



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Nanci Klein

SUBJECT: SEE BELOW

DATE: March 22, 2021

Approved

Date

03/22/21

SUBJECT: STUDY SESSION ON GOOGLE DOWNTOWN WEST PROPOSED DISTRICT SYSTEMS PROGRAM

PURPOSE OF STUDY SESSION

To provide an update on issues and topics identified and associated with a district system as proposed by Google for its Downtown West project.

OUTCOME OF STUDY SESSION

The Mayor and Councilmembers will understand opportunities and issues associated with the proposed district systems plan and recommended conditions of approval.

BACKGROUND

On December 4, 2018, City Council approved a [Memorandum of Understanding \(MOU\) with Google](#) to guide collaboration on a mixed-use development project moving forward. The MOU outlined guiding principles and shared goals for a mixed-use, transit-oriented development to be proposed by Google. One of the areas of shared interest was sustainability and the opportunities for Google and the City to collaborate on an array of infrastructure including District Systems and the shared use of resources, that could be innovative and exemplary for future development opportunities in the City.

In addition to infrastructure generally required of all projects in San Jose and specific projects identified in the Diridon Infrastructure Plan, Google proposes inclusion of certain infrastructure to solely support its Downtown West development. To meet the obligations of AB900, the project must significantly reduce greenhouse gas (GHG) emissions and other critical

environmental concerns. By containing and controlling the input and output of resources, Google believes its project not only fulfills its commitment under AB900, but also provides a new development model for sustainability and resilience.

Included in Google's proposal for private district systems are:

- Utility corridors ("utilidors") for privately owned district systems, including crossing within the public rights of way
- Electrical distribution system
- Wastewater collection and treatment and recycled water distribution systems
- District heating and cooling systems

As part of its CEQA analysis and initial project proposal, Google also considered an Automated Waste Collection System and the potential for transporting goods and services through the utilidor system. At this time, these are not part of the project under consideration, though they may elect to return to the City and City Council with proposals in the future.

The City currently offers and oversees a variety of utility services, including wastewater treatment at the San José-Santa Clara Regional Wastewater Facility ("RWF"), which has existing capacity to accommodate wastewater treatment for this development; recycled water infrastructure, which could be extended to serve this development; and solid waste services (resulting in a 69% overall waste diversion rate) including recycling collection and back-end processing of all residential garbage to extract organics for compost and collection and processing of commercial garbage, recycling, and organics, in which the organics are anaerobically digested.

Typically, developers construct infrastructure to connect their project to the broader network of City or other utility systems. For example, a developer will construct sewer pipes, including upgrades required for capacity or deficiencies in the City's system, and connect them to the City network that flows to the RWF. Electricity is provided to the City and developers through the PG&E transmission and distribution system. A developer may be required to underground overhead lines within the development area, but the connections of the buildings is to the existing utility, PG&E.

A major component of the Development is a proposed "District Systems" approach is to more efficiently handle at least some of the utility needs of the development. Where feasible, utilities such as electricity, thermal (heating and cooling), wastewater, recycled water, and solid waste flows would be delivered through district-wide infrastructure, rather than individual and building-specific systems.

Through the development of district systems, the project will secure increased environmental performance, increased resilience, higher efficiency, and lower operating costs. One of the primary systems is the microgrid, providing a more resilient microgrid for electric distribution

than currently is possible through PG&E. District Systems create a holistic ecological system that makes the 80 acres more self-sufficient.

Google's Downtown West project proposal includes three primary documents affecting infrastructure: the Downtown West Design Standards and Guidelines (DWDSG), Downtown West Improvement Standards (DWIS) and the [Downtown West Infrastructure Plan](#). The DWDSG establishes objectives, standards, and guidelines for the buildout of the project to ensure well-designed urban spaces and buildings, as well as connections to the necessary infrastructure systems. The DWIS includes specific standards to provide for deviation from and changes to the City's 1992 Standard Specifications and Standard Details which the City will use to review proposed horizontal improvements in the public realm through the subsequent conformance review processes. The DWIS also provides standards and performance guidance for unique elements of the Downtown West project such as utilidors.

