University of Colorado
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University of Colorado Design Review Board
and Research Park Design Review Board
Meeting Notes

Date: Thursday, February 9, 2017
Time: 9:00 a.m. – 3:30 p.m.
Location: First Floor Conference Room, 1800 Grant Street, Denver, Colorado

DRB members present: Don Brandes, Sarah Brown, Rick Epstein, Victor Olgyay (by phone), Michael Winters, Teresa Osborne (ex officio), Carolyn Fox, campus DRB member for the University of Colorado Colorado Springs campus ("UCCS") and Bill Haverly, campus DRB member for the University of Colorado Boulder campus ("CU Boulder").

Others in attendance not otherwise noted:
Linda Money, CU Real Estate Services, CU System employee / DRB note taker.

Mr. Brandes, Chair, determined a quorum and called the meeting of the Design Review Board to order at 9:00 a.m. at which time the Board held private work sessions as noted below.

9:00 – 9:30 Work Session – SharePoint Discussion

The Board met in a private session to review newly adopted policies regarding the university's SharePoint website.

Others Present:
Christian Boman, Applications Administrator, University Information Systems, CU System Office

9:30 – 11:00 Work Session – Board Only

The Board met in a private session to discuss administrative matters and the items on the agenda prior to convening the public portion of the meeting.

Mr. Brandes called the public portion of the Design Review Board meeting to order at 11:00 a.m., after which, the Board and the individuals present for the next item on the agenda introduced themselves.

11:00 – 12:30 Indoor Practice Facility and Ball Diamond – UCCS

Architect: DLR Group, Denver, Colorado

Presenters: Bob Binder, AIA, REFP, LEED AP, DLR Group

Brian Thomasen, PE, Director of Engineering, Colorado Region, NV5, Denver, Colorado, civil engineer

UCCS Campus
Presenter: Gary Reynolds, Assistant Vice Chancellor for Administration

Other UCCS Campus Representatives Present:
Carolyn Fox, Executive Director, Construction & Planning, University Architect, UCCS Campus Planning & Facilities Management
Charles Cummings, Design & Construction Project Manager, UCCS Campus Planning & Construction

Description: Pre-Design/Concept Design Submission for an indoor practice facility ("IPF") and a baseball diamond at the UCCS Campus

Presentation to the Board/Discussion:

Mr. Brandes began the presentation by explaining the review process for the submission. He also noted that he had been invited by UCCS to participate in the selection process for the architect and for the general contractor at which time DLR Group was selected as the architectural firm for this project.

Mr. Reynolds provided a brief history of the UCCS strategies concerning the athletics programs and the campus master planning process regarding the areas on the campus reserved for these programs. The master plan for these areas currently includes a soccer field and an outdoor track, the construction of which will not be pursued at the direction of current UCCS campus leadership. He also reviewed the specific locations proposed for the IPF and the baseball diamond and related site details.

He indicated that the current project budget was approximately $14.8 million, of which $7.6 million has been allocated to the IPF and $7.2 million has been allocated to the baseball diamond. This project has been reviewed and approved by the Board of Regents ("Regents") at a proposed budget of $12 million. The increase in the project budget will be presented to the university's Capital Construction Subcommittee for approval at its meeting in May 2017.

The proposed schedule for the construction of the baseball diamond includes a completion date in February 2018 so it will be ready for the beginning of the baseball team's next season. Plans, drawings and other project specifications are targeted for completion in April or early May of 2017 in order to begin earthwork, grading and utility work in a timely manner.

Mr. Binder elaborated on the composition of the design team, noting that DLR Group is one of the leading sports facilities design firms in the country. DLR Group includes in-house engineering for the mechanical, electrical, structural and landscaping components of the project. Additionally, NV5 has been selected to provide civil engineering services, and Bryan Construction in Colorado Springs has been selected as the CM/GC.

Mr. Binder and Mr. Thomasen reviewed the master plan; site analysis; a sun angles analysis; the proposed site plan and site plan options; potential road alignments; existing and proposed watersheds, drainage basins and piping, and retention ponds; a topographical plan and earth movement options; proposed site cross sections; site views; and conceptual designs for the project including both the IPF and the baseball diamond. The proposed construction system and potential design elements for the IPF were also discussed.

