Kennedy Jenks

September 21, 2023

Memorandum

To: Nathan Travis, District Manager
Castle Pines North Metropolitan District

From: Greg S. Sekera, P.E.

Subject: District Engineer Report for Board of Directors Meeting on September 25, 2023
Castle Pines North Metropolitan District
KJ Job No. 2346002*GENW

Briefly presented below are the items that we have been involved in during the past month as well as on-going engineering related items.

DISTRICT PROJECTS

- Water Treatment Plant Upgrades – There are 6 projects currently in the design and construction phases. We are also developing task orders for engineering services related to several other plant upgrades that staff has requested.
  - HVAC System Upgrades – Glacier Construction Co. is finalizing the installation of the HVAC System upgrades at the plant. Due to longer than expected equipment lead times this project will extend into October. However, main ventilation equipment that will properly exhaust and condition spaces in the treatment plant have been installed and are on-line.
    - Status: Active Construction
    - Contract End Date: October 2023
  - Backwash Reclaim Tank Rehabilitation – Glacier Construction Co. has been issued substantial completion for this project, the District has assumed beneficial use of the new backwash reclaim system, and the team is working to close out the project.
    - Status: Project Close Out
    - Contract End Date: September 2023
  - Liquid Ammonia Sulfate (LAS) Storage and Feed System Upgrade – KJ is continuing to work on the final design documents for this project. The project is expected to go to bid in October of 2023. Estimated time of construction is 6 months once notice to proceed is issued.
    - Status: In Design
    - Anticipated Project Bid: Q4 2023
  - Tank Rehabilitation Program – This project was awarded to Glacier Construction Co. NTP has been issued to the Contractor and they are beginning their contract work.
    - Status: Active Construction
    - Contract End Date: March 2024
  - Facility Documentation Program – KJ and the District staff have kicked off the Facility Documentation Program. This program goal is to capture, document, and/or develop the

infrastructure, controls programming, and operational procedures related to the Water Treatment Plant.

- Status: *The following phases of the Facility Documentation Program are active:*
  a. Electrical, Instrumentation & Controls Documentation: This program phase is active and is estimated to be completed by Q2 of 2024. KJ has developed draft P&IDs to-date and will begin to coordinate their finalization with the District's integrator Mountain Peaks.
  b. Code Summary Analysis: This project phase is active and is estimated to be completed by Q3 of 2023.
  c. Asset Management Registry Update: This program phase is active. KJ and the District's 3rd party asset registry designer are beginning a data entry pilot that will determine the remainder of this phases scope.
  d. Site Civil Utility As-Builts: This program phase will include generating an updated survey of the WTP site. This survey along with utility location efforts will be used to generate site civil drawings for the WTP.

❖ Filter Rehabilitation Project – KJ and the District have been working together to define the scope of work to upgrade/rehabilitate the 6 media filters at the WTP to operate more efficiently. This will likely include upgrading the media types within the filters and replacing the equipment within each filter with more modern equipment. The first step will be to pilot media options with the District's raw water. KJ has started a 6 week sampling campaign of the WTP's combined raw water influent. This data will further inform the pilot plan.

KJ is also actively working on the pilot plan and preparing to start coordinating the pilot and overall project with CDPHE.

- Status: Piloting Phase (Sampling)

❖ Lift Station Upgrades – Final design is in progress. We are performing reviews with the District and agencies and finishing final coordination with the surveyor, geotechnical engineer, and utility locate/pothole company to complete their work. We are currently at the 30% design level.

- Status: Currently in design
- Anticipated Bid: Q2 2024

Notice of Violation / Cease and Desist Order – The District received a notice of violations letter from CDPHE on August 8, 2023, relative to the lift station overflows (8 events) that have occurred since November 2018. CDPHE is requiring a long list of corrective actions that must occur over the next 90 days. We are currently assisting Nathan and Level Engineering in addressing each action item. Level Engineering will be the lead in gathering in responding and submitting the required data, plans, and information for the responses. The work related to these corrective actions will somewhat sidetrack our design efforts for the lift station improvements, but we are hoping we can stay on track, as much of the engineering is interchangeable.

- Yorkshire Water Line Replacement – The Yorkshire Water Line will be replaced ahead of the City's pavement restoration in Yorkshire. The bid opening was held Sept 20. Six (6) bids were received. We have reviewed the bids and recommended a contractor. The project will be completed in late Fall or early Spring prior to the City's pavement schedule.
    - Status: Bid Opening was Sept 20, need to award project
- Well Vault Rehab Project – Kennedy Jenks is currently designing the rehabilitative upgrades needed for each well vault in the District. We are currently at the 60% design level.
    - Status: Currently in design
    - Anticipated Project Bid: Q4 2023
- Monarch Water Line Replacement – The Monarch Water Line will be replaced ahead of the City's pavement restoration in Monarch that is scheduled for 2024. We are currently potholing the existing water line in various spots to determine the condition of the existing ductile iron pipe. Based on the findings from the potholing we will be able to determine the extent of the water line that needs to be replaced. We will then develop our scope of services proposal for design of the water line. We anticipate providing our proposal in October.
    - Status: Currently in pre-design and scoping phase
    - Anticipated Project Bid and Construction: 2024

DEVELOPMENT PROJECTS

- New Service Line Reviews – We have continued observations of new water and sewer taps and services in Lagae and Town Center for conformance to the District standards. We will continue the observations as requests are received by the District.
    - Status: Active on an as needed basis
- Lagae PA-12 Site – We continue coordination with the Developer and their utilities contractor for completion of the punch work. The sanitary sewer and water mains are complete however completion of punch list work is pending. Acceptance of the project for start of conveyance is pending completion of punch work and documentation.
    - Status: Active construction – punch list and close out phase
- Lagae PA-7 Site – The water and sanitary sewer mains and service line stub-outs to the townhome buildings are complete. The Developer is continuing with townhomes, and we are reviewing the meter and service lines as they request. Acceptance of the project for start of conveyance is pending completion of punch work and documentation.
    - Status: Active construction – punch list and close out phase

- Lagae Family Trust Site – No new updates for this past month. Water and sanitary sewer improvements are complete. We continue to track punch list work. The project has not been accepted for start of conveyance.
    - Status: Active construction – punch list and close out phase
- Charter Oaks Car Wash – New car wash project requires relocating fire hydrant at Castle Pines Pkwy and Carolyn Drive, installing a new water service, and a new sewer service. Reviews and the easement have been completed.
    - Status: Construction in progress.
- Irrigation Tap for City's Gateway Monument Project – New 1.5 inch irrigation tap for the City's gateway monument project. David Anderson reviewed the water service size.
    - Status: Construction in progress.
- Service Street Auto Repair – Lot is within the Lagae Family Parcel at Castle Pines Pkwy and Lagae Road. Project only requires new water and sewer services. Our review of the water service size is complete.
    - Status: Currently in design
    - Start date for construction is unknown.
- McDonalds – Lot is within the Lagae Family Parcel at Castle Pines Pkwy and Lagae Road. Project only requires new water and sewer services. We received plans for review.
    - Status: Currently in design
    - Start date for construction is unknown.