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

Date:	Thursday, December 8, 2016
Time:	9:00 a.m. – 1:00 p.m.
Location:	Conference Rooms 502 & 503, 1800 Grant Street, Denver, Colorado

DRB members present: Sarah Brown, Rick Epstein, Victor Olgyay (by phone), Michael Winters, Teresa Osborne (ex officio), Bill Haverly, campus DRB member for the University of Colorado Boulder campus ("CU Boulder"), and André Vite, AIA, campus DRB member for the University of Colorado Denver campus ("CU Denver").

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

Mr. Epstein, Acting Chair, determined a quorum and called the meeting of the Design Review Board to order at 9:10 a.m. at which time the Board held a private study session regarding the items on the agenda.

9:00 - 10:00 Study Session – CU Denver and CU Boulder

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

Mr. Epstein determined a quorum and called the public portion of the Design Review Board meeting to order at 10:00 a.m., after which, the Board and the individuals present for the meeting introduced themselves. Mr. Epstein noted that the Board would not be approving the CU Denver Master Plan, but rather the Board would be sitting as an advisory board for the master planning presentations.

10:00 - 10:45 CU Denver Master Plan – CU Denver

Architects: SmithGroupJJR, Ann Arbor, Michigan
Paulien & Associates, Inc., Denver, Colorado
Brailsford & Dunlavey, Chicago, Illinois

Presenters: Doug Kozma, SmithGroupJJR (by phone)
Jon Hoffman, SmithGroupJJR (by phone)

CU Denver Campus Presenter:
Cary Weatherford, Associate Director, Institutional Planning, CU Denver

Others Present:

André Vite, AIA, Campus Architect, Office of Institutional Planning, CU Denver
Michael Delgiudice, Chief Planning Officer, CU Denver (by phone)

Description: CU Denver is in the initial phases of a ten-year master plan for the Denver campus which is expected to conclude in March 2017. Assisting CU Denver in this effort are SmithGroupJJR, Paulien and Associates, and Brailsford and Dunlavey. The project will be introduced and the process, along with themes and considerations of the master plan, will be discussed with the members of the Board.

Presentation to the Board/Discussion:

Mr. Weatherford introduced this agenda item by providing a brief introduction of the Office of Institutional Planning, the members of the planning team consultants as listed above, and the master planning history of the Auraria campus and the CU Denver campus. He noted that this will be the first comprehensive master plan for CU Denver as all previous master plans were completed in conjunction with the Auraria campus. Each of the other institutions that are also a part of the Auraria campus are also in the process of completing master plans for their respective campuses.

Mr. Kozma reviewed the expectations regarding the methodology and approach for the creation of the CU Denver master plan, followed by a review of the Auraria campus neighborhood map. He elaborated on the four phases involved in creating the master plan and an anticipated schedule for completion. He briefly explained the four phases, including discovery, analysis, planning, and documentation. Also reviewed was the anticipated project schedule including potential meetings with the DRB.

Mr. Weatherford explained the CU Denver decision matrix developed for the master plan and how they anticipate it will work. He also noted that the same decision matrix will apply toward a master planning effort for CU South Denver. Additionally, the other institutions (Metropolitan State University and Community College of Denver) on the Auraria campus have already completed their master plans and the Auraria campus is also in the process of completing master plans for its campus neighborhood areas. He explained that the tight project schedule is partly because new CU Denver leadership wishes to complete its master plan at the same time as the Auraria master plan is scheduled to be finished, which is in March 2017.

Mr. Kozma described the interviews that have been held to date and interviews which will happen in the future regarding the master plan topics and the student survey process and response.

He explained a map regarding connectivity between the CU Denver neighborhood on the Auraria campus across Speer Boulevard (“Speer”) into Downtown Denver.

Parking options, current student enrollment of 14,500 (head count) and potential enrollment growth, student housing needs and potential housing options, a potential transformation from a

commuter campus to a residential campus, interactions and coordination with the City of Denver planning department, crossing issues and possible future pedestrian bridges across Speer, a potential educational partnership with the Denver School of the Arts in order to provide access to the Center for Performing Arts were discussed with the Board.

