineers were construction

materials, particularly barriers. These were justified through the Division Acquisition Review Board (DARB) or the Joint Acquisition Review Board (JARB), depending on the monetary thresholds. The engineers provide input for the division-level approval, or process the requests going to corps for their action. In addition to the material requests, an engineer reviewed all construction requests and conducted a work classification to ensure compliance with statutory construction limits. Within Iraq, the Logistics Civil Augmentation Program (LOGCAP) is a source of base camp support. As part of our division-level review process, the Division Engineer validates all LOGCAP requests over \$100,000.

The G7 in MND–N was responsible for oil and electrical infrastructure. This nonstandard mission entailed tracking the progress of improving crude oil exports, distribution of the refined product, and production and distribution of electricity. The MND–N area included one of the largest refineries and power plants in Iraq, as well as the Kirkuk oil fields. The G7 staff section provided our general officers and higher headquarters with accurate and timely oil and power information. This information assisted leaders at all levels in their engagements with Iraqi officials, resulting in improved production, security, and reliability over the course of our deployment.

The G7 also supervised the Commander's Emergency Response Program (CERP), another nonstandard mission. This involved tracking all BCT projects, facilitating the approval of projects over \$100,000, funding all projects in conjunction with the G8 CERP manager, and maintaining the Iraq Reconstruction Management System (IRMS) database. This was no small task, because the division executed more than 3,000 projects in one fiscal year. Civil affairs personnel augmented the engineers in order to accomplish these nonstandard missions.

The Division Engineer section accomplished all of these tasks, because all the engineer personnel on the division staff worked for the Division Engineer in G7. If personnel work according to their MTOE assignments, the engineer contribution to the division commander and staff is limited to battle tracking and coordination for engineer support. The consolidation of engineer personnel enabled the sourcing and execution of the nonstandard task.

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Multiple vs. Consolidated Command Posts

The modular MTOE for the division does provide adequate engineer staffing, but the organization supports three separate command posts, which are critical for a mobile fight. In Iraq, we did not need the capability to conduct mobile operations, so we formed one staff from the three command posts and formed new cells as required by the mission in Iraq. Over the course of 15 months, two cells did form that operated separately from the division headquarters. Although referred to as TACs, these cells supported leader engagements rather than coordination of tactical operations. Additionally, the division formed the Iraqi Security Force (ISF) cell, the improvised explosive device (IED) defeat cell, the Project Coordination Center (executed CERP), and the reconciliation cell. With the consolidation of all engineer personnel in one staff section, we supported all of these cells with appropriate coordination, as well as controlling the Project Coordination Center. The G3 controlled the other cells.

Manning

My assessment is that the MTOE for personnel provides adequate expertise and leadership to execute engineer planning, integration, and support at the division and brigade levels. Discussions are already underway to modify the organization at division and BCT levels. Unfortunately, none of the BCTs nor the division staff was manned according to their MTOEs. Non-career course graduates often filled the captain positions and career course graduate captains filled the major positions. Only one Stryker BCT had the required major, one of one. Engineer officers were in great demand as liaison officers (LNOs) and military transition team (MiTT) members and for fulfilling branch qualifications in branch-immaterial positions (brigade special troops battalion [BSTB] or special troops battalion [STB] executive officer [XO]/operations officer [S3]). The same situation occurred with captains, although not to the

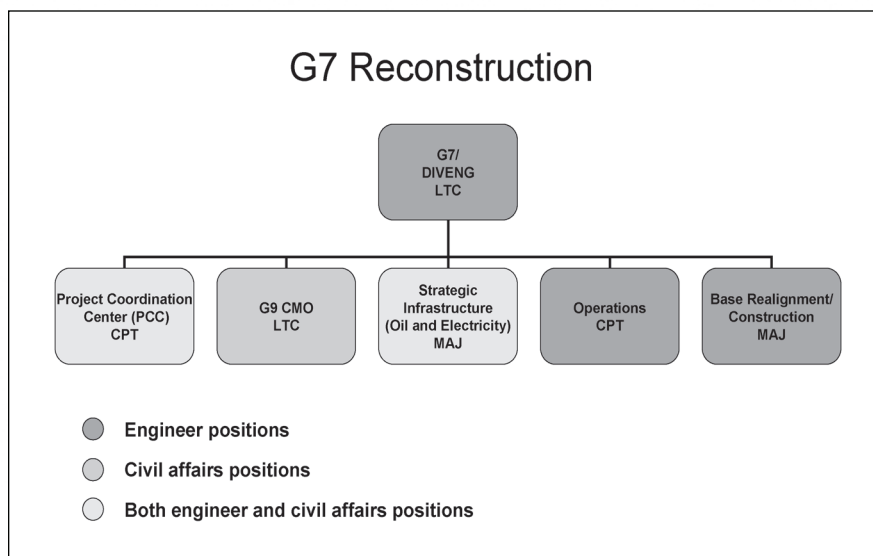
extent of the majors. Many of the problems we experienced with communication and coordination would be alleviated by having more senior personnel on the staff. It is critical that the brigade and division staff positions are filled at the appropriate grade, not just with an engineer. I recommend consolidation of the division engineer personnel into one section, the G7, but retain the current MTOE authorizations. At the BCT level, I am hesitant to suggest a different force structure for the officers, but I would add a construction-type noncommissioned officer (NCO).

