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**University of Colorado Design Review Board  
And Research Park Design Review Board  
Meeting Notes**

Date: Thursday, July 14, 2016  
Time: 9:30 a.m. – 12:00 noon  
Location: McAllister Building, Conference Room S228, Sustainability, Energy and Environment Complex (SEEC), 4001 Discovery Drive, University of Colorado Boulder

**DRB members present:**

Don Brandes, Rick Epstein, Victor Olgyay, Michael Winters, Teresa Osborne (ex officio), and William Haverly and Carolyn Fox, Campus Board Representatives for the University of Colorado Boulder (“CU Boulder”) and the University of Colorado Colorado Springs (“UCCS”), respectively.

**Others in attendance not otherwise noted:**

Linda Money, CU Real Estate Services, CU System employee / DRB note taker.

Prior to convening the public portion of the meeting, the Board took a tour of East Campus with CU Boulder Facilities Management representatives.

Mr. Brandes, Chair, determined a quorum and called the meeting of the Research Park Design Review Board to order at 9:40 a.m.

**9:30 - 11:00 Astrophysics Research Lab Clean Room – CU Boulder**

Architects: Architectural Workshop

Presenters: Wayne Northcutt, Architect, Facilities Planning  
Richelle Reilly, Campus Landscape Architect, Facilities Planning

CU-Boulder Campus Representatives and Others

Present: William “Bill” Haverly, Campus Architect and Director of Planning, Design and Construction  
Mark Bowers, Architect, Architectural Workshop

Description: The project is to develop a large Clean Room for assembly of a space probe being sent to Mars by the United Arab Emirates in a building addition near the East Courtyard of the facility. Requesting Design Development approval from the Board.

### **Presentation to the Board/Discussion:**

Mr. Northcutt, Ms. Reilly, Mr. Haverly and the Board discussed a number matters related to the submittal package for the Design Development approval regarding the CASA/ARL Clean Room project at the University of Colorado Boulder including, but not limited to:

- Options available from the manufacturer for the surface finish and the color of the concrete panels, what options might be available if the selected manufacturer's option was not sufficient, and potential costs regarding these options;
- The placement, heights, and color of the coping for the proposed buildings and the retaining wall;
- How to address the visibility of the mechanical equipment on the roof of the tallest building by increasing the height of the parapet or using a roof scape or other similar treatment;
- The proposed color of the coping, doors and respective trim;
- The placement, number and materiality of proposed garden screening panels in the courtyard to enable the creation of green walls parallel to the north and south walls of the entryway into the courtyard;
- The proposed planting materials and placement and lighting needs for the courtyard; and
- The placement of the horizontal reveals and subsequent joints for the proposed building.

A motion was made and unanimous Design Development approval was given for the CASA/ARL Project based on the following conditions:

### Architectural Comments:

- The height of the parapet wall may be increased to visually screen the mechanical equipment, however; the DRB suggested that the loading and ventilation requirements be verified in order to determine if the height and/or design of the proposed equipment could be reduced. The DRB also suggested that staff evaluate if there were any opportunities to change other project-related specifications such as evaluating the insulation ratings for the doors, weatherization, etc., that might help downsize or otherwise economize the proposed mechanical equipment in order to reduce the visibility of the equipment while still maintaining appropriate mechanical functions;
- The sand blasting for the concrete panels should be performed and completed at the factory;
- The Board will suggest an appropriate color for the concrete panels and submit the preferred color sample to the Campus Architect for consideration;
- In order to avoid the appearance of horizontal striping, the width of the coping should be proportionately scaled down based on the height of the building;
- Coping needs to be included on the concrete retaining wall in keeping with the same proportionate width as noted above;
- The overhead doors and ladders (if required), and other elements backed by the concrete wall should be painted in a gray color to match the concrete panels. The coping at the roof shall be a light gray color, lighter than the color of the concrete panels;
- The alignment and spacing of the horizontal jointing patterns and the horizontal reveal lines on the concrete panels should be reviewed in order to tie them back into the existing building as a base line and also tie them into the coping of the lower new mass;

- The proposed ladder on the west side of the proposed building should be reviewed and, if possible, be removed and replaced with a temporary construction ladder on an “as needed” basis; and
- The DRB should be provided with information on the sizing and selection of the mechanical equipment specified for the CASA clean room to 1) review the opportunities on this project for increased efficiency, equipment downsizing with associated capital and operating cost savings, and 2) to inform the DRB of the germane issues to consider for future clean rooms scheduled to be constructed.