The Infrastructure Plan lays out and describes the private systems envisioned by Google to connect buildings within its project area, as well as the public systems (such as streets and above ground systems) that tie directly into the City networks. This document provides the concepts and plans for the District Systems. Within the 80 acres planned for development of Downtown West, Google proposes the construction and use of a central utility plant that distributes electricity and heating and cooling to the Google properties, while collecting and handling sewage from the Google properties. The distributed systems would be interconnected among the central utility plant and the Google properties via a distribution network largely contained with the basement of the Google properties, at specific points there will be crossings in an underground structure called a utilidor, which is further described below.

Google anticipates construction costs of infrastructure that tie to the City systems at nearly \$1 billion. The cost to construct the components of its proposed District Systems is not completely identified at this time but is anticipated to be well in excess of the \$1 billion of infrastructure required of the project. The cost of ongoing maintenance and operation of the district utility system is borne by Google and/or future entities owning and operating the properties and buildings with the district.

ANALYSIS

Each of the systems have unique regulatory or other controlling factors, the overarching topics for consideration by the City fall into three general topic areas: (1) what is regulated, (2) who regulates, (3) how is each of the district systems and the customer/public protected. Specific regulatory requirements and procedures addressing these three topic areas will be included in the Conditions of Approval for the project. As of this writing, Google and City staff have discussed conditioning the vesting tentative subdivision map ("Vesting Tentative Map") to include certain parameters and criteria that must be satisfied in order for Google's final subdivision maps to be approved and, therefore, for construction of any portion of the project, including District Systems.

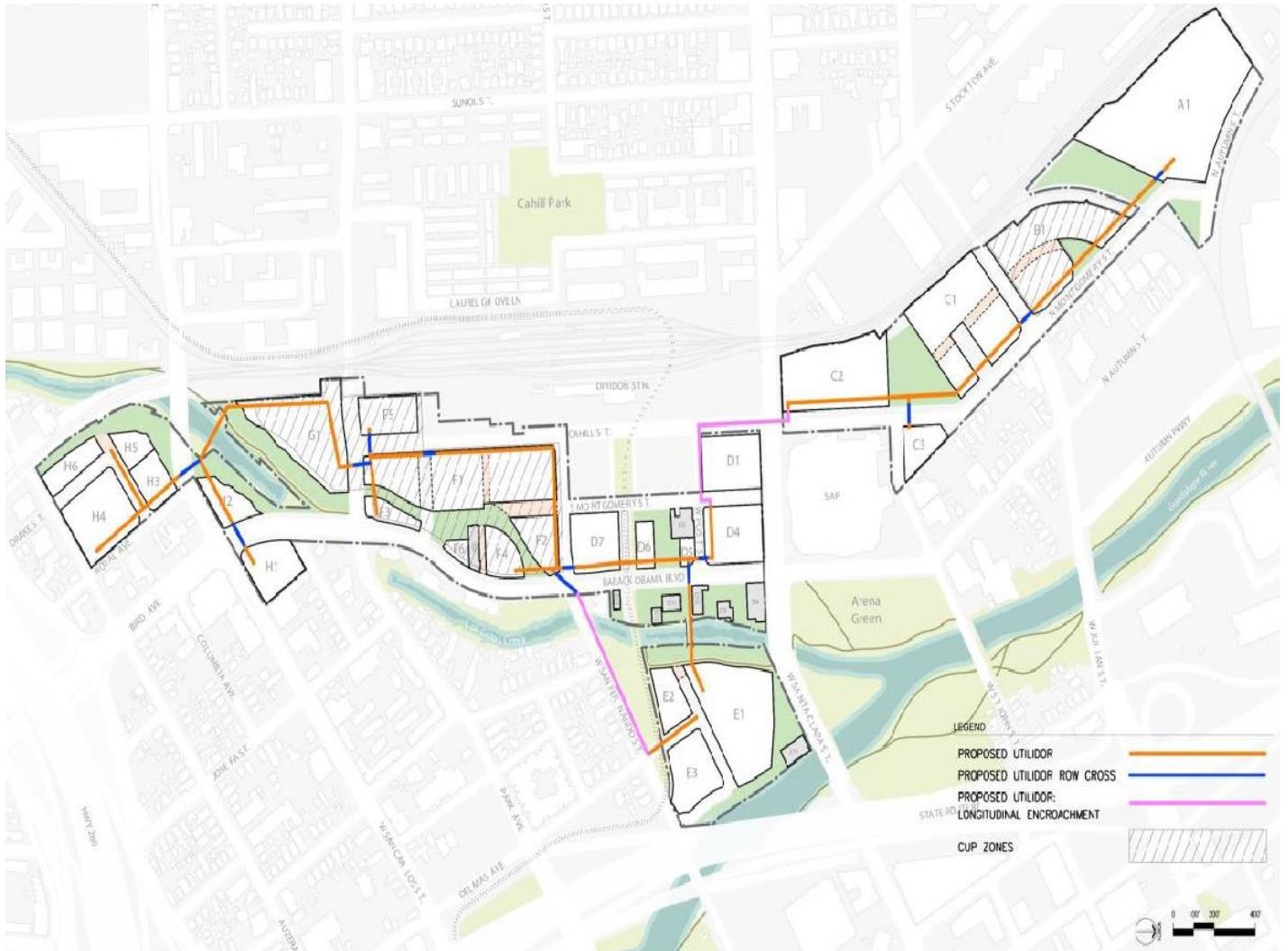
It is important to note that Google does not intend to be the operator of the various utility systems (electrical, waste, wastewater, recycled water), but is most likely to be the owner or major stakeholder in an operator company. This is similar to the arrangement developed for the Hudson Yards project in New York City. Within the Hudson Yards project, a co-generation plant was constructed inside one of the private buildings (designed and operated as a retail building) and, with external connections to the electric infrastructure owned and operated by the investor-owned utility Consolidated Edison, the project delivers electricity, heating, and cooling to the buildings with the Phase 1 development. While not completely analogous to the Downtown West proposals, the resolution of permitting, regulatory and construction issues between the Hudson Yards project and the various New York agencies provides a level of understanding that certain issues may be resolved with time and creativity.

