

Kansas Administrative Regulations

Kansas Department of Agriculture—Division of Water Resources

Article 40.—Design of Earth Dams

5-40-44. Embankment.

(a) The minimum top width of an embankment shall be determined from the following table:

Height of dam (in feet)	Minimum top width (in feet)
less than 20	10
20 through 24.9	12
25 through 39.9	14
40 or greater	15

(b) The top of the dam shall be sloped toward the reservoir, unless special measures are taken to adequately control erosion on the downstream side of the dam.

(c) The height of each lift in the embankment and cutoff trench shall be no more than nine inches, unless the dam is designed as a zoned fill. If the dam is designed as a zoned fill, the lifts outside the cutoff trench and most impermeable zone may be larger if geotechnical data is provided that shows that adequate compaction can be achieved using lifts in excess of nine inches.

(d) The material in each low-impact embankment and cutoff trench shall be brought to a moisture content that can be compacted in accordance with this subsection. Each application for a low-impact dam shall contain specifications requiring adequate compaction. The minimum compaction required shall be achieved by one of the following:

(1) Using a sheepfoot roller until the feet cease to push into the fill material and start to walk across the compacted surface;

(2) using the controlled movement of rubber-tired earth-moving equipment so that every point on the surface of each lift is traversed by not less than one tread track of the equipment; or

(3) using another method that achieves the compaction required by this subsection.

(e) Each high-impact dam shall include the following in its specifications for earth placement in the embankment and cutoff trench:

(1) The minimum and maximum allowable levels of soil moisture;

(2) the compaction standards;

(3) a provision for testing the soils placed during construction; and

(4) a means to ensure that the compaction standards approved by the chief engineer are met during construction.

(f) In addition to the requirements of subsections (d) and (e), the specifications for hand-compacted fill around each conduit in the embankment shall meet the following requirements:

(1) Set a maximum lift of one-third the diameter of the outside of the conduit. However, no lift shall exceed four inches; and

(2) specify a minimum distance around the conduit for hand compaction.

(Authorized by and implementing K.S.A. 2006 Supp. 82a-303a; effective May 18, 2007.)

***** Authenticated Kansas Administrative Regulation *****