ATTACHMENT C

GREENVIEW ESTATES SUBDIVISON

Soils and Drainage Report

HGM #106119
May 14, 2019

Soils

Pre-developed land use is agricultural in nature. According to the "Soil Survey of Pottawattamie County, Iowa" conducted by the Natural Resources Conservation Service and United States Department of Agriculture, the area is composed mainly of two types of soil: Ida silt loam (70%) and Napier silt loam (30%). Ida silt loam has a liquid limit of 35 to 50 percent and a plasticity index of 10 to 25. It is classified under hydrologic soil group "B" and is not subject to flooding. Monona silt loam has a moderate permeability with rates of 0.6 to 2.0 in/hr. Napier silt loam has a liquid limit ranging from 25 to 40 percent and a plasticity index of 8 to 20. It is classified under hydrologic soil group "B" and is not subject to flooding. Napier silt loam has a moderate permeability with rates of 0.6 to 2.0 in/hr.

Further geotechnical analysis is required to identify any necessary measures to ensure soil stability for construction and to prevent soil erosion.

Drainage

The proposed subdivision is in FEMA Flood Zone X – Area of Minimal Flood Hazard and has no floodway or fringe encroachment.

The proposed subdivision will allow for the detention and release of storm water in accordance with SUDAS and City of Council Bluffs design standards. This detention plan will collect and store storm water up to the 100-year event from the subdivision and release it at an overall rate not to exceed the existing 5-year flow.

The proposed 18 townhomes and adjacent street account for 4.55 acres of the total site. The storm water from the townhomes will be controlled by a storm sewer system in the street. This storm water will be outlet into a detention basin adjacent to State Orchard Road (Eastern Hills Drive) and then released into the proposed storm sewer system on Eastern Hills Drive.

The remaining 15+ acres will be developed as residential/commercial as a future phase and it is proposed that storm water will be controlled by a detention basin at the south end of the property.

This report was prepared by John E. Jorgensen, PE, ***HGM Associates Inc.***