

October 9, 2024

Tony Doran, Engineering Associate
City of Tualatin – Engineering Division
18880 SW Martinazzi Ave., Tualatin, OR 97062



RE: Public Utility Availability report for Tonquin Commerce Center Annexation

Dear Tony,

The purpose of this letter is to demonstrate how the proposed project can connect to the existing public sanitary and storm sewers and water infrastructure, for purposes of annexation. The 46.06-acre site, that will be annexed to the City of Tualatin, is located north of SW Basalt Creek Road, west of SW Grahams Ferry Road, and south of SW Tonquin Loop and comprises of Tax Lots 3000 of Tax Map 2S134DB; Tax lots 500, 600, 700, of Tax Map 2S134DA; tax lots 100, 200, 300, 450, 500, of Tax Map 2S134DD.

Sanitary Sewer:

The subject site is dependent on the Clean Water Services sanitary sewer pump station being constructed and operational. Currently, CWS has completed a siting study identifying pump station location and conduit system routing, and has engaged a private property owner in land acquisition, required for the pump station site. Per the siting study, the pump station is proposed to be located at the southwest corner of SW Tonquin Rd and SW Tonquin Loop intersection. The proposed CWS pump station development design will provide adequate infrastructure to service the subject site and is scheduled to be available prior to subject's site development completion. Refer to Exhibit A for additional information.

Stormwater:

The subject site slopes north to south, aligning with the stormwater system overview laid out by the City of Tualatin Stormwater Master Plan, dated April 2019. Stormwater will be managed onsite prior to releasing runoff into the existing SW Tonquin Rd and SW Basalt Creek Rd roadside ditches and closed conduit storm systems. The stormwater connection points into the existing street system are proposed to be located at; the southeast and southwest corners of the subject site, north of SW Tonquin Rd, and the southeast corner of the subject site, north of Basalt Creek Rd. Refer to the attached Exhibit A for additional information regarding the stormwater management.

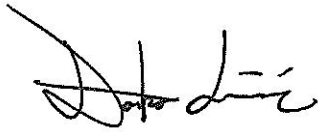
Domestic Water:

There is an existing twelve-inch water main, terminus point located at the southwest corner of Victoria Gardens subdivision, within Graham's Ferry Road, which can be extended within the public right of way to service the subject site. The existing water main will extend south along SW Grahams Ferry Rd, down to SW Tonquin Rd, where it will continue west, to the southwest corner of the subject site. The proposed extension of the water system to the subject site will provide domestic and fire water service and aligns with the future planned construction laid out by the City of Tualatin Water System Master Plan, dated

March 2023. As part of the subject site analysis, the City of Tualatin has provided a water hydraulics analysis which identified a need for Norwood reservoir pump station upgrades to be completed in order to provide fire flow demands needed for the subject site. The updates to the pump station are anticipated to occur in 2026, prior to the subject site development. Refer to the attached Exhibits A & B for additional information regarding the natural slopes, elevations, and proposed service locations to serve the subject site.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC

A handwritten signature in black ink, appearing to read 'Darko Simic', with a stylized flourish at the end.

