SURFICIAL MATERIAL GEOLOGIC MAP OF THE ALTON 7.5' QUADRANGLE ST. CHARLES COUNTY, MISSOURI

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PHYSIOGRAPHY

The Missouri portion of the Alton 7.5' quadrangle includes part of the large floodplain between the Missouri and Mississippi rivers. The floodplain is greater than four miles wide in this area with only a small portion residing on this quadrangle. The quadrangle lies within the Dissected Till Plains Section of the Central Lowland Province of the Interior Plains Physiographic Division. The lowest recorded elevation of slightly less than 410 feet mean sea level (msl) occurs along the edge of the Mississippi River. The highest elevation on the Missouri portions is just slightly more than 430 msl in the southwest corner quadrangle. Total relief on the Missouri portion of the Alton 7.5' quadrangle is approximately 25 feet.

DESCRIPTION OF MAP UNITS

AF — **ARTIFICIAL FILL –** This unit comprises artificially emplaced fill material and is composed of a mixture of heterogeneous clay, silt, sand and gravel in various quantities. This unit may reach 40 feet in total thickness and comprises the material for highway and railroad beds, and waste water treatment facility fill. This artificial fill has typically been placed on undisturbed materials.

Qcly — **QUATERNARY CLAY-CAPPED ALLUVIUM –** This unit has been deposited by the Missouri and Mississippi rivers. The approximate upper 15 feet of these deposits are composed predominantly of clay with variable amounts of silt and organic material. The material residing below the clay is predominantly sand to the top of bedrock. In the Missouri portion of the map in St. Charles County, the thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface here, resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

Qslt — **QUATERNARY SILT-CAPPED ALLUVIUM –** This unit has been deposited by the Missouri and Mississippi rivers. The approximate upper 15 feet of these deposits are composed predominantly of silt with variable amounts of clay and organic material. The material residing below the silt is predominantly sand to the top of bedrock. In the Missouri portion of the map in St. Charles County, the thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface, resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

Qsnd — **QUATERNARY ALLUVIAL SAND –** This unit has been deposited by the Missouri and Mississippi rivers. The composition of this unit is predominantly sand with variable amounts of clay, silt and organic material in the upper 15 feet. In the Missouri portion of the map in St. Charles County, the thickness of this unit reaches 120 feet between the large rivers. The water table is approximately 15 feet below ground surface here resulting in an interval of saturated sand greater than 100 feet thick. This unit is included in the cross section as Quaternary alluvium.

A — A' Lines locate the placement of the cross section with end line symbols

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