

Written Testimony to the Little Hoover Commission
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A. Context and Summary: A Lifecycle-Approach to Social Infrastructure

Opened in 2005, UC Merced is the youngest campus in the University of California system and was fortunate at its inception to have built modern and environmentally sustainable facilities that currently accommodate approximately 7,000 students.

A key element of the University of California's enrollment plan, as agreed upon by the Legislature, is the growth at UC Merced. Growth at the Merced campus will provide for increased access for first-generation college students, students from underserved communities, and California students who are qualified to attend a University of California campus.

UC Merced has established a goal of creating facilities for a comprehensive 10,000-student campus by 2020. At that size, the campus will be able function effectively as a world-class, but highly focused, research university. The campus is currently operating at higher enrollment levels than capacity. Without new facilities further enrollment growth is constrained.

As a result, if the campus were to both fulfill our academic mission and keep pace with the increasing demand for admission caused by California's population growth, the campus needed to quickly build new facilities. As a result, the University looked at many different development strategies and compared those strategies across several different factors.

One primary driver for the University is that it had time-sensitive needs across a wide range of asset categories, from housing to academic facilities to basic infrastructure. It also determined that bundling the development of these asset types together into a single project enabled a unique programmatic opportunity to capture economies of scale and functionality in a short time frame.

But most importantly, the campus was committed to identifying an infrastructure management strategy that achieved multiple objectives. Based on the experience of other public institutions, the University sought a structure that would help it deliver and manage facilities that achieve good building performance throughout their life cycles, including the maintenance and operations of major building systems. The goal was to share performance and financial risk over the life cycle of the facilities, as well as foster market competition across the total cost of ownership.

In order to provide the critically needed facilities and infrastructure, and to meet enrollment targets by 2020, the campus adopted a performance-based delivery model to address the need in an efficient timeframe.

Known as the “2020 Project”, the 1.2 million gross square foot project would be comprehensively developed to ensure the university considered the lifecycle costs of design, construction, financing, operations, and capital maintenance. This was achieved through procurement of a Project Agreement that is also referred to as an availability payment concession model.

The availability payment concession model uses facilities performance standards to enable an interdisciplinary approach to solving design, construction, financing, operations and maintenance issues. The contract does not transfer revenue streams nor does it shift responsibility for delivering public services. There is no transfer of property rights to the private sector and the financing is on the university’s balance sheet.

To finance the Project, the University will issue traditional tax-exempt financing for a large portion of the capital cost and the remainder of the funding will come from financing and equity through the private Developer. The campus will pay debt service on the progress payments. In addition, the campus will make availability payments to the Developer, subject to the performance of the facilities specified in the Project Agreement, for its capital borrowing and equity in the form of availability payments. The availability payments will provide the Developer with funds needed to fund its facilities management responsibilities under the contract, repay its borrowed financing, and provide equity return.

The procurement process commenced in Spring 2014, concluded in Summer 2016 and groundbreaking for the project occurred in October 2016. The first buildings will be complete by Fall 2018 and the project will be complete by Fall 2020.

B. Justification: A campus for a growing California

The University of California, Merced is a research university located in heart of the San Joaquin Valley, an agriculturally-rich area stretching from Stockton to Bakersfield. As of 2016, approximately 4.1 million people and more than 100 ethnic groups live in the San Joaquin Valley. As a region, the San Joaquin Valley’s population has the lowest level of college attainment in the State, the highest levels of young people under age 18 living in poverty, and among the highest unemployment rates in the United States.

The motivating factor for UC Merced’s work is rooted in its mission to foster opportunity for the next generation of Californians. More than 70 percent of the University’s students are the first in their families to attend a four-year institution, approximately 60 percent come from low-income families and we have a critical need for space in order to expand our unique mission.

Without new facilities, enrollment at the University would have been constrained after Fall 2016 — just at a time when the demand for a UC education has never been higher.

C. Evaluated Alternatives

To meet the campus’ goals, UC Merced analyzed a range of existing capital delivery models including:

- Traditional Design-Bid-Build Contracts
- Traditional Design-Build Contracts

Design-Bid-Build

Design-Bid-Build is a procurement methodology that has been utilized to deliver new campuses in the past. In this process, the campus would hold all responsibility, including the financial and performance risks, associated with the development of the master plan, the procurement of design services and the procurement of construction services.

In a Design-Bid-Build model, the design and construction costs are budgeted on a project-by-project basis. The cost of the design and construction is amortized over the term of a bond financing and interest costs associated with those bonds represent the financing costs. The University would make payments for the cost of the building as construction proceeds, and in full, upon completion of construction.