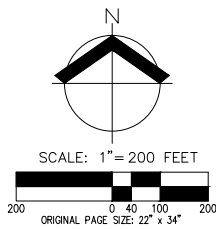
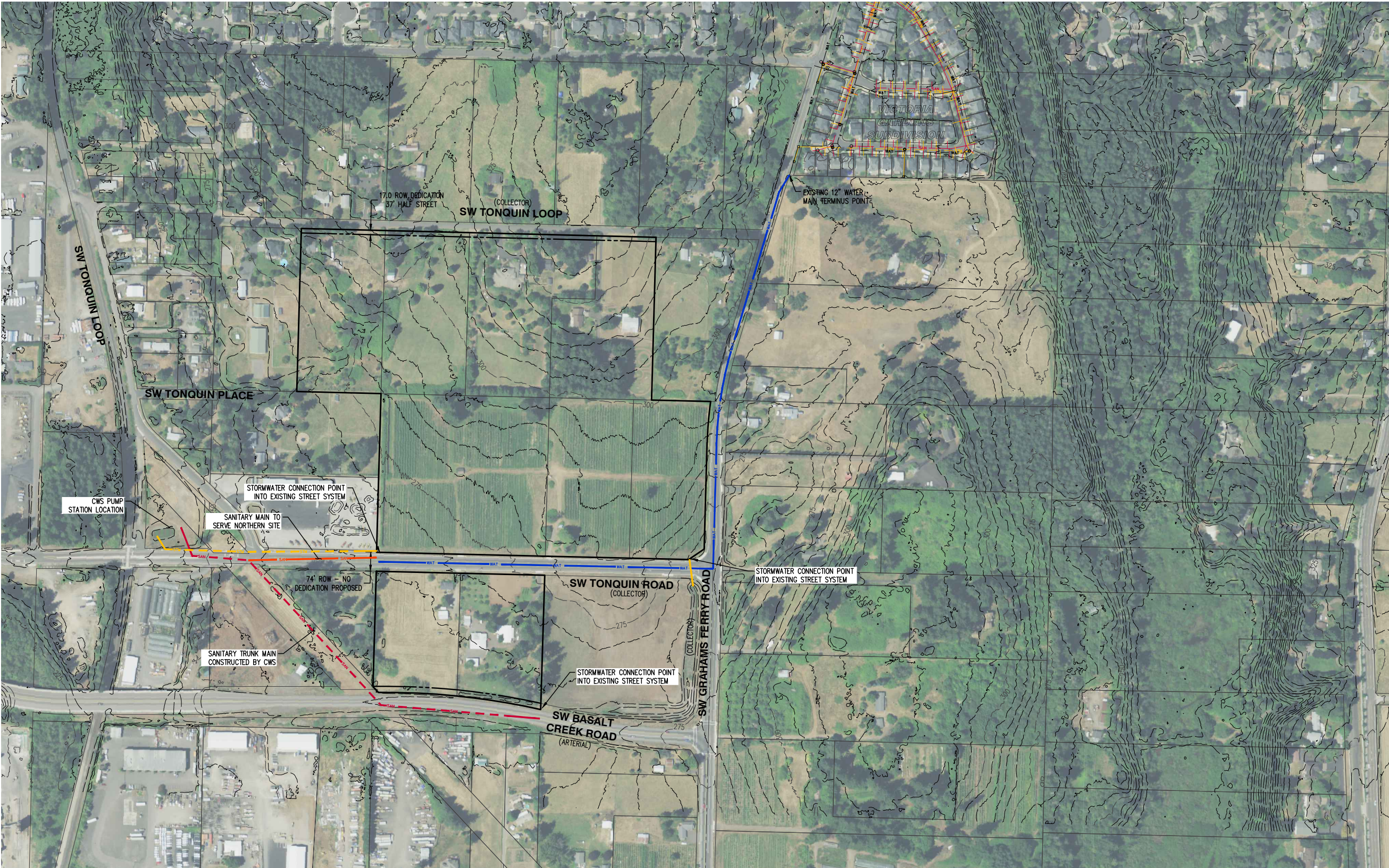
Darko Simic, PE

12965 SW Herman Rd, Suite 100 Tualatin, OR 97062
503-563-6151 | darkos@aks-eng.com

Attachments:

Exhibit A: Existing Public Infrastructure Utility Availability

Exhibit B: Water System Capacity Analysis Technical Memorandum



DATE: 10/08/2024 AKS JOB: 9720

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ENGINEERING • SURVEYING • NATURAL RESOURCES
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EXISTING PUBLIC INFRASTRUCTURE UTILITY AVAILABILITY TONQUIN COMMERCE CENTER

SCHNITZER PROPERTIES
TUALATIN, OR



Technical Memorandum

Date: August 26, 2024

Project: HMW24-0001 – 10795 SW Tonquin Road, Basalt Creek Commerce Center

To: Mr. Tony Doran – Engineering Associate
City of Tualatin – Engineering Division

From: Brian Ginter, PE

Re: Water System Capacity Analysis

Introduction

As requested, this memorandum has been prepared to present the findings of our analysis of the water service to the proposed Basalt Creek Commerce Center, located in the Basalt Creek Planning Area, west of SW Grahams Ferry Road between SW Tonquin Loop and SW Basalt Creek Parkway. This memorandum presents the findings of this analysis for the City's use in determining the water system improvements necessary to meet fire flow and pressure requirements.

Background

The proposed development consists of approximately 580,000 square feet of warehouse and office buildings. The proposed development is located within the City's existing Pressure Zone C, served by the C level pump station and the C level reservoirs at a nominal hydraulic grade of 506 feet above mean sea level (msl).

The City's water system hydraulic model was used to perform a hydraulic analysis of pressure and fire flow performance in the City's water system under maximum day demand conditions with fire flow events evaluated at the site. Extension of Service Level C piping south in Grahams Ferry Road was added in the model to evaluate water service to the proposed development. In addition, two additional system expanding improvements identified in the City's Water System Master Plan (Conсор, March 2023), were considered as part of the ultimate development of the C-level in the Basalt Creek area:

- A. 12-inch diameter C-level transmission main in the proposed Basalt Creek Parkway, extending from Boones Ferry Road to Grahams Ferry Road.
- B. New C-level Pump Station at the City's ASR well site on SW 108th Avenue north of SW Brown Street.

Figure 1 illustrates the development site, adjacent water system infrastructure, and proposed piping. Fire flow was modeled at the intersection of SW Tonquin Road and SW Grahams Ferry Road at the edge of the proposed development area.

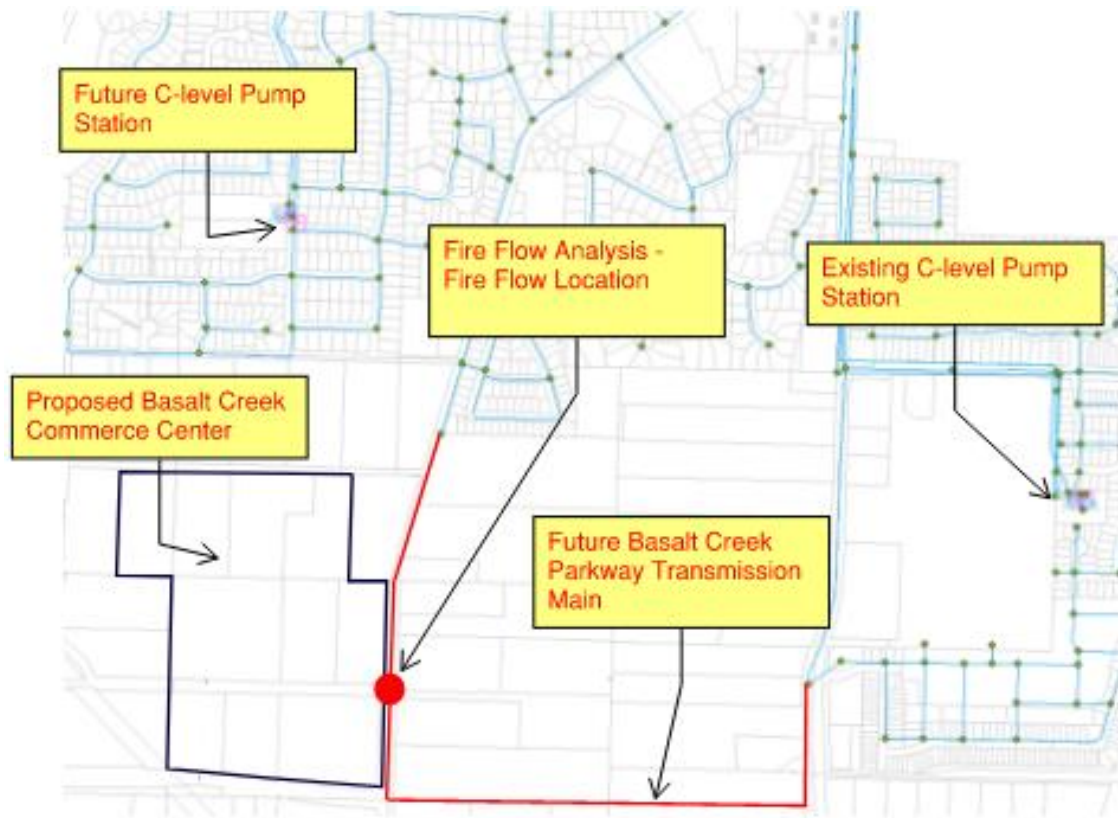


Figure 1. Proposed Development Site and Water System Infrastructure

Analysis and Findings

The hydraulic model was updated as described above and fire flow performance tested at the proposed intersection (approximate location, shown in Figure 1).

A summary of specific model conditions for this analysis is presented below:

Demand Conditions: 2030 Maximum Day Demand

Fire Flow: 2,000 gpm

Physical Condition: Base - Existing facilities plus proposed 12-inch Diameter Grahams Ferry Road Transmission Main Extension to Basalt Creek Parkway

Scenario 1 – Basalt Creek Parkway Extension to SW Boones Ferry Road

Scenario 2 – C-Level Pump Station at ASR Site

Scenario 3 – Scenario 1 and Scenario 2 improvements included

The available fire flow at the identified fire flow test location at the development, with a minimum 25 pounds per square inch (psi) residual pressure within the area influenced by the fire flow in Pressure Zone C are summarized in Table 1 below, for each of the scenarios.

Table 1 | Analysis Results

Scenario	Available Fire Flow at 25 psi System Residual Pressure
Base	1,400 gpm
Scenario 1	2,100 gpm
Scenario 2	2,900 gpm
Scenario 3	>3,000 gpm

Based on the findings of this analysis and a review of overall system improvement needs presented in the Water System Master Plan, planned system improvements in addition to the extension of the Grahams Ferry Road main to the proposed develop are required to serve domestic and fire suppression flows to the proposed development. *If either the Basalt Creek Parkway Transmission Main loop to Boones Ferry Road or the planned C-level pumping improvements at the ASR site (B-level Reservoir and C-level Pump Station), then the required fire suppression flows to serve the proposed development can be met.*

It is the developer's responsibility to size internal (private) fire and domestic mains for adequate service pressure, private hydrants and fire suppression sprinkler systems as these facilities are outside the scope of this analysis.

Please do not hesitate to contact us if you have any questions or comments in this regard. We would be happy to meet with you personally to discuss the findings presented in this memorandum.