Understanding the miscellaneous shape/size change code

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 ((NASSCO; Marriottsville, Md.), provides an introduction to PACP and offers the opportunity to put your defect detective skills to the test.

Tanya Stephens

This installment focuses on the proper use of the Miscellaneous Shape/Size Change Code (MSC). This change code applies when the sewer changes shape or dimension. (The shape and size of the sewer observed at the beginning of the survey is recorded in the header of the PACP form.)

When a change in size is encountered, enter the new height in the Value column under the subheading "Dimension-1st"; enter the new width in the Value column under the subheading "Dimension-2nd." In a circular pipe, a change in diameter is recorded only in the "Value-Dimension-1st" cell.

Should the overall shape of the sewer change, use the code MSC and add details of the change in the remarks cell. A list of shape codes can be found in Appendix E of NASSCO's PACP Manual version 7.0 or higher.

Although it is common practice to place a manhole where there is a change in grade, alignment, size, and at all junctions, there are other instances where a change in shape or size can be observed. These instances include newly constructed sewer extensions, downstream sewer relief, reconstructed sections to accommodate underground trains and pedestrian tunnels, and changes in pipe slope to ensure proper depth below grade.

The MSC code also is used in Lateral Assessment & Certification Program (LACP). Although special fittings such as a reducer or downspout adapters are not included in LACP as fitting codes, a size or shape change shall be noted as in PACP.

Tanya Stephens is a NASSCO PACP, MACP, and LACP Trainer at TDS Consulting (Toronto, Ontario, Canada).

Test your skills

1. If pipe dimensions change because of a defect such as deformation, should it be coded as MSC with the remaining cross-section height noted in the 1st dimension column and the remaining cross-section width noted in the 2nd dimension column?

2. How should the change shown in Photograph A be coded?

3. How should the change shown in Photograph B be coded?
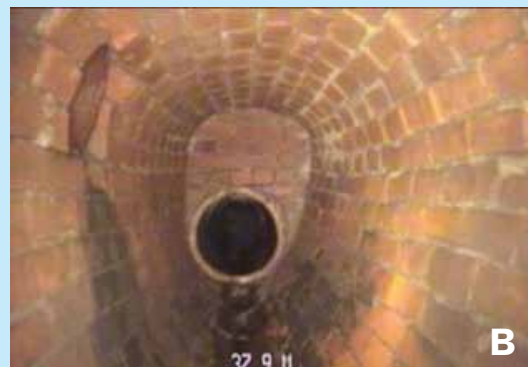
Decoding the Defective Detective in the May WE&T issue

1. What should be entered in Box A?
The operator should enter FH3 for Fracture Hinge 3 because a total of three indications are in view, and, at the 12 o'clock position, a fracture (a defect with a visible opening) is present.

2. What should be entered in Box B and Box C?
The operator should enter 9 in Box B, and 3 in Box C, because the defect starts at the 9 o'clock position and ends at 3 o'clock position.

3. Which of the three stages would the best describe the defect pictured?
Stage 2 would best describe this defect.

4. In a hinge defect with three visible indications, if there is only one fracture visible, with the other two as cracks, should the defects be coded as Fracture Hinge or Crack Hinge?
Fracture Hinge (FH) – If *any* of multiple indications at the defect location are fractures, then the correct code is Fracture Hinge (FH).