T&E AGENDA: 10/5/2020
ITEM: d(1)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Matt Cano

SUBJECT: SEE BELOW

DATE: September 16, 2020

Approved

Date 9/24/20

SUBJECT: SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY CAPITAL IMPROVEMENT PROGRAM SEMIANNUAL STATUS REPORT

RECOMMENDATION

Accept the semiannual status report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program for the period of January 2020 through June 2020.

OUTCOME

The purpose of this semiannual status report is to provide an update on the implementation of the Capital Improvement Program (CIP) at the San José-Santa Clara Regional Wastewater Facility[1] (RWF) by highlighting key accomplishments during the second half of fiscal year 2019-2020 to the Transportation and Environment Committee (T&E), the Treatment Plant Advisory Committee (TPAC), and City Council (Council).

BACKGROUND

The San José and Santa Clara City Councils adopted the Plant Master Plan (PMP) in November 2013 and December 2013, respectively. The PMP identified more than 100 capital improvement projects totaling over $2.1 billion to be implemented at the RWF over the next 30 years. A validation process was completed in early 2014 to update and prioritize the recommended PMP projects and additional gap projects into 33 projects to be initiated over 10 years. Beginning in fiscal year 2014-2015, the validation process was used to inform the five-year CIP and ten-year

[1] *The legal, official name of the facility remains San José/Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.*

funding strategy. The 2020-2024 adopted CIP includes approximately $1.4 billion in funding, of which approximately $885 million is for construction. To provide visibility and accountability for this significant CIP effort, staff began providing formal semiannual status reports to T&E, TPAC, and Council in spring 2013.

The first semiannual status report was published in April 2013 and focused on progress and activities from July 2012 through December 2012. This report is the sixteenth in the report series and highlights key program and project accomplishments from January 2020 through June 2020. This report also compliments monthly CIP status reports, which staff began issuing in April 2014 to provide more frequent and time-relevant updates. Through June 2020, 75 monthly reports had been issued. Copies of the monthly reports are available at https://www.sanjoseca.gov/ciparchive

ANALYSIS

On March 16, the Santa Clara County (County) Public Health Officer issued a countywide shelter-in-place order due to the COVID-19 pandemic. In response to the County order, all CIP staff, except for construction management field staff, immediately commenced remote working. Construction activities continued with enhanced safety protocols. Design activities also continued with City and consultant staff adapting and learning to work effectively through virtual meetings and email communications. In April, as the COVID-19 pandemic continued and the County issued revised orders, the City designated CIP projects under construction as essential, which allowed work to continue. Contractors and CIP staff working at the RWF continue to follow the latest guidance from the County. The City also continues to develop policies and procedures in response to changing COVID-19 conditions. Staff is still evaluating pandemic-related impacts to construction schedules and costs and will present findings and recommendations to Council at a later date.

Significant progress was made in key program areas from January 2020 through June 2020.

A. *Construction Management Strategy*

At the start of 2019, the CIP had four projects under construction and anticipated five more to enter construction over the next year. Staff anticipates ten more to begin construction over the next three years. With the significant increase in construction activity on the horizon, staff initiated a construction management readiness assessment in early 2019. The objective of this assessment was to evaluate the current Construction Management (CM) program and identify any improvements necessary in readiness for the increased number of projects in construction. The assessment was completed in fall 2019. The outcome of this assessment has included enhanced program understanding; updated CM guidelines & SOPs, systems and tools; improved definition of CM positions, roles and responsibilities; a staffing gap analysis; and a staffing and resource procurement

strategy. Staff implemented recommendations from the CM readiness assessment including hiring an experienced consultant Principal Construction Manager, adding interim cost and scheduling resources, implementing updated processes and procedures, reinforcing the consistent use of tools across all construction projects, training City staff on best practices and new tools/procedures, and initiating procurements for additional third-party CM and controls resources.

B. *Biosolids Disposition Market Assessment and Procurement Strategy*
In February, the team finalized the biosolids procurement strategy and implementation plan. The plan recommended a short-term strategy of procuring contracts for hauling and disposition and a longer-term strategy potentially consisting of multiple procurements to develop a partner facility, city farm and/or secure long-term service contracts. As a next step, the biosolids environmental program manager will begin to implement the procurement strategy.

C. *Recruitments*
During the second half of fiscal year 2019-2020, staff successfully filled seven vacant positions including a principal engineer, a senior construction inspector, three civil engineers, an associate engineering tech, and a senior office specialist. Recruitment for project management and construction management positions to support project delivery will continue to be a priority during the first half of fiscal year 2020-2021.

On the project delivery front, there were 19 active projects at various stages of the project delivery model.

