



OLD 3-36" New Replace 6-54"

# North Dakota Department of Transportation

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Director

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## SARGENT COUNTY WATER RESOURCE DISTRICT HIGHWAY DESIGN INQUIRIES

In response to your email dated October 2, regarding questions about two legal drains that cross ND Highway 13 in Sargent County. We have reviewed the areas in question and offer the following comments.

Drain 11 is located 12.5 miles west of the city of Gwinner. This site has been a concern for the traveling public due to concerns of water overtopping the roadway during significant rain events. The Department added drainage capacity at this location to minimize the frequency of overtopping. Our analysis at this location shows a drainage area of approximately 55,000 acres and the 25 year design discharge of 621 cubic feet per second. Since there were three existing crossings at this location, the Department decided to install multiple culverts at each location. Previously, each location had one 36" diameter culvert. Each location was upgraded this year to have double 54" culverts. This upgrade was consistent with North Dakota Stream Crossing Standards.

Drain 7 is located 1.5 miles east of the city of Milnor. This box culvert was built in 1949 and extended in 1977. We do not have any plans to upgrade this location at this time.

Please feel free to contact me if you need anything further.

BOB WALTON – FARGO DISTRICT ENGINEER

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c: Brad Pfeifer, Hydraulics Section of NDDOT Bridge Division