REQUEST FOR QUALIFICATIONS

ARCHITECTURE/ENGINEERING SERVICES
FOR THE
CORE (LIBRARY REPLACEMENT) BUILDING

Release Date:       June 23, 2017
RFQ Submittal Deadline:    July 14, 2017 @ 2:00PM

Planning, Design and Construction
California State University, East Bay
25800 Carlos Bee Boulevard
Hayward, California 94542
1. INTRODUCTION

California State University, East Bay (CSUEB) seeks qualifications from architectural firms, to provide Architecture/Engineering (AE) services for the CORE (LIBRARY REPLACEMENT) BUILDING at the Hayward Campus. **Respondents to this RFQ must be prequalified by the CSU Office of the Chancellor.**

Although this RFQ is intended for the full AE services, a notice to proceed will be issued on different phases. To date, the University is only funded for the schematic and preliminary design phases. Work beyond the preliminary design phase is contingent upon funding availability.

2. THE UNIVERSITY

California State University (CSU), East Bay, located in Hayward, is known for award winning programs, expert instruction, small classes, and a highly personalized learning environment. The University serves Alameda, Contra Costa and Solano counties, representing some of the largest and fastest growing counties in California. With an enrollment of more than 15,500 students, CSU East Bay offers baccalaureate programs in 50 major fields and 61 minor fields of study. It offers master's degrees in 35 disciplines and a doctoral program in educational leadership. CSU East Bay has four colleges: Science; Business and Economics; Education and Allied Studies; and Letters, Arts and Social Sciences. The university contributes to the regional economy in a variety of methods, including development of biotechnology education programs for the Bay Area Biotechnology Center and operation of the East Bay Small Business Development Center in Oakland where entrepreneurs and business leaders develop strategies and skills in business development.

CSU East Bay's central web site is [http://www.csueastbay.edu](http://www.csueastbay.edu). This site includes significant information about the University environment, history and plans for the future.

3. PROJECT SITE & DESCRIPTION

The CORE Building will be located at the northeast side of the campus, in close proximity to the Recreation and Wellness Center and Pioneer Heights Student Housing, shown in Appendix A. The new building replaces the square footage lost in the existing Library. The new building is envisioned to be approximately 70,000 assignable square feet (ASF) / 100,000 gross square feet (GSF), using CM@Risk as delivery method. It has an estimated construction cost of $58.28M.
The building site planning and analysis (Appendix B) and building program should be taken into account by the selected design firm. In addition, the campus aims to achieve a building design with Zero Net Energy and a LEED Gold rating, at a minimum.

Note: The building program is currently being developed and will be provided to the selected firm. The selected firm shall take into account the program prescribed by the University. As part of the design process, the selected firm shall validate the program and shall conduct user group meetings with the different stakeholders.

**Building Mission/Vision**

The CORE building is a place to challenge, understand, and develop knowledge based on the rigor of academic inquiry. The new facility will build connection within the campus community, including our students, faculty, and staff. It encourages opportunities for learning and mentoring, developing models for student success and the creation of new knowledge.

- The CORE is a launch pad for our students’ personal and professional success in a knowledge rich, technology enhanced world.
  - It will allow students to engage in the latest technology.
  - It will enhance digital literacy and provide the support system for students to learn.
- The CORE is a place where our students participate in their cohort, faculty, and community to create new methodologies and ways of thinking.
  - It will be a one stop shop for collaborative, interdisciplinary work.
  - It will be the campus learning commons with 24 hour access.
- The CORE is a home for a program that creates and facilitates positive, stress-relieving initiatives, activities and events.
  - It will be the center for cultural dialogue.
  - It will be the center for reflection programs to help manage and reduce stress.
- This center is where learning leaves the classroom and continues in community and grows to its ultimate application. This is where ideas ferment and come to fruition.
  - The CORE will be the incubator for programs of innovation and entrepreneurship.
  - The CORE will foster ideation within creative spaces.
Anticipated Project Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue notice to proceed</td>
<td>September 1, 2017</td>
</tr>
<tr>
<td>CSU Board of Trustees Schematic Approval</td>
<td>January 2018 or March 2018</td>
</tr>
<tr>
<td>Complete Preliminary Design</td>
<td>July 2018</td>
</tr>
<tr>
<td>Complete Working Drawings</td>
<td>December 2018</td>
</tr>
<tr>
<td>Start Construction</td>
<td>February 2019</td>
</tr>
<tr>
<td>End Construction</td>
<td>February 2021</td>
</tr>
</tbody>
</table>

