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OCT 11 2018

CRYSTAL GRADY
BOONE COUNTY CLERK
M.A. D.C.

ORDINANCE NO. 2018-37

BE IT ENACTED BY THE QUORUM COURT OF THE COUNTY OF BOONE, STATE OF ARKANSAS,
AN ORDINANCE TO BE ENTITLED:

CODES AND STANDARDS FOR VENTED LOW WATER CROSSINGS.

**NOW THEREFORE, BE IT ORDAINED BY THE QUORUM COURT OF THE COUNTY OF BOONE,
STATE OF ARKANSAS;**

SECTION 1. In January 2008, Boone County started using a design for building Vented Low Water Crossings that has become the codes and standards for all low water crossings built in Boone County since that date. This design has proved to fit all applications to which it has been applied, regardless of the size of the waterway or channels.

CODES AND STANDARD FOR VENTED LOW WATER CROSSINGS

Each crossing is built on a 2'0" wide x 2'0" high and length footers installed on each side of structure, (some variations may be necessary) 2'0" x 4'0" length footers are constructed on each end of structure. This is to keep flood waters from getting underneath and creating hollows or cavities within the structure.

Weep holes are constructed using 3" inch PVC pipe on downstream side of structure. This is to allow any water that may accumulate inside to escape. These weep holes are installed between culverts.

Culvert size and placement are crucial in constructing these structures. Width and depth of channel both play a role in determining what size culvert and how many are placed on the footers at water level. (Caution is taken to make sure that culverts are not placed too low or too high.)

A 2'0" x 2'0" length footer is constructed at the lower edge of a 4'0" x 6" thick length x length flow pad that is constructed on the lower side of crossing to prevent erosion when flood waters rise over the crossing which helps to prevent undermining of the lower side of the structure.

Rip-rap (large clean rock) is used for fill between footers and stacked to within 6" of the top of the culverts. Approximately 6" of non-spec gravel is used to seal and cap the top side of the rock.

3 to 1 slopes are established on upper and lower sides of structure. These are capped with 6" (inches) of steel reinforced concrete. 3 to 1 slopes allow flood waters to travel more freely with less resistance and blockage during flood stages.

The structure is designed with a low center stationed in the center of the channel which allows the water to stay in the middle of the channel during flood stages.

8" thick x length and width of steel reinforced concrete is used to finish top of structure.

A 6" thick sloped pad 3 to 1, is added to the edge of the outflow pad with a catch riser to help stop gravel wash and undermining of slab in situations where solid rock is too deep to attach slab.

The diameter of the CMP's on any newly installed vented low water crossing will be determined by an H&H study of the site.

If the sub-grade of the low water crossing is damaged, the County will design and replace the crossing with a vented low water crossing accordance with adopted codes and standards.

These codes, standards and specifications have been adopted and used by the Boone County Road Department for building low water structures since January 2008 forward.

SECTION 2. If any provision or section of this Ordinance is held invalid by a Court of competent jurisdiction, such invalidity shall not affect other provisions and section of this Ordinance, and to such end the provisions and sections of this Ordinance are declared to be severable.

SECTION 3. This Ordinance herein enacted is an Appropriation Ordinance and therefore, it is effective immediately.

DATE PASSED: 10-9-18 SUBMITTED BY: JUSTICE ROBERTS

DATE APPROVED: 10-11-18 APPROVED: [Signature]
COUNTY JUDGE

ATTEST: [Signature]
COUNTY CLERK
Deputy

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