West Side Trail

Fall City Metropolitan Park District (FCMPD) *Otak # 32649*

Technical Memorandum #8

11241 willows road ne
suite 200
redmond, wa 98052
phone (425) 822-4446
fax (425) 827-9577

Subject: Geotechnical Investigation

By: Mark Cole, P.E. Date: August 22, 2017

This design memorandum presents criteria, recommendations, and other relevant information for project consideration on the above referenced subject.

Acknowledgement:

Significant discussion and agency comments during review are incorporated and reflected by date-revision, when shown. Information presented herein represents final concurrence and direction on referenced subject.	***Otak*** Mark Cole, PE, Proj.Mgr.	*initials*
	F.C.M.P.D. Kirk Harris, Commissioner	*initials*

Introduction

The purpose of this design memorandum is to highlight key findings, design considerations, and recommendations from a geotechnical investigation to explore subsurface soil and groundwater conditions in support of preliminary design for the proposed West Side Trail project. This investigation, performed by GeoEngineers, is summarized in report titled "Preliminary Geotechnical Engineering Services, West Side Trail (SR 202 Corridor) Project, Fall City, Washington, dated August 18, 2017. The full draft report, included as an attachment, provides a completed detailed summary of the field exploration; laboratory soils testing; and recommendations.

Highlight Summary of Investigation, Findings, and Recommendations

- Subsurface soil and groundwater conditions were evaluated by completing field exploration consisting of 6 hand augers to depths ranging from 1.25 to 4 feet below the surface.

- Subsurface soils consist of fill overlying alluvial fan deposits.
  - Fill consist of silty sand with varying amounts of gravel and organic matter was encountered in all the hand augers and typically extended to depths of about 1.5 to 2 feet below surface (except HA-5 that extended to 3.5 feet below surface).
  - Alluvial fan deposits generally consist of silty fine sand with varying amounts of gravel or fine to coarse gravel with varying amounts of silt and sand were encountered below the fill layer in all hand augers except HA-2. Occasional cobbles (and possibly boulders) should be anticipated in the alluvial fan deposits.

- Groundwater was not observed in the shallow explorations. The regional groundwater table is expected to be below the proposed site improvements, with isolated perched groundwater zones above silty soil deposits.

- Recommended that subgrade preparation consisting of striping existing vegetation/top soil, proof-rolling with heavily loaded rubber-tired equipment, and compacting to at least 95 percent of the maximum dry density. Silty sand fill and the alluvial fan deposits are classified as "Type D" and require 1.5H:1V (horizontal to vertical) slopes.

- A minimum pavement section of 2-inches of Hot Mix Asphalt (HMA) over 6-inches of base rock is recommended.

- Preliminary infiltration rates, based on D10 values developed from grain size analysis in accordance with WSDOT Highway Runoff manual, for low impact design of storm drainage facilities were estimated to range between 0.6 and 3.3 inches/hour.

- Existing soils are moisture sensitive and have a high susceptibility to erosion when disturbed. It is recommended that site preparation occur during periods of dry weather and temporary erosion control measures should be used during construction and may also be necessary to reduce sediment transport until vegetation is established or permanent surfacing applied.

Exhibit ___

Significant Discussion Topics during Agency (Client) Memorandum Review

The below summary represent relevant discussion occurring during agency memorandum review in validating presented information and incorporating memorandum changes to reflect final agency direction.

[To be completed at time of final concurrence]