A. *Feasibility/Development Highlights*
Four projects were in the feasibility/development phase during the second half of fiscal year 2019-2020. Key activities completed during this period include the following:

- **Facility-wide Water Systems Improvements:** The project team held several workshops focused on trenching construction coordination, conceptual design review, and water systems improvements. The design consultant also finalized the Conceptual Design Report (CDR), the 100 percent plans for utility location trenching, and completed utility depth survey. Staff anticipates advertising the contract for utility trenching in July.
- **Final Effluent Pump Station and Stormwater Channel Improvements:** The US Army Corp of Engineers (USACE) Shoreline Levee project will include a closure structure that would prevent gravity flow for the RWF final effluent to the Bay. During this reporting period, the project team completed an analysis of options for unimpeded final effluent discharge to the Bay. Staff utilized the triple-bottom-line-plus (TBL+) approach to evaluate final effluent discharge options, and to identify a preferred alternative. The City continued to coordinate with the USACE to ensure that the RWF discharge requirements are accounted for in the design of the Shoreline Levee.

- **Storm Drain System Improvements:** During this period, the project team completed alternative analysis and started to develop the conceptual design. The design consultant also conducted utility surveys using ground penetrating radar technology, and additional inspections of stormwater pipes and pump stations.

B. *Design Highlights*

Six projects were in the design phase during the second half of fiscal year 2019-2020. Key activities completed during this period include the following:

- **Digested Sludge Dewatering Facility**: In January, soil testing and geotechnical investigations were completed. The project team completed centrifuge tests and conducted site visits to centrifuge facilities at East Bay Municipal Utility District and Union Sanitation District to help establish performance standards for the new mechanical dewatering facility. The design-builder conducted several workshops focused on permitting and project interface, project equipment, facility concept and site/civil engineering, cost model, alternative TBL+ scoring, architecture and geotechnical review, and sludge characterization. The design-builder also submitted the final subcontractor procurement plan, draft geotechnical report, hazardous materials report, and basis of design report (BODR).
- **Filter Rehabilitation:** The design consultant completed the 100 percent design documents. In March, staff advertised the construction contract and received bids from all three previously prequalified contractors. Staff anticipates Council award of the construction contract in October with substantial completion expected in March 2024.
- **Fire Life Safety Upgrades:** Staff advertised the design-build contract in January and received two bids. Both bids were determined to be either non-responsive or non-responsible. To mitigate delays on the delivery timeline, in April, the project delivery method was changed from low-bid-design-build to design-bid-build. Staff anticipates final design completion in January 2021, with construction contract rebid in March 2021.
- **HVAC Improvements and Outfall Bridge and Instrumentation Improvements:** In April, staff reevaluated the project delivery approach and recommended changing from low-bid-design-build to design-bid-build for both projects. The design-bid-build approach would allow for more competitive bidding on the construction contracts. Also, during this period, the 30 percent designs were completed for both projects.
- **Yard Piping Improvements – Phase 1**: In March, the design consultant finalized the CDR. In May, the final preliminary design report was completed. Other activities conducted during this reporting period include initiation of CEQA review, additional pipe condition assessments, field inspections, and soil sampling.

C. *Construction Highlights*

Nine projects, totaling approximately $403 million, were in construction during the second half of fiscal year 2019-2020 (see Attachment A). Two of the nine projects are being delivered using the progressive design-build method, with the remaining seven projects being delivered using the design-bid-build approach. Key activities completed during this period include the following:

- **96-inch and 87-inch Settled Sewage Pipes Rehabilitation**: In February, staff issued the Notice to Proceed (NTP) to the contractor, Michels Pipeline Construction. In April, the contractor completed installation of a reroute system needed to facilitate construction and conducted pressure testing. Functional testing of the reroute system was completed in May, and the contractor started potholing for underground utilities location. In June, the contractor completed cleaning of the 96-inch and 87-inch pipes and started excavation to expose the 87-inch pipe for rehabilitation. Through June 2020, construction was approximately 13% complete.
- **Advanced Facility Control & Meter Replacement – Phase 1:** During this period, the contractor completed functional testing on 49 of 53 analytical equipment installed in the Secondary B-side. These included flowmeters, dissolved oxygen (DO) analyzers, and total suspended solids (TSS) analyzers. The contractor also started demolition of pipes in the Nitrification tunnel, and staff finalized the startup sequence schedule.
- **Advanced Facility Control & Meter Replacement – Phase 2**: In January, staff advertised the construction contract and received two bids. In June, council awarded the construction contract to Kiewit Infrastructure West Co. The NTP will be issued in July, with beneficial use expected in early 2023.
- **Blower Improvements**: In Building 40, the contractor completed the architectural walls and ceiling joist for the new electrical room, installed the variable frequency drives (VFDs), performed electrical work including installation of conduits and pull boxes, and completed the removal of tiles from walls and floors within the locker rooms to expose drain lines that need to be replaced. In the Tertiary Blower Building (TBB), the contractor completed demolition and asbestos remediation work in the baghouses, poured new pads for and installed the S11 switchgear, installed metal stud and rafters for the new electrical room wall and ceiling, painted the walls and ceiling, and installed the electric motor for one TBB blower. In addition, during the period the contractor completed excavation of several duct banks and started setting conduit and reinforcing bars. Through June 2020, construction was approximately 47 percent complete.
- **Cogeneration Facility**: The design-builder continued piping, mechanical, electrical and equipment installation work in the main generator building. Interior painting, flooring, and drop ceiling work also continued in the power and air operations center. Paving in the project area was also completed. In addition, the design-builder performed functional testing on various pieces of equipment including cooling towers, HVACs, hot water loop, and gas treatment system. Through June, construction was approximately 89 percent complete.

