



City of Palo Alto

City Council Staff Report

(ID # 11580)

Report Type: Consent Calendar

Meeting Date: 10/5/2020

Summary Title: Contract Amendment with Magellan Advisors

Title: Approval of Amendment Number 1 to Contract Number C20176363 With Magellan Advisors, LLC, for an Integrated Fiber Expansion Approach and Acceleration of the Fiber-to-the-Premises (FTTP) Business Case and to Increase Compensation by \$285,065 for a Total Not-to-Exceed Amount of \$497,576

From: City Manager

Lead Department: Utilities

Recommendation

Staff recommends that the City Council approve and authorize the City Manager, or his designee, to execute Amendment No. 1 to Contract C20176363 ([Attachment A](#)) with Magellan Advisors, LLC (Magellan), for an integrated fiber expansion approach and acceleration of the fiber-to-the-premises (FTTP) business case and to increase compensation by \$285,065 for a total not-to-exceed amount of \$497,576.

Background

On June 1, 2020, City Council approved a contract in the amount of \$212,511 with Magellan for Phase 1 of the fiber network expansion plan ([Council Report #11368](#)). Phase 1 seeks a high-level design and cost estimate for fiber expansion to support Advanced Metering Infrastructure (AMI), Supervisory Control and Data Acquisition (SCADA), and wireless communication for City field staff and other City services.

In addition to AMI and SCADA, the City is also pursuing a comprehensive fiber expansion strategy from an integrated cross-utility perspective in Phase 3 of the expansion plan to extend fiber-to-the premises (FTTP). The overall objective of this strategy is to evaluate the feasibility of integrating fiber network expansion into other ongoing utility capital improvement projects and programs, if practical, to fully leverage the City's fiber asset and minimize the incremental cost to extend fiber to the premises.

The four (4) phases of the Fiber Network Expansion plan are as follows:

- **Phase 1** seeks a high-level design and cost estimate for fiber expansion to support Advanced Metering Infrastructure (AMI), Supervisory Control, Data Acquisition (SCADA),

and wireless communication for City field staff and other City services;

- **Phase 2** seeks a detailed engineering design and cost estimate for fiber expansion to support AMI, SCADA, and wireless communication for City field staff and other City services;
- **Phase 3** seeks a business case and high-level design for a citywide FTTP network. The FTTP network and high-level design in the business case should expand on the fiber network for AMI, SCADA and wireless communication; and
- **Phase 4** seeks a detailed engineering design, cost estimate and a phased deployment approach for FTTP.

Under the previous plan, each individual phase must be completed and approved by City Council before the decision is made to proceed with the next phase. With the contract amendment, staff recommends advancing some FTTP analysis and tasks from Phase 3 to Phase 1 so they can be completed concurrently. The new approach will enable staff to bring forward preliminary findings of FTTP business case analysis in conjunction with the findings and recommendations of Phase 1 within six months.

Discussion

On August 5, 2020, Utilities Advisory Commission (UAC) discussed the importance of broadband service and FTTP given the shift to teleworking, telepresence, and remote learning due to the pandemic ([UAC Report #11468](#)). UAC asked staff and Magellan to determine if it was feasible and effective to accelerate some FTTP analysis and tasks in Phase 3 to shorten the duration of the fiber network expansion plan and provide UAC and Council more up to date information of cost projections and alternative approaches to build out FTTP network.

As a result of COVID-19 and sheltering in place, telecommunication networks have become one of the most critical infrastructures for communities. Millions of people rely on the internet daily for telework, remote learning, telemedicine, and E-commerce. Interestingly, the pandemic has also changed the way we use the internet. Previously, asymmetrical, one-way download use (i.e. video streaming) took up much of our at-home bandwidth, but now, symmetrical uploads and downloads (i.e. video conferencing) are much more prevalent. Fiber broadband is one of the technologies that can handle symmetric traffic. Even after the pandemic is over, there will continue to be a high demand for telework, remote learning, telemedicine, E-commerce, and other cloud applications.

Staff and Magellan believes there are synergies in combining Phases 1 and 3 of the fiber network expansion project for the purpose of accelerating FTTP business case and developing a fully integrated fiber design plan instead of a phased approach. The contract amendment will enable Magellan to begin Phase 3 tasks in parallel to the Phase 1 tasks that are currently underway. This approach will allow Phase 1 to be completed in the same time duration of six months as the original scope yet have preliminary findings of the FTTP business case completed for review by the UAC and Council within the same timeframe.

