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The Pointe At Wolf Creek Resort

Storm Water Runoff

October 12, 2021

This memo is intended to summarize the existing versus proposed storm water runoff from the area on and around parcel 220160034. The site is south of Worldmark Phase 2 and north of the Wolf Creek Golf Course.

Predeveloped Storm Water Runoff

The existing site consists of about 3 acres of vegetation / dense grasses and scattered trees along. The site generally slopes from northeast to southwest. The existing storm water runoff from the site drains on to the golf course and eventually to the existing secondary water pond located about 200 ft south of the property line. Much of the existing runoff flows over the grass and eventually into the pond. There is an existing ditch along a portion of the southwest property line that diverts some of the existing runoff to a culvert that also drains directly into the pond. The existing predeveloped storm water runoff from the site drains to the existing pond.

In addition to the existing storm water runoff from the proposed site, areas from Worldmark also runoff through storm drain pipes and into the existing pond. These existing pipes are routed through a box with a measuring device that allows the Wolf Creek Water and Sewer Improvement District (WCWSID) to quantify the amount of water added to the pond which in turn allows WCWSID to utilize more water from their nearby well for culinary use. WCWSID would like to route as much runoff as possible through the measuring device to maximize their use of the well. The intent of the proposed storm drain improvements is to send all runoff collected to the measuring device which drains to the pond.

Proposed Storm Water Runoff

The proposed 3 acre site will be improved with 3 buildings and associated parking lot and sidewalk. The proposed site will remain about 32% landscape area. Drainage from the site will be collected by the proposed storm drain system of pipes and boxes. The storm drain system includes a proposed detention system and control structure to restrict the release of storm water at a rate of 0.1 cfs per acre. The proposed release rate is 0.3 cfs. The storm water release is restricted by orifice plates on the control structures. This restricted release rate is intended to mimic the predeveloped release rate currently leaving the site and flowing into the pond. As stated above the intent of the proposed storm drain improvements is to capture runoff from the site and route it through the WCWSID measuring device. In order to that, about 425 feet of storm drain piping is being installed from the proposed site to the measuring device. This will allow WCWSID to quantify the amount of water contributed to the pond for secondary water use. The proposed detention system is sized to restrict runoff to match the existing runoff rate.

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