The nature of the sequential procurement methodology, including the need to develop infrastructure based on a selected master plan before procurement of buildings, elongates the delivery time for the facilities. The campus estimated that the fastest possible time to deliver the 2020 Project infrastructure, and all of the needed facilities to be a minimum of eight years (2024). As a result, the design and construction costs are higher due to construction inflation and the separation of the projects through several separately managed phases. The campus estimates that the annual cash flow required to develop and maintain under this model would cost \$119 million per year.

The Design-Bid-Build strategy also has limitations on the warranties provided by each contractor. These limitations concentrate performance risk for the developed facilities on the University. Over time, the University would need to contract for capital renewal projects on a scheduled or deferred basis. The pricing of capital renewal projects would be subject to unknown future construction market conditions. In the event that buildings do not perform as designed and/or maintenance of capital renewal work is deferred, costs can become unpredictable and escalate rapidly.

Design-Build

Design-Build is characterized by a single point of responsibility for both design and construction activities. Design-Build is often chosen to transfer risk and coordination responsibility to one contracting party to ensure a higher level of coordination for these two critical components of project delivery. Utilization of a Design-Build strategy would enable development of the supporting infrastructure for the Project at the same time as the buildings, thereby streamlining design and construction of the facilities.

In a Design-Build model, the design and construction costs are budgeted as a capital project. The cost of the design and construction is amortized over the term of a bond financing and interest costs associated with those bonds represent the financing costs. The University would make payment for the cost of the building as construction proceeds, and in full, upon completion of construction.

While faster than Design-Bid-Build, the Design-Build strategy has identical limitations on the value of the warranties provided by each contractor. Over time, the University would need to contract for capital renewal projects on a scheduled or deferred basis. The pricing of capital renewal projects would be subject to unknown future construction market conditions. In the event that buildings do not perform as designed and/or maintenance of capital renewal work is deferred, costs can become unpredictable and escalate rapidly. Together, the annual cost of the amortization of design and construction, the cost of financing, and the estimated cost of ongoing operations and maintenance of the facilities is estimated at \$113 million per year.

D. Chosen Delivery Strategy: Availability Payment Concession

In order to cost-effectively build and maintain the proposed facilities, the delivery strategy for the 2020 Project develops the project using the familiar Design-Build methodology and then supplements it with a long-term performance-based agreement. With the addition of long-term maintenance functions built into the contract, the campus can plan for lifecycle needs, shift financial risk of facilities performance, and preserve the value of University ownership of the facilities.

This development structure is also referred to as an availability payment concession “design-build-finance-operate-maintain” (DBFOM) procurement model and is modeled from other performance-based infrastructure and public building projects in the United States and internationally. The availability payment concession procurement creates competition for a contract across all lifecycle costs, linking the cost of long-term maintenance and operation of the facilities to their initial design and construction.

As implemented, the University entered into a long-term contract with a private-sector developer to design and construct the civil infrastructure and buildings, secure a portion of the financing, and perform lifecycle maintenance and management for the facilities. The University provides a portion of the financing and employs represented university employees for operating services currently performed by the campus (i.e., custodial services, grounds keeping, dining and parking services).

The University makes payments (also known as “progress payments”) during construction. This would be followed by a predetermined schedule of payments over the course of thirty-five years to cover maintenance and the amortization of any remaining amounts used to build the capital facilities, (also known as “availability payments”).

In delivering the 2020 Project, the campus sought a developer with expertise and innovation in design, construction, and management, and the ability to deliver the facilities in a cost-effective manner.

The scope and strategy for the Project, its operational and financial considerations, and a proposed delivery timeline received extensive modeling and evaluation, and the analysis indicated that the proposed DBFOM delivery method could provide:

- An advantage in time to delivery of up to four years over Design-Bid-Build
- Efficient and cost-effective pricing of lifecycle design, construction, and facilities management

- Increased long term budgetary certainty for facilities maintenance and operations
- Transfer of significant construction related risks from the campus to the Developer

The Availability Payment DBFOM approach allows the University to maintain ownership of the land and buildings throughout the project while giving the private developer significant incentive and flexibility to meet or exceed performance requirements and schedules built into the contract. Equally important, it allows the University to focus on its teaching, research and public-service mission while the Developer handles project implementation and management.

By delivering the project in four years, faster than could have done using a traditional design-bid-build method, the 2020 Project will enable UC Merced to expand its promise to serve California’s young people. In return for building a significant public infrastructure project, the private developer invested approximately \$700 million and will assume much of the risk of construction, as well as the operations and maintenance of the new facilities, for decades to come. Since the contract covers life cycle costs, it increases the university predictability for budgeting, as the developer carries future maintenance costs for the 39-year term of the agreement. Going forward, the structure will enable UC Merced to focus new initiatives on the academic, faculty and student success pillars of our mission – without the need to manage and reserve for deferred maintenance risk.

