

**STATE OF CALIFORNIA**  
**Capital Outlay Budget Change Proposal (COBCP) - Cover Sheet**  
 DF-151 (REV 07/19)

Fiscal Year 2020-21	Business Unit 6870	Department Board of Governors, California Community Colleges	Priority No. 1
Budget Request Name 6870-025-COBCP-2020-GB		Capital Outlay Program ID <b>5680</b>	Capital Outlay Project ID (7 digits. For new projects leave blank) <b>0006504</b>

Project Title <b>Barstow Community College District, Barstow College: Hydronic Loop and Water Infrastructure</b>	Project Status and Type Status: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuing Type: <input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor
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Project Category (Select one)

CRI (Critical Infrastructure)  WSD (Workload Space Deficiencies)  ECP (Enrollment Caseload Population)  SM (Seismic)  
 FLS (Fire Life Safety)  FM (Facility Modernization)  PAR (Public Access Recreation)  RC (Resource Conservation)

Total Request (in thousands) <b>\$741</b>	Phase(s) to be Funded Preliminary Plans and Working Drawings	Estimated Total Project Cost (in thousands) \$9,920
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**Budget Request Summary**

The Board of Governors, California Community Colleges, requests \$741,000 Proposition 51 General Obligation Bond for the preliminary plans and working drawings phases of the Barstow Community College District (CCD), Barstow College, Hydronic Loop and Water Infrastructure project. The project replaces the campus-wide domestic water system which supplies potable water and the hydronic loop infrastructure, which serves the heating and cooling demands of the buildings campus-wide. The total project costs are \$9,920,000 (\$9,920,000 state funds).

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed	CCCI <b>6684</b>
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Requires Provisional Language <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Budget Package Status <input type="checkbox"/> Needed <input checked="" type="checkbox"/> Not Needed <input type="checkbox"/> Existing
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**Impact on Support Budget**

One-Time Costs  Yes  No      Future Costs  Yes  No  
 Future Savings  Yes  No      Revenue  Yes  No

If proposal affects another department, does other department concur with proposal?  Yes  No  
*Attach comments of affected department, signed and dated by the department director or designee.*

Prepared By	Date	Reviewed By	Date
Department Director	Date	Agency Secretary	Date

Department of Finance Use Only	
Principal Program Budget Analyst <b>ORIGINAL SIGNED BY SALLY LUKENBILL</b>	Date submitted to the Legislature <b>1/10/2020</b>

**A. COBCP Abstract:**

**Barstow Community College District, Barstow College: Hydronic Loop and Water Infrastructure** - \$741,000 for the state share of preliminary plans and working drawings. The project includes the replacement and construction of the campus-wide water infrastructure systems. The total project costs are currently estimated at \$9,920,000, including preliminary plans (\$459,000), working drawings (\$282,000), and construction (\$9,179,000). The preliminary plans are estimated to begin in July 2020 and be completed in December 2020. The working drawings are estimated to begin in December 2020 and be completed in December 2021. Construction is scheduled to begin in May 2022 and be completed in October 2023.

**B. Purpose of the Project:**

Barstow College has 4,418 students enrolled in its instructional programs, and 3,380 (76.5 percent) of Barstow College's students are low-income. Barstow College has 206.8 full-time equivalent employees who provide administrative leadership, student services, and instruction. There are 206.8 full-time equivalent employees who directly serve the programs associated with the proposed project. The Barstow CCD and the Barstow College campus are located in the high desert, which is identified by the California Community College *Vision for Success* as a region of low performance.

The Barstow College Hydronic Loop and Water Infrastructure project includes replacing the failing infrastructure (water) systems, which are at risk of catastrophic failure, and addressing life-safety deficiencies that pose safety hazards to students, faculty, staff and the public. A majority of Barstow Colleges' existing infrastructure was constructed in the mid-1960s and is obsolete, far beyond its useful service life. Barstow College consists of 22 buildings containing over 250,000 gross square feet (GSF) on 16 acres, and a single 8-inch water main serves both potable water and fire flow water to the campus, with 2 to 4-inch laterals to the individual buildings. The hydronic loop provides water for the campus-wide heating, ventilation and air conditioning (HVAC) needs of faculty, staff, and students. The infrastructure systems have not been renovated and do not support the current programs.

**Life-Safety Deficiencies**

The district recently commissioned a third-party infrastructure study, which found that the water systems are at risk and there is a significant probability that both or one of the water systems will sustain catastrophic failures. When the hydronic loop and water infrastructure systems fail, Barstow College does not have potable water, the ability to activate its fire suppression system, and provide heating ventilation and air conditioning to the buildings. In a catastrophic event, Barstow College may have to close the campus.

