

ATTACHMENT D

WHISPERING OAKS – PH III & IV

Preliminary Plan

Drainage Report

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Summary

The Whispering Oaks – Phase III & IV development is the next phase of proposed single family lots at the existing Whispering Oaks development in Council Bluffs, Iowa. The proposed Phases III & IV consist of approximately 102 new residential lots on areas that were formerly agricultural ground. The Phase III portion of the development drains to the south and will be directed to a new stormwater management pond prior to discharging to the existing drainage swale. This drainage swale exits the south end of the property at a culvert beneath Greenview Road. The Phase IV portion of the development generally drains to the northwest and will be directed to the existing stormwater management system which was constructed during the Whispering Oaks Phase I & II project.

Detention Ponds

Phase III consists of approximately 12.4 acres of new single family units and public right-of-way. Stormwater runoff from Phase III will be directed to a new detention pond prior to being released downstream into the existing drainage channel. The detention pond will be designed to provide stormwater quality treatment and to reduce onsite peak runoff to 5-year storm pre-developed conditions in accordance with SUDAS and City of Council Bluffs requirements.

Offsite stormwater runoff from approximately 21.7 acres to the east of Whispering Oaks drains beneath Franklin Avenue and through Whispering Oaks Phase III. This offsite flow will pass through the proposed detention pond and will be considered bypass flow when determining the peak release rate allowed from the proposed detention pond. Based on preliminary stormwater calculations and modeling of the detention pond, approximately 5,500 CY of storage is required in the new pond.

Phase IV consists of approximately 28 acres of new single family units and public right-of-way. The stormwater management system constructed during the Whispering Oaks Phase I & II improvements consists of multiple detention ponds and berms which were designed to accommodate stormwater runoff from Phase IV. The existing system was designed to limit stormwater runoff from the developed 100-year storm event to not exceed the predeveloped 10-year storm event release rate as documented in the approved Whispering Oaks Project Drainage Report dated August 19, 2016.

A drainage map showing drainage boundaries for Phase III, IV and the offsite flow has been included with the preliminary plan set of drawings.