4. REQUIRED SERVICES / DELIVERABLES & AE FEES

The required services and deliverables are detailed in the CSU Submittal and Procedure Manual for Capital Projects, and a sample of the CSU AE service agreement can be viewed at:  http://www.calstate.edu/CPDC/ae/pro-serv-agree/cm-risk.shtml

(Cut/paste the above link to your browser if clicking the link does not work)

The selected firm shall adhere to the language set forth in the manual and service agreement. Modifications to the contract documents are not permitted.

To date, the University is only funded for the schematic and preliminary design phases. The proposing firm should be aware that there may be a delay in the project funding beyond preliminary design phase. The notice to proceed will be issued at various phases.

In addition to the required AE services, the design team shall include an AV consultant and an Acoustic Consultant.

The total fee for AE services is $3,577,000. The fee for schematic and preliminary design phases is $1,433,000.

5. SPECIAL ACCOMODATION FOR UNPAID STUDENT INTERNSHIP

The University supports co-curricular learning. While it is not a requirement for selection, we encourage firms to consider providing student internship, particularly in the field of Zero Net Energy Building Design. The internship could be for credit courses (entails formalized learning outcomes negotiated between the supervisor, the faculty advisor, and the student) and non-credit courses (no formalized learning outcome, faculty advisor not involved).

The internship will enable students to learn the subject matter and the nature of the work. Typically, interns assist staff. Typical activities include attending meetings as an observer, taking meeting notes, researching specifications, data gathering, etc.
6. **RFQ SUBMISSION SCHEDULE**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, June 23, 2017</td>
<td>Issuance of Request for Qualifications (RFQ)</td>
</tr>
<tr>
<td>Wednesday, June 28, 2017</td>
<td>RFQ Questions due to contact shown below</td>
</tr>
<tr>
<td>Thursday, July 06, 2017</td>
<td>Questions/Answers Issued (View at:</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.csueastbay.edu/af/departments/facilities/design/capital-projects/RFQs.html">http://www.csueastbay.edu/af/departments/facilities/design/capital-projects/RFQs.html</a></td>
</tr>
<tr>
<td>Friday, July 14, 2017 @ 2PM</td>
<td>RFQ Submittal Deadline</td>
</tr>
<tr>
<td>Friday, July 28, 2017</td>
<td>Announce Shortlist</td>
</tr>
<tr>
<td>Friday, August 04, 2017</td>
<td>Conduct Interviews</td>
</tr>
<tr>
<td>Tuesday, August 08, 2017</td>
<td>Select Successful firm</td>
</tr>
<tr>
<td>September 1, 2017</td>
<td>Issue Notice to Proceed; Hold Kick-off Meeting</td>
</tr>
<tr>
<td>December 31, 2018</td>
<td>Complete Design</td>
</tr>
<tr>
<td>February 2019 to February 2021</td>
<td>Construction Period</td>
</tr>
</tbody>
</table>

Submit questions/requests for clarification **only via email** to:

Anne Leung  
University Planner  
California State University, East Bay  
anne.leung@csueastbay.edu

Please submit all questions and inquiries with regards to this RFQ by email in accordance with the deadline noted above. The questions/answers will be posted on the website:  
Neither calls nor inquiries to others at the University will be responded.

7. **RFQ SUBMISSION REQUIREMENTS**

**General Requirements**  
Submittal shall include 6 sets, and an electronic version on CD using generally available software (e.g., Microsoft Office, Adobe Acrobat) The University reserves the right to duplicate or disseminate any provided materials for internal use.

All submittals become the property of the University.

Qualifications submission packages shall be delivered to the address shown below, on or before **July 12, 2017 at 2:00PM**:
California State University, East Bay  
25800 Carlos Bee Boulevard  
Hayward, California 94542-3022  
Attention: Anne Leung (FM Building)
Faxed submissions will not be accepted.