Upon the completion of the presentation by Mr. Binder and Mr. Thomasen, the Board shared the following comments and/or direction:

Overall Comments

The design team should attempt to integrate the IPF, the baseball diamond, the pedestrian, bicycle and automobile elements, and the accompanying landscaping into an athletic complex where the two buildings are better connected horizontally, vertically and visually with the background of the native landscape. The complex doesn't necessarily need to be an iconic site but given its prominent location between Pulpit Rock and Nevada Avenue, perhaps it should visually blend into the environment which may require that the architectural, civil, and landscape architectural professionals work together more closely.

Site and Landscape Architectural Comments/Direction

- Regarding the location and the corresponding floorplates, the design team should assume that there is a finished floorplate for a potential arena when considering the overall drainage concerns for the site, especially as they relate to Parking Lot 580 ("Lot 580");
- Ensure that the architect, landscape architect and the civil engineer are in agreement regarding the extensive site grading, drainage, landscaping, retention, and irrigation along Nevada and throughout the site;
- Include in the schematic design ("SD") submittal details, more cross sectional studies that illustrate the extent of the cut and fill earthwork, site grading, slope, the use of retaining walls, the inclusion of geotechnical data, an integration of the overlot grading with the stormwater management systems and how they are tied together.
- Please refer to other schematic design submittals for the UCCS campus for examples regarding the submittal details for site planning, retaining walls, trails, walkways, pavements, ADA, site and landscape improvements, planting plans and details, site fixtures and furnishings, signage, etc., that have been prepared for other campus projects.
- Please share your planning and design thoughts for how the overall site improvements blend into the background and foreground from various on-site (internal) and off-site vantage points.
- Improve the sense of "placemaking" by including pedestrian walkways, bicycle access systems, the connectivity between the IPF and the baseball diamond, the parking lot and existing and proposed trails, and encourage pedestrian access from the parking lot to the IPF, integrating all connections into one system.
- Review the proposed point of access into the baseball diamond (behind the batter's box) in order to determine if the steep climb coming up from the corner of Lot 580 to this proposed access point can be eliminated or reduced by providing for a different point of access in order to provide better ADA access.

- Review the impact of the overall project lighting (parking, diamond, IPF, site, etc.) and the impact of the project to the natural elements of the site, especially as they relate to creating a north gateway and especially considering the prominent location of the site adjacent to Nevada Avenue.
- Consider a more intensive site grading and landscape solution along the eastern edge of the baseball diamond and Nevada Avenue to better incorporate the site improvements with Pulpit Rock and the surrounding landscape character.

Architectural Comments/Direction

- Investigate breaking up the symmetrical design of the structures flanking both sides of the proposed access point to the baseball diamond, by moving the access point and the structures to the east between the IPF and home plate, making the access point more inviting, making the design more asymmetrical and non-standard, and possibly reducing the grade proposed for the current access point;
- Consider ways to improve the relationship between two building elements, tying them together, so they work as one composition by creating a gateway on the south side of the baseball diamond and integrate it with the front of the IPF, relating the IPF and the baseball diamond to each other, including adding a tensile fabric shade or canopy to the south side of the baseball diamond and adding a constructed front section to the IPF that would hold the restrooms, offices, storage, etc., and that would be consistent in appearance with the constructed buildings on the south side of the baseball diamond; and
- Consider ways to make the baseball field area asymmetrical in its design in order to make it fit better into the site location.

Sustainability, Energy, and Environmental Comments

- Take advantage of the opportunity the site provides by not competing with or detracting from Pulpit Rock and the natural landscape existing around the project;
- The buildings and the baseball field should not overwhelm the area with lighting and color but should be more complementary to the location and should emphasize Pulpit Rock and the natural areas surrounding it;
- Consider whether any of the activities programmed for the inside of the IPF can be located outside of the IPF and integrated into the landscape, providing opportunities for the athletes to work outside when the environmental elements allow for this;
- Regarding the programming in the IPF, in particular, consider using a broad comfort range for the activities. Specifically, consider an extended comfort range for the environmental requirements for ventilation, lighting, thermal comfort, etc., within the IPF and to what degree these requirements may inform the design of the IPF so that many of these requirements could be accommodated using access to the outside environment such as natural ventilation, daylighting, etc. State these goals in your program, and like the new IPF in Boulder, think beyond normal criteria for environmental comfort and program activities so that the facilities can be adapted accordingly; take advantage of the local climate, and ultimately be more energy efficient;

- Consider building these facilities to exceed code. This is likely to be a lower total cost of ownership over a 10-year period. Calculate the anticipated costs to run the facilities, and determine the payback from energy efficiency; and
- Investigate ETFE and similar lightweight insulating skin materials that may both reduce capital cost by reduced structure and greatly reduce operating costs.