Site and Landscape Architectural Comments:

- Use stainless steel to fabricate the green screen wall so it will blend in with the color of the concrete;
- On the south side of the entry way, install the green screen wall up to the height of the reveal;
- Move the easternmost green screen wall panel of the south wall to the west side of the south wall in order to provide more exposure to the green screen wall element from the courtyard;
- Budget permitting, add the green screen wall to the north side of the entry way;
- In the narrow space of the walkway to the courtyard, avoid the use of tall trees and shrubs in order to not further reduce the width of the walkway;
- Review and improve as needed the lighting in the courtyard to ensure that the lighting is sufficient and that the courtyard is not creating a life safety issue by not being adequate; and
- Consider lighting located in the courtyard trees, behind the green screen walls and downlights on the new concrete panel wall as an accent.

There being no further business, the public meeting of the Research Park Design Review Board was adjourned at 11:15 a.m.

Mr. Brandes then convened the meeting of the University of Colorado Design Review Board immediately following the adjournment noted above.

**11:00 - 12:00**

**Ent Service Center - UCCS**

Architect: Keys + Lauer Architects, Colorado Springs, Colorado

Presenters: Victor Lauer, Keys + Lauer Architects  
Lisa Carpenter, Keys + Lauer Architects

UCCS Campus

Presenter: Carolyn Fox, Executive Director, Construction & Planning,  
University Architect, UCCS Campus Planning &  
Facilities Management

Description: Pre-Design Submission for a new branch of the Ent Credit Union

**Presentation to the Board/Discussion:**

Mr. Brandes welcomed the representatives from Keys + Lauer Architects after which the members of the Board introduced themselves. The Board also explained the purposes of the pre-design meeting.

Mr. Lauer began the presentation by providing a history of the growth of the Ent Credit Union ("Ent") as it relates to its branch buildings. The programming assumptions that were applied to this branch building and the specifications of the site provided by UCCS to Ent were also reviewed.

The proposed Ent project will include a building of approximately 5,000 sq. ft. which will serve approximately 700 customers a day and house approximately 12 full-time employees. The proposed number of parking spaces will be approximately 25 to 30 spaces, an increase from the minimum number of spaces required by the City of Colorado Springs due to peak load parking requirements.

Regarding the construction schedule, Mr. Lauer noted that even though Ent would prefer to break ground earlier, it would be acceptable to break ground for construction in the spring of 2017. He also noted that they would use a design-bid-build process.

Recognizing that this site will be in a prominent location for Ent, the Board also emphasized that this site is a gateway to the UCCS campus and the appearance of what is placed on this corner will be equally important and that the new Ent building should appear to be part of the UCCS campus from an architectural standpoint.

The Board and the presenters discussed the following:

- The site summary as presented and how the building, drive-up canopy and parking lot footprint could be placed on the site and the appearance of these masses from the adjacent roadways;
- The functional programming that will be required of the building vs. the footprint and whether or not there is any flexibility of either;
- Traffic patterns, load and flow on Austin Bluffs Parkway, North Nevada Avenue, the intersection of these two roadways, and the proposed traffic ingress and egress off of North Nevada Avenue;
- Potential partnership opportunities with the students on the UCCS campus and current and/or potential connectivity and circulation patterns with the campus;
- The topography of the site and adjacent roadways and the placement of existing utilities;
- Studies of the site yet to be completed, including drainage, erosion control, grade elevations, infrastructure and utility connects and the services of other professional firms to be obtained, including civil engineering and landscaping;
- Potential sharing opportunities with the City of Colorado Springs regarding landscaping;
- Environmental considerations regarding the site and how they might relate to the building; and
- Potential design options, materiality options, and security issues.

Mr. Brandes thanked the representatives from Keys + Lauer for their presentation. He briefly explained the comments that would follow from the Board regarding this presentation and the

review process the Board will follow moving forward, including Conceptual Design, Schematic Design and Design Development. He indicated that the preferred submittal package for Conceptual Design will need to include a number, perhaps three or four, alternatives that the Board can review from a conceptual standpoint.

With this in mind, the Board would like the following to be presented at Conceptual Design:

Site and Landscape Considerations:

Plans and details from the Project Civil Engineer and Landscape Architect that address the following issues:

- Existing and proposed utility/infrastructure networks;
- Existing (historic) and proposed grading and drainage (surface/piped);
- Existing and proposed access, circulation and parking (surface, structured - future Lane Center parking - and ADA);
- Environmentally sustainable site and landscape concepts that address Low Impact Development (LID) stormwater drainage management, possibly including permeable pavers, bio-swales and other bio-filtration systems, minimizing curbs and gutters, etc.;
- Indicate potential trail connections to the University, as well as an informational kiosk about the University;
- Illustrate appropriate use, placement and type of lighting in the parking lot and around the building; and
- Landscape plans and studies for the expanded project area, including the University monument area and ROW area. Illustrate conceptual site and landscape improvements for the project area.

Sustainability Considerations:

From an environmental design perspective, review the following:

- Site analysis: how the Ent building will fit into the site, particularly blending in with the hill behind it, and the landscaping as noted above;
- Wind, shading and snow melt analyses and how these might impact the building and might impact access into or out of the building; for example, the site analysis provided can be more accurate and detailed to better inform the building site and architectural design through building orientation, massing, sizing of overhangs, location of openings, etc.
- Integrate energy and technical analysis into the design process: a schematic “shoebox” energy model should be done at this phase of design in order to assess which environmental design opportunities should be optimized to make the building cost effective and efficient; for example, by improving insulation it may be possible to reduce mechanical system size, complexity and costs, resulting in better performance and lower capital costs. Utilizing daylighting and natural ventilation can inform the design of the building massing and aesthetics. Consideration of how the light and air moves within the building may affect interior design and layout. Capturing the western views and North Nevada Avenue presence without suffering the noise and associated heat gain also will require analysis to properly address this design issue.

- Resilient, flexible design for the future: much as the program for the credit union is now accommodating the different needs of younger customers, the design of the physical structure should anticipate emerging issues. A few evident issues include design for a water-constrained future, potential for roofs and hard site surfaces to collect and store rainwater, even if not used now. Rather than design to current code, consider what will be required in a few years as a standard. Imagine escalating electricity costs and incorporate the roof as a “fifth elevation” and design it to be “clean” and accommodate photovoltaics. A consideration would be electric car parking/charging, electricity storage, and islandable electrical service so the credit union can continue to operate if the public utility experiences brownouts. Operable windows are another feature which provide resiliency, allowing the building to continue to operate under conditions when a sealed building has to be shut down.
- Set goals and clear metrics for assessment. Review current similar buildings and use them to inform appropriate goals for this project. Small offices/banks can operate at a 30kbtu/sqft/yr EUI (energy use intensity), which if achieved might make this building “net zero ready” with the addition of photovoltaics. Similarly, a daylight autonomy metric (DA) of .7 may provide an interior environment that is delightful and reduces electricity use for lighting and cooling. The LEED Gold goal is appreciated, and if the requirements for LEED certification levels are further articulated, they can be used to “inform” and lead the architecture and the design of the building. When integrated as features of the building, it will not only be energy and resource-efficient, and less expensive to operate, but also less expensive to build.
- Integrate building performance into the Ent program needs: typically employee costs are the largest operating cost in an office/retail operation. Good building environments attract and retain better employees, and encourage customers as well. The PNC bank example shows the enormous long-term profitability of this approach. Ensure that the strategies employed for environmental reasons support the credit union’s program goals as well. With this approach, this project might become a new standard for all Ent projects going forward and, at the same time, define how it could be a beacon for the campus and its ongoing sustainability efforts.

#### Architectural Considerations:

- Keep the design of the building simple, quiet and elegant in terms of massing and materials;
- Keep the building more consistent with existing buildings on campus, i.e., contemporary, modern materials, flat or low slope roof, etc. Do not mimic the new Ent Performing Arts Center.
- Integrate the drive-up canopy into the design of the building in order to eliminate the appearance that it was “tacked onto” the side of the building. Consider integrating the drive-up canopy with the entry canopy in some way;
- Consider integrating steps in the roof with daylighting;
- Use fewer materials and, if possible, within budget; use materials like metal and stone, for example, and use larger and simpler scales and compositions for their placement, such as singular panel elements, etc. Stucco is not a recommended material; and
- Visualize the building from North Nevada and from Austin Bluffs, and design it so it is integrated into the site, the environment, and the landscape.

The Board noted that the next DRB meeting will be August 11, 2016, in Colorado Springs. Ample time will be allocated to this agenda item. Based on the adequacy of the Conceptual submittal and review, it may be possible to combine a Schematic Design and Design Development submittal.

There being no further business, the public meeting of the Design Review Board was adjourned at 1:00 p.m.