

The Role of Humanitarian Engineering and Sustainability Assessment for the Master Planning of Kigali, Rwanda by Mark Reiner

Abstract

In developing cities, planned communities are juxtaposed to informal (unplanned) communities and the level of delivering basic services to residents varies widely in very close proximity. This creates a dichotomy of infrastructure delivery within the boundaries of developing cities and provides the backdrop of discussion regarding the integration of humanitarian engineering and formal engineering approaches. In addition, how does an engineer incorporate the realities of limited resources and different cultural norms into design? Until recently, relatively little has been taught to American engineers regarding the necessity of incorporating humanitarian engineering and social justice into design considerations. However, the challenge of providing long-term survival of infrastructure in developing nations provides solutions for sustainable infrastructure in more developed nations. These points are presented as separate discussion items, and reflected upon in discussing the master planning efforts for the capital city of Kigali, Rwanda in 2005-2007.