Mr. Epstein moved to approve the pre-design and concept design submission taking into account the comments made by the Board at this meeting. Mr. Winters seconded the motion which unanimously passed.

Mr. Brandes indicated that for the forthcoming schematic design submittal, the Board will expect more detail and the inclusion of the comments.

After this agenda item, the Board took a brief break for lunch.

1:30 – 2:00 Work Session – Board Only

The Board met in a private session with CU Boulder staff to discuss the next item on the agenda prior to convening the public portion of the meeting.

Upon completion of the work session, Mr. Brandes called the public portion of the Research Park Design Review Board meeting to order at 2:10 p.m.

2:00 - 3:30 Aerospace Engineering Sciences ("AES") Building – CU Boulder

Architects: Hord Coplan Macht, Inc., Denver, Colorado, architects
RATIO Architects, Denver, Colorado
PLOT Project, LLC, Denver, Colorado, landscape architects,

Presenters: Jennifer Cordes, Principal, Hord Coplan Macht
Kent Freed, Principal, PLOT Landscape Architecture
Anthony Mazzeo, Principal, PLOT Landscape Architecture
Chris Boardman, Principal, RATIO Architects

CU Boulder Campus Presenter:
Wayne Northcutt, Architect – Facilities Planner

Others Present:
Ro-Tien Lang, Architect, Hord Coplan Macht, Inc.

Other CU Boulder Campus Representatives Present:
James Faber, Project Manager, Construction Management, Facilities
Tom Goodhew, Assistant Director, Facilities Planning
Bill Haverly, Campus Architect and Director of Planning, Design and Construction, and
Richelle Reilly, Landscape Architect, Facilities Planning
Matthew Rhode, Aerospace Engineering Sciences

Douglas Smith, Assistant Dean, College of Engineering, CU Boulder

Description: Schematic Design ("SD") Submittal for New Building on East Campus

Presentation to the Board/Discussion:

Mr. Northcutt began the presentation by briefly reviewing the process that will be followed for this agenda item.

Ms. Cordes, Mr. Mazzeo and Mr. Boardman then reviewed the SD submittal package including area plans for a potential future master plan and the site development of the AES scope; an analysis of the fluidity concept; a concept site design; a grading plan; site diagrams for both the north side and the south side showing circulation, stormwater drainage, programming, and planting plans; detailed plans, images, and cross sections of the outreach plaza, research plaza, entryways, flight field, and the spillway.

Mr. Boardman presented the current plans for the building including floor plans; a *Sketch Up* model; exterior views and elevations; cross sections of the building; and the proposed brick palette and patterning and other proposed elements related to the materiality, including proposed limestone panels, composite metal panels for canopies and roofs, and spandrel panels. Forthcoming wind studies and proposed air handling systems were also discussed.

The Board met in private session with the campus representatives present in order to discuss the submittal package as it was modified during the meeting, after which the Board thanked the presenters for their submission and provided the following comments and/or direction:

<u>Site and Landscape Architectural Comments/Direction</u>

- In the same level of effort that created the vision and level of detail for the north side of the site – please further define and detail the south side, including, but not limited to: the sense of arrival and gateway, the revised building elevation, the lenticular and subtle nature of the site/building that expresses "science and technologies";
- Preference was expressed for the south side entryway design as it was reflected on the preliminary site plan for the 3-D model;
- Review the locations of the bicycle racks to ensure that they are placed in the most appropriate places nearest to entrances to the building to allow for the greatest level of use;
- Review the use and locations of tree plantings related to the Outreach Plaza and the entryways leading to the front door of the building on the south side in order to determine if there might be places where trees could be planted more proximate to the walkways to soften the entryway for pedestrians entering the building without affecting the long-term site design and master planning efforts; and
- Investigate what landscaping will be needed in order to make the east/northeast side an entryway. Explore site and landscape concepts that clearly provide for a gateway to the site with the pedestrian access coming from the parking lot to the northeast corner of the building.

