

**STATE OF CALIFORNIA**  
**Capital Outlay Budget Change Proposal (COBCP) - Cover Sheet**  
 DF-151 (REV 02/20)

Fiscal Year 2020-21	Business Unit 6870	Department Community Colleges	Priority No.
Budget Request Name 6870-083-COBCP-2020-MR		Capital Outlay Program ID 5680	Capital Outlay Project ID 0006505

**Project Title**  
**Yuba Community College District, Yuba College: Fire Alarm Systems Upgrade**

**Project Status and Type**

Status:  New  Continuing      Type:  Major  Minor

**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) \$ 377	Phase(s) to be Funded Preliminary Plans and Working Drawings	Total Project Cost (in thousands) \$ 5,088
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**Budget Request Summary**

The Board of Governors, California Community Colleges, requests \$377,000 for the preliminary plans and working drawings phases of the Yuba College Fire Alarm Systems Upgrade project. This replacement project involves addressing functional deficiencies and increasing the operations capabilities of the campus' fire notification systems. The total project cost is \$5,088,000 (\$4,070,000 state funds and \$1,018,000 district funds).

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 No	Code Section(s) to be Added/Amended/Repealed	CCCI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

One-Time Costs  Yes  No      Swing Space Needed  Yes  No  
 Future Savings  Yes  No      Generate Surplus Property  Yes  No  
 Future Costs  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 Original Signed by Sally Lukenbill	Date submitted to the Legislature 5/14/2020
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**A. COBCP Abstract:**

*Yuba Community College District, Yuba College, Fire Alarm Systems Upgrade – \$377,000 for the state share of the preliminary plans and working drawings. The project involves the addition of an addressable, centrally controlled network to connect the alarm systems in each building and the replacement and repair of the fire suppression monitoring systems within the buildings. The total project costs are currently estimated at \$5,088,000, including preliminary plans (\$285,000), working drawings (\$186,000), and construction (\$4,617,000). The preliminary plans are estimated to begin in July 2020 and be completed in October 2020. The working drawings are expected to begin in October 2020 and be completed in July 2021. Construction is scheduled to start in January 2022 and be completed in September 2022.)*

**B. Purpose of the Project:**

The proposed project involves the replacement improvements to the fire suppression monitoring systems and addition of a central network to comply with fire and life-safety codes and help ensure the safety of students, faculty, staff and the public. The necessity and urgency for the project, as well as the scope of the project, are detailed below.

*Infrastructure Deficiencies/Life Safety Issues*

Yuba College, Marysville campus was constructed in 1963 and many of the instructional facilities and spaces that students use on daily basis have not been updated since the 1960s.

There is no addressable control network that links all of the fire and life safety alarms in the existing campus buildings, making it possible for a fire alarm to activate in a building, the fire department arrives at the campus, but the firefighters unable to know which building is involved in the incident.

An addressable fire alarm system is one in which all fire and smoke detection devices in a system are connected and communicate with each other, with a central control monitoring location, and with outside emergency authorities. This interconnectivity allows the control personnel to identify the location or “address” where the initial detection occurred. The existing alarm systems are a mix of capabilities. A few modern buildings have equipment that is capable of connecting to a central network if it existed. Older buildings have outdated equipment that does not have the capability of connecting to a network, even if it existed.

The existing alarms are incapable of networking, unreliably slow, unsupportable, and not up to current standards. Numerous instructional and support buildings are equipped with obsolete and inadequately-supported fire monitoring systems. The existing fire alarm system serves over 20 buildings or groups of buildings on the Yuba College campus and updates are required per the California Life, Safety, Electrical and other regulatory codes. The faulty conditions of the fire alarm systems are documented in an independent third-party report prepared by a licensed professional engineer (The Fire Consultants, Inc.) in 2018 and key concerns highlighted in the report include:

- Lack of a central monitoring of the systems to initiate emergency response.
- Most campus buildings are served by fire alarms installed 50-55 years ago and due to the age of the equipment, several devices have been reported to be inoperable and system failure is a concern.
- Some alarm devices have experienced recurring fault conditions and been noted to have an abnormally slow or delayed response time to alarm receipt. These alarms are no longer manufactured, marketed or actively supported by the manufacturer. It is very difficult to find technicians knowledgeable in the service of the equipment or to obtain parts for equipment that become damaged or inoperable.

- Visual notification alarms (strobes) are no longer compliant with current ADA and local accessibility standards.

The third-party report (The Fire Consultants, Inc.) has concluded that the deficient conditions of the existing fire alarm systems are a concern in that they may not be capable of providing sufficient protection for the occupants in the event of a fire emergency. A delay or faulty operation of the systems could put occupants at risk by minimizing the available egress time or delaying proper emergency response. The proposed repair and replacement of the fire alarm systems will provide effective emergency notification to mitigate the imminent risks to occupants and promote a safe learning environment for the students.

#### *Solution Criteria*

To mitigate the above problems, Yuba College seeks a solution that addresses the following criteria:

- Security – Addressable control network for alarms substantially improves the effectiveness of security systems.
- Cost – Is the least cost solution.
- Educational Impacts – Provides functional and operational fire alarm systems to protect facilities, students, faculty and staff.
- Delivery Timeline – Provides a solution in a reasonable amount of time (26 months or less).

#### **C. Relationship to the Strategic Plan:** (relevance of problem/need to mission and goals)

The district has made a commitment to facilities stewardship and optimization of capital investments in order to achieve a safe, high-functioning campus. It is also in the interest of the district to coordinate its operations with other public agencies. The Fire Alarm System Upgrade project will help provide a safe campus environment in support of student learning and completion.

#### **D. Alternatives:**

Three viable alternatives were analyzed to address the problems discussed above.

- Alternative 1 – Add an Addressable Control Network and Repair, Replace, Modify Existing Fire Alarm Systems
- Alternative 2 – Add an Addressable Control Network and Upgrade Fire Alarm Systems
- Alternative 3 – Add Stand-Alone Panels, Add an Addressable Control Network, and Upgrade Fire Alarm Systems.

Alternative 1 – Add an Addressable Control Network and Repair, Replace, Modify Existing Fire Alarm Systems. The work includes the repair, replacement and/or modification of the existing fire alarm systems in 21 buildings to make them functional, compliant and capable of connecting to the new network. Where the existing system is usable (10 buildings), modify to enable code required central station identification and monitoring. Where existing systems are obsolete (11 buildings), replace with new system to carry out all necessary functions in the building. All new systems will have voice capabilities; existing systems will not be changed. The estimated cost of this alternative @ CCCI 6684 is \$5,088,000.

Pros:

- Security – Addressable control network for alarms substantially improves the effectiveness of security systems.
- Cost – Is the least cost solution.
- Educational Impacts – Provides functional and operational fire alarm systems to protect facilities, students, faculty and staff.
- Delivery Timeline – Provides a solution in a reasonable amount of time (26 months or less).

- ~~• Campus Integration or Cohesiveness – Supports the campus’s master plan objective to meet the higher education needs with the improvement of facilities/systems, as well as effective coordination with community partners.~~

Cons:

- None.

Alternative 2 – Add and Addressable Control Network and Upgrade Fire Alarm Systems. This approach adds a new addressable control network all campus buildings. It replaces and upgrades the systems in 21 existing buildings to provide a higher level of networking capability and voice communications. This option would also provide universal voice capability and integrated systems in all buildings. The estimated cost of this alternative @ CCCI 6684 is \$11,484,000.

Pros:

- Security – Addressable control network for alarms substantially improves the effectiveness of security systems.
- Educational Impacts – Provides functional and operational fire alarm systems to protect facilities, students, faculty and staff.
- Delivery Timeline – Provides a solution in a reasonable amount of time (26 months or less).
- ~~• Campus Integration or Cohesiveness – Supports the campus’s master plan objective to meet the higher education needs with the improvement of facilities/systems, as well as effective coordination with community partners.~~

Cons:

- Cost – Is not the least cost solution

Alternative 3 – Add Stand-Alone Panels, Add an Addressable Control Network, and Upgrade Fire Alarm Systems. This approach adds a new addressable control network for all Yuba College campus buildings. It provides uniform equipment to create the highest level of alarm capabilities and networking in all campus facilities by replacing and upgrading the systems in 21 existing buildings because they are not networkable, and/or have no voice communication capability. This alternative would also provide basic fire alarm functions in stand-alone panels with horn/strobe devices (instead of speakers) in the individual buildings. The monitoring and mass notification/voice capabilities will be provided by a separate monitoring and paging/alarm amplifier system. The estimated cost of this alternative @ CCCI 6684 is \$12,647,000.

Pros:

- Security – Addressable control network for alarms substantially improves the effectiveness of security systems.
- Educational Impacts – Provides functional and operational fire alarm systems to protect facilities, students, faculty and staff.
- Delivery Timeline – Provides a solution in a reasonable amount of time (26 months or less).
- ~~• Campus Integration or Cohesiveness – Supports the campus’s master plan objective to meet the higher education needs with the improvement of facilities/systems, as well as effective coordination with community partners.~~

Cons:

- Cost – Is not the least cost solution

**E. Recommended Solution:**

1. Which alternative and why?

Alternative 1 – Add an Addressable Control Network and Repair, Replace, Modify Existing Fire Alarm Systems is the recommended solution because it is the only option that meets all the

solution criteria. The proposed project will increase the capabilities of the fire and life safety alarm system at Yuba College. It introduces an addressable, centralized control network that will allow all of the alarms to communicate with one another, with the central control, and with outside public emergency response agencies. The improved fire alarm systems will address the functional and operational deficiencies in the fire notification system. This alternative provides a solution at the least cost and in the shortest timeframe, presenting code compliant systems to enhance occupancy safety.

2. Detailed scope description.

The scope includes site utilities, communications, and electrical work associated with the new addressable control network, as well as replacement and repair of the fire and life-safety systems. This project will permanently restore the designed capability and capacity of the campus-wide fire alarm system for the following 21 buildings:

Admin. Center and Student Services (buildings 100A and 100B), Music Center (200), Campus Center (300), College Theatre (400), Business/Soc. Sci. (500), Applied Arts/Sci. (600), Life/Phys. Sci. (800), Liberal Arts Center (1000), Library Center (1100), Gymnasium (1200), Maintenance (1400 and 1900), Warren Hall (1600), Auto Ctr. (1700), DSP&S (1800), Adaptive P.E. (2000), Health/Public Safety (2100), Protection Service Vehicle Storage (2101), Chiller/Boiler (9804), and Shop Service (9805).

3. Basis for cost information.

Refer to the JCAF 32.

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

This recommended solution is the lease cost alternative.

5. Complete description of impact on support budget.

None anticipated.

6. Identify and explain any project risks.

None anticipated.

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 plan reviews. State Public Works Board and Department of Finance approval of design.

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

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