Operation and ownership of the private electric system by Google is subject to review with the CPUC in the future. There is an evolving regulatory position relative to microgrids and it is proposed that this specific ownership option is enabled through the approvals but will only proceed should the CPUC issue formal confirmation that the system can operate privately. The confirmation from the CPUC will need to be issued prior to the final map. The intent of leaving this option open is to provide maximum flexibility for the project.

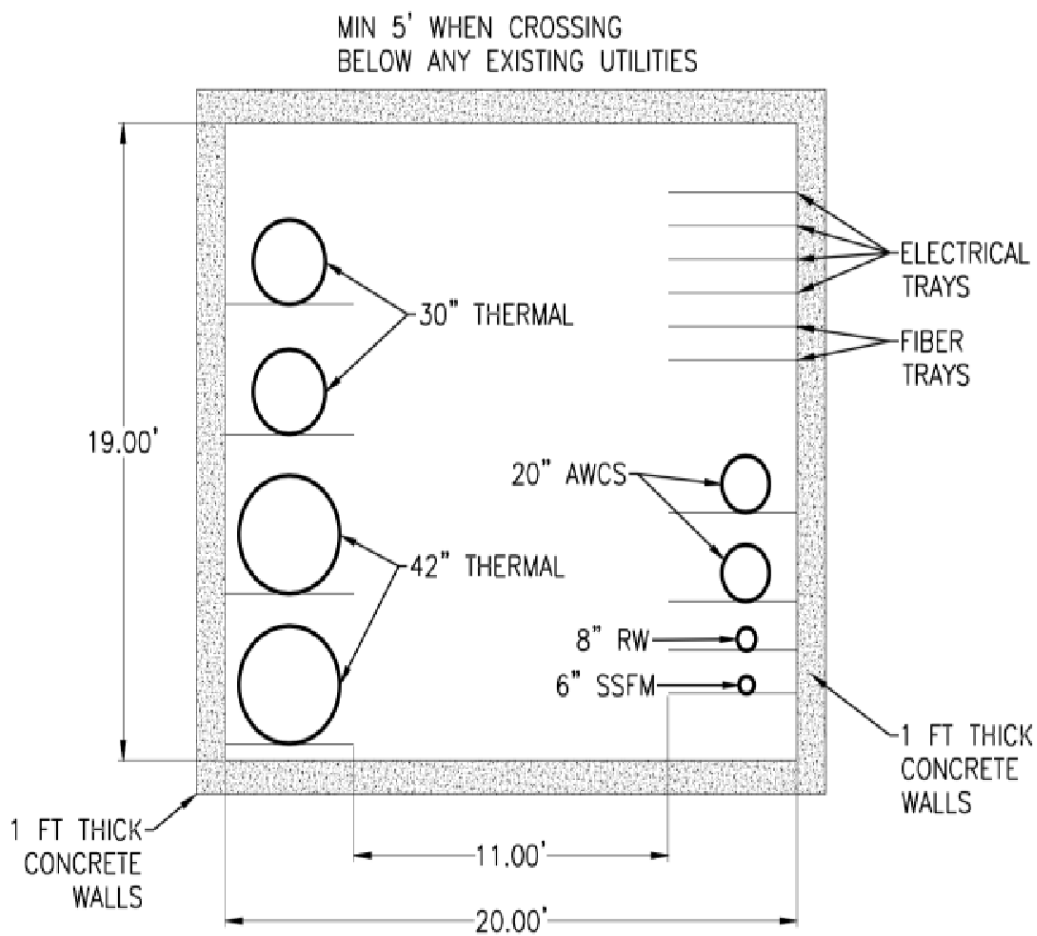
The Utilidor Structure

Utilidors, as proposed, are 20'x 20' privately owned underground structures that will be used for wet and dry private services to be conveyed across the public right-of-way. To comply with the San Jose Municipal Code's requirements for use of the public right-of-way, the utilidor use must provide a benefit to those using the public streets and must be the only reasonable alternative that accomplishes Google's objectives. Utilities and structures may be allowed pursuant to San Jose Municipal Code Chapter 13.37 through a Major Encroachment Permit approved by City Council. Public right-of-way is held in public trust for the State and any authorization for private encroachment must be a revocable license that is subject to terms and conditions that protect the public from responsibility and liability for the private use. In 2017, City Council approved the form of an encroachment agreement that governs all encroachments permitted under Chapter 13.37. A major encroachment permit will be prepared and presented to the City Council as part of the overall approval process for the project.

Conceptual Utilidor Layout



Conceptual Utilidor Tunnel Section



Staff continues to work with Google on appropriate conditions of approval for the proposed utilidor. The utilidor structure may offer the following unique benefits: 1) minimizes re-opening and repairing the roadway for operations and maintenance or system expansion by creating easy access in the system with the initial installation, and 2) utilidor design can create economies of scale to accelerate development across the district similar to the way utilidors enable a campus development to expand more quickly by consolidating utilities. Staff will continue to work with Google on the utility system for the Downtown West Project meeting the public benefit required in the San Jose Municipal Code. It is worth noting that utilities within the structure may be subject to other State regulations.

Electric Service

Options for Providing Electric Distribution Service to the Development

