

**Space Program Plan**  
**for the**  
**Roger Sorrells Engineering & Science Library Renovation**  
**Summer 2013**

**Purpose**

In the recent past, we stated the purpose of the document to be: “The purpose of this document is to communicate the preliminary plans for renovation of the Roger Sorrells Engineering & Science Library in the Summer of 2013. The expected audience during draft stages includes: the employees of the Science Libraries, the Dean and Associate Dean of the University Libraries, the Libraries Council, selected advisors from the University Libraries and the University as a whole, all University Library employees, and interested individuals from the Carnegie Mellon University Community.” We are now entering a new phase where the collective effort of the university is being communicated to the successful architectural design firm. Careful consideration of this document would be greatly appreciated.

**Assumptions**

- A “blue sky” approach has been used so as not to limit the imagination; subsequent prioritization decisions will yield a negotiable result (for the purpose of architectural plans).
- The renovation will establish a facility that should serve the university for roughly the next 10 to 15 years with periodic enhancements.
- The project should be divided into identifiable phases or options and a modular approach should be taken such that design elements that cannot be afforded under the current renovation budget could be added on at a later date.
- A service desk will be essential (details will need to be determined).
- All employee should have private service oriented space (visible and approachable).
- Office areas for six staff (see descriptions in Appendices A through E) and two desks with computers for information assistants are essential.
- Private offices for four library faculty are essential (see general description in Appendix F).

- A private office for the Dean emeritus is essential (to be converted to a group study when the Dean emeritus no longer requires the space).
- A common area (shared employee space) for supplies, mail slots, photocopier/printer/fax, etc. which will limit disruptions in employee office space.
- An employee lounge with a kitchenette.
- Attention should be paid to co-location concerns – for example an active librarian’s office right next to a quiet study area is not compatible.
- Accommodations for broader mission library facilities such as the poster printer, space to accommodate tutoring activity, an annex for the Global Communications Center, “virtual windows” to the Qatar, Silicon Valley, and Rwanda campuses, a maker space with 3D printer, or a multi-purpose area that can accommodate instruction should be possible options.
- Shelving needs include: 110 linear feet for the reference collection, 420 linear feet (plus 63 to 94 linear feet of growth) for theses, 8,817 linear feet for the circulating collection, 4,500 linear feet of journal shelving (perhaps as low as 3,910 linear feet), current journal shelving for 200 titles (the number of titles may significantly decrease by May 2013), 18 linear feet for folios, plus an atlas cabinet of approximately 9 square feet. Only the theses collection has anticipated physical growth.
- Public computing equipment: 11 personal computers at seated furniture and 3 personal computers at standing counters.
- Other equipment: 1 microfiche/film reader/printer/scanner, 9 microfiche/film cabinets, and a display cabinet (8 square feet).
- Current public seating capacity is 165 seats and a post-renovation goal should be 200.

### **Methodology for Gathering Stakeholder Input**

We used a number of methods to gather feedback from students, staff, and faculty of CMU. Feedback gathering was primarily focused towards patrons of the Sorrells Engineering & Science Library, though feedback from patrons who do not frequent the library was not excluded if it was provided to us. The first method we used to gather feedback was to provide patrons with a blank floor plan of the library and ask them to draw or write what design elements they would like to see in a renovated library space. The second method we used was to post information about the space redesign to a popular online forum for CMU students ([www.reddit.com/r/cmu](http://www.reddit.com/r/cmu)), soliciting feedback about the redesign. Finally, we conducted a number of focus groups with student and faculty patrons as well as faculty and staff employees of the library to discuss the space redesign.

## Responses

### *Floor Plans*

The floor plan exercise produced a variety of ideas for the space redesign, though a handful of these ideas were repeated across many of the responses. A major theme in the floor plans is the need for the clear separation between quiet and loud areas in the library. A number of plans suggest using shelving to effect this separation, a plan that provides both a physical and visual barrier between areas. A second common element of the submitted plans is the need for more lounge areas. The specifics of these lounge areas are typically not indicated, though couches and comfortable seating are suggested in a few responses. Third, many respondents suggest that there needed to be more group study space including group study tables and rooms. Last, a café or coffee facility (a kitchenette for self-service) in the library is a somewhat common suggestion. A handful of other elements are mentioned in the floor plans that are worth considering including better/new art, a new circulation desk, better lighting, a change in the entrance area, and the inclusion of a second floor.