**Programmatic Issues**

Although the life-safety problems with the infrastructure systems are a concern in terms of the safety of faculty, students, and staff, the lack of potable water and ability to heat and cool buildings do not serve the needs of the campus-wide programs. With the hydronic loop offline, the HVAC systems are inoperable and result in an unsafe environment for students and employees, especially with a college located in the high desert. Educational and student support programs, including college operations, are adversely affected.

Solution Criteria:

To mitigate these problems, Barstow College seeks a solution that meets the following criteria:

- Cost - Is the least cost solution.
- Educational Impacts - Provides the technology and configuration to support instructional programs.
- Educational Impacts - Creates an on-campus environment where students can learn through the incorporation of current educational technologies.
- Delivery time - Project delivers a solution in the shortest amount of time.
- Campus integration or cohesiveness – Project is included in the campus' master plan.
- Security - Improves campus security systems.
- Energy efficiency and environmental sustainability - Improves energy efficiency.

**C. Relationship to the Strategic Plan:**

Barstow CCD's Hydronic Loop and Water Infrastructure project seeks to advance the changes and goals of the *Vision for Success*, an effort to improve student success, increase students' transfer to four-year institutions, and build robust career education programs. This project is the highest-priority in the Barstow Community College District's Master Plan. Life/safety is a primary district concern; this project includes structural and code improvements as well as the technological infrastructure needed to support Barstow College's instructional needs. This project will integrate architectural elements that match the State's environmental sustainability goals for energy efficiency, water conservation measures, energy efficient HVAC, occupant health, as well as minimizing the domestic water delivery systems impact on the environment both by design and construction.

**D. Alternatives:**

Although two alternatives were considered, only one alternative is feasible. One feasible alternative was analyzed to address the problems discussed above.

- Alternative 1 – Replace the campus-wide hydronic loop and domestic water systems.
- Alternative 2 – Continue to repair the existing hydronic loop and domestic water system as it continuously fails.

Alternative 1: Replace the campus-wide hydronic loop and domestic water systems. Includes the construction and replacement of the campus-wide water infrastructure systems to stabilize the campus infrastructure and maintain college operations at the Barstow College campus. The estimated cost of this alternative @ CCCI 6684 and EPI 3607 is \$9,920,000.

Pros:

- Cost - Is the least cost solution.
- Educational Impacts - Provides the technology and configuration to support instructional programs.
- Educational Impacts - Creates an on-campus environment where students can learn through the incorporation of current educational technologies.
- Delivery time - Project delivers a solution in the shortest amount of time.
- Campus integration or cohesiveness – Project is included in the campus' master plan.
- Security - Improves campus security systems.
- Energy efficiency and environmental sustainability - Improves energy efficiency.

Cons:

- None.

Alternative 2: Continue to repair the existing hydronic loop and domestic water system as it continuously fails is unacceptable and not a feasible alternative.

**E. Recommended Solution:**

1. Which alternative and why?

Alternative #1 – Replace the campus-wide hydronic loop and domestic water systems is the chosen option because it meets all of the solution criteria. The new permanent water infrastructure systems provide technologically advanced, energy efficient, and sustainable water delivery that supports the campus-wide faculty, staff, academic and student services programs and contemporary teaching methodologies. The new infrastructure systems restore and resolve the campus-wide health, life and safety deficiencies, and improve environmental and sustainability measures. This alternative does not adversely impact the campus' operations budget, and is the least cost solution.

2. Detailed scope description.

Demolish the existing domestic water infrastructure systems, and replace and construct new campus-wide water infrastructure systems. The site location for the project will be adjacent to and along the same trenches as the existing infrastructure systems.

3. Basis for cost information.

JCAF 32.

4. Factors/benefits for recommended solution other than the least expensive alternative.

The least expensive alternative was chosen. Continuing to repair the existing hydronic loop and domestic water systems, as they continuously fail, is unacceptable and not a feasible alternative.

5. Complete description of impact on support budget.

This project will include installation of efficient mechanical and electrical devices, which will result in a reduction of operational and maintenance costs.

6. Identify and explain any project risks.

Since a large portion of this project deals with underground earthwork, it is also possible that unknown obstacles and materials may be discovered as grading and underground utility improvements begin.

7. List requested interdepartmental coordination and/or special project approval (including mandatory reviews and approvals, e.g. technology proposals).

Division of the State Architect and State Fire Marshal reviews for structural safety, access compliance and fire life safety. State Public Works Board approval of preliminary plans and working drawings are also required.

**F. Consistency with Government Code Section 65041.1:**

The California Community Colleges are exempt from the specific provisions of this Government Code Section.