The entire package shall be sealed. The name and address of the respondent shall appear on the outside of the package and it shall be addressed as indicated above. The outside of the package should also indicate that it contains “RFQ- AE SERVICES FOR THE CORE (LIBRARY REPLACEMENT) BUILDING”

Each respondent is solely responsible for the timely delivery of its package by the deadline prescribed. California State University, East Bay will not be responsible for delays regardless of the reason. Failure to meet the submission deadline shall result in disqualification from consideration.

**Submission Format**

To be considered responsive to the RFQ the submittal must be in the format identified below. The submittal must be indexed and bound or assembled in loose-leaf binders with a table of contents and with each response clearly identified for each section. **Please note that the maximum number of pages allowed under each section is clearly stated below; also, please make sure the font size is no smaller than 12 point.** The submittal will not be made publicly available for inspection; however, any portion considered to be exempt from disclosure under the Public Records Act should be clearly marked and accompanied with an explanation of the legal authority supporting this assertion.

The submittal shall adhere to the following format for organization and content. Statements must be divided into the individual sections listed below, indexed, and tabbed.

**Tab 1 - Cover Letter (1 page)**

Provide a cover letter with the name of the firm making the submission indicating your interest in being selected for this effort. Include a brief description of why your firm is well suited for, and can meet the needs of this effort. The letter shall be signed by the individual authorized to bind the respondent or group to all statements and representations made therein and to represent the authenticity of the information presented.

**Tab 2 - Business Information (2 pages, not including certification letters)**

Provide the following on company letterhead:

- Company name
- Address
- Telephone
- Fax
- Name and email address of primary contact
• Internet address

Provide a list of each sub-consultant you will use in this project with the same information noted above. Also indicate the work they will perform and the percentage of the total contract value this work represents. Provide a copy of the State of California certification letter for your firm and/or each of your subcontractors who have attained Small Business or Disabled Veteran Business Enterprise status.

Tab 3 – Capabilities (1 page)
Provide the following information about the firm(s) making this submission:
• A brief description and history of the firm
• Number of employees (licensed professionals, technical support)
• Number of current projects and present workload and where possible, projected workload for the period in question
• Location of office where the bulk of services solicited will be performed

Tab 4 – Relevant Experience (10 pages)
Provide information about similar design work prepared by the candidate firm(s). Include the following information:
• Project name, location, and size by acreage and enrollment
• Description of the scope of work involved in the preparation of the plan
• Date of completion and owner reference, contact name and phone number
• Key individuals of the firm involved and their roles in the project
• Any sub-consultants that worked under the candidate firm

Tab 5 – Organizational Chart (1 page)
Provide a complete organizational chart that clearly defines relationships among key personnel that would be assigned to perform the work. Include the physical locations of the office(s) with which key personnel are associated.

Tab 6 – Key Personnel (5 pages)
Provide abbreviated résumés for key personnel of the firm(s) – and more in-depth information for those personnel expected to work on this project. Identify and describe the roles of each individual in the firm. Note relevant project experience.

Tab 7 – Project Approach (3 pages)
Describe the processes that will be used to complete the design, specific challenges associated with the project, and how these challenges will be addressed. Outline an anticipated work plan that illustrates how the design will be completed within the identified timeframe.
Also describe how your firm can add value to this project and the process including examples of situations from comparable projects where the owner realized tangible value.

**Tab 8 – Special Accommodation for Student Internship**
If you are willing to involve a student intern in the design process, describe how they can be accommodated. Identify potential work assignments.

A Selection Committee will evaluate all submittals. Based upon the information presented in the submittal, the Selection Committee will choose the most highly qualified candidates as finalists. These finalists will be invited to the Hayward campus for interviews, following which the Selection Committee will identify the successful firm that can provide the greatest overall benefit to the University. Should CSUEB be unsuccessful in negotiations with the respondent with the highest score, the respondent with the second highest score will be extended the opportunity to negotiate a contract.

Each respondent will be evaluated and ranked on the criteria set forth below. The criteria will be weighted as noted below in determining award.

<table>
<thead>
<tr>
<th>Tab 4</th>
<th>Relevant Experience</th>
<th>30 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tab 6</td>
<td>Key Personnel</td>
<td>35 points</td>
</tr>
<tr>
<td>Tab 7</td>
<td>Project Approach</td>
<td>35 points</td>
</tr>
</tbody>
</table>

**BONUS POINTS.** California State University, East Bay, as an agency of the State of California, strives to award a minimum of 25% of its annual procurement to certified small businesses and 3% of its annual procurement to certified Disabled Veteran Business Enterprises. The following points shall be awarded to respondents based on percentage of DVBE participation:

<table>
<thead>
<tr>
<th>% DVBE Participation</th>
<th>Bonus Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 % – 3.99%</td>
<td>0</td>
</tr>
<tr>
<td>4.01% - 4.99%</td>
<td>5</td>
</tr>
<tr>
<td>5% or more</td>
<td>10</td>
</tr>
</tbody>
</table>

Respondents with SBE certification shall be awarded 5 points.

Please note that in the event the respondent both hold 5% or more of DVBE participation and are a certified SBE, only 10 bonus points will be awarded.
8. PRESENTATIONS AND INTERVIEWS

Finalists will be invited to the campus to make an oral presentation and to be interviewed by the Selection Committee. Each finalist will be forwarded information about their presentation in sufficient time to permit advance preparation, including time and location information.

In general, the purposes for the presentations and interviews are as follows:

- To permit the finalist to respond to any Selection Committee questions arising from the submitted written materials
- To permit the finalist to demonstrate their depth of knowledge and understanding about the development of the feasibility study and provide evidence of the attributes that set them apart from other finalists
- To permit CSUEB personnel to meet, interact with, and assess the potential working relationship that might occur with the finalist's key personnel
- Presentation/Interviews will be limited in duration by the committee. Consultants should ensure any presentation keeps within this time limit and provides CSUEB staff and the committee to ask all relevant questions.

It is expected that all key members of the project team will attend the presentation/interview.
PART 1: NEW LIBRARY BUILDING SITE EVALUATION

The proposed new library building site is situated along a major pedestrian route on a steep slope, visible from a major campus access point and the lower promenade, which is the main hub of student activity.

Figure 0-1. A Proposed New Library Location

The site can support a building footprint or approximately 55,000 square feet if kept inside of the existing circulation paths bordering the site (see Massing Option A below). Alternatively, the building footprint can be up to 80,000 square feet if the building envelopes the existing path along the Western perimeter (See Massing Options B and C below).

The building code allows library buildings to be of unlimited area, height and stories if the most stringent (and costly) construction type of I-A is used. However, this new library is required to be between 100,000 and 150,000 SF per CSU East Bay, and all massing options shown below are within the requirements for the recommended construction type II-A (non-combustible, 2 hour fire rated construction), which allows for either a 186,000 GSF, 4 story library building or a 244,125 GSF, 3 story library building.

Note: The new building will be 100,000 GSF.
EXECUTIVE SUMMARY

- MOST BASIC, COST EFFECTIVE SHAPE
- BUILT WITHIN EXISTING PEDESTRIAN PATH
- 3 STORIES
- 150,000 GSF

Figure 0-1.8 Massing Model A
EXECUTIVE SUMMARY

- BRIDGES PEDESTRAIN PATH
- ALLOWS ROOF DECKS OR
- ALLOWS ROOFTOP SOLAR GAIN
- 4 STORIES
- 100,000 SF

Figure 0-1.C Massing Model B
Model C

- Stepped Mass
- Allows exterior decks and/or ceiling lighting
- Uses slope
- 3 stories
- 150,000 SF

Figure 0-1.D Massing Model C
Our study identified the following considerations as they pertain to the proposed site:

1. CSU East Bay Vision
2. Site Conditions and Sustainability
3. Logistics and Code Requirements
4. Infrastructure
5. Construction Impacts Cost

PART 1 – SUMMATION OF ASSESSMENTS AND RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Site Consideration</th>
<th>Site Assessment</th>
<th>Cons:</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Conformance with the CSU East Bay Vision</td>
<td><strong>Pros:</strong> The proposed land use is in conformance with the CSU East Bay vision (Academic/Administrative &amp; Circulation). Massing Option A is in conformance with the CSU East Bay’s current build-to lines and allows building entry locations to be on primary circulation paths. The proposed site frames planned open spaces per CSU East Bay.</td>
<td>Massing Option B &amp; C deviate from CSU East Bay’s current build-to lines and planned building entry location as they envelope the primary circulation path running through the site.</td>
</tr>
</tbody>
</table>

**Recommendation:** The site selection is optimal for land use and conforms to the established campus layout. The building footprint should be designed to uphold the primary circulation path through the site. All massing Models A, B and C building forms do this by either keeping outside of, bridging over or infilling under the maintained path and throughfair.

| Visibility | **Pros:** The site is highly visible from the lower promenade, which is the hub of student activity and the South primary campus access point used by resident students. | **Cons:** The site is not visible or is minimally visible from the vehicular access points and vehicular perimeter roadways. |

**Recommendation:** Maximize the building’s visual presence from the South pedestrian access point and the South perimeter road with building form and architectural elements.
<table>
<thead>
<tr>
<th>Security – Night Time Access</th>
<th><strong>Pros:</strong></th>
<th><strong>Cons:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The selected site is in a central campus location, adjacent to other night use areas and with close access for resident students</td>
<td>Pockets of concerns can be created on less public faces of the building, including the North and East side of the building.</td>
</tr>
</tbody>
</table>

**Recommendation:** The site location is well situated for night time and off-hour security. Locate entrances on the North and South face of the building, facing other night-use areas of campus to eliminate pockets of concern for evening occupants.

## BUILDING DESIGN AND SUSTAINABILITY

<table>
<thead>
<tr>
<th>Site Consideration</th>
<th>Site Assessment</th>
<th><strong>Pros:</strong></th>
<th><strong>Cons:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Topography and Site Configurations</td>
<td></td>
<td>The Site is elongated in the North-South direction, and climbs in grade steeply from the West to East direction. The sloped site orients the building’s primary face towards prominent view to the West, while it’s East face is buried in the hillside.</td>
<td>Ideal building orientations for passive heating and cooling are in the North-South direction. In this case, the site dictates an East-West orientation, with the primary building exposure towards the West. Although ideal for the view at this site, solar heat gain from the west is a concern with this site. The steep slope of the site requires increased costs for retaining and shoring.</td>
</tr>
</tbody>
</table>

**Recommendation:** Develop strategies to maintain views to the West while mitigating the solar heat gain resulting from the site topography and configuration. Utilize the natural grade to the benefit of the building with terracing to address the multiple campus levels, provide roof decks for daylighting strategies.

<table>
<thead>
<tr>
<th>Daylighting</th>
<th><strong>Pros:</strong></th>
<th><strong>Cons:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The elongated building form allows sunlight to penetrate deep into the shallow spaces from the West.</td>
<td>In order to allow translucency of the West facade for views and daylighting, solar heat gain and glare must be mitigated from the Western hot and low angled afternoon sun.</td>
</tr>
</tbody>
</table>

**Recommendation:** Use vertical louvers or saw tooth type windows, light shelves, tinted glazing, façade integrated PV systems or other methods to block glare while allowing ambient light to flow through.

Terrace the building form to allow daylight to penetrate deeper into spaces through skylights.

For deeper building form options, use an atrium or courtyard to allow ambient light into interior spaces built against the hillside.
### Passive Cooling/Natural Ventilation

**Pros:** The selected site is narrow and elongated with slopes orienting the building towards primary winds from the West allowing for natural ventilation strategies. Use natural slope and earth sheltering on east side for passive cooling techniques.

**Cons:** With the windward side being the building’s primary West face, potential to create wind tunnels or increase wind loads on the structural or shading elements should be considered.

**Recommendation:** Provide openings low on the West and high on the East or chimney stacks for cross-ventilation. Provide vertical louvers, reflective Low SHGC Low-E double glazing, double facades (semi-translucent curtain walls), and/or façade integrated PV systems to decrease solar heat gain from the West.

### Logistics and Code Requirements

#### Site Consideration

<table>
<thead>
<tr>
<th>Site Assessment</th>
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<tbody>
<tr>
<td><strong>Pros:</strong> The primary Fire Truck Access Road exists to the selected site, with some required improvements. The majority of a secondary Fire Truck Access Road exists to the site, and may be required at the discretion of the State Fire Marshal.</td>
</tr>
</tbody>
</table>

**Cons:** A portion of the primary Fire Truck Access Road requires widening. The turning radius increase will require alterations to an adjacent stair, ramp and retaining wall. Due to the sloped site, the access road cannot loop around the building, and instead dead ends at two separate points, requiring alterations for turnaround space. If a second Fire Truck Access Road is required by the State Fire Marshal, a portion of the road will need to be installed across flat ground, requiring additional grading and increasing construction costs.

**Recommendation:** Provide Fire Truck Access Roads as required. Although some improvements will be necessary, the selected site is in a location fairly accessible to emergency vehicles on all sides.
<table>
<thead>
<tr>
<th>Service Truck Access</th>
<th><strong>Pros:</strong> The existing pedestrian paths on both sides of the sloped site are also currently being used as service truck access roads into the campus. No additional work is required for vehicular access to the site.</th>
<th><strong>Cons:</strong> Due to the narrow approach to the site from both sides, which will also be used for fire lanes, a load/unload zone will be required at the building, cutting into the already shallow space for the building footprint, or positioned at the building end.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommendation:</strong> The selected site is easily accessible by service vehicles. Building form and a recessed lower level can compensate for the narrow footprint required at service truck loading areas, or the loading area can be placed on the North end of the building.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking</th>
<th><strong>Pros:</strong> Multiple nearby parking lots serve the site and are within a 5-10 minute walk to the site, with existing accessible paths.</th>
<th><strong>Cons:</strong> Minor parking lot accessibility upgrades will be required. Parking adjacent to the building would not be possible as the site is within the campus core. The existing campus parking capacity is at a deficit, although the new library building is not expected to generate additional parking demand as a replacement building.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommendation:</strong> Update nearby existing parking lots as required. Consider campus parking structures to address Campus parking deficits.</td>
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</table>

<table>
<thead>
<tr>
<th>Pedestrian Circulation</th>
<th><strong>Pros:</strong> The selected site is well suited with the primary façade on an existing major pedestrian circulation route, and with the other extents of the building perimeter on existing secondary paths.</th>
<th><strong>Cons:</strong> Massing options and building design must respond to complex circulation requirements around and through the site.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommendation:</strong> The selected site is well suited to respond to and assist with pedestrian circulation. The building form should respond to circulation needs across steep topography.</td>
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</tbody>
</table>
## Accessibility

**Pros:**
Accessible routes exist around the majority of the site perimeter, and to the parking lots and transit serving the site.

Due to the sloped site, the building’s interior circulation can assist with traversing the grades around the site.

**Cons:**
The accessible ramps connecting the site to the lower plateau are out of code conformance and/or conflict with the fire truck access road, and would require reconstruction.

**Recommendation:** Reconstruct the accessible ramps from the lower campus plateau to the site. Use the building’s interior vertical circulation to assist with traversing the sloped site.

## INFRASTRUCTURE

### Site Consideration

<table>
<thead>
<tr>
<th>Site Assessment</th>
<th></th>
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<tbody>
<tr>
<td><strong>Utility Power</strong></td>
<td><strong>Prognosis</strong></td>
</tr>
<tr>
<td>Pros:</td>
<td>Cons:</td>
</tr>
<tr>
<td>The site is adjacent to existing 12 KV Distribution switches, reducing costs of running a new service to the site.</td>
<td>If a massing option which envelopes the path through the site is selected, rerouting of 12 KV distribution loop would be required at increased cost.</td>
</tr>
</tbody>
</table>

**Recommendation:** Select a massing option that does not impede on existing utilities through the site to reduce construction costs.

### Emergency Power

**Recommendation:** Provide new building standalone emergency power system consistent with existing campus to serve egress lighting and critical building functions, including IT and data storage.

### Telecommunications

**Pros:**
The site is adjacent to the existing network distribution system, reducing costs of running a new service to the site.

**Cons:**
If a massing option which envelopes the path through the site is selected, rerouting of network distribution loop would be required at additional cost.

**Recommendation:** Select a massing option that does not impede on existing utilities through the site.

### Fire Alarm

**Recommendation:** Provide a new building standalone fire alarm system, consistent with other campus buildings, to tie into the existing campus monitoring system.
<table>
<thead>
<tr>
<th>Security Systems</th>
<th><strong>Recommendation:</strong> Provide a new building standalone security system, consistent with other campus buildings, to tie into the existing campus monitoring system.</th>
</tr>
</thead>
</table>
| Renewable Energy | **Pros:** The site driven West facing building orientation allows for Building Façade PV or solar thermal systems, however this is not ideal. Using a flat roof system would allow for South facing PV or solar thermal systems.  
**Cons:** West facing facades are not ideal the ideal direction for PV or solar thermal systems.  
**Recommendation:** Design building form to maximize rooftop PV system. |
| Natural Gas      | **Pros:** None  
**Cons:** Trenching and intermittent system shutdown will be required to relocate existing 3” gas lines serving the Recreation and Wellness Center and Meiklejohn Hall away from project site.  
Further investigations will be necessary to determine if the current gas system will be able to provide the new building’s needs without negatively impacting the remaining infrastructure.  
**Recommendation:** Relocate gas lines under East-side driveway and reconnect them downstream of the buildings (Recreation and Wellness Center, Meiklejohn Hall, and Pioneer Heights). |
| Water            | **Pros:** Alterations to the water system should be coordinated with the proposed recycled water system to meet 2030 Campus goals.  
Buildings could be designed for rainwater containment, use of greywater for toilets, and the use of low flow and automated fixtures throughout.  
**Cons:** If a massing option which envelopes the path through the site is selected, relocation of 8” water branch would be required.  
Additionally, a comprehensive analysis of the schoolwide water system will be required to determine whether the campus can support the new building’s requirements.  
**Recommendation:** If a massing option which envelopes the path through the site is selected, minimize construction costs and system downtime by isolating the smallest section of water piping in conflict and relocate water lines under the East-side driveway. |
<table>
<thead>
<tr>
<th>Sanitary Sewer</th>
<th><strong>Pros:</strong></th>
<th><strong>Cons:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minor back-up issues have been reported at the Recreation and Wellness Center. The alterations to the sanitary sewer line serving the Recreation and Wellness Center that are in conflict with the proposed library location may alleviate some of these problems, if they have not been addressed already.</td>
<td>If a massing option which envelopes the path through the site is selected, relocation of the 8” sanitary sewer branch would be required. The relocated sanitary sewer line would face the difficulty of maintaining proper slope due to uneven grading. A lift station may be required. A grinder/pump system may need to be employed if slope presents an issue. Additionally, a comprehensive analysis of the entire sanitary sewer system from the project designer will be required to determine whether the current campus’ infrastructure can support the new building’s requirements.</td>
</tr>
</tbody>
</table>

**Recommendation:** If a massing option which envelopes the path through the site is selected, it is recommended to relocate the 8” sanitary sewer main under the proposed project site to under the East-side driveway to provide new service for the building and to continue serving the Recreation and Wellness Center. Exact location and sizing for the new sanitary sewer branch should be reconciled with the Campus for expansion.

<table>
<thead>
<tr>
<th>Storm Drain</th>
<th><strong>Pros:</strong></th>
<th><strong>Cons:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New building construction should incorporate new tie-in to existing stormdrain system.</td>
<td>Additional calculations and system analysis will be required.</td>
</tr>
</tbody>
</table>

**Recommendation:** No existing storm drainage piping occurs under the project site location. Calculations for the storm drainage system shall be performed to verify the system’s infrastructure can support the new capacity.
### CONSTRUCTION IMPACTS

<table>
<thead>
<tr>
<th>Site Consideration</th>
<th>Site Assessment</th>
<th>Cons:</th>
</tr>
</thead>
</table>
| Site specific construction impacts          | **Pros:** Open spaces surround the site and can be used for construction staging, facilities, equipment access and parking.  
 There are no nearby structures that would be affected during ground work.  
 If the existing circulation path through the site is maintained in the building design, there will be no system work downtime to other campus buildings. | If the existing circulation path through the site is enveloped by the building design and the utilities require re-routing, system down times to other campus buildings could be disruptive and should be scheduled and coordinated with Campus closure dates.  
 The major access route running through the narrow site must be maintained and accessible at all times, as it is currently a service truck, fire truck, and pedestrian accessibility access route to the inner site. |

**Recommendation:** Avoid relocation of the existing utilities through the site to reduce construction costs and impacts on adjacent uses. Maintain existing access routes through and around the site.