The Board suggested that the planning team consider the following subjects while moving forward with the master plan:

- Review how the CU Denver campus relates to Speer; specifically how the buildings physically address Speer, any potential redesign of Speer by the city, how any changes to Speer might affect potential building sites and uses, and the potential pedestrian bridge crossings; work with other ongoing initiatives in the city that affect this, including DCPA, Speer Blvd. street section, and a pedestrian bridge at Larimer, etc.
- Virtually the entire length of the Auraria campus along Speer is within the CU Denver neighborhood. This is a strong visual opportunity to further strengthen CU's presence in Denver.
- Determine if a campus identity can be established; beyond signage, how can the architectural elements of the buildings and placemaking elements be established and tied together on both sides of Speer in order to make the whole neighborhood feel more like a campus, and how can the CU Denver campus identity be differentiated from the other campus neighborhoods;
- Determine if sustainability can be implemented in a broad perspective, consider potential sustainable themes of the buildings regarding energy perspectives, ways in which water is handled on site, and other elements to make sustainability stronger, all of which could be integrated into the campus identity;
- Review redevelopment opportunities for some of the sites, look at the assets differently in order to determine if using them for other purposes would better promote the needs and best interests of the campus;
- Determine if the neighborhood boundary for the campus area be expanded creatively by using P3 development opportunities, etc.; and
- Review current and potential themes and/or guidelines for physical design elements, paving, street furniture, branding, signage, etc., in order to determine if they can be blended into something consistent that would further define CU Denver's identity within the city;
- Explore further the relationship of pedestrian connections surrounding Campus Village; and
- Look at opportunities in both Tivoli and in the CU Denver neighborhood for a student center/gathering center that has a sense of focus, place and identity for CU Denver students.

The Board thanked the staff and the planning team for their presentation and indicated that they look forward to meeting with the group again in 2017 as the planning process progresses. They cautioned to not rush the process to the extent that doing so might impede the final results.

After this agenda item, the meeting of the Design Review Board was adjourned and the Research Park Design Review Board meeting was called to order at 11:09 a.m.

11:00 - 12:30 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
Richelle Reilly, Landscape Architect, Facilities Planning

Others Present:
Ro-Tien Lang, Architect, Hord Coplan Macht, Inc.
Kelly Finkowski, PLOT Landscape Architecture

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
Matthew Rhode, Aerospace Engineering Sciences
Douglas Smith, Assistant Dean, College of Engineering, CU Boulder

Description: Concept Review of New Building on East Campus

Presentation to the Board/Discussion:

Mr. Northcutt and Ms. Reilly began the presentation by briefly reviewing the progress made on the project design as it relates to the direction provided by the Board at the last meeting. This progress included reviewing micro master planning options, possible alternatives regarding the site planning, designs for the building itself, and other elements which will meet the programmatic needs and requirements of the Aerospace program.

Ms. Reilly reviewed potential vehicular and pedestrian accesses into East Campus and the related connectivity throughout East Campus, including the potential future density of the East Campus, the possible location of a future pedestrian bridge, and moving the feel of the East Campus from a suburban office park to an academic campus and the creation and placement of a multi-purpose pathway.

Ms. Cordes added that one of the benefits of the master plan as it has been described by staff is that it can be completed in phases rather than having to be completed all at one time. Once the micro master plan was more defined, the planning team determined clean scope and site boundaries, incorporated the completed topographic study into the planning efforts and revisited various options for the site, the building, surrounding elements, and the integration of the project with the adjacent buildings.

Mr. Freed reviewed with the Board the results of additional studies regarding existing conditions, including the bicycle radius and routes from the Main Campus, wind and solar conditions, green spaces on Main Campus vs. East Campus, the current framework plan adopted for East Campus, East Campus circulation, and views from the project site. He also reviewed an analysis of the existing conditions, including site context and diagrams for site analysis, water and natural areas, earthwork, grading, and overall synthesis.

Mr. Mazzeo reviewed various footprint options and transition landscape concepts, newly designed concept site plan options, a key species landscape palette, a section of a concept site design, and landscape concepts for the south lawn and some of the proposed plans for the flight field.

