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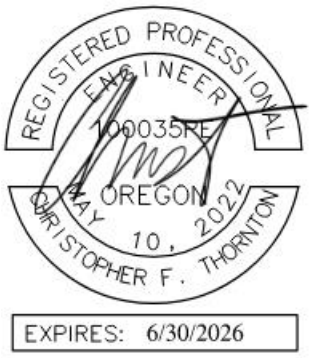
MEMORANDUM



DATE: 06/05/2025
BY: Christopher Thornton, P.E.
SUBJECT: Stormwater Utility Narrative
PROJECT: Popeyes Woodburn – Woodburn, OR
PROJECT NO.: A24112.10

This memorandum is to outline the stormwater requirements for The Popeyes Woodburn project located on Mt Hood Ave, west of Highway 99E/214 in Woodburn, Oregon. The existing site is 46,546 SF and is fully developed as part of a complex of commercial buildings. The subject property includes the shared access for this multi-lot commercial complex onto Mt Hood Avenue, with associated vehicle and pedestrian circulation and utilities. The site drains to existing catch basins onsite and flows offsite to the existing private detention system for the cluster of lots for the complex. There are accompanying CCR's for the parcels regarding the shared common area elements. After the required Right of Way dedication, the site will be 44,970 SF in size. The existing site mostly contains asphalt drive aisles, parking, and sidewalk, yielding a total existing impervious area after the right of way dedication of 42,681 SF and 2,289 SF pervious area.

The proposed improvements include constructing a new 2,561 SF building, with 20,556 SF of modified impervious area for associated pedestrian and vehicular circulation around the proposed building. Since the site serves as the shared access, 18,235 SF of the existing impervious area will remain post-construction. The project results in a total impervious area of 38,791 SF post-construction, which is a reduction of 3,890 SF of impervious from the existing conditions. Therefore, there is a reduction of the total impervious area onsite. The roof runoff from the new building area will be directed to downspouts on the building and will connect to the existing onsite storm system nearby. Existing catch basins and storm pipes under the new building footprint will be relocated and will connect to the existing onsite storm. The majority of the existing catch basins onsite will remain untouched during and after construction. Onsite conveyance pipe sizing will be designed to capture and convey runoff for the 25-year design storm per the City of Woodburn Public Works Design and Construction Standards. Pipe sizing will be modelled with Manning's Equation below

$$(Q = \frac{0.463 D^{8/3} S^{1/2}}{n})$$

where D is pipe diameter in feet, S is pipe slope in feet/feet, and n is the Manning's Coefficient and is based on the pipe material. Because the site has an existing collection system and the proposed project greatly reduces the amount of impervious area flowing to the detention system, there are no anticipated effects to the existing stormwater system.

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