Lower Columbia Engineering
58640 McNulty Way
St. Helens, OR 97051
503.366.0399

# Technical Memorandum

**To:** City of Vernonia Staff & Grace Coffey, AICP
**From:** Lower Columbia Engineering, Vernonia City Engineer
**Date:** February 15th, 2023
**Subject:** City of Vernonia Public Improvements to the "Boot"
**Project:** Urban Growth Boundary Extension

This memo has been written to summarize the anticipated ability to connect roadway access and public utilities (water, sanitary sewer, and stormwater) to an area outside of city limits known as the "Boot". Further analysis is underway to determine the legitimacy of incorporating the "Boot" into the City's Urban Growth Boundary (UGB). Public access and utilities are a key matter in this determination.

The "Boot" is an area that currently is surrounded to the East, South, and West by areas already within city limits and either already developed or currently under development. Southeast of the "Boot" is the location of the recently developed school; the remaining areas are developed and under developed for varying levels of residences. Existing access and utilities are already established within these surrounding areas given the existing and new developments. Commonly these improvements are established within the Right-of-Ways (ROW's) with mainlines being established in Riverside Dr, Texas Ave, and Louisiana Ave. One of the City's water mainlines feeding the eastern portion of town is located north of the "Boot" in Mellinger Rd.

The following review elements are specific expectations for developing the "Boot":

Water System

As described above, the City's water system is established on all sides of the "Boot". It is anticipated that direct access would be established from the Mellinger Rd and Texas Ave mainlines with additional connection possibilities from Louisiana Ave and Riverside Dr. The eastern portion of the town is supplied with water by the Mellinger Rd and Bridge St mainlines, respectively North and South of the "Boot". Were a watermain connection to be established through the "Boot" it would provide another means for equalizing water system pressures within the two delivery mains. Similarly, connections to the Louisiana Ave and/or Riverside Dr systems would also provide beneficial pressure equalization in the water system. The large demand of the school and the surrounding residences would be positively affected by these possible improvements.

Sanitary Sewer

Given existing topography and sewer infrastructure, the northern portion of the "Boot" is expected to be serviced by the Riverside Dr sewer main and the southern portion of the "Boot" would be serviced by the Texas Ave sewer main. Additional planning and engineering will be necessary to determine sewer demands and infrastructure improvements to service the additional developments in the "Boot". However, existing sewer infrastructure is already in place and will likely require minimal renovation to accompany the "Boot" as compared to the possibility of developing completely new infrastructure. Additionally, preliminary review indicates that sewer connections could be accomplished without any additional force main construction.

Stormwater

Similar to the sewer system, any stormwater system associated with the "Boot" would be accommodated by an extension of the existing gravity system from the south and incorporating storm system improvements to the east, feeding to the Nehalem River. Currently, the Louisiana Ave area does not have an established stormwater system. Were improvements developed in the "Boot" it would provide a feasible and expedited manner for dealing with the Louisiana Ave stormwater runoff.

Roadway Access

The Mellinger Rd, Texas Ave, Riverside Dr, and Louisiana Ave ROW's all provide feasible routes for roadway access to future developments in the "Boot" given their existing improved roads. A mix of main avenues and side streets would likely be developed in the "Boot" connecting to existing ROW's that currently have no reasonable route for extension. It is expected that the additional access connections will reduce some roadway bottlenecking by alleviating traffic demand on current road mains or side streets which have no alternative connection point. Similarly, the additional roadways that would be created with the development of the "Boot" would provide alternative means for emergency access or evacuation of the areas that currently have limited means for emergency traffic.

Given the criteria analyzed above, it is expected that developing utility connections and public access to the "Boot" will be feasible and in some ways beneficial to the public infrastructure. Let us know if additional information or help is necessary with the assessment of including the "Boot" in the City's Urban Growth Boundary.

Andrew Niemi, PE
City Engineer
2/15/2023