As with other utility systems, the Developer will be required to complete the installation of electrical infrastructure necessary to serve the Project pursuant to permits issued by the Department of Public Works. Consistent with the District Systems approach, the developer is proposing an advanced microgrid electrical distribution system to serve the development. The City will evaluate permit plans to ensure that the design and engineering of the microgrid is consistent with all applicable regulatory standards. Further, because of the uniqueness of the microgrid infrastructure, the developer will be asked to cover the City's costs to engage third-party technical consultants as necessary to review engineering and construction submittals prior to permit issuance.

The microgrid system would include electric distribution lines coming from a dedicated transmission substation to connect the majority of buildings and amenities within the development area in a microgrid. Renewable generation technologies including photovoltaic arrays and building-integrated photovoltaic products may be located on building rooftops and facades. In addition, storage technologies such as batteries may also be deployed within the substation area, central utilities plant, or buildings throughout the development. The microgrid would include controls to share power between buildings to provide limited operation in the event of an outage. Both storage and generation on-site would allow the realization of benefits such as:

- Provide power to key development area loads in the event of a utility wide grid outage;
- Allow renewable energy to be shared between buildings; and
- Allow the generation and storage technologies to provide grid services and balance demand and onsite generation with grid import and export.

There are three options under consideration for providing microgrid electric service to the Development. As further described below, the options relate to whether PG&E, the City or Google will be the ultimate owner/operator of the microgrid infrastructure after Google completes the required improvements. Developer and City staff continue to collaborate on the studies and analyses necessary for the implementation of a microgrid. The legislative structure for PG&E to own and operate the microgrid is in place and the developer is in discussions with PG&E on this option. It is also possible for the City to own and operate the microgrid, should that be desired by the City Council. The City is also working with PG&E in the completion of necessary studies for implementation of this option. Finally, the developer is considering the steps necessary for it to be a private owner/operator of the microgrid. No applications or legislation is in place at this time to fully enable this option. The critical issue for both the developer and the City is that if a microgrid is implemented that it come online in sequence to support the development envisioned by developer.

