CITY OF PALO ALTO

City Council Staff Report

From: City Manager
Report Type: CONSENT CALENDAR
Lead Department: Utilities

Meeting Date: June 10, 2024
Staff Report: 2312-2318

TITLE

Approval and Authorization for the City Manager or Their Designee to Execute the Following Five Utilities Contract Amendments for the Electric Grid Modernization Pilot: 1) Amendment Number 1 to VIP Powerline Corp C23185980 Increasing Compensation by $16,000,000 Through April 2028; 2) Amendment Number 1 to Davey Surgery Tree Company C20176920 Increasing Compensation by $3,103,484 Through May 2025; 3) Amendment Number 1 to Stella-Jones Blanket Purchase Order Increasing Compensation by $3,000,000 Through June 2026; 4) Amendment Number 1 to Oldcastle Infrastructure Blanket Purchase Order Increasing Compensation by $450,000 and Extending the Term to December 31, 2024; and 5) Amendment Number 1 to Statewide Traffic Safety and Signs S22183236 Increasing Compensation by $200,000 Through December 2024; CEQA Status: the Grid Modernization Project is Exempt Under CEQA Guidelines Sections 15302, 15303 and 15183.

RECOMMENDATION

Staff recommends that the City Council approve and authorize the City Manager or their designee to execute the following first amendments to two blanket purchase orders and three contracts, for overhead and underground construction, pole replacement, vegetation management for line clearing, utility pole and underground equipment purchases, and traffic control services used for the electric grid modernization pilot project:

(1) Amendment No. 1 to Contract No. C23185980 with VIP Powerline Corp increasing the contract limit by $16,000,000 for a total not-to-exceed amount of $36,000,000 for the remaining term of the contract through April 9,2028 (for a total term of five years), to provide pole replacement, 4/12kV overhead conversion and system improvement work on the electric distribution system (Attachment A);

(2) Amendment No. 1 to Contract No. C20176920 with Davey Tree Surgery Company increasing the contract limit by $3,103,484 for a total not-to-exceed amount of $17,589,541 for the remaining term of the contract through May 31,2025 (for a total term of three years) to provide utility line clearing and vegetation management (Attachment B);

(3) Amendment No. 1 to Blanket Purchase Order with Stella-Jones increasing the contract limit by $2,250,000 for a total not-to-exceed amount of $3,000,000 for the remaining term of the contract through June 30, 2026 to purchase new utility poles (for a total term of three years);

(4) Amendment No. 1 to Blanket Purchase Order with Oldcastle Infrastructure increasing the contract limit by $450,000 for a total not-to-exceed amount of $2,050,00 and extending the term of the contract to December 31, 2024 (for a total term of five years) to purchase equipment for the electric underground system;

(5) Amendment No. 1 to Contract No. S22183236 with Statewide Traffic Safety increasing the contract limit by $200,000 for a total not-to-exceed amount of $455,000 for the remaining term of the contract through December 31, 2024 (for a total term of three years) to provide traffic control services (Attachment C).

EXECUTIVE SUMMARY

On June 19, 2023, the City Council approved the FY 2024 CIP Budget with the new Grid Modernization for Electrification Project (EL-24000). Staff is deploying a pilot to determine how to align the grid modernization upgrades (Grid Mod) with fiber-to-the-premise (FTTP) program Phase 1 buildout, to help minimize utility engineering pole make-ready work, pole replacements, noise disruption, and construction activity in neighborhoods and these are necessary contract amendments to support this project. The purpose of the pilot is to determine the feasibility of engineering designs and construction methods and implement best practices to facilitate the most cost-effective deployment of resources.

Given the anticipated increase in engineering design work, City of Palo Alto Utilities (CPAU) will need to add resources to manage and perform a high volume of pole make-ready work and replacements. In the meantime, staff recommends leveraging existing on-call construction and engineering contracts to perform the engineering design, overhead and underground construction including vegetation management, and installation for the pilot area (approximately 409 poles and 1,224 homes). Authorizing additional services within the scope of existing contracts will reduce the construction timeline by 6 – 9 months, which would otherwise be prolonged in the process of issuing multiple invitation for bids (IFBs) to perform the work for grid modernization. The pilot area will be treated as a testbed to design and construct both projects in parallel to minimize community disruption and reduce shared construction costs. The pilot will inform CPAU how to most effectively bid out the engineering, construction and installation services required for FTTP and grid modernization for the remaining Phase 1 area (an additional 1,241 poles and 5,560 customers). The City will issue public solicitations for each of these services for subsequent phases of the grid mod and FTTP projects.