Mr. Boardman presented 3-D models of a sampling of the building concepts and a *Sketch Up* model of the preferred concept. He reviewed building, site, and landscaping options, and the connectivity to the MacAllister Building. Site plan and massing alternatives were also reviewed. Regarding materiality and fenestration, a range of architectural strategies and expressions were explored.

Mr. Olgyay inquired about the energy goals for the building as they had been mentioned at a prior Board meeting: 1) what sustainability/energy options had been included at this point, and 2) whether or not any of these options had affected the diagram of the building designs included within the current presentation. Ms. Cordes and Mr. Boardman responded by indicating that the design team was reviewing programming for the floor planning in order to determine if the floor planning could accommodate: 1) low utility use for half of the building vs high utility use for the other half of the building so that separate mechanical systems could be used for either half of the building; 2) 100% outside air spaces being consolidated together; and 3) if a heat recovery system could be used for the rest of the building. Additionally, the daylighting study is still in effect even with the modifications to the building and site designs. An internal study concerning where people spend most of their time in the building is also being conducted so that these spaces are planned along the south and north faces of the building and the internal parts of the building are being used for restrooms, labs that are least frequently inhabited or do not need any daylight, etc. As much as possible, the walls that transition from south to north in the building are all glass. The design team is hoping to use operable windows primarily for the south side, but this option is still under discussion with the University.

In response to other questions by the Board, the design team or staff responded that: 1) the new pedestrian underpass at the intersection of 30th Street and Colorado Avenue was linking an existing pedestrian sidewalk from one corner of the intersection to another corner of the same intersection; 2) the $375,000 that had been included within the proposed budget for the pedestrian bridge over Skunk Creek was now being set aside to remove a portion of the road connecting the parking circle in front of the MacAllister Building to the parking lot located north of the SEEC Building which had not originally been included within the project scope; 3) fire lane access has been addressed in the current designs; 4) the grading between the AES building and the MacAllister Building would be sloped appropriately; and 5) the preferred building option by staff and the design team is the “tower” building with the classroom on the east side of the building and the preferred site option is the fluid walk concept.

After meeting privately to discuss the new materials, the Board thanked the presenters for the thoroughness and completeness of the presentation. The project development since the last submission demonstrates that it will be an important building and a great precedent for the East Campus.

Ms. Brown moved to approve the concept design submission package presented to the Board with the conditions as stated below. Mr. Winters seconded the motion, which unanimously passed.

Overall Comments

- The Board liked and embraced the curved option for the master plan approach and felt that it was a strong step forward in the planning process. The AES project will be the first to implement this planning option. A strong terminus could occur at the east end as a starting point. This space should integrate with the existing building and the courtyard to create a central place on the East Campus. The Board also preferred the fluid walk concept and the concept of the "tower" building. The Board felt that the site/landscape of East Campus should incorporate Main Campus elements and the buildings should incorporate the materials used on Jennie Smoly Caruthers Biotechnology Building and the new SEEC building.

Site and Landscape Architectural Comments/Direction

- From a landscape approach, the Board embraced the fluid walk concept and felt 1) that it was consistent with previous comments from the Board regarding how the front and back of the building should have some continuity and engage with the building, and 2) that the fluid walk is an integral part of the building, the site, and the program;
- The placement of the classroom element on the east side of the building between AES and the MacAllister Building is preferred over placing this element on the south side of the building;
- Regarding the micro master plan, the design team should overlay the preferred alternative site plan on top of the micro master plan in order to review how the two plans interact with each other, what relationships might exist, what might need to change, and what might remain the same;
    - Review the finished floor elevation in relationship to the micro master plan;
- Reconsider the front yard to the south as it currently seems disconnected with the rest of the site plan,:
    - for example, if the circular loop road were eliminated, determine how everything else adjacent to the area would work together;
    - determine what the entry to the site reveals about the front door to the building;
    - The curvilinear line of trees creates an undesirable separation to the front of the building;
    - embrace the approach to the site as it relates to the position of the building and its relationship to the MacAllister courtyard;
    - the design should consider that improvements could be torn out within the next 10 or 20 years as the East Campus is built out;
    - review how it interacts with the micro master plan;
    - regarding how the south side ends, it needs to have a sense of place and arrival and could be integrated more with the larger fluid walk concept; parts of the current plan for the south side seem to be left over from previous submittals; and

