

Theater Construction Management System

By Sergeant First Class Brian Nering

Modern Army engineers have a multitude of automated aids to make their job easier. The Theater Construction Management System (TCMS) is one of these aids. Used in conjunction with AutoCAD® LT, the TCMS is a computer-based system for planning construction projects. The system includes design, management, and reporting capabilities.

The TCMS was designed to replace Technical Manuals 5-301 and 5-302, *Army Facilities Components System – Designs*; and 5-303, *Army Facilities Components System – Logistics Data and Bills of Materiel*. These manuals include “blueprints” and schedules for projects ranging from latrines to base camps. The goal was to provide construction units with examples of projects that had already been used in the field. In other words, civil engineers would not have to design a base camp from scratch; they would simply copy the required drawings, make any necessary changes, and start building.

The primary military occupational specialty involved is 51T, technical engineer. The 51T course is taught at Fort Leonard Wood, Missouri, to members of all branches of the military. The 18-week, technically intense advanced-individual-training course is comprised of drafting, surveying, and materials-testing skills. At the beginner level (10), students are taught to search, modify, and print drawings properly. Considering the current inventory of 4,800 plans to choose from, proper search techniques are critical.

In the TCMS—under the “Facilities” pull-down menu—type either a “noun” or short “description” to search for like projects. After locating the desired project, open the drawing file in AutoCAD LT and save it as a separate file. Then changes can be made to the drawing for site conditions or other requirements specific to that project. Currently, personnel at the staff-sergeant level (30) are responsible for determining required changes. The next step is to generate a bill of materials (BOM) needed to build the structure.

It's easy to see how the TCMS has become a time and labor saver. Projects that once required cumbersome technical manuals and a chest of flat files are now on a CD. As always, time is a valuable asset to mission accomplishment, and the TCMS is now “time saved” for the military. 

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