

2003 ASCE Daniel W. Mead Contest for Younger Members

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Essay topic: "Is it Ethical to Profit from Engineering Work Arising from Natural or
Manmade Disasters"

Work for the Ethical Reward

Disasters draw public attention like few facets in today's world as expressed both in the media and everyday conversations. It follows that disaster related engineering work glares out from headlines in much of the technical dialogue we engage in as engineers. Certainly this has long been the case. However, following the collapse of the World Trade Center Towers and a portion of the Pentagon, disasters of massive scale, close to home, purposefully caused, the discussion has remained in our discourse. Disasters destroy the built environment that we Civil Engineers make our living from. The situation presents the quandary of the ethics from making a profit due to engineering work in response to disasters, naturally or purposefully caused.

Disasters by definition are immense tragedies. Moreover, the foundation of the tragedy is injury and loss of human life. The destruction of the built environment collapses upon that foundation. The very built environment that we as Civil Engineers not only conceptualize, plan, design, construct, and maintain but also supports the means for us to make our living from.

Is it ethical to profit from work due to disasters given that the destruction of the built environment is marginal compared to the tragedy of injury and loss of human life? Is profit ethical particularly because of that tragedy? Is it ethical to gain the benefit of profit while others suffer great loss?

Ethics are the moral codes that guide the practice of our profession. ASCE, among other organizations, has formalized a Code of Ethics. The ASCE Code of Ethics does not directly pertain to the situation of making a profit, doing engineering work in response to disasters, or making a profit from engineering work in response to a disaster. Thus, the cursory review of the matter is that it is ethical to profit from engineering work in response to disasters because the ASCE Code of Ethics does not ban such a practice.

While ASCE is "America's oldest national engineering society", ASCE is not the sole arbiter of ethics in engineering. Other organizations such as the National Society of Professional Engineers and the Society of Forensic Engineers and Scientists each have a Code of Ethics. Similarly, these codes are silent on the topic of profit from disaster related work. This endorses the position that it is ethical to profit from engineering work resulting from disasters.

Making a profit does not appear contrary to the "spirit" of any of these codes. In fact, there are statements in these codes that support an engineer working toward the success of the company. A company that makes a profit is typically considered more successful and as such an engineer should work to make a profit. Nevertheless, while not specifically banned nor divergent from the essence of each Code of Ethics, is profit appropriate given the tragic circumstances congruent with disasters? While the codes are silent to the specifics of the situation of profit from disasters and more generally from

either profit or disaster related work, is such an act consistent with the broad intent of a Code of Ethics?

A Code of Ethics often begins with a statement about protecting the health, safety, and welfare of the public. Is the public wellbeing protected by profit arising from engineering work due to disasters? The ASCE document, Standards of Professional Conduct presents the question of ethical behavior as one that the situation satisfies a “personal definition of right, good, and fair” so the question asks is it right, good, and fair to profit from tragedy?

While the question is presented in a personal nature, societal customs define the answer. Profit is the practice in the system of our society. Work relating to disasters is not an exception to this practice.

As disasters have catastrophic effects in many aspects, many professions and trades are needed to respond to the disaster. Some of these workers make their living almost entirely from tragic events. The jobs of firefighters, paramedics, and emergency room workers all exist primarily for situations of misfortune, tragedy, or disaster of some degree. These workers and their companies profit from such events. Engineers making a profit from disaster work are thus consistent with this customary practice of society. However, the engineering profession does not exist primarily for such events.

There are other trades and professions that also profit from disaster work although it is not their primary purpose. Contractors will have much reconstruction work to do. Retailers will sell many new products for those damaged or destroyed. Financial institutions will loan money and earn interest for the reconstruction and new purchases. Since many other professions, trades, workers, and people make a profit during disasters, does that then make it ethical for engineers also? No, not unequivocally because we as Civil Engineers are unique in regards to working in the realm of the built environment. The reality of a disaster is that the public welfare has not been completely protected with the built environment. Thus do Civil Engineers owe a service to the public to remedy this failing?

Since Civil Engineers serve common society, should no profit be made in view of the fact that complete protection to the public welfare from disaster did not occur? The building could have been stronger, the dam could have been higher, and the highway could have been safer. Humans error, engineers error. Furthermore, although the engineering may be completely correct and free of error, failure still occurs. Patients die in surgery and juries convict the innocent. Disasters demolish the built environment. A surrender of profit does not raise the demolished. It is not appropriate for engineers to relinquish profit for deficiencies beyond control. Although engineers learn much in school and through years of work experience, engineering knowledge possesses neither a mastery over natural forces nor control over the evil resolve to destroy.

