

## **Closed & Temporary Bridges 2012**

**ODOT County Bridge Programs**

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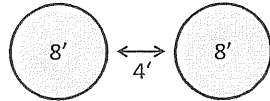
**& Bruce Martin**

### **FHWA Coding Guide Definition Of A Bridge**

- The National Bridge Inspection Standards defines a bridge as: A structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes;
- It may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

### Example Of Multiple Pipe Dimensioning

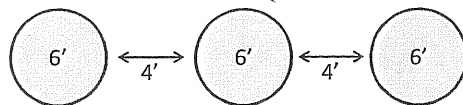
- 8-ft. diameter C.G.M.P. (corrugated galvanized metal pipe)



- The space between pipes can not be more than the radius ( $\frac{1}{2}$  diameter) of the pipe to be continuously measured. You would have 20-ft. if the space between measured 4-ft. This is measured from outside of pipe to outside of pipe. This would be considered bridge length

### Example Of Multiple Pipe Dimensioning

- This would not be considered bridge length since the spacing between pipes is more than the radius of the pipes installed. The pipes are 6-ft. C.G.M.P. with spacing between measured at 4-ft. 4-ft. > the radius of 3-ft. which disqualifies this as a bridge length structure.



### **ODOT Definitions Of “Closed” And “Temporary” Bridge Structures**

- “K” (Closed) is a bridge that is closed to traffic. This includes vehicular and pedestrian traffic.
- All safety considerations should be met such as proper signing of the closure and a permanent barrier that will not allow traffic to use the closed bridge. The public should be informed of any detour route information as needed.

### **ODOT Definitions Of “Closed” And “Temporary” Bridge Structures**

- “E” (Temporary) Open, temporary structure in place to carry legal loads while an original structure is closed and waiting replacement or rehabilitation.
- This would include undersized multiple pipes in place of a failing structure that has been removed.

### **ODOT Definitions Of “Closed” And “Temporary” Bridge Structures**

- “Any bridge which has been continuously closed or temporary for the past 6 or more years should be removed from the national bridge inventory data base unless the bridge owner has Current plans to replace or repair the structure.”
- “Also, any bridge which is currently closed or temporary should be inspected on a 24 month cycle.” If needed a special inspection can be done for any bridge that experiences circumstances like flood, traffic damage or scour. The interval can be changed to meet safety considerations of the bridge and would vary from the 24 month rule.
- ODOT considers the 8 year plan as “Current”

### **Do I Have To Remove A Long Term Temporary Bridge From The Inventory?**

- Yes & No. A bridge that has been in service as a temporary for an extended period of time can be reissued a new NBI# and then it would be considered a permanent bridge. This would allow the old bridge status to be removed from the inventory and the new bridge would take it's place.
- A new NBI# would only be issued for a temporary bridge that meets the 20-ft. criteria. Any bridge shorter than this would be removed from the inventory.

## **Structurally Deficient And Functionally Obsolete Bridges**

- “Structurally Deficient” a bridge can be inadequate to carry legal loads, whether caused by obsolete design standards, structural deterioration or waterway inadequacy. These may include load posted as well as those closed to traffic.
- “Functionally Obsolete” a bridge inadequate to properly accommodate traffic can be due to clearances, approach alignments, structural condition or waterway adequacy. This include narrow bridges.
- Both “SD” and “FO” are determined from field inspection findings. Also any bridge built or undergoing a major rehabilitation within 10 years cannot have either “SD” or “FO” designations.

## **Structurally Deficient Bridges**

- “SD” bridges are a major concern to the FHWA and ODOT at this time.
- As of now Oklahoma has many “Off System” “SD” bridges and we would like to see the number reduced if at all possible.
- Temporary bridges hold the “SD” status from the original bridge and if they are removed from the inventory then the “SD” number will be reduced.

### **Misconceptions On Funding For Bridge Replacements**

- It has been thought if a bridge was removed from the inventory it would be nearly impossible to gain funding for a replacement. In fact it is no more troublesome than gaining funding for a new bridge.
- The simple truth is that it costs money to keep these temporary and closed structures in the inventory system. The costs involved in the inspection and paperwork process add up over time. There is time involved for the county, consultants, ODOT & the FHWA. This money could be used for other purposes.