Architectural Comments/Direction

- The Board is supportive of giving the design team and staff more latitude in the building design so that a balance between the AES building and other structures on East Campus can be determined while giving the AES building its own language and the freedom to let the building be what it should be and to move forward without being impacted by strict design limitations;
- Consider that the concept of fluidity in the building design is almost too subtle and could be enhanced and more expressive;
- Consider how the design elements of the north, west and east sides of the building can be made to more closely match the design elements of the south side of the building as they will be equally as visible as the south side;
- Make the fenestration of the window bays more vertical in nature, more consistent from the south side to all other sides of the building, and determine if and how sunshades can be used on all sides of the building to improve sustainability efforts and if the window design can also support the concept of air movement throughout the building;
- Consider replacing the limestone shading elements in the window panels with thinner, metallic elements in order to provide a greater level of sharpness and crispness in the design;
- Change the red color proposed for the roof and the canopy structures to a lighter and crisper color, perhaps an anodized aluminum or similar metallic finish, and also use the same finish for the metal shading elements proposed for the windows as suggested above, noting that the color for the roof doesn't necessarily need to match other buildings on the East Campus;
- Embrace brick and the proposed palette and pattern as a good background material for the building but explore further how it is articulated on the north, west and east sides of the building;
- Consider making the glass entryway cut on both the south and north side of the atrium thinner, and more vertical, lighter, and glassy in appearance;
- Treat the roof as an element and regarding the horizontal roof expression on the east and west sides of the building, it should be modified so they have a more pronounced cantilevered "float" effect and are more consistent with the roof on the north and south sides of the building, supporting these changes using the concept of fluidity, but do so in a way that isn't too trendy and which will continue to be meaningful and resonant decades from now;
- Consider the scale of the building, especially as one approaches the building from the northeast, including the glazing on the windows, the edges of the building, the landscaping, the entryways, the underside of the canopies that cantilever out, making sure that all of the elements are comfortable from a pedestrian point of view and that pedestrians won't feel overwhelmed by the scale; and
- Further explore the lower elements, the canopies, the classroom, etc., integrating them more into the building's design so they don't have the appearance of being a secondary element and "tacked on" but rather are more essential to the building and help to create a lower-level pedestrian scale.

Sustainability and Environmental Comments/Direction

- The fluidity concept is an exciting idea which can be pulled through the building and into the form of architecture, from an energy design viewpoint. In this case, design the building to use the fluidity of air and the radiant flux of light. There is no apparent incorporation of the dominant winds into the design. Using the prevailing winds to reduce required fan power will substantially reduce building energy use. The annual energy costs by end use shown in the diagram on page 30 of the SD submittal package shows 25% of the overall energy use is consumed by fan power. This quantity of energy flux can be reduced by thinking of air as a fluid. This is an architectural design issue. For example, reduce the need for fan power and reduce static pressure by designing with the air flow, use buoyancy (don't push air down), design larger ducts with gentle bends and shorter runs which follow the needs within the building and which can be integrated into the architecture. Perhaps the duct layout should be different in the lab areas and the non-lab areas. Design to use nonconditioned "economizer" modes as much as possible;
- The daylighting design should meet both performance and aesthetic requirements. If lighting is responsible for 20% of the energy use, this must be optimized. Add shading on the east and west sides, in addition to the south. Reconsider the glazing design on the south side. It may be more useful to have the high glazing (rather than spandrel) and less ankle level glazing. The lighting systems should coordinate to improve the heating and cooling systems as well. For example, use your energy analysis to design how the façade can allow solar gain during the heating season when it is beneficial, but without causing glare, and integrate these ideas into the architecture. If there are dark areas in the plan where daylight is not reaching, try to modify the design to allow sunlight into these areas; and
- Use the energy analysis to help inform the design and shape of the architecture and enhance the sustainability and energy efficiency going forward.

Mr. Epstein moved to: 1) table a decision on this matter and bring it back before the Board at its meeting on March 10, 2017, for additional review and a decision of a revised schematic design submittal and, in an effort to maintain the project schedule and to expedite the planning and design process, 2) the DRB will participate in a workshop session to be scheduled in late February. Ms. Brown seconded the motion which unanimously passed.

Mr. Brandes indicated that the Board would work with the design team's schedule and that the GoToMeeting workshop could be held in early March if the timing was better.

There being no further business, the public meeting of the Research Park Design Review Board was adjourned at 4:05 p.m.