  - further develop and refine the outreach plaza as it currently feels like a "thickened edge" of the building and, as an important part of the building's south terminus, it should have a greater expression of placemaking as people arrive at the building.
- Reassess the landscape surrounding the classroom element on the east side as it feels disjointed regarding how the pedestrian sequence informs the movement from the east side of the building to the parking, to the MacAllister Building, etc.:
  - the existing sequence doesn't feel like a natural sequence with a smooth flow of movement; and
  - more thought is needed regarding the development of the area in terms of the connectivity, the pathways, the geometry, and the landscaping.
- Flight Field: the Board preferred the Fluid Walk Concept over the Sky Mounds and other alternatives. Continue to study how the south entry Outreach Plaza can connect through the building's lobby and tie to the Flight Field on the north.

Architectural Comments/Direction

- The Board appreciated the physical wood models used to represent the different design options. The models helped illustrate the massing and scale of the alternatives, which led to the preferred option.
- The Board liked the functional roof of the tower building option, and the vertical element within it - it will be an important element and could be captivating;
  - Consider adding a multi-functional, expressive stair element to the front of the building (that would be the tower) which would: 1) bring people from the outreach plaza to the roof, 2) could be part of the flow of the building, and 3) could provide additional egress for the roof.
- Regarding the west elevation:
  - the west elevation will essentially be a terminating view from the campus pedestrian spine and shouldn't be treated as the back side of the building, but rather it should be treated as a strong front side and will be as important to East Campus as the south side will be;
  - the design team may want to consider bringing the same treatment from the south face around the corner onto the west face and to terminate it at a break/ reveal in the west face similar to the break/reveal on the south side, i.e., the west side could be split into two masses by the reveal whereby the front façade would wrap around the corner to the west facade.
- Consider common elements that the East Campus may share with the Main Campus and what elements will be unique to East Campus:
  - for example, the roofs of future buildings could be unique and special in that they might depart from the slope tiled roofs of Main Campus to some type of dynamic functional roof, either habitable or otherwise;
    - embrace what is being done with the AES building as a unique element that could create some identity for the building and for the remaining, unbuilt areas of East Campus;
  - Regarding the entry and other similar elements, the way flagstone has been used for signage at entries into the existing East Campus buildings could help bring flagstone as a material into East Campus and provide retaining some continuity with the Main Campus even if flagstone isn't part of the building façade itself; and
  - Consider ways that flagstone can be integrated into the ground plain, landscape and lower elements beyond the gateway entrances to the East Campus.

- Regarding the classroom element:
    - determine if the roof is inhabitable, if it could be a fifth elevation, entirely habitable, habitable over only a portion, if it is expressive and to what degree;
    - revisit the geometry of the proposed angles as they relate to MacAllister and the south face and determine if placing the classroom differently might make more sense:
        - placement as a rectangle may be better because otherwise, the front angle of the classroom competes with the front façade of the south face whereas if it were a rectangle placed against the east side of the building, it strengthens the angles on the front; and
        - if it were placed as a rectangle, the geometry of the sidewalk to the south may also straighten out.
- Consider what the public spaces are like, how some portions frame others, how they relate to the open space character of the Main Campus and, regarding scale, how the challenges of the large buildings on East Campus are different from those on the Main Campus, and yet how the pedestrian scale is critical to modulate the larger buildings and could relate to the scale of the main campus:
    - is the inset of the south face enough of a scaling element and does it provide a sense of scale so the AES building does not become a large, object building;
    - Main Campus creates a fabric which results in buildings becoming part of a whole public space sequence, some of which should be maintained and which may be especially important given the scale of the buildings on East Campus;
    - think about these opportunities and how breaking down the scale somewhat might provide opportunities to relate back to the Main Campus;
- Regarding the materiality, the Board liked the proposed direction and suggested that:
    - a combination of steel and glass could perhaps be used for the entry;
    - the framework of the brick could be retained but where there are punctuated moments, these could be created using the steel and glass vocabulary, letting the brick and precast materiality show up in other elements;
    - the idea of the material from the south face wrapping around the corner to the west face should be explored and consideration should be given to thinking about the terminating vista from the west, how the materials would wrap;
    - the materiality of the underside of the roof for the sections where it is exposed needs to be explored, i.e., should any materiality on the inside of the atrium be brought out through the underside or through an extension of the wall plane; does a relationship exist between other buildings on East Campus vs. what should be unique to the AES building, etc.;
    - present a few options regarding the materiality with schematic design submittal which should show how the team arrived at the preferred designs, what will the key element be, how the materiality relates to the design, how it is both forward thinking and timeless, how it will work if AES moves out of the building in 50 years, etc.