Even though the public wellbeing may not be completely protected from the disaster, is the public wellbeing further harmed if engineers profit from disasters?

Those who suffer from disasters normally do not pay directly for work that an engineer may do. Typically, government agencies and insurance companies serve as clients and compensate the engineer. It is not naturally the case that the profit of the engineer further harms the disaster victims. These victims do not directly pay the bill of the engineer and have no added burden due to the profit. Of course the victims do pay indirectly for this profit through taxes and insurance premiums. However, others who are not victims of the disaster share this burden. While this could be considered as a small additional damage from the disaster, in fact it is a benefit. The profit motive serves the economic system well providing for competent persons to respond to disasters.

The profit earned from engineering work due to disasters ensures that the engineer will engage in the work. Furthermore, the engineering business continues its viability and experiences no impediment in business success due to committing personnel and resources that would otherwise be making a profit in some non-disaster related engineering work. Work with no profit disadvantages the company finances as any time not billed is income lost to the company. Furthermore this work reduces future disaster impacts through the knowledge acquired from the involvement of the engineer. Successful engineering businesses supply society with a well educated and competent engineering force.

In the media frenzy surrounding disasters comments such as “everything that can be done is being done” and “cost is not an issue” sound out loudly. Does this imply that the office amass overtime and expense every paper clip?

Disaster related work grows ripe for fraud and the appearance of swindling government or insurance companies. Profiteering such as astronomical fuel prices at the corner gas station in the afternoon of September 11, 2001 caused criminal investigations and darkened the image of those businesses. It is unethical to exploit disaster work just as it is unethical to exploit any project. However, it is ethical to bill at a rate that recognizes personnel and resources are diverted from previously scheduled work. This rate could be higher than a normal rate similar to when a client requires work immediately to meet a deadline. Higher rates for immediate response acknowledge a true cost and appropriate profit within the context of the business system. The nature of disaster related work often calls for this. However, the manipulation of the system for excessive profit is absolutely unethical as it is not honest. The accounting and business management professions still suffer from loss of public stature due to several situations of inflated profits and system manipulation. It is unethical to cause harm to the reputation of the profession. A fundamental canon in the ASCE Standards of Professional Conduct is to enhance the professional reputation.

Disaster related work allows ample opportunity to increase the professional reputation of engineers. Many engineers understand this prospect and amply aid as needed, often on a voluntary basis. Engineers need not bill for work related to disasters or make a profit for such work. Each engineer or company may elect to work without profit. In fact, while the profit may vanish from the balance sheet with the forfeiture of

earnings, those who volunteer often profit by other means such as publicity, professional stature, and a sense of doing good. A voluntary effort opens one situation that would be unethical for an engineer to profit from. An engineer who initially works under a volunteer effort in response to a disaster and after the fact attempts to bill for the volunteer effort is unethical. The engineer worked in a dishonest and deceptive fashion by volunteering and then seeking payment.

ASCE also recognizes the opportunity presented with disaster related work in the form of three disaster response programs. The three programs are the Critical Infrastructure Response Initiative, the Infrastructure Security Professional Advisory Network, and The Infrastructure Security Partnership. It is appropriate and necessary for individual engineers and technical societies such as ASCE to evaluate contributing factors to disasters and propose changes in the approach and techniques of engineering when appropriate. It is unethical for engineers not to profit from this new knowledge and determine aspects of their work that may have contributed to the disaster. Not doing so in effect allows others to profit by making the same errors or oversights in the future. This is a clear example of not protecting the public's wellbeing.

Civil Engineers work with the built environment. The reality that our living, and profit, is made from working with this built environment is not changed if the circumstances of the work are due to a disaster. Thus it is ethical to profit from engineering work arising from disasters. Moreover, offering specialized knowledge and skill at no charge in immediate disaster response enhances the image of the engineering profession and accordingly advocates the ASCE Code of Ethics. Profit, in the form of either dollars in the pocket, warm feelings in our hearts, or approval in the public arena, must be done in a manner that protects the safety, health, and wellbeing of the public. This ethical profit provides recovery from the disaster and enhances society.