# Lining up the inspections of

Good collection system practices require regular inspections and ongoing maintenance. Recording the condition of assets requires a standard set of terms, procedures, and ratings. The Pipeline Assessment & Certification Program (PACP) helps fill this need.

The Defect Detective series, supplied by the National Association of Sewer Service Companies, provides an introduction to PACP and offers the opportunity to put your defect detective skills to the test.

This photo shows a structural defect that looks like some sort of pipe chiropractor might need to fix. Examine the photo and then use your Defect Detective skills to diagnose what is going on.

- What is the best code to describe for this defect? Should it include a modifier?
- Why did you choose to use a modifier?
- Does this defect affect the functionality of the pipe?
- Should you use the "Joint" column of the PACP form when coding this defect?
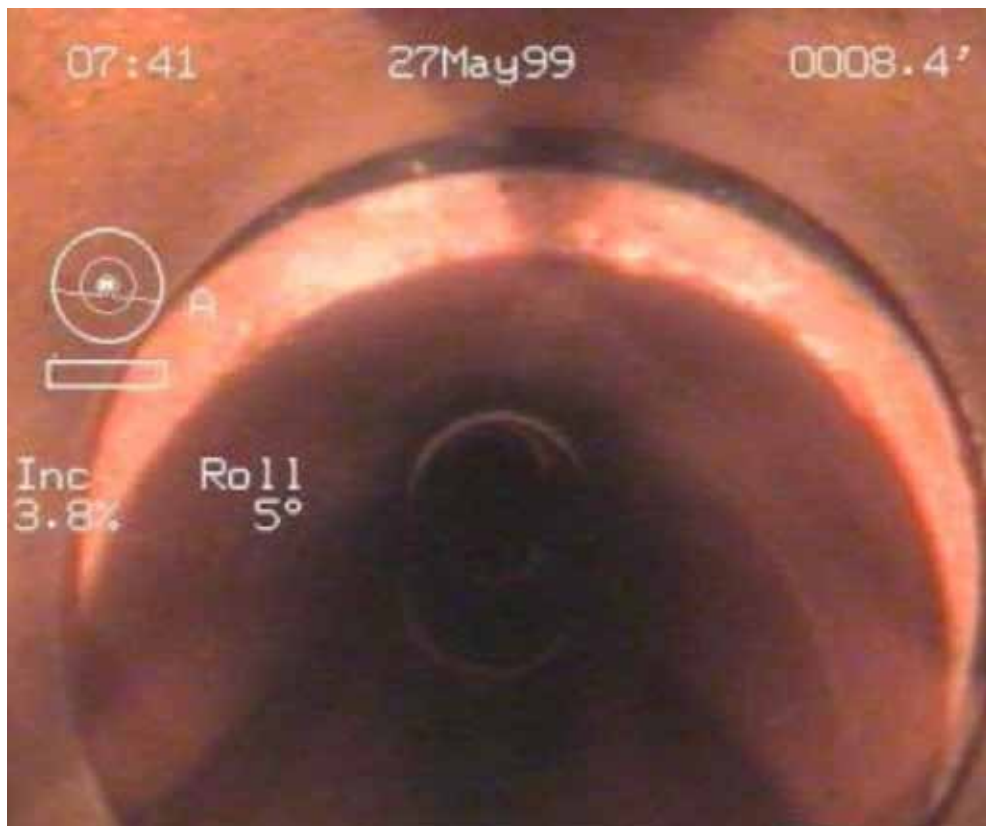


## Decoding the October Defect Detective

The October installment of Defect Detective, titled "Rooting out the problem," posed several questions regarding the photo at right. See how the experts decoded this section of pipe.

**What is the value (percentage of cross-sectional area loss to the nearest 5%) associated with this defect?**
This defect leads to about a 20% loss in cross-sectional area of the pipe. One way to estimate this is to envision the pipe divided into 4 pizza slices of 25% each and compare it to the area of the roots. (In this case we are estimating slightly less than 25%, or 20%.)

**Code the operation and maintenance defect.** In PACP, this would be noted with code RMJ – which stand for Roots Medium Joint – from 7 o'clock to 5 o'clock. RMJ is a mass of roots (greater than or equal to 5% up to 50%).

**Would you describe this as a continuous defect (3 out of 4 joints)?**
Yes. Looking further down the pipe, you can see roots intruding at the next two joints.



**What are the rehabilitation options for this defect?**
The goal is to remove the roots and restore the full pipe capacity. Several options exist: chemical root control, jet with a rotational nozzle (water only), and jet with a root saw or wire brushes. Use of a chain flail, knocker, or scraper is not recommended because this segment is vitrified clay pipe, and this type of aggressive cleaning device may cause damage.