BACKGROUND

One major initiative in the City's Sustainability and Climate Action Plan (S/CAP) is to promote the transition to all-electric homes and electric vehicles (EVs) to reduce greenhouse gas emissions. In 2020, the City launched an update to reduce GHG emissions 80 percent below 1990 levels, i.e., reduce 624,095 metric tons of greenhouse gases by 2030 (the "80 x 30 goal"). This goal exceeds even the state of California's world-leading reduction goal of 80% by 2050; the California Global Warming Solutions Act of 2006 (AB32) requires the state to reduce its GHG emissions 40% below 1990 levels by 2030 and set an aspirational goal to reduce emissions 80% by 2050. A 2021 impact analysis showed that to meet the "80 x 30 goal", the City must electrify all of its roughly 15,000 single-family homes, replacing natural gas equipment with efficient electric alternatives. Also, currently, one in six Palo Altans drive an electric car, and EVs now account for more than 30% of new car sales in Palo Alto – the highest adoption rate in the country. One of three newly registered vehicles in Palo Alto is an EV. This transition, or "electrification," will require an extensive upgrade to the electric distribution network due to a large increase in electrical energy needed to replace gas heating equipment with electrical equipment and to support EVs.

As a result, Grid Mod was developed to enhance the distribution system's grid resiliency and reliability in a manner that will continue to accelerate the City's clean energy and decarbonization goals. Palo Alto already supplies customers electricity from a 100% carbon neutral portfolio and has been in the forefront of efforts to design programs allowing customers to easily utilize clean energy through EVs and electric appliances.

Palo Alto's grid must be modernized to reach the capacity required to electrify all homes and cars. The modernized system will be designed to fully accommodate energy received from local generation such as rooftop solar and battery storage, an important element in decarbonization goals. There will be an upgrade to the distribution system to incorporate local generation, allow two-way power flow, meet projected capacity needs, enhance voltage regulation and system protection requirements, and provide a high level of resiliency and reliability.

The City conducted an electrification study to evaluate the impacts of projected electrification loads on Palo Alto's distribution and substation transformers, primary/secondary distribution circuits, and to propose upgrades needed to mitigate overloads. The estimated cost to construct the necessary electric system upgrades for a 100% electrification scenario is between $220 million to $306 million, depending on the approach. Of the nine substations in Palo Alto, the study recommends major design and equipment upgrades at two of the nine substations, and minor to moderate upgrades at four substations to meet projected loads to support 100% electrification.

The Grid Mod Project requires bringing online more transformers, replacing aging infrastructure, upgrading, or replacing poles, and providing battery storage and solar energy system support to the interconnected grid. Specifically, the Project involves replacing the City's current 1,413 single-phase pole-top transformers rated less than 50kVA with the same type of

transformers rated 50kVA or larger. Additionally, there are currently 261 single-phase pad-mounted transformers and 231 single-phase underground transformers installed on the distribution system. Based on the projected average peak load of 6kVA per customer, 341 of these transformers (including all 231 underground transformers) will need to be replaced with 75kVA or larger transformers to mitigate overloads. In order to limit the maximum number of customers per transformer to 15 (90kVA), the City will need to install an additional 83 transformers. Furthermore, 296,300 circuit feet of open wire secondary conductors in the distribution system will be replaced with aluminum aerial cable. These design aspects will accommodate 100% residential electrification of end uses in the Palo Alto community, aligning with the City's primary goal of decarbonization. For future housing development, the City will perform new analyses and make appropriate electric distribution network changes as needed for electrification.

ANALYSIS

As noted, staff routinely use a cohort of contract support to build, maintain, and invest in the City's electric system infrastructure. To achieve efficiencies in timing for this pilot phase of electrification and fiber to the premise build, leveraging these existing resources is recommended. The recommended contract amendments reviewed below will enable current routine daily business to proceed while ensuring capacity to support this pilot phase one build.

VIP Powerline Corp (VIP) – Electrical Construction - Contract No. C23185980

For more than 25 years, CPAU has routinely hired contractors to assist Electric Operations crews in offsetting the labor shortage of qualified electrical journey-level workers throughout the industry. Over the past 10 years, CPAU has not been able to successfully hire and retain qualified electrical journey-level staff, specifically in the line construction section, to perform the required work on the electric distribution system. Given the magnitude of work that is required to upgrade the electric distribution system and to meet the 2030 emissions reduction goal through electrification, staff recommends increasing the annual amount for VIP's electrical contractors from $4 million to $8 million for the remaining four years of the contract and increasing the five-year not-to-exceed amount of the contract from $20 million to $36 million. This will enable VIP to bring in one or two additional crews to perform Grid Mod work on a regular basis. The estimated cost for a 5 day/5 person crew is approximately $72,000 weekly or $3,500,000 annually (Attachment A). The original contract was approved by Council on April 10, 2023 (Staff Report #2303-1119[1])