<u>Sustainability and Environmental Comments</u>

Regarding sustainability efforts, the Board applauded that the design team had created an early stage energy model (using the SEFAIRA software), but otherwise felt that sustainability had received less attention in this submission than other issues that had been addressed. Moving forward, the Board expects sustainable design concerns to be more thoroughly developed. Specifically, the Board suggested:

- Clear goals must be set for energy use intensity (EUI) and all other sustainable design goals. These goals should be in the documentation submitted to the Board, and be stated in a quantifiable manner that ensures progress is made toward successful achievement of the goals.
- The design team should use the information from the energy model to inform the design. There is an opportunity to seamlessly integrate the performance of the building with the formal building concept, so these are positively reinforcing, economically and without architectural conflict or budget compromise. For example, the design team has suggested "permeable form" as a building massing and expression strategy; perhaps this design element could also integrate the information from the energy model to become a functional aspect that enhances the building performance.
    - One element that would be expected out of the SEFAIRA model is to target U values for wall assemblies, and perhaps "window to wall ratios" for different orientations. That could certainly play into the building massing explorations, and perhaps the floor plans as well.
    - The team mentioned stacking the plan to allow for appropriate mechanical systems to be deployed easily in the building. Bringing that idea into our current context means "using passive methods first" to reduce loads before the mechanical systems are sized. That is an appropriate approach.
    - The energy model may suggest that natural ventilation is important. If so, this may lead to planning of the west (wind facing) façade as an opportunity to use that positive wind pressure for ventilation, perhaps integrating into the permeable massing or "funneling facades" and thereby reducing the required mechanical fan pressure. The east elevation may want to formally acknowledge that it is in negative wind pressure, and vents will work well here. Similarly, the atrium and the adjoining spaces can work together to provide passive ventilation for many of the occupied spaces. Operable windows are desirable for many reasons in these areas, but they may also inform the organization of the building floorplate and form itself to allow for air movement.
    - Consider vertical permeability of the design as well, regardless of whether or not operable windows are used. Thinking about the physics of airflow will allow for economizer cycles, etc., to be done with a minimum amount of fan power so the building "breathes" naturally. Perhaps create "functional roof elements" for vertical ventilation.

- Daylighting is similar to the ventilation opportunity in that sense and is about more than just shading; a typical classroom or space will benefit from multi-lateral aspects of daylighting. Consider evolving the "permeable" design so there are opportunities to get light from more than one side in occupied building spaces. This clearly directs the building's form as well.

  While the existing SEFAIRA energy model has likely been useful to date, the design team should be encouraged to move to a more sophisticated energy modeling software (like Energy+) for the schematic design submission. The team has a great design concept and with the more precise information available with a better tool, it is likely that it will be easier to meet, and perhaps even exceed, the energy goals previously set. With the skill of this team, this will be done with significant lifecycle benefits to the University.

Mr. Haverly noted that the Board has expressed a willingness to be available not just at its regularly scheduled public meetings, but can also be available for workshops or other occasions as needed and that these should be scheduled through Ms. Osborne.

The design team indicated that it will bring the schematic design submittal back to the Board at its meeting in January.

There being no further business, the public meeting of the Research Park Design Review Board was adjourned at 1:15 p.m.