



MEMORANDUM

SUBJECT: Grass Lake Nature Park
Trail Construction

TO: Community Planning and Development

FROM: Neal Glassburn, Project Engineer II

DATE: June 11, 2020

Grass Lake Nature Park is comprised of multiple parcels totaling approximately 218.2 acres and is located in the Residential Low Impact (RLI) zoning designation. The project site parcels have frontage on Kaiser Road, Harrison Avenue, Cooper Point Road, and 14th Avenue. Louise Lake is located on the northwestern corner of the site and overflows to the northwest through storm pipe under Kaiser Road. The park is vastly covered in dense native vegetation and contains multiple, soft-surface nature trails. Wetlands are located throughout the site and portions are designated as Shoreline-Urban Conservancy.

Project Description:

The proposed trail project will consist of the construction of approximately 5,700 linear feet of hard surface trail extending from Kaiser Road to Harrison Avenue. Approximately 5,300 linear feet of 10-foot wide paved trail with 2-foot shoulders each side and 400 linear feet of 12-foot wide raised boardwalk at the wetland crossing location will be constructed. A new parking lot will be provided at the Kaiser Road trailhead location. The parking lot will provide personal vehicle and bus parking, a bicycle rack and trail head kiosk. Frontage improvements along Kaiser Road will be provided to meet the Major Collector roadway section. None of the proposed facilities will require connection to any utility services.

Transportation:

A new parking lot will be constructed at the Kaiser Road trailhead location and will provide 10 new parking stalls, 1 ADA parking stall and parallel bus parking. Kaiser Road half street frontage improvements to meet the Major Collector designation will include a 10-foot wide lane, 5-foot wide bike lane, 0.5-foot curb, 8-foot wide planter strip and 6-foot wide sidewalk. New concrete driveway approaches will be constructed at the two access points to the 16-foot wide one-way drivelane. A new ADA ramp and trail access will be provided on the south side of the new frontage improvements. The driveway ramp for the northern exit will be aligned with Fairfield Court on the west side of Kaiser Road. No new frontage improvements are proposed at any other public road frontage locations.

Trail Design:

The proposed trail layout will be designed to meet the WSDOT roadway design geometrics, City of Olympia EDDS Chapter 4 Trail design standards and the United States Access Board ADA design for Outdoor Areas. A design speed of 20 miles per hour will be used for the main trail geometry which is consistent with other City of Olympia trails. The trail will consist of a 10-foot wide paved trail with 2-foot wide gravel shoulders on both sides. A minimum 10-foot vertical clearance will be maintained. Trail slopes will be designed to maintain a less than 5 percent slope where feasible. In areas between 5 and 8.5 percent slopes necessary resting landings will be provided at 200-foot intervals as outlined in the US Access Board for outdoor areas manual.

The proposed wetland crossing will be achieved by constructing an approximately 400-foot long by 12-foot wide wood boardwalk. The boardwalk will consist of pin pile footings and a wood pile and beam structure to support the wood deck and railings.

Stormwater:

The proposed hard surfaces will be cross sloped and stormwater runoff will be dispersed to the heavily vegetated natural drainage courses onsite. We do not anticipate the need for treatment or detention stormwater facilities since a majority of the site will remain in a forested condition. A stormwater analysis will be conducted for each of the onsite basins and will be described in the project drainage report. A construction SWPPP will be provided with the final construction documents.

Critical Areas:

The site contains multiple wetlands and water bodies that are classified as Urban Conservancy and will require review and permitting from additional agencies. The trail alignment will be designed to minimize impacts to the critical areas and minimize the removal of the large trees and dense vegetation. The Park, Arts and Recreation design team will contract with an environmental specialist for the delineation, mitigation and permitting of any critical areas impacted by the proposed trail and boardwalk construction.

Forestry:

A professional forestry specialist will be contracted to provide a tree and vegetation assessment and assist with the trail alignment to endure the proposed construction will not harm the existing tree root structures or encroach on any protected species.

Questions:

Will the trails wetland buffer reduction exempt or will a shoreline variance be required for this project?