Battalion Headquarters in a BCT

Most engineer and maneuver commands commented on how they needed more engineers and how they missed having the attached engineer battalion in the BCT. With a properly manned brigade staff, the engineer battalion headquarters is not required to support the modular BCT. An engineer battalion headquarters is appropriate because engineer elements assigned to the BCT increase based on the assigned mission set. What is not required for the one or two organic engineer companies is an engineer headquarters element. A BSTB headquarters provides the required command and control. The knowledge and experience of an engineer battalion commander within a BCT is invaluable and is a tremendous advantage. But that capability is not worth the detachment or company that comes with the commander. A better solution is to place a high-quality, potential battalion commander on the BCT staff as one of the assigned majors. At BCT level, there are either one or two engineer majors, depending on whether it is a Stryker, infantry, or heavy BCT. I suggest providing two engineer majors on the MTOE, regardless of the type of BCT.

Engineer Capability in a BCT

Another common complaint with the new modular structure is the lack of engineer capability. In Iraq, I believe our problems are not a result of modularity.




Engineers are in high demand in counterinsurgency operations. Because a BCT requires additional engineers to support missions, the BCT must wait, share, or simply do without the requested engineer capability. Providing additional organic capability to the BCT is not a viable solution. We must remain flexible and agile to match the engineer capability to the BCT requirements at the correct time. As BCT missions require additional forces, the BCT receives engineer forces with the appropriate command or control relationship. The only capability I would suggest is additional horizontal capability within the engineer company.

Engineer Brigade Headquarters

The one required force structure change is the engineer brigade headquarters at division level, and there are many ways to provide this command and control headquarters. I suggest an arrangement similar to that of the sustainment brigades. Each division has a habitual relationship with an engineer brigade. The current four engineer brigades on active duty are not enough. Every division in Iraq, except the surge infantry division, has had at least one engineer brigade or group assigned to it to support operations. That fact should validate the requirement. Similar to the sustainment brigades, these engineer brigades do not require organic units. The division's mission dictates the allocation of additional engineers. With the already lean organic engineer capability of the BCT, divisions will require additional engineer units for nearly every assigned mission. These modular brigades accept the additional engineer capability required to support operations. The modular engineer brigade is not integral to the division headquarters and will remain able to command and control engineer operations across the division area of operation. Typically, divisional engineer brigades provided their assigned engineer battalions to the BCTs and usually

requested engineer groups as additional engineer battalions supported the division. Previously, we had an engineer command and control headquarters at division level, but we requested one more headquarters. What we really need is more company- and battalion-level capability; one engineer brigade headquarters per division is adequate.

Summary

Ibelieve the modular concept and capability within the division and BCT is about right if properly manned. It is critical to have 100 percent manning on division and BCT staffs with the appropriate grade personnel. At division level, consolidate the engineers by MTOE into one section, nominally the G7. Provide some additional horizontal capability within the organic BCT engineer company. I would not attempt to provide the organic engineer battalion headquarters to a BCT. I would increase the number of engineer brigades in the structure to match the number of divisions and would continue with efforts to increase the engineer force structure. My experience in Iraq reinforces that we do not have enough engineers in the force structure; Engineer Soldiers deploying every other year deserve the additional force structure. The modular construct is valid and does not require major reworking or debate within the Regiment. We should first focus on bringing back engineer capability at the company and battalion levels. 

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