



# INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N642  
Indianapolis, Indiana 46204

PHONE: (317) 232-6776  
FAX: (317) 233-4929

**Michael R. Pence, Governor**  
**Brandye L. Hendrickson,**  
**Commissioner**

## Bridge Inspection Memorandum No. 16-07

**TO:** All Inspection Personnel, and Consultants

**FROM:** /s/Merril Dougherty  
Merril Dougherty  
Bridge Inspection Manager  
Bridge Division

**DATE:** June 3, 2016

**SUBJECT:** Revisions to the BIAS MAD tab – Added Bridge Culvert Geometry

**EFFECTIVE:** Immediately

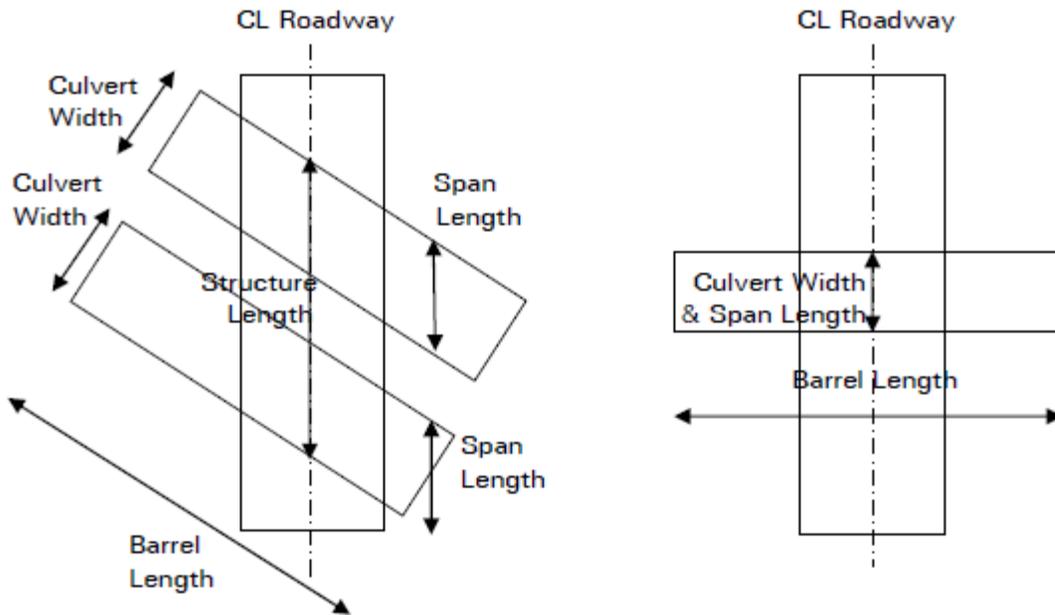
The revisions to the *Bridge Inspection Application System (BIAS)* are necessary to provide additional geometry data on the opening and length of these bridge structures to better program repairs and replacement, as well as determining the hydraulic opening of these structures. This data will be collected and added to BIAS during Routine Inspections.

The following sections geometry items have been added:

### Bridge Culvert - Barrel Length:

The Barrel Length is the length of the pipe/box/structure that water will flow through, from the headwall to headwall or end of pipe to end of pipe. Data for this field will be collected in feet and decimal feet, with the format being xxx.x. Data for non-culvert type bridges should be coded as: 000.0. Bridge Culverts that have a Barrel Length greater than 999.9 feet should use this value, but a note should be added in the Executive Summary as to its actual length.

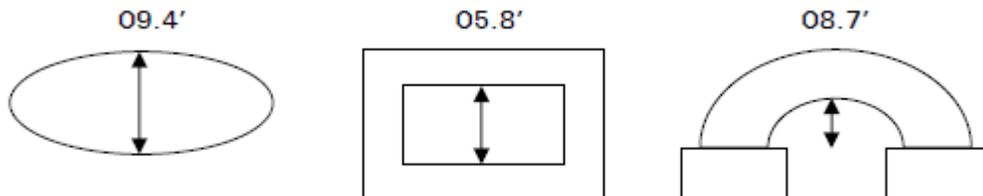
See figures below for Barrel Length information:



**Bridge Culvert - Height:**

The Height is the largest vertical dimension inside a pipe/box/structure. However for Bridge Culverts with varying construction types, the value to record should be the minimum of the largest construction types. For instance if a concrete box has been widened with metal pipes, the value recorded should be the smaller value of the maximum value of the box and the pipes. For structures without a constructed bottom, the distance to the top of the footing or the normal channel bottom can be used. Data for this field will be collected in feet and decimal feet, with the format being xx.x. Data for non-culvert type bridges should be coded as: 00.0. Bridge Culverts that have a Height greater than 99.9 feet should use this value, but a note should be added in the Executive Summary as to its actual length.

See figures below for Culvert Height information:



**Bridge Culvert - Width:**

The Width is the widest horizontal dimension inside a pipe/box/structure. However for Bridge Culverts with varying construction types, the value to record should be the minimum of the largest construction types. For instance if a

concrete box has been widened with metal pipes, the value recorded should be the smaller value of the maximum value of the box and the pipes. This measurement should be taken perpendicular to the orientation of the structure (Barrel Length). Data for this field will be collected in feet and decimal feet, with the format being xx.x. Data for non-culvert type bridges should be coded as: 00.0. Bridge Culverts that have a Width greater than 99.9 feet should use this value, but a note should be added in the Executive Summary as to its actual width.

See figures below for Culvert Width information:

