

## East Chicago Returns to its **Steel Roots**

**T**he city of East Chicago, Indiana's new public safety building is loaded with sophisticated and sensitive communications equipment—not unusual for a facility housing a 911 emergency dispatch center, a police station and an emergency medical service personnel group.

Because of this set up, both the design team—DLZ Indiana Inc.—and the building owner considered the electrical and communications systems to be such critical components that protecting them from electromagnetic interference (EMI) was a key design consideration.

DLZ, in weighing potential power-quality problems, was quick to specify steel conduit. "Steel conduit is, in essence, a shield for fields created by the fact that these wires

transmit power," says Jeffrey Brown, P.E., with DLZ.

Steel conduit is just one part of DLZ's power-quality equation. Also incorporated into the project were all copper-wired bus bars, panel boards and distribution panels. "We also upsized the branch circuit wiring so that they're good and strong and efficient at transmitting power," says the engineer.

Those elements added up to a few more dollars spent, something that Brown says provided a much better building system, but many times will require some owner education. Specifically, he says EMI's affect on communications' systems is something that many building owners aren't necessarily aware of. "We're finding that owners—because they have reduced engineering

departments—have less and less expertise and they're depending on consultants more."

Therefore, he adds, it is necessary to stress the life-cycle cost. "We don't try to do things for only the least initial cost. We try to do a design for efficiency for today, as well as making sure the building is low cost to live with," says the engineer.

Other benefits, such as the fact that steel conduit is maintenance friendly, should also be emphasized, says Brown. "If you've got a problem it's pretty easy to go to the end of the conduit, pull conductors out and replace them—That's an advantage."

*For more information about power quality and the Steel Tube Institute, circle 137.*