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Quality Through Plagiarism? or The Dumbing Down of an Industry

by John Jurgens

The trenchless industry is not one of rocket science. It has many components coming together in a balanced approach, bettering the chance of a successful project. What is a successful project? One in which all participating parties win. The owner has good specifications, the process used was a good fit for the problems being addressed and the contractor had clear direction and was able to perform the works properly.

It doesn't always happen like that though. Let me share three examples, which reflect the title of this paper.

Recently a consulting engineer contacted Trenchless Resources International (TRI) requesting specifications for sliplining a 15-in. diameter pipe. His only criteria was that the slipline material be as

close to the inside diameter of the existing pipe as possible. His client, an agency, advised him to contact us for help as they put the project together. As we talked about his project, I learned that it was a storm line on a steep grade and he did not believe capacity was a concern.

At this point he said, "I just need specifications for the work, are all these questions necessary?" My response, "Yes, absolutely! How else can you be sure if the specified item will solve the problem you are addressing?" He said, "I just want to slipline the pipe."

After asking about laterals (building connections) on this pipe, he indicated that he did not believe any existed. "What did the video of the pipe show?"

At this point he said, "Is really all this necessary? I just need specifications to do this project." I realize you just want to get the project done, but knowing about laterals and locations is important, especially if the pipe is in an area you don't want to excavate. These are issues that have to come into play as you determine the most appropriate, cost-efficient rehabilitation method to be used.

"What did the video show?"

He finally admitted that, no, the line had never been televised to his knowledge, again he emphasized that he just wanted specifications and didn't understand why all my questions were necessary.

You see, my fear is that many take specifications and try to make them work for their project, not understanding various items in the specification that make a job successful. (Recently I observed a project in which an agency had taken road specifications and increased the thickness of the concrete street from 8 to 12 in. The person putting the specification together used specifications using items which were specific for an 8-in. thick pavement, calling for saw cutting relief joints 2-in. deep. Others reviewing the bid package prior to bidding did not catch this item. The contractor performed the work per the specification. Now the agency has invested monies in a new street, which is cracking by design.)

I advised the gentleman that I would not be able to furnish him specifications since I didn't know the specifics for the work he needed to get done, suggesting instead of quick specifications, reviewing the site would be more advantages.

Another agency called asking for an opinion of a particular fold-and-form type of process for pipeline rehabilitation. "It's fine; it all depends on what kind of problems you're trying to address." He indicated that he had looked at various processes on the Internet and determined the most appropriate repair based on information he gathered. At this point I asked him if he had televised the pipeline. "No" was his response and then said they didn't have monies in the

budget to both televise the pipes and make the repairs for this year. If they did take the time to televise, they might lose the funding altogether or have to wait to do the work next year.

"How can you utilize a process that you're not even sure will work for your particular problem?" You've indicated infiltration is the issue you're trying to address. What if you have only one joint that's leaking? Perhaps chemical grouting would solve the problem and you would not have to address the full length of the pipe. I said, additionally, the TV inspection is critical because if you use fold-and-form materials it will let you, as well as the contractors bidding the project, know how to charge. Further, the TV inspection will let you know if there's an offset joint, root problems or excessive debris in the pipeline. All of these issues are critical to contractors bidding trenchless projects.

The best example to date, however, was the engineer who put together specifications for 10,000 lf of force main repair using a trenchless process, without cleaning or televising the pipeline. Interesting project, numerous problems.

TRI was founded to ensure positive growth for the trenchless industry. We've worked with many agencies providing field inspection support services after a project has been bid. What commonly occurs is the engineer realizes that the inspector may need assistance and ensuring that what he's seen in the field is being done properly. The problem has been, on occasion, that the agency has specified a process that was not appropriate for the problems they were addressing. The most successful projects have been those in which we were able to have input prior to the bid, ensuring the rehabilitation procedure could perform well for the problem being addressed.

In order to ensure trenchless technology works appropriately for pipeline rehabilitation, it's critical that the pipe be evaluated. Know what the specific problems are. Is it flow capacity or infiltration or structural issues?

CRITICAL ISSUES:

- What site-specific conditions exist to hinder specific processes from being utilized? For example, if pipe bursting, is there enough access to install a pit?
- Where are lateral connections located? Each lateral has to be excavated.
- What type of material is going to be utilized for the new pipe? If HDPE, then we need to allow the material to rest 24 hours prior to lateral connections.
- Does the process require by-pass pumping? If so, does it require by-pass pumping of laterals? How long of a time period is to be utilized for that function?
- There is a difference between trenchless methods and less-trench methods.

An important issue to remember as we look at trenchless pipeline rehabilitation is that this is viewed as an option to dig-and-replace. When we dig and replace existing pipelines we have performance specifications that the pipeline has to meet prior to acceptance by the owner. Criteria may include mandrel proofing, air testing and 11-month inspection criteria. Further, all new materials must meet certain standards. QA/QC departments at pipe manufacturers have specific guidelines of what the material characteristics must be.

How are these addressed in the trenchless marketplace? How do the inspectors know where the guidelines need to be at as these projects are delivered to them ready for installation in the field? Inspector awareness training has been a focus for TRI for the last five years. Engineering groups have also benefited through learning criteria needed to be included in the specifications prior to the project hitting the streets.

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