### *Focus Groups*

Given the variety of types of library users we met with for the focus groups, one might expect feedback from these sessions to be quite variable in content. While we do see some differences among groups, there are a number of elements of feedback that are quite similar across groups. Participants indicate that they largely use the library space for independent and group study, use of computing equipment (computers, scanners), relaxation, and only occasionally to find or browse books and journals. Specific elements of the library that students addressed include group study rooms and tables, independent study carrels, whiteboards, printing services, and document scanning.

**Space Delineation:** A common problem regarding the library space is a lack of clarity with respect to library policies around noise and food/drink. One patron said, “I’m not sure what I’m allowed to do or not do [in the library], so I just do whatever I want.” While this approach apparently works for this patron, it is indicative of a lack of visual cues about the rules of the space. A number of participants at both the graduate and undergraduate levels also indicated that they were unsure where they were allowed to conduct group work apart from the use of group study rooms or that they were dissuaded from conducting group study/collaboration sessions in the library because they were worried about disturbing other patrons. Other difficulties patrons report include semi or non-functional equipment including printers, scanners, and computers. Patrons also note a lack of outlets and poor cell phone reception.

**Idealized Workspaces:** When asked about study and work spaces at CMU and outside of CMU, focus group participants often cite the study and work spaces in the Gates and Hillman Centers at CMU for the modern but functional look, excess of study nooks, and plethora of whiteboards. A number of participants indicate that they enjoy working in coffee shops because of the reduced number of distractions compared with an office or dorm room. Other responses suggest that places with high ceilings, natural lighting and windows, and places that offer a mix of social and quiet space are best for studying and working.

**Look and Feel:** The final question asked of focus groups was open-ended, querying the participants about any changes they would like to see at the Sorrells Library. As expected (and hoped) this question elicited a variety of responses and was responsible for some of the more creative suggestions to come out of the focus groups. While it is difficult to summarize these responses, some major themes emerged. First, the lighting in the library is universally panned as too “sleepy” and harsh, with multiple requests for more natural lighting, and barring that, more full-spectrum or warm lighting. The shelving was often discussed as a barrier to a positive visual experience in the library with participants citing the run-down look of the shelving and the way in which the mass of shelving in the library blocks out the potential feeling of openness in the space. Other visual aspects of the library were discussed including the lack of color, outdated art, and a number of comments indicating that the space needs to be modernized or made more beautiful. Many participants suggest that there is potential for the library space to be spectacular and beautiful and that this should be one of the goals of this redesign – to make the space special and unique.

**Physical Equipment:** The furniture is generally described as needing to be updated, though specific elements of the furniture discussed include the comfortableness (or lack thereof), the need for tables and chairs to be on wheels, the need for tables to be somewhat modular (cf. comments about tables being too big *and* too small), and a need to reduce the amount of crowding (or the sense of crowding) in the study areas. Respondents also suggest providing more surfaces for writing on such as whiteboard walls and tables, more power outlets, and additional private spaces or “nooks” in which to study.

**Group Study:** Group study rooms or collaboration spaces were a topic that was discussed by all focus groups and at great length. Most participants indicate that the number of group study spaces in the library is insufficient given the needs of the patrons. Some participants indicate that if they need to use group study space, they are unlikely to even attempt to find space at Sorrells, instead selecting another location on campus, given the insufficiency of space in the library. Improvements to group study rooms that are most often suggested include whiteboard space, plasma screens for viewing computer work, telephones

for conferencing, and soundproofing to ensure that group study and collaboration does not bother other patrons.

**Serendipity:** Some interesting moments of convergence occurred with this final question. Independently, multiple individuals across different focus groups suggest a number of very specific, if somewhat unusual elements that could be added to the library. These include: more plants, a second story or atrium, art that takes advantage of the high ceiling (Foucault's pendulum, Calder mobile), an aquarium, a kitchenette, and lockers. These elements represent a fascinating view into the hopes that patrons have for the kind of creativity, innovation and energy that could be built into their new library space.

### *Online Forum*

In the middle of the summer, we posted a comment to the CMU section of the popular online forum, Reddit. The post simply let those viewing know that we were engaging students, staff, and faculty for feedback on the Sorrells Library space with an eye towards redesign. Over the course of about a week, more than 30 self-identified CMU students responded to the post and participated in discussion about the library space. Major themes to emerge from this discussion include the need for more outlets, whiteboards, and study rooms; the need for more private spaces or nooks to study in to avoid distraction; and the need for more comfortable furniture.

