

Ethical Dilemma 1

Shadyvale, a picturesque town in upstate New England, is having water problems. Three years ago an engineering consultant issued a report that stated, among other things, that the existing water main in Shadyvale was generally in good condition but was extremely old. Further, the water main is no longer large enough for all of the properties served. Since that time, the Town Selectmen have been trying to secure the funds needed to replace the old main with a new main of larger diameter, but they still cannot afford to do so.

However, the state department of transportation (DOT) is planning a highway reconstruction project in Shadyvale. Warren, a senior planning and programming engineer, is the senior DOT engineer responsible for this project. Although he now lives in the Capitol City, Warren was born and raised in a small village not far from Shadyvale, next door to his boyhood friend, Earnest "Red" Anderson. With a twinge of nostalgia and fond memories of a more peaceful time, Warren confidently delegates the project to one of his subordinates, Dianne, a young engineer intern about to sit for the P.E. exam.

Dianne is well liked, highly competent, and by all indications will go far in the department. As per standard practice, Dianne initiates the design layout for the Shadyvale project to avoid conflicts with the existing utilities, including the old water main. She understands that state DOT policy unambiguously requires that only unavoidable utility conflicts will be paid for as part of highway projects, and that other utility work is to be considered as a betterment that must be paid for by the local municipality. This is quite fresh on her mind, since due to a downturn in the state's economy, several layoffs have occurred in the state government, and recent memos have repeatedly emphasized fiscal belt-tightening.

With the design at about 30% completion, Dianne submits a set of drawings to Warren for his review and comment. She also recommends a site visit to observe the route, tie down several details, and resolve various design issues. On the appointed morning, Warren and Dianne secure a state vehicle and make the very pleasant drive to Shadyvale. The stress of the city fades with each mile as they drive through some of the most picturesque scenery in the state.

"I'll definitely have to bring the wife back in September to enjoy the foliage," muses Warren to himself as they drive into town. Shops, restaurants, and even the local garage still have that old-town feel. As expected, it is a wonderful day in the field, and Dianne busily gathers the information she needs to take the drawings to the next level. In the meantime, Warren takes the opportunity to explore the town. To his pleasant surprise, he learns that his friend, Red Anderson, still lives in Shadyvale, and in fact is the senior town selectman.

Upon learning of Warren's being in Shadyvale, Red invites Warren and Dianne to lunch at one of the local cafes. In addition to catching up on old times, Red recounts Shadyvale's water main problem and how the town just sees no way to get together the kind of money needed for such a project. Dianne is well aware of the location of this water main—she knows Warren is too—but she made a conscious decision to design around it. Neither of them says anything, not wanting to spoil such a friendly visit. After a good meal, good conversation, and plans for Warren and Red to get together in the near future, Warren and Dianne depart Shadyvale.

On the way back to department headquarters, Dianne comments to Warren about how, in view of their conversation with Red, she feels disappointed that she must align the new closed drainage system for this project on the opposite side of the road from the old water main. The facts are, were the proposed drainage system to impact the existing water main, it could be dealt with simply as an added share to the engineer's estimate for the town's cost, and Shadyvale would only be responsible for the difference in price between the size of the now-impacted existing water main and the proposed larger size (about \$25,000), rather than for all of the water main work (over \$350,000). "It's just too bad," she sighed.

Warren had been silent, listening to Dianne's comments and line of reasoning. After she finished her thought, just as they were pulling into DOT headquarters, Warren looked directly at Dianne and stated in an odd sort of way, "Yes, the citizens of Shadyvale are really fine people, and they deserve the best the state DOT can offer. I want you to do a really thorough job on the layout, and I'll back you 100 percent." Then, as they were getting out of the car, Warren added, "By the way, Dianne, you had mentioned that you were going to send me a reference form for your P.E. license. Please get that to me and I'll complete it right away."

It is now the next morning. Dianne is at her desk, looking at the Shadyvale drawings. It seems obvious to her based on Warren's clandestine remark that he wants her to change the design so that Shadyvale's old water main is impacted, thus requiring the state DOT to bear most of the cost of replacing it. This could be justified easily enough, and no subsequent reviewer would question the issue if Warren signs off on this as he says he will. After all, it is not like Warren is asking her to embezzle funds for personal use or anything. But Dianne knows this action is not consistent with DOT policy. A voice inside screams, "What about your ethics?" Immediately another voice replies, "What about your P.E. license recommendation from Warren?" Yet another pipes up, "What about the deserving citizens of Shadyvale?" And on it goes.

How should Dianne proceed with this matter?

Alternatives to Consider:

1. Go along to get along, compliantly. Dianne should do what Warren wants—not rock the boat. She is getting her marching orders from Warren, she is under his direct supervision, and she should embrace this opportunity to learn from him how to handle these types of situations.
2. Go along to get along, cautiously. Dianne should follow Warren's apparent hint and design the reconstruction project so that the water line is replaced. If she feels that Warren cannot be trusted, she should keep records of conversations, meetings, and review comments by him.
3. Share the wealth, generously. Adding the water main to the highway project is a "win-win" for everyone involved. The increase in the state project costs are negligible while building considerable community goodwill. Shadyvale will obtain plenty of clean water at an affordable cost, Warren will fulfill his sense of hometown obligation, and Dianne will receive the favorable P.E. recommendation she seeks. It is, after all, the responsibility of a professional engineer to look beyond policies and seek the best solution to every problem.
4. Take refuge in ambiguity, innocently. Dianne should proceed to develop the plans as per her understanding of DOT policy, pretending to have not picked up on Warren's subtle "hint" to move the water line. In her transmittal memo to Warren, Dianne should take pains to point out how she has complied with his request to be very thorough in her design work on this project. This puts the issue squarely in Warren's court.
5. Straddle the fence, technically. Dianne is not a decision maker, but she does have the opportunity to prepare and present two plans. One plan should follow the letter of the DOT directive and the second should follow a "cost-share" approach to include replacement of the water main. Since Warren seems very interested in influencing this project, offer him the opportunity to recommend the project to be sent forward.
6. Straddle the fence, politically. Don't let policy stand in the way of common sense. Since Shadyvale will benefit if the design is prepared in a certain way, there may be someone from the selectmen who has influence in certain circles and could convince someone on the DOT board

to grant a variance to the policy in this case. Maybe the selectmen could ante up funds that would increase the town's share of the water line replacement cost which would justify the policy variance. Dianne should consult with Warren on this approach to negotiate a win-win solution and efficient expenditure of public funds.

7. Face the facts, squarely. Dianne should consult with Warren to clarify his intentions. His statement, made as they were getting out of the car, could be interpreted to mean either design in accordance with DOT regulations and policy, or prepare the design to cause replacement of the old water main. If he is indeed asking her to ignore DOT policy, Dianne should talk with Warren about her concerns regarding moving the alignment and explain the reasons that this is a bad idea and try to talk him out of doing this.

8. Agree to disagree, cordially. Dianne should ask to be removed from the project. She should make it clear to Warren that she would not be able in good conscience to do what he has asked, and point out that it is within Warren's prerogative to engineer the alignment change himself or direct someone else to make the alignment change.

9. Adhere to policy, strictly. Dianne has clear guidance from the DOT to minimize all costs to the state. This guidance is fair, causes no real harm to the people of Shadyvale, and does not violate the ASCE Code of Ethics. There is no reason, other than her concern about possibly losing a favorable P.E. recommendation, for Dianne to not follow the DOT directive.

10. Blow the whistle, loudly. Dianne should flatly refuse to change the alignment—Warren is asking her to do something unethical and something that will cost the DOT more than it should. She should simply say she cannot do this and put the alignment in the best location. Further, she should go over Warren's head to his boss and point out that he is encouraging her to violate DOT policy.

Ethical Dilemma 2

Rod Traverse is a civil engineering student at a well-known university in the mid-west. Because he did well in his surveying course during his junior year, he is working for the summer before his senior year for the state Department of Transportation (DOT) on a road construction project 140 miles from his hometown. His duties include working closely with the state's on-site resident engineer, Jim Upwright, and several other state highway construction engineers for the project. Ethel Hicks (known to her friends as "Eth") is Upwright's supervisor at the DOT headquarters and visits the site every couple of weeks to see how the project is progressing.

Every Friday afternoon at about 4:00 p.m., Rod and the DOT engineers get into their cars or trucks to drive home for the weekend. Since he works a good bit of the time reducing survey data and keeping records in the state's construction trailer, Rod has noticed individual foremen from the three separate bridge contractors for the project putting a box or other article in the back of the resident engineer's pickup truck at about 3:30 p.m. on most Fridays. These boxes and articles have included a new set of tires, a mountain bike, a case of Duggan's Dew o'Kirkintilloch Scotch whiskey, and a shotgun.

There are several more bridge structures to be designed and built under another contract for the project. Upwright will be asked to make comments and give recommendations regarding the three bridge contractors presently on the project, if they show interest in obtaining the additional work.

Since Rod's work is part of a summer credit course program at the university, Upwright will also be required to communicate with Rod's advisor at school (Dr. R. E. Serchur) and recommend an appropriate grade for Rod's summer work course.

Under the circumstances, is Rod obligated to say anything about the gifts to anyone, and if so, to whom and when?

Alternatives to Consider:

1. Rod is only a summer hire and should keep his nose out of things that are none of his business. He has heard that things like this happen on some construction projects. The last thing he wants is to jeopardize his chances for a good grade in the summer work course, which could impact his job opportunities the following spring when he graduates.
2. Rod should contact his faculty advisor, R. E. Serchur, over the weekend and ask for his advice about the most appropriate course of action, if any, he should take.
3. Rod should approach one of the bridge contractor foremen to try to clarify the facts of the situation through them, before confronting Upwright (perhaps the items in the pickup truck were intended for charity or maybe they are purchasing items that Upwright wants at a discount and Upwright is reimbursing them for the cost of each item).
4. Rod should send an anonymous letter to Eth Hicks in guise of a taxpayer who frequently observes things on the project, and has noted the apparent transfer of gifts from contractor personnel to a pickup truck with a license plate number that coincides with that of Upwright's pickup. The letter should suggest that these actions appear improper and should be looked into.
5. Rod should discretely inquire of someone in the DOT who is not connected with the project what the policy is with respect to DOT personnel accepting gifts from contractors. If it is against DOT policy, then Rod should blow the whistle to Eth Hicks.
6. Rod should ask Upwright directly about what has transpired with the contractors' foremen and explain that while nothing wrong may be occurring, the appearance of impropriety exists to the casual observer.
7. Rod should approach one of the contractor's foremen and mention how nice it would be to have a Bose Lifestyle 20 sound system to put in his fraternity room during the ensuing college year.
8. Rod should photograph the Friday gifts for a few weeks with dates, times, and the license plate on Upwright's pickup clearly visible. He should show Upwright copies of these photos, emphasizing how practical Rod's summer job is, then suggest that his efforts surely deserve an A grade and a glowing recommendation for his university file.
9. Rod has no control over the situation. He should leave the construction project as soon as possible and take an incomplete in the summer work course, so that he won't be included as part of the situation should anything happen (someone blows the whistle) before the summer has ended.