A fuller description of the pathways forward for a microgrid follows.

1. *PG&E Retail Service* – Like all other development projects in the City, taking retail service from PG&E is an available option. A comprehensive set of established regulations, tariffs, processes, and a franchise exist that would allow the developer to obtain electric service from PG&E to the project. However, the developer and the City are fully aware of the challenges PG&E is facing in terms of providing safe, reliable, and affordable electric service to its customers, so this is not the preferred option for the City or the developer. With that said, it should be noted that the CPUC is implementing rules to facilitate the commercialization of microgrids pursuant to Senate Bill (SB) 1339.¹ As such, the developer is working with PG&E to potentially take advantage of PG&E’s Community Microgrid Enablement Program whereby PG&E would provide enhanced support for the development and implementation of high-priority multi-customer microgrids serving vulnerable customers and critical facilities. This type of arrangement may be an improvement over typical PG&E retail service and remains an option, though many important details are yet to be developed.
2. *City Provided Electric Service* – In this option, the City would create a local public utility that operates the electric distribution system to provide electric service to the development. The utility would own all or part of the distribution system. Staff has accessed the initial feasibility of this approach and believes that this is a viable and promising option. Local public electric utilities exist throughout California and have a proven track record of providing excellent, low-cost service to their customers. The driving force behind many of the benefits of a public utility is that a city council or local board governs and oversees the design, construction, operation, and rate setting of the electric system, meaning that the local community owns the utility and, therefore, controls the utility’s priorities through open meetings and transparent business decisions. . A benefit of a municipal system is that local public utilities must provide cost-based rates and do not pay taxes or collect a rate of return for investors, which provides cost savings for ratepayers.
3. *Developer Owned and Operated Microgrid* – Under this option, the developer will construct, own, and operate the microgrid rather than transferring ownership of the infrastructure to the City or to PG&E. If, as a result of the developer’s engagement with CPUC, CPUC determines that developer may own and operate the microgrid without any CPUC regulation or oversight provisions, then developer will seek Council approval of City regulations concerning the safe operation of the microgrid and distribution of electricity to owners and tenants prior to operation of the microgrid. Further, State law preempts the City from engaging in matters of the State, and therefore the City cannot exercise a regulatory role over a privately-owned utility. As a result, the City and developer are negotiating conditions of approval for the Vesting Tentative Map which will require the developer to demonstrate to the City that developer’s ownership and operation of the microgrid is consistent with all applicable federal and state regulatory requirements. The Vesting Tentative Map conditions of approval would

¹ CPUC Rulemaking 19-09-009 (Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339).

also ensure that appropriate structures, controls, and covenants are in place to effectively protect the public and customers should the utility fail. The developer would be required to make this demonstration prior to approval of a final map. If a Certificate of Public Convenience and Necessity from CPUC is ultimately deemed necessary, then the developer may also be required to obtain approval of a franchise agreement from the City under Title 15 of the Municipal Code.

Regardless of the ultimate ownership of the microgrid system, the infrastructure will be constructed by Google as part of its overall project. To this end, the construction would be subject to the appropriate regulations that cover electrical grid construction. The constructed grid would be turned over to either PG&E or the City, as with all such public improvements in development, should one of those options be the solution. If Google retains ownership the system as a private utility, they would be subject to the conditions issued by the CPUC or other appropriate regulatory bodies.

Onsite Wastewater Treatment and Recycled Water Reuse

Google proposes to transport wastewater from its various commercial, residential, and mixed-use buildings throughout the development via the utilidor to the CUP(s). A portion of the wastewater will be treated onsite and the resultant clean effluent (i.e., recycled water) will be reused within the development. The remaining wastewater and byproduct of the wastewater treatment will be discharged into the City's sanitary sewer collection system infrastructure and treated at the RWF. The onsite wastewater treatment and recycled water reuse proposal raises three future considerations: permitting, sanitary sewer service and use charges, and odor.

Permitting

Google will be required to comply with both onsite wastewater treatment and recycled water standards, and State permit requirements. In addition, the City will issue the development an Industrial Discharge Permit to designate a variety of testing, reporting, and communication controls and ensure compliance with the City's Pretreatment Program requirements, as mandated by applicable Federal and State regulations.