[1] Staff Report 2303-1119
https://cityofpaloalto.primegov.com/meeting/document/1862.pdf?name=Item%2010%20Staff%20Report

Davey Tree Surgery Company (Davey Tree) – Line Clearing - Contract No. C20176920

The City has contracted for utility vegetation management services since the mid-1980s to ensure the clearing of trees and other vegetation from electrical conductors, poles, substations, fiber optic lines, traffic signals, and streetlights throughout Palo Alto that meets or exceeds regulatory requirements. There is increased pressure on Investor-Owned Utilities such as PG&E to reduce the potential for fires around their electric infrastructure through enhanced vegetation management. This has contributed to a statewide shortage of qualified line clearance tree workers. In addition to this increased demand for qualified workers, a recent State Assembly Bill, SB 247, has mandated that these tree workers be "…paid a rate no less than the prevailing wage rate for a first period apprentice electrical utility lineman…". This increased base pay rate is 36% higher than the 2019 prevailing wage document for this trade.

Given the number of trees that will need to be pruned and the extra time it will take to fully clear heavily vegetated areas, CPAU requires a significant increase to the capacity of line clearance crews. Staff estimates needing a 100% increase of line clearance capacity to continue vegetation maintenance, hazard tree removal, and pruning for the primary, secondary, and electric service drop cables for Grid Mod. Of the 409 poles in the pilot area, staff estimates 25% or 100 poles will require significant pruning to achieve 1-3' radial clearance along the path of the various cables. Staff recommends increasing the contract limit by $3,103,484 for the remaining term, which will increase the total not-to-exceed amount from $14,486,057 to $17,589,541 for the five year contract term through May 31, 2025 (Attachment B). The original contract was approved by Council on June 1, 2020 (Staff Report #10883[2]).

Stella-Jones – Utility Wood Poles – Blanket Purchase Order

CPAU has a recurring capital improvement project Wood Pole Replacement (EL-19004) to replace between 50 to 100 wood poles on an annual basis because the poles have exceeded their average service life of 50 years and/or other weakening conditions. Wood poles are used to support overhead utility lines throughout the city. Though poles are inspected, tested, and treated to maintain their integrity, over time poles will degrade and require replacement for the safety of the community or utility workers. The City issued a formal solicitation (Request for Quotation # 188453) on June 13, 2023 for the purchase and delivery of treated wooden poles. Stella-Jones was one of two responsible bidders. Stella-Jones was awarded a blanket purchase order to purchase wood poles, in an annual amount of $250,000 for a total not-to-exceed amount of $750,000 over three years. For Grid Mod, staff estimates a replacement of 25% or 1500 of 6000 poles over the next several years to accommodate the weight of the new transformers and distribution cables while maintaining compliance with rules for overhead electric line construction (California Public Utilities Commission General Order 95[3]) . Since CPAU

[2] Staff Report 10883 https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2020/id-10883.pdf?t=62508.97

[3] California Public Utilities Commission General Order https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M338/K730/338730245.pdf

will be replacing about 300 to 400 poles annually over the next five years, staff recommends increasing the annual purchase order amount from $250,000 to $1,000,000 with Stella-Jones for the remaining three years of the contract, increasing the total not-to-exceed amount from $750,000 to $3,000,000 over the three-year term. In addition, staff separately solicited for H-class poles in March 2024 and Stella-Jones was the lowest responsible bidder, so staff recommends adding H-class wood poles under the Stella-Jones contract. The H-class poles are larger in diameter and will support more equipment load, otherwise, the City would need to install additional poles. The City will issue new purchase orders on an as-needed basis as the quantity, size and type of pole replacements are determined for the Grid Mod project.

Oldcastle Infrastructure – Underground Vaults and Pads - Blanket Purchase Order

CPAU purchases large, pre-cast concrete pads, vaults, covers, and extensions for its underground infrastructure. The materials come in various sizes and styles to meet unique design requirements and field conditions. The vaults contain electric distribution system cables and equipment used to provide power to customers throughout the City. In December 2014, Council authorized Utilities to standardize with Oldcastle for this underground equipment (Staff Report #5309[4]) because Oldcastle is one of two vendors on the West coast that manufacture concrete pads, vaults, extensions, and covers in the sizes and styles that meet Utilities' standards for the construction of the utility underground electric system (Electric Service Requirements[5]). Oldcastle is the City's preferred supplier because of lower costs and higher quality than the other West coast supplier. On February 24, 2020 Council approved a blanket purchase order with Oldcastle as the City's standard supplier of certain equipment for the electric underground system, in an annual amount of $350,000 for a total not-to-exceed purchase amount of $1,600,000 over 4.5 years (Staff Report #10960[6]). Staff recommends extending the contract term for an additional six months from June 30, 2024 to December 31, 2024, and staff is recommending increasing the annual amount from $350,000 to $800,000, for a total not-to-exceed amount of the contract from $1,600,000 to $2,050,000 over the five year term. The City will issue new purchase orders on an as-needed basis as the quantity, size and type of underground equipment are determined for the Grid Mod project.

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[4] Staff Report 5309 https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2014/final-staff-report-id-5309_utilities-substructure-standardization-with-oldcastle.pdf

[5] Electric Service Requirements https://www.cityofpaloalto.org/Departments/Utilities/Utilities-Services-Safety/Engineering-and-Operations/Electric-Service-Requirements

[6] Staff Report 10960 https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2020/id-10960-mini-packet-022420.pdf?t=53347.87

Statewide Traffic Safety and Signs – Traffic Control - Contract No. S22183236

A traffic control plan must be included in every permit application submitted to the Development Center and Transportation Department for projects that involve work within the public right-of-way. The traffic control plan must be approved prior to the start of work. The City may require additional measures of traffic control or time-of-work restrictions on a case-by-case basis. The City issued a formal solicitation (Request for Proposals # 183236) in 2021 for Utilities Construction On-Call Traffic Control Services, and Statewide was awarded the three-year contract. In the pilot area, CPAU will have to replace and upgrade about 90 wooden poles to accommodate the weight of the new transformers and distribution cables. Most of these poles are in the public right of way which will require traffic control services (i.e. flagging, traffic shifts, sign boards) when performing the construction work. Staff recommends increasing the annual amount of the Statewide contract from $85,000 to $285,000 per year for the remaining term through December 31, 2024, which increases the total not-to-exceed amount from $255,000 to $455,000 over the three-year term. (Attachment C).

FISCAL/RESOURCE IMPACT

Funding for the five contract amendments is available in the FY 2024 Electric capital budget under CIP Grid Modernization for Electrification (EL-24000). All the contract amendments are for on-call services or as-needed purchase orders. Any unspent funds from the contracts will be returned to the Electric Grid Modernization CIP. Funding in subsequent years is subject to Council's approval of each fiscal year's budget appropriation.

Vendor	Contract No	Original Not-to-Exceed Amount	Original Term Date	Amendment Amount*	Years Remaining	Revised Not-to-Exceed Amount	Revised Term Date*
VIP Powerline	C23185980	$ 20,000,000	4/9/2028	**16,000,000**	4	$ 36,000,000	4/9/2028
Davey Tree	C20176920	$ 14,486,057	5/31/2025	**3,103,484**	1	$ 17,589,541	5/31/2025
Stella-Jones	Blanket PO	$ 750,000	6/30/2026	**2,250,000**	3	$ 3,000,000	6/30/2026
Oldcastle Infrastructure	Blanket PO	$ 1,600,000	6/30/2024	**450,000**	1	$ 2,050,000	**12/31/2024**
Statewide Traffic Safety	S22183236	$ 255,000	12/31/2024	**200,000**	1	$ 455,000	12/31/2024
Total		$ 37,091,057		$ 22,003,484		$ 59,094,541	
* Changes in contract amounts and term date are bolded							

STAKEHOLDER ENGAGEMENT

The services are coordinated with internal stakeholders and the service providers.

ENVIRONMENTAL REVIEW

The grid modernization project will replace aging infrastructure and install modern network infrastructure to meet future needs related to home electrification. This project does not expand the existing footprint of the City's network; there is sufficient capacity on the existing sub-transmission lines, substations, and primary feeders to serve the energy load that is being added to the system. Changes to the equipment on the network will include replacement and

installation of pad-mounted transformers and new protective devices to improve reliability, and system controls to allow for the import and export of energy from homes on the network. This project is categorically exempt from California Environmental Quality Act (CEQA) review under CEQA Guidelines section 15303 (construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures) and section 15302 (replacement or reconstruction of existing structures and facilities). In addition, Council's approval of the grid modernization project does not require additional environmental review under CEQA Guidelines section 15183, because the grid modernization project, an element of the Council-approved S/CAP, is consistent with the Environmental Impact Report (EIR) Addendum to the City of Palo Alto Comprehensive Plan Final Environmental Impact Report Council approved on June 5, 2023[7].

ATTACHMENTS

Attachment A: Contract With VIP Powerline; C23185980, Amendment 1
Attachment B: Contract With Davey Surgery Tree; C20176920, Amendment 1
Attachment C: Contract With Statewide Traffic Safety and Signs; S22183236, Amendment 1

APPROVED BY:

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[7]Environmental Impact Report https://cityofpaloalto.primegov.com/Portal/Meeting?meetingTemplateId=12530