D. Procurement Process

During the procurement process, six development teams participated in a request for qualifications phase. These teams were scored through a transparent selection process and three teams were chosen to participate in a request for proposals.

The request for proposals was structured to ensure that the estimated annual lifecycle costs associated with design, construction, financing, operations and maintenance would be equal to or less than a budgetary threshold for the project (the “Upset Limit”). Focusing on annual costs is different than traditional design-bid-build or design-build procurement processes, because those procurements only measure the upfront cost to design and/or construct the facilities. The Upset Limit is set to ensure that the delivery approach is both affordable and economically equivalent or better than the Design-Build approach.

The selected developer, Plenary Partners Merced, produced a compact, efficient and environmentally sensitive design that blended with the existing campus, facilitated the University’s multidisciplinary teaching and research methods and provided flexibility for future growth and for changes in building usage.

As contracted, Plenary Properties Merced, will design, build, partially finance, operate and maintain approximately 1.2 million gross square feet of new teaching facilities, research laboratories, student housing, faculty offices, infrastructure, athletics, dining and student life amenities through the customized, 39-year availability payment concession.

The selected proposal came the closest to meeting a wide range of design specifications and performance standards within the Upset Limit the university had established for the project. The multi-layered process of review and analysis the University developed gave the project selection committee the tools to make a decision with support from internal and external subject-matter experts on technical, financial and qualitative issues.

E. Structure and Regional Economic Impact

The University spent a significant amount of time consulting with decision makers at all levels of the system, with policy makers and with stakeholders regarding the model that it had determined was well suited for the project. While this took time, best practices suggest that the institutional governance and consultation process should be incorporated into the process for any entity considering this type of procurement.

Financing for the project will include a combination of bonds issued by the University of California system, campus funds and privately placed bonds and equity arranged by Plenary Properties Merced. During construction, the university will make predetermined progress payments to Plenary. Once the buildings become available for use, the university will make performance-based availability payments that cover remaining capital costs, as well as the operations and maintenance of major building systems.

In the structure developed for the project, existing environmental, labor and transportation agreements between the university and various stakeholders were maintained. For example, in the area of labor, the developer will be responsible for the operations and maintenance of major building systems with strict performance and hand back specifications.

Given the project size, independent economic consultants have estimated that the total one-time economic impact of the 2020 Project will be nearly \$1.9 billion in the San Joaquin Valley, and almost \$2.4 billion statewide.

This project was also recognized as an opportunity to bring economic development to a region of California with historically high unemployment. In addition, the University agreement included significant requirements for local hiring, apprenticeships and contracting with small businesses for the private developer.

F. Summary: Focusing on Priorities

California's public universities have developed and managed capital assets under many different structures. Past projects have deployed more traditional design-bid-build, construction manager at risk and design-build strategies, to forms of public-private partnerships that include ground leases and lease-leaseback transactions. The availability payment concession model provides another alternative for campuses to examine when they determine the best strategy to develop and manage capital assets.

The delivery strategy being implemented incorporates international best practices that are rapidly being incorporated into procurement processes in the United States. The strategy represents an expansion of the concept of a master-planned development. It combines the

proven method of design-build delivery of facilities with long-term operations and maintenance obligations that create the incentive to deliver high-quality facilities designed with lifecycle operating and maintenance costs in mind. The delivery model is noteworthy for its ability to deliver facilities faster, provide budgetary certainty over multiple decades, and minimize the financial burden typically created by deferred maintenance.

The campus believes that the availability payment concession model was the best choice to develop the second phase of the UC Merced and is committed to sharing the benefits and risks it examined as it developed the project.

With the 2020 Project underway, the University is redoubling its focus and attention to executing on its core mission at a size of approximately 10,000 students.

In just the past year, UC Merced received its Carnegie Classification as a Research University with High Activity designation, the second highest classification for American universities the Carnegie Foundation confers.

UC Merced has also been recognized by the national media as one of the top five campuses for social mobility. As a result, the University has a strong foundation for nurturing academic distinction and strengthening student success.

With its new capital facilities and their future maintenance addressed, UC Merced will be well positioned to achieve the size and research breadth needed to establish itself as a major and significant teaching and research institution.

Attachment

1. Campus Map and Development Footprint

Links to Additional Information

1. UC Merced 2020 Project Website
<http://merced2020.ucmerced.edu>
2. UC Regents Items Considering Development of the UC Merced 2020 Project
<http://merced2020.ucmerced.edu/documents/uc-regents-items>
3. UC Merced 2020 Project Procurement Documents
<http://merced2020.ucmerced.edu/procurement>
4. 2020 Project Video Overview
<http://merced2020.ucmerced.edu/buildingthefuture>
5. 2020 Project Live Webcam
<http://merced2020.ucmerced.edu/webcam>