Use Charges

The City applies sanitary sewer service and use charges to customers based on use type. These charges are applied as follows: to residential customers, rates are on a per unit basis; to commercial, institutional, and light industrial customers, rates are based on adjusted water consumption data reflecting the difference in sewage strength among 63 standard classifications of users; and, to "monitored industrial" customers (discharging more than 25,000 gallons of sewage per day or discharging sewage of widely varying strength), rates are based on sampling and actual sewage flow meter data or estimated from potable water consumption. The City must

apply these charges equitably across customers in compliance with Prop 218 and SJMC requirements. Google has agreed to pay connection fees for wastewater aligned with the Muni code.

Odor

Given the planned onsite treatment of wastewater in an urban setting, the City is interested in ensuring odor mitigation controls. Google will be required to comply with odor control mitigation measures under its Mitigation Monitoring and Reporting Program requirements and existing SJMC and BAAQMD requirements. It is worth noting that there are examples throughout the world of these private treatment facilities within a dense urban environment. Including the precedent examples of Barangaroo and Central Park in Sydney which were visited by City staff in 2019, Battery Park New York and Salesforce Tower, San Francisco. Within these precedents as wastewater is treated much closer to its origination, the provision of specific controls and technology ensure that these systems can work without odor issues.

Under the City's Conditions of Approval, the City will require that the Project provide details to the City to ensure proper permitting, the application of appropriate sanitary sewer service and use charges, and odor controls prior to the issuance of a building permit. Odor controls are overseen by the BAAQMD and specifically addressed as a monitored mitigation measure, requiring an odor mitigation plan reviewed by the City, under the Project's CEQA process.

Potentially Outstanding Issues Related to Conditions of Approval

As noted above, it is staff's intent to address many of these issues with Conditions of Approval to the subdivision maps and/or the development permits. Draft Conditions of Approval are being developed and coordinated at this time. To implement the District Systems program, Google proposes a Transactional Document. Specifically, District Systems Transactional Documents will include enforceable covenants that require the owners or lessees, including at both the building and unit or parcel level, as applicable, to contract with the District Systems operator/owner for electric service, sanitary sewer collection, recycled water, , and thermal heating and cooling service if and when available from the District Systems operator/owner. The District Systems Transactional Documents will require the District Systems operator/owner to exclusively supply services within the project boundary and to all owners or lessees within the project boundary unless otherwise described in the Infrastructure Plan.

As with any long-term agreement, there is a need to envision some or all a project to be transferred or assigned to another entity. Handling the future of a multi-faceted system is such a situation. Google proposes that Google may assign to (i) Alphabet, Lendlease, or any Google/Alphabet/Lendlease affiliates/related entities) or (ii) any third-party assignees if the third-party is an owner/investor in the infrastructure sector, with appropriate operational and asset management capabilities, directly or via an operating partner. Any such assignments would not require City's consent but would require prior notice to City except assignment of permits or

other regulatory obligations under federal, state, or local laws must comply with these laws. Staff believes that any state operating permit would require state approval for an assignment of permit.

Through the proposed conditions of approval, it is planned to establish a clear program of checks and balances to protect San Jose residents and businesses and to hold the operators of the systems accountable. As noted earlier, the level of qualifications of the operator is an example of requirements that will be defined and included in approvals. Also critical to the operation of any system is the ability of the operator to maintain and improve the system. Requirements for adequate capitalization and capital programs will be included. Given the potential for any system to be bought or sold, transferability of responsibilities and rights will be included. Finally, it is imperative that, should something grievously impact the operations of a utility, any increase in rates not be borne by residential tenants. To this end, Google is committing to provide the legal surety and device to transfer the obligation for impacts of a failed or failing system to the owners of the commercial office buildings, as protection for residential tenants. These conditions provide a level of protection and security for the utility customers beyond what is established in other projects, such as Hudson Yards in New York.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the March 25, 2021 City Council Study Session.

COORDINATION

This memorandum was coordinated with the Department of Planning, Building and Code Enforcement, Public Works, Environmental Services, Community Energy, and the City Attorney's Office.

/s/

NANCI KLEIN

Director of Economic Development

For questions, please contact Nanci Klein, Director, at (408) 535-8184.