The FTTP business case will assess how citywide FTTP would enhance City and utility services through densification of fiber from deployment of FTTP. It will also assess how the current commercial dark fiber leasing program would be impacted by citywide FTTP. This work will culminate in a broadband financial plan that assesses the financial performance of a FTTP network under different business models such as retail, partnerships, and fiber leasing. The FTTP business case will also incorporate several other scenarios that could reduce cost or create synergies with other capital projects (i.e. electric undergrounding, gas, and water main replacement and abandonment).

Below is a high level workplan including resequencing and milestones. With the revised approach, staff and Magellan recommends resequencing the order of individual tasks to take advantage of synergies in combining the phases while also delivering preliminary findings and business case within the original six-month timeline. The italicized tasks (*C, E, H, I, J, and K*) were originally listed under Phase 3 (tasks 11-16) but are being recommended to be combined with Phase 1 (tasks 1-5) to accelerate the FTTP analysis and business case.

- A. Prepare draft local ordinances to support broadband deployment. (Task 5)
- B. Perform as-is fiber optic network map audit and reconciliation. (Task 1)
- C. *Develop FTTP business case options to determine the viability of deploying broadband services to the Palo Alto community, to enhance City and community services, and expansion opportunities for commercial dark fiber. (Task 11)*
- D. Prepare a high-level design and cost estimate of a fiber optic communication system for AMI, SCADA, and wireless communications for Public Safety, Public Works, and Utilities field staff. (Task 2)
- E. *Conduct a market assessment of the local broadband and telecommunications market in Palo Alto that will inform an FTTP business case. (Task 12)*
- F. Prepare bill of materials and cost estimates for the fiber expansion to support AMI, SCADA and internal wireless communication. (Task 3)
- G. Prepare a preliminary report for Phase 1 that will include presentations by the selected consultant(s) before the Utilities Advisory Commission (UAC) by the first quarter of 2021 and for the City Council at a public meeting by the second quarter of 2021. The goal of this report is to inform the UAC and City Council of the findings of the fiber expansion study and the findings of the FTTP business case and seek direction. (Task 4)
- H. *Based on UAC and City Council direction, explore public private partnership options for FTTP deployment. (Task 14)*
- I. *Based on UAC and City Council direction, conduct needs assessment and statistically valid broadband surveys for FTTP, electric system underground district conversion projects and customer appliance electrification to determine realistic demand from Palo Alto residents and businesses. (Task 13)*
- J. *Update FTTP business case and cost estimate with findings from partnership opportunities and market assessment. (Task 15)*
- K. *Prepare a final report based on the results of the needs assessment, statistically valid broadband surveys and partnerships for presentation before the UAC and the City*

Council. (Task 16)

Separate RFPs will be issued for construction and construction management services if approved by the City Council for implementation in the future. Magellan will be precluded from bidding on future construction and construction management services solicitation RFPs due to conflict of interest prohibitions in California’s Government Code Section 1090. The prohibitions were communicated to the Proposers in the RFP and confirmed by staff in the demonstration interview.

Resource Impact

Funding for the additional FTTP analysis and tasks under revised Phase 1 of the fiber network expansion plan is available in the FY 2021 Fiber Operating and Capital Budget. The updated funding allocation below is based on the tasks associated with the electric and fiber utilities.