### *Brainstorming of Entities to Include in the Planned Space (by Sorrells employees)*

In addition to feedback from patrons, we sought the feedback of employees (librarians, staff, and students) working in the Sorrells Library space. Much of the feedback from Sorrells employees closely paralleled the feedback we received from other forums including the need for more group study, more quiet study, a more "spruced-up" look, better lighting, and more functional spaces. The perspectives of the library employees, however, provided a number of additional comments that should be considered such as:

- Multi-use spaces – with instruction being one use.
- Wow factor – perhaps a waterfall or aquarium (large fish tank).
- Multi-level furniture in the center area of the library space (double-decker carrels).
- Walk-up scanner.
- Look beyond Herman Miller.
- Current ILL office could be used for a gaming space.
- Second floor or indoor access to a covered patio area above.

### *Choice Quotes from our Feedback*

Below are a handful of choice quotes that give a sense for how people feel about the current library space and of what they hope to see in a future space.

“I'm picturing a library with literally every vertical surface turned into a whiteboard”

“You should do something with this high ceiling”

“You really need to update the art in here”

“I think it should be beautiful”

“We need the WOW factor”

### **Recent Impacts on Space and Efforts at Space Reclamation**

- Technical Reports – Library personnel from Sorrells and Technical Services are arranging to have our print collection of technical report sent to the storage facility.
- Journals – Back files of Elsevier, Wiley (selected), World Scientific, Springer, AIP, IOP, Taylor & Francis, and others have been recycled or placed in storage.
- Reference Collection – A reference collection review has been completed with some materials withdrawn, some placed in storage and some moved to the circulating collection.
- Circulating collection – As time allows, a review of the circulating collections by liaison librarians should identify materials that can be withdrawn or placed in storage.
- E-book Approval Plan – The Science Libraries have requested that their approval plan be changed to severely limit the number of new print volumes acquired – especially in the Sorrells Library.

## **Input from other offices throughout the University**

### *Notes From a Walkthrough with Don Coffelt of Facilities Management Services*

With a large renovation, we will need to address certain safety concerns – the pressure to upgrade to code will be great. The sprinklers in the Sorrells Library are too close to the shelves – they can be replaced with recessed sprinkler heads like those in the Sorrells Library group study rooms. EH&S may cover these costs getting them done would be pretty much non-negotiable. Also flashing fire alarms for those that are hearing impaired will likely be put in place. A more thorough review with EH&S might yield additional mandatory upgrades.

It's likely that current lighting will need to be redone, but FMS might be assigned these costs. Lighting will be an important part of the redesign. Although an upgrade to 'T8' lighting has taken place, a renovation of this size might suggest a newer technology. This echoes what library users are requesting. Recessed lighting in the dropped ceilings is a possibility, but HVAC ductwork that might be in the way will be a concern.

Greater use of pillars for distributing the electrical supply should be effective. Opt for fewer remote floor penetrations – it is difficult for them to be UL approved. Chains of powered furniture and room dividers can be designed to allow dispersed seating.

Sound suppression would be a strong interest. The cathedral ceiling is coffered, but additional opportunities for sound suppression/acoustic attenuation should be considered (e.g. room dividing aesthetically pleasing shapes that incorporate a power panel).

The Sorrells Library has a closed off hallway that been used for the shelving of older journals. Emergency egress might be a concern for this area, but some study nooks could be created with angled shelving.

HVAC, as is, is adequate, and might actually improve with fewer stacks.

We can't ignore a great opportunity in low ceiling areas for additional group study rooms and for quiet nooks. The high ceiling areas could call for more comfortable seating like what we have.

It is important to utilize existing shelving – it is higher quality than what is currently being manufactured. Consider new end caps to spruce up their overall look.

### *Notes from a walkthrough with Connie Eaton, Associate Director, Academic Technology Services*

Ms. Eaton provided a number of suggestions for campus technology and furnishing needs that could be incorporated into the renovation. These included additional power outlets that should be incorporated into new furniture (an example would be similar to the tables in the new Hunt Reference Conference Room), tables with rounded edges and asymmetric shapes (half-moon, kidney) on wheels, chairs on wheels (no arms, swivels not necessary), circulation of pocket projectors for small group projection, telepresence capability, digