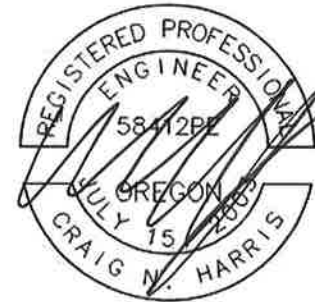


MEMORANDUM

DATE: 07/07/2022
BY: Craig Harris, P.E.
SUBJECT: Stormwater Utility Narrative
PROJECT: Emergency Vet Clinic – Tualatin, OR
PROJECT NO.: A22108.10



EXPIRES: 6/30/2023

This memorandum is to outline the stormwater requirements for the Emergency Vet Clinic project located at 8250 SW Tonka St in Tualatin, Oregon. The project consists of the construction of additional parking, vehicle and pedestrian circulation, expansion of the existing building, and associated utilities. The existing site is 54,946 SF, which contains a two-story building with associated parking and landscaping. Within the subject site, there is a total of 40,003 SF existing impervious and 14,943 SF existing pervious area. Post construction, out of the existing impervious area, 35,198 SF will remain, 4,805 SF will be modified, 1,319 SF additional impervious is proposed and 883 SF will be removed. The total impervious area post construction will be 40,439 SF and the total pervious area will be 14,507 SF. The required water quality treatment area is the new impervious plus three times the modified impervious area, which yields 15,734 SF required treatment area for this project. The existing swale located along the northern property line is currently 124 LF long, with a 0.8% longitudinal slope, 6' bottom width, and 4:1 side slopes. It provides treatment for the existing site. The existing swale meets the minimum requirements per CWS Standards and will treat the entire property post construction. The swale yields a residence time of 98 minutes and is sized to treat the additional impervious runoff. This project is small in size (less than 12,000 SF of new or modified impervious area), is in Development Class "Developed". The stormwater ultimately discharges into Nyberg Creek which is a "Low" risk level receiving body of water. Therefore, this project is Category 1 and Peak Flow Matching Detention criteria was used per CWS Standards to match the post-developed flows to the pre-existing conditions for the 2-year, 5-year, and 10-year storm events per Section 4.08.6.c of CWS R&O 19-22. In order to detain the 25-year storm per Hedges Creek Subbasin Master Plan, the swale needs to be expanded approximately twice as wide. The existing area drain in the swale will be replaced with a flow control structure to meet peak flow and detention requirements. New roof runoff will be directed to downspouts and conveyed to the swale. Parking lot surfacing drains north west to an existing catch basin prior to entering the swale. Onsite facilities and conveyance pipes will be designed to capture and convey runoff for the 25-year design storm per CWS Standards. A comprehensive stormwater report will be included in the next submittal.