



Inspection Basics



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— Mike Chapman,
Construction Services Manager,
Arlington, TX



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— David Wynn,
City Engineer,
Burleson, TX

Table 1: Cities Interviewed

City	Number of Inspectors	City Population
Arlington, TX	10	350,000
Burleson, TX	2	27,500
DeSoto, TX	2	40,000
Eules, TX	2	50,000
N. Richland Hills, TX	4	55,000

By Craig Fisher, P.E.
Technical Director

It is often said that the inspector is the public works official's eyes and ears. After interviewing five officials, though, it is obvious that inspectors are more valued for their voice and brains. The overwhelming answer to the question "What are the basics of a good inspection program?" was "Good inspectors!"

Five public works officials in the Dallas / Fort Worth area compromised our panel of experts on the topic. This article summarizes their thoughts on the topic of inspection and shares their institutional knowledge with PVC Pipe News readers.

BACKGROUND

For public works officials, the goal is quality infrastructure with a long design life. Figure 1 conceptualizes the elements involved in meeting this goal with a successful installation.

Technical articles often focus on the challenges the designer faced, the difficulties that the contractor encountered, or the innovative products used to solve a particular problem. Inspection does not receive the same level of coverage, even though it plays an equal role in the triad of a successful installation. Inspection may not be a glamorous topic, but it is essential if a public agency is to deliver quality infrastructure with a long design life.

THE PANEL

Public officials from a variety of cities were interviewed: big cities and small cities, older established cities and younger growing cities. Given the vast differences in the cities interviewed, more variety was expected in their answers. However, regardless of the City they served, the responses of these officials only underscored and reinforced the statements of the others. There was not any ambiguity among them on what makes a good inspection program.

Arlington was the largest city with 96 square miles of land, while Eules was the smallest with 16 square miles of land. Population growth rates varied from 2.1% to 5.3% for the five cities.

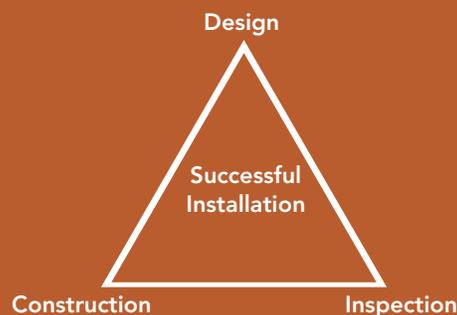


Figure 1: The Elements Of A Successful Installation

The type of work inspected did not vary much. (Another department handled building inspections.) These inspectors covered paving, drainage, water, and sewer regardless of whether it is for a private development or for a public improvement. Mr. Wynn's comment was representative: "Basically, anything that becomes the City's maintenance responsibility is within the purview of these inspectors."

GOOD INSPECTORS

"I can not emphasize enough the importance of the people. A good crew is the key to a good program. Without good people, you can not be successful," says Mr. Barton.

Saying that a good inspection program depends on good inspectors may seem to be a statement of the obvious, but it is not. The subtlety arises from what a City does to find the right personality during the interview process and what that City does to develop that innate ability.

HIRING AND TRAINING

The Cities discussed the traits they look for during the interview: a good communicator, an effective listener, and someone who has a demonstrated ability to work well with a wide range of people.

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Training was also routinely mentioned. This acknowledges that good inspectors are not only born but also made. It is not enough to have the same traits as a good inspector, but those traits have to be developed into the many skills that the competent inspector draws upon daily.

While training itself was a constant, the training provider was not. Training was supplied through many sources: college extension programs, professional organizations, government agencies, and suppliers. Other training techniques were to team-up a new inspector with an experienced inspector or to start the new inspector on simpler projects and gradually assign them more and more complicated projects to inspect.

AUTHORITY AND RESPONSIBILITY

Another feature that quality inspection programs shared was to give their inspectors the authority to make decisions in the field and handle issues as they arise. In the words of Mr. Chapman: "We create an atmosphere of project responsibility, where the inspector is given the freedom to make decisions. Mistakes are inevitable whether or not the inspector was given that authority. When a mistake happens, we learn from it and support the guy that had to make the tough call. We don't berate them." Contractors appreciate this approach even though they may not always like the decision the inspector makes. "For a contractor, time is money," says Mr. Shumac. "Given the choice, the contractor would prefer a good decision quickly rather than a great decision slowly. When there is a change, the contractor wants a decision fast and wants to be able to adjust his schedule accordingly," continues Mr. Shumac.

OPEN LINES OF COMMUNICATION

For inspectors, words are the coin of the realm. The effective inspection program turns a chaotic mob of words into a well-trained army that marches where it needs to go quickly and efficiently.

In this area, the inspector is given a lot of support by management. In most cases, the inspector is the first and last point of contact. When the inspector needs input, he passes that request on. Once receiving the input, the inspector relays that information back to the person requesting the information - typically to the contractor or citizen.

Open lines of communications help everyone: the contractor, the inspector, the City, and the citizen. Communication strategies were multi-pronged, to say the least. Websites, public meetings, letters, construction signs, and door hangers were some of the ways the City helped keep the lines of communications open with their citizens. To keep the contractor informed, there were a few rituals observed: standard specifications, weekly meetings, pre-construction meetings, emergency phone numbers, and the dreaded public works contract.

Above all, the most important communication was the face-to-face conversations between inspector and contractor or inspector and citizen. "We encourage our inspectors to not only hear but to listen; we ask them to try to understand the question and the other person's perspective," emphasizes Mr. Barker.

TECHNOLOGY

Technology had its place in a good inspection program. It was considered a tool to help the inspector more efficiently do his job. As with many other professions, the cell phone has become indispensable to the inspector and has made his job much easier. The most interesting technology application, though, came from the City of North Richland Hills. "Our inspectors have laptops, which they use for their daily logs instead of books. They can store that information electronically and download it everyday. It is similar to the set-up that our police officers have. There is a built-in desk with a power source, and the inspector can take notes as things are going on in the field," comments Mr. Barton.

SUMMARY

The key message these public officials sent was to hire the right personality and provide training. The qualities that make a top-notch inspector were an effective communicator with extensive knowledge on proper construction practices and materials. These officials also stressed that the hallmarks of a good program are inspectors who are empowered to deal with issues as they occur in the field. Problems are addressed quickly, which helps to keep projects on schedule and on budget. Poor programs require too many issues to be run up the chain-of-command. This results in delays, hard feelings, and scheduling nightmares.



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