- **Digester and Thickener Facilities Upgrade**: During this period, the contractor completed the commissioning of all eight remote digesters, installed insulation on digesters 5-8, installed all pipe rack main columns, and installed instrumentation on the covers and inside the dissolved air flotation treatment (DAFT) tanks. The contractor also completed the foul air piping in the odor control area, and polymer and water piping to the polymer area. Conduit and wiring work around digesters 5-8 continued, as well as startup planning and testing for the DAFT tanks and sludge screening areas. Through June 2020, construction was approximately 90 percent complete.
- **Headworks**: In February, Council approved the Definitive Contract Amendment and Guaranteed Maximum Price. Staff issued the NTP to the design-builder, CH2M Hill Engineers, in March. During this period, the design-builder submitted, and staff approved early design packages for construction and equipment procurement. The design-builder conducted site preparation activities including installing storm water pollution prevention plan measures, restrictive fence for habitat, trenching operations for temporary electrical and fiber optic connections, excavation for tower crane foundation, and installation of the tower crane base and reinforcement steel. Construction activities started in June and included relocation of existing pipelines, installation of temporary power and fiber optic connections, and grubbing of site and solid disposal area. Beneficial use is anticipated in mid-2023.
- **Nitrification Clarifiers Rehabilitation - Phase 1:** Staff continued to review contractor submittals and requests for information (RFIs) for equipment/ instrumentation, workplans, and process shutdown requests (PSRs). Through June 2020, 166 submittals and 48 RFIs were received. In June, the contractor started draining clarifier B8 of groundwater, constructing temporary stairwell for accessing clarifiers B8 and B6, and trenching for electrical conduits. Beneficial use is anticipated in late 2022.
- **Switchgear M4 Replacement and G3 & G3A Removal:** In May, staff issued the NTP to the contractor, Blocka Construction Inc. Pre-construction meetings and site walks were held in May and June. Also, in June, the contractor submitted a preliminary schedule for City review. Beneficial use is expected in early 2023.

Staff, contractors, and consultants continued to work safely and there were no reportable incidents to the State's Division of Occupational Safety and Health (Cal/OSHA) during the second half of fiscal year 2019-2020.

Staff expects to achieve the following during the first half of fiscal year 2020-2021:
1. Advertise the construction contract for the Facility-wide Water System Improvements Exploratory Trenching and Yard Piping Improvements - Phase 1.
2. Obtain Council approval to award the construction contract for the Filter Rehabilitation project and Facility-wide Water System Improvements Exploratory Trenching
3. Obtain Council approval to the award master services agreements for construction management, and construction controls.

4. Issue NTP for Advanced Facility Control and Meter Replacement - Phase 2, Filter Rehabilitation, and Facility-wide Water System Improvements Exploratory Trenching
5. Continue to implement the construction management and testing, startup and commissioning strategies.
6. Continue recruitment activities to fill remaining RWF CIP vacancies

CONCLUSION

Despite the challenges of COVID-19 pandemic the CIP continues to make significant progress on projects.

EVALUATION AND FOLLOW-UP

No follow-up action is required at this time. Staff will continue to provide regular updates to inform T&E, TPAC, and Council of significant changes or issues (particularly as related to rate impacts) as implementation of the CIP progresses. In addition to semiannual presentations, staff will continue to share monthly progress reports with TPAC.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the October 5, 2020, T&E agenda.

COORDINATION

This report has been coordinated with the Office of the City Attorney and City Manager's Budget Office.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the October 8, 2020, TPAC meeting.

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Information Memos that involve no approvals of any City action.

/s/
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/s/
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For questions, please contact Napp Fukuda, Assistant Director, Environmental Services Department at (408) 973-5353.

Attachment A – Projects in Construction: January 2020 – June 2020