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To: [Guo, Shelley](#); [Cheong, Winola](#)
Cc: [Downtown West Project](#)
Subject: Downtown West Infrastructure Review
Date: Tuesday, March 16, 2021 11:03:50 AM
Attachments: [Revised Infrastructure Document - Sewer.pdf](#)

Hi Shelley and Winola,

How are you ladies doing? I'm reviewing Google's responses to our last comments from December. Can you please help with the following and let me know your concerns?

Section 9.2.2 Collection Areas/ Table 9.1:

City Comment: Provide details on parcels not served by district system.

Response: Discussion on parcels that will connect to City system (Table 9.1), which according to Google, will be about 600 units (I'm trying to get more info on parcel type and discharge breakdown from them).

Section 9.2.4.1 Facility Design:

City Comment: Explain how 1-mgd WRF handles the 2.6 mgd discharge.

Response: Discussion on revised unit demand and decrease of project's wastewater production estimates.

Thank you and have a great day!

Vivian

9.2. DISTRICT WASTEWATER COLLECTION SYSTEM

9.2.1. Scope of Service

The district wastewater collection system will serve the majority of the proposed parcels within the development area and will be located within the proposed utilidor system. A small portion of the sanitary sewer system which will provide a discharge connection from the water reuse facility will be located outside of the utilidor and will extend beyond the development boundary, along W San Fernando Street to Almaden Blvd. Refer to Section 9.2.4.3 for additional description of the discharge connection. The Project applicant will be responsible for ownership and maintenance of the onsite district water reuse system and private sanitary sewer collection system.

9.2.2. Collection Areas

The proposed sewer system would collect wastewater from the majority of the Project's proposed development parcels via a private collection network owned by the Project applicant and connected to an onsite district water reuse facility (WRF). See Section 9.2.4 below for additional detail on the WRF. Some development parcels (e.g., Parcel D8) may connect directly to the city's sanitary sewer network as identified in Table 9.1 and Figure 9.3.

Table 9.1: Development Parcels Proposed to Connect to the City's Sanitary Sewer Network

Parcel	Proposed Connection
40 South Montgomery Street	To the existing line in South Montgomery Street
150 South Montgomery Street	To the existing line in Barack Obama Boulevard (formerly South Autumn Street)
Parcels D8, D9, D10, D11, D12, & D13	To the existing line in South Montgomery Street
374 West Santa Clara Street	To the existing line in West Santa Clara Street

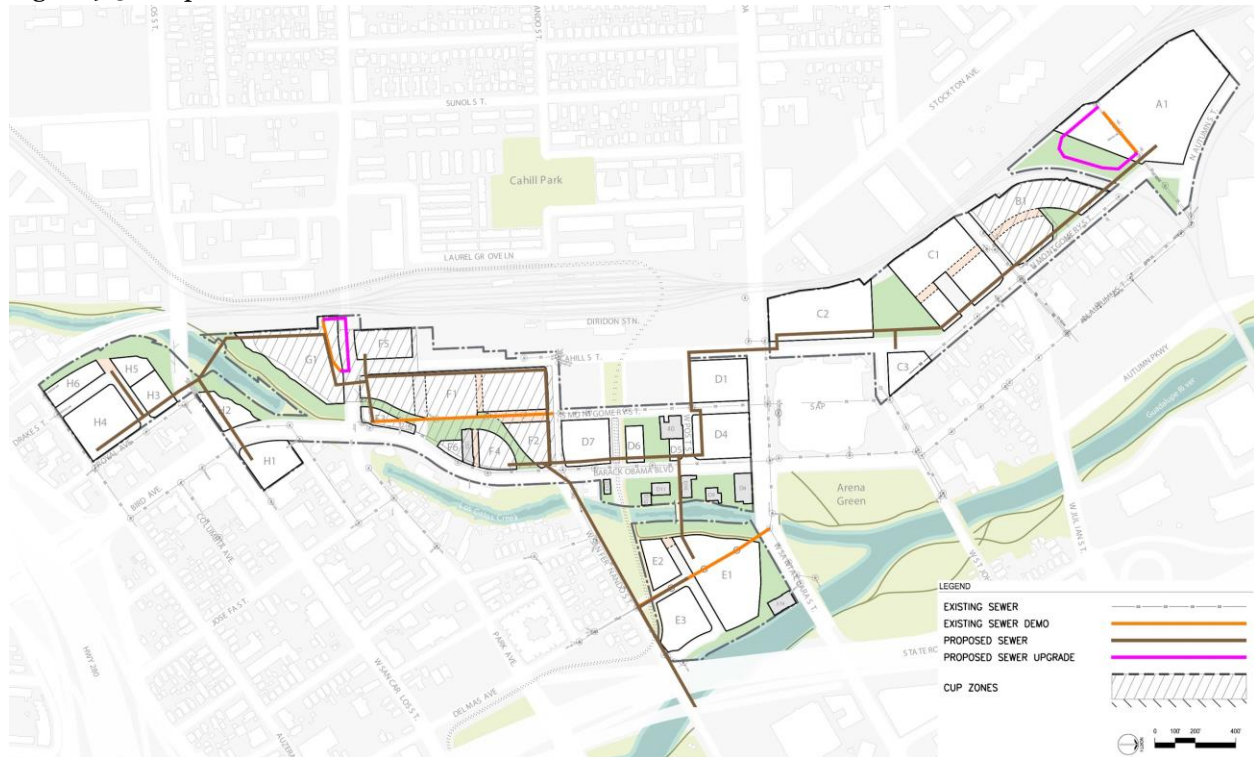
9.2.3. Proposed Low-Pressure Collection System

The proposed design for wastewater collection includes a private, low-pressure sanitary sewer collection network which would be integrated into the proposed utility corridor alignment as shown in Figure 9.3. Sanitary waste would be collected in a small pump station in each building basement. The pump stations would include a collection tank and a pump to feed into a low-pressure force main, routed within the proposed utility corridor. Pumps would be selected to adequately transfer wastewater solids through the network to the WRF.