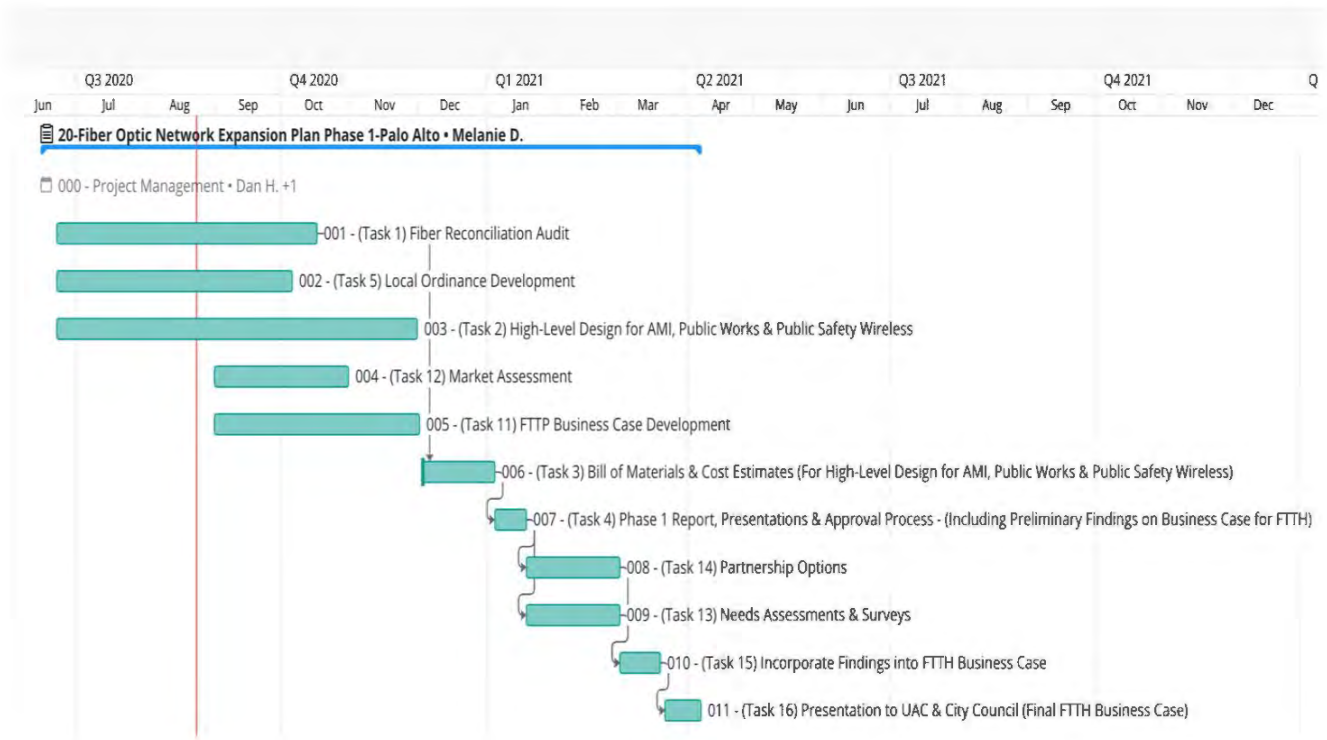
Revised Phase 1 Milestones:	Electric	Fiber	Total
A. Local Ordinances		\$ 28,350	\$ 28,350
B. Asset & Survey Assessment		\$ 74,760	\$ 74,760
C. FTTP Business Case and High Level Design		\$ 179,100	\$ 179,100
D. High Level Cost Estimates for AMI, SCADA, City wireless network and FTTP	\$ 49,350		\$ 49,350
E. Market Assessment		\$ 11,550	\$ 11,550
F. High Level Design for AMI, SCADA and City wireless network	\$ 16,800		\$ 16,800
G. Report & Presentation (Preliminary)	\$ 8,000	\$ 2,500	\$ 10,500
H. Community Assessment and Survey		\$ 21,000	\$ 21,000
I. Partnership Options		\$ 21,000	\$ 21,000
J. FTTP Business Case and Design Update		\$ 21,000	\$ 21,000
K. Report & Presentation (Final)	\$ 2,500	\$ 8,000	\$ 10,500
			\$ -
Travel (reimbursable)	\$ 2,000	\$ 6,432	\$ 8,432
Additional Services (if needed)	\$ 7,865	\$ 37,369	\$ 45,234
Total	\$ 86,515	\$ 411,061	\$ 497,576

As a result of synergies of combining Phases 1 and 3, staff re-negotiated high-level design and

travel expenses with Magellan which reduced total project budget by \$35,200 and is reflected in the contract award amount. There was also a project reduction of \$19,221 in the Phase 1 of the previous contract award.

Timeline

The estimated timeline of the updated Phase 1 activities are outlined below:



Stakeholder Engagement

With this proposed multi-phase and integrated cross-utility approach, the Utilities Advisory Commission (UAC) will become the forum for community participation, outreach and oversight for electric undergrounding, electric system rebuilds, fiber system rebuilds, gas main replacement, electrification, fiber, and wireless planning. The UAC will facilitate recommendations to the Council and create the best opportunity to efficiently leverage the City's fiber network with other ongoing utility capital improvement projects, environmental sustainability goals and public benefit programs. Each individual phase must be completed and approved by City Council before the decision is made to proceed with the next phase. Prior to implementation of subsequent phases, staff will return to Council with the respective tasks, costs, and contracts for approval.

On August 5, 2020, Utilities Advisory Commission (UAC) discussed the importance of broadband service and FTTP given the shift to teleworking, telepresence, and remote learning due to the COVID-19 pandemic. UAC asked staff and Magellan to accelerate some FTTP analysis and tasks in Phase 3 to earlier phases to shorten the duration of the fiber network expansion plan.

Environmental Review

Approval of the attached contract for design services and development of cost estimates for the fiber network expansion project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15306 (Information Collection) of the CEQA Guidelines because the services consist of data collection, research, and evaluation as part of a study leading to an action that the City has not yet approved or funded. The City will conduct an environmental assessment of subsequent project phases, as needed, prior to implementation.