Additional Information
February 12, 2019 Board Meeting

The following additional information was provided regarding the February 12 Board meeting agenda:

Item 3.h, Consulting Agreement with Raka Consulting:

1. The multiple contracts for related work had the effect of splitting the total work (which would require Board approval) into smaller contracts that did not need Board approval. I accept this was not intentional, but it happened, it's a serious problem, and it wasn't discovered for many months. What changes are being made in the contract development and approval processes to prevent this from happening again? **This was unintentional, and when staff discovered that the work was similar, we halted work by the consultant until an executive decision was made to continue with the project and go to the Board for retroactive approval for the contract. This will be brought to the attention of Chancellor's Staff members to be discussed with their respective staff. Overall there are very few of these type of incidents that get by the Purchasing department staff, and they have been diligent in having discussions with staff in explaining the process on larger contracts.**

2. Regarding the last purchase order of January 25, 2019, is this paid in total or incrementally as analysis and work is completed? **The contract amount is a "not to exceed" amount and the consultant is only paid for work that is accomplished. Typically the consultant invoices the District on a monthly basis with a written report of work accomplished and the actual number of hours worked.**

Item 3.k, Amend Agreement with R2A Architecture for the FC Business-Humanities Building Renovation Project:

1. In the second paragraph, last sentence, should it read: "DSA very much prefers that all buildings be seismically updated but the CBC 50% is the exception to the replacement rule?" **No, it was not well worded. A better statement is: The California Building Code 50% of replacement cost rule makes building renovations such as the 300 and 500 building project a more viable option versus full building replacement.**

Item 3.l, Amend Agreement with BNBuilders for the FC Central Plant Expansion Project:

1. Scenario (1) provides cooling capacity (1 new chiller) for new buildings and the infrastructure for replacing existing chillers in 5-7 years. Scenario (2) provides the new cooling capacity and provides 3 new chillers to replace all the existing chillers now even though they have not reached their end-of-service life. An argument is presented that having all new chillers will provide improved service for existing buildings.

   A) No cost analysis is presented that takes into account the added costs of prematurely retiring the existing equipment before its end of life and incurring the cost of buying new equipment 5-7 years early, so the cost analysis is incomplete. **A life cycle cost analysis was completed September 2018 to determine whether the two existing 600-ton chillers and associated cooling towers and pumps located at Mini Plant 3 should be replaced at the end of their useful life or during the Central Plant Expansion project. Based on the findings of the report, replacing existing chillers during the Central Plant Expansion project has the lowest (best) life cycle cost with a net savings of $690,298 over an 8-year period, compared to the Base case of retaining and operating the existing chillers to the end of their useful life. Since 2014 the**

college has seen a significant increase in chiller and Variable Frequency Drive (VFD) failures. The chiller plant has had 3 major VFD failures and ongoing minor failures. Future failures will result in tens of thousands of dollars in repair costs. When major failures do occur, it takes weeks to repair, leaving the campus without the capacity to adequately cool the campus. The reliability of these VFD's and chillers is highly questionable. Additionally, during the summer months, the existing chiller system has proven to be unreliable. Based on tonnage alone, the chiller capacity should be sufficient to support the cooling needs of the buildings they serve. Unfortunately, the system does not. In order to keep the campus cool during summer months, the chillers must run throughout the night to pre-cool buildings, which uses additional electricity. Night chiller operation also subjects the system to additional wear and tear. During the hottest summer days, or days of high humidity, the system simply cannot keep up with cooling demands throughout the day. Classroom and office temperatures can rise above the desired temperature range, often to the point of being uncomfortable. Summing the savings of $690,000 identified in the study, the potential VFD repair costs, energy saved from no longer needing the chillers to run at night, and economies of scale, the total savings is closer to $800,000 dollars.

B) An obvious Scenario (3) is not presented: provide all the infrastructure, install 2 chillers now to improve the current operations, and finish the complete replacement in 5-7 years. Why wasn't this considered, and should it be included in the options now? **Replacing 100% of equipment rather than augmenting what is existing will negate the need to coordinate an unreliable, inefficient system with a new, warrantied system. Also due to the future construction schedule we would like to avoid future disruption to the campus to complete the project.**

2. The original system replacement analysis by BSE Engineering was deficient in multiple significant ways. It sounds like the work may have been so deficient as to constitute legally incompetent work by the professional-engineer-in-responsible-charge. What is being done about this? **BSE provided a high-level, rough order magnitude estimate based on the initial conceptual layout. They used industry average square foot and unit costs to arrive at the initial estimate. As noted, the initial concept excluded infrastructure for full plant build out.**

Since the "Progressive Design/Build" delivery method is being used for this project, a high level design criteria is given to the design/build firm, which gives them latitude to develop a more cost effective design. This is unlike the traditional Design/Bid/Build delivery method, where a detailed document of design and engineering criteria is used. Prospective design/build firms were asked not to spend extensive time or money developing proposals; they could have easily spent hundreds of thousands of dollars on their proposals, which would have dramatically limited the size of the pool of potential builders/bidders. The goal was to obtain as many qualified proposals for the project as possible.

The project is now in the detailed design phase, which includes all equipment and infrastructure. It is not uncommon for the original high-level estimate for a conceptual design to vary considerably from a detailed, professional cost estimate based on a

fully developed design. For example, one difference is adding the electrical gear and footprint for full build out, which contributes to the substantial increase in plant square footage and cost. The College has begun utilizing professional cost estimating services to help ensure accurate budgets.

BSE has been a reliable engineering design firm utilized by the District for many years, including peer review and problem solving for other engineering firm design issues.