A low-pressure collection system (also known as a pressure sanitary sewer, PSS) is proposed as it allows for the controlled transfer of sewage in a more efficient footprint than conventional gravity systems. A pressurized system would allow for wastewater to be collected in smaller diameter pipes within the utilidor whereas a gravity system would require that a dedicated trench be constructed with larger diameter pipes to achieve adequate slope for flow. A PSS operates through a sealed system, eliminating leakages (exfiltration) and stormwater inflow and infiltration (I/I) while also reducing odor issues. The pump station wet wells associated with the PSS will be vented as required by CPC to prevent odorous conditions. If needed, air blowers and odor control units (e.g., carbon filters) may be incorporated into the pump station design.

The inclusion of PSS and WRF avoids the upsizing of buried gravity mains, which would be a much larger construction Project and would involve trenching within public roadways. Additionally, a PSS allows for system optimization, as the operator can program the system's operating periods and stagger peak loads. This flexibility could potentially reduce the discharge volume that would be sent to the City.

Figure 9.3. Proposed Wastewater Collection Network



9.2.4. Onsite District Wastewater Treatment and Water Reuse Facilities

9.2.4.1. Facility Design

Up to two private onsite district water reuse facilities (WRFs) are proposed to treat Project-generated wastewater for reuse to meet non-potable demands; where a second WRF would be constructed if the existing Sharks parking lots are not included in the Project. The WRF(s) would meet California Code of Regulations Title 22 disinfected tertiary (unrestricted reuse) recycled water standards through a multi-stage treatment system, including primary treatment, secondary treatment, tertiary filtration, and disinfection. The WRF(s) have been sized to treat up to a maximum wastewater production flow of 1 million gallons per day (MGD). Water that has been tertiary filtered and disinfected would be stored in a non-potable storage tank before being distributed for uses such as water closet and urinal flushing, irrigation, and cooling. Treated non-potable water would be distributed via a pressurized distribution network within the private utilidor.

The Project wastewater flow estimates account for low-flow fixtures, as required by LEED and CalGreen. The unit demand factors associated with these low-flow fixtures are lower than the unit demand factors provided by the City of San José (July 2020) and in San Jose Water's Water Supply Assessment (WSA) (January 2020), resulting in lower projected wastewater flows.

The Project applicant submitted a memorandum to the City and San Jose Water proposing that the unit demands factors be reviewed and adjusted to align with the Project's sustainability commitments (*Sherwood Design Engineers, Technical Memorandum, Downtown West Mixed-Use Project Water Demands, March 18, 2020*). The revised unit demand factors would decrease the Project's estimated total water use, thereby also decreasing the Project's wastewater production estimates. Using the revised unit demand factors, the Project's annual non-potable water demands are projected to be 107 million gallons per year (MGY) and the annual discharges to the City's sanitary sewer are projected to be up to 165 MGY.

9.2.4.2. Treatment Standards

The proposed onsite district WRF(s) would treat wastewater to California Code of Regulations Title 22 disinfected tertiary (unrestricted reuse) recycled water standards. These are the same public health standards met by the recycled water produced by the San José-Santa Clara Regional Wastewater Facility (SJ-SC RWF) and distributed by South Bay Water Recycling (SBWR). The WRFs would be co-located with the mechanical and thermal equipment in the CUP locations outlined in Section 9.4.

The recycled water produced at the WRF(s) will be regulated by the State and meet the same water quality as the SBWR system, which produces disinfected tertiary (unrestricted reuse) recycled water. This level of treatment allows for unrestricted reuse for approved non-potable end uses including spray irrigation. The Project will have the capacity to irrigate public areas (which could include publicly-owned parks and/or privately-owned parks with public access) with recycled water produced at the WRF thereby leaving potable water available for other uses.

9.2.4.3. Discharge Connection

As described above, the private district system would tie into the City's sanitary sewer network to discharge excess wastewater from the water reuse facility and, potentially, for disposal to the City sewer system of residual solids (sludge). This connection would allow the water reuse facility to discharge excess wastewater to the City's sanitary sewer system if there is a lower demand for recycled water or the district system is offline for any reason. These discharges would be governed under an industrial wastewater discharge permit. This arrangement would avoid the need for the Project applicant to permit a treated water discharge to the environment.

Industry standards typically referenced by the State Water Quality Control Board, define 'sludge' as the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially used as soil amendment pursuant to federal and state regulations.

This sanitary sewer discharge connection would connect across Los Gatos Creek via the proposed utility corridor and Guadalupe Creek via the West San Fernando bridge. An existing 33" RCP City sanitary sewer trunk line has been identified running within Almaden Boulevard where a connection is proposed. The point of connection would be determined in coordination with City staff. The discharge infrastructure may require some installation within existing roadways once it exits the proposed utilidor. Discharge infrastructure outside of the proposed utilidor would require an encroachment permit within the ROW.

If a northern WRF is constructed, a second sanitary sewer discharge connection to the City system would be required outside of the proposed utility corridor.