

PROJECT TITLE:

## 180th and Lone Elm Drainage Improvements



<b>Project Location:</b>	Johnson County, Kansas
<b>Scope:</b>	Engineering Services
<b>Self-Performed Work:</b>	Drainage Improvements, Surveying
<b>Construction Cost:</b>	\$100,000
<b>Project Start Date:</b>	January 2006
<b>BHC RHODES Client:</b>	Johnson County Department of Infrastructure and Transportation
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<b>Project Owner:</b>	Johnson County Department of Infrastructure and Transportation
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The intersection of 180th and Lone Elm needed design improvements to keep the homes from flooding and public streets from overtopping in a residential development. The improvements were completed by utilizing SMAC funds for Johnson County. BHC RHODES provided design engineering services for the improvements to the intersection and residential area. The improvements focused mainly on drainage issues such as widening the existing channel between homes, construction of a stormwater detention basin upstream of the development to control flows, replace cross-road culverts, and improve driveway culverts and drainage ditches in front of homes. BHC RHODES used hydrologic analysis and HEC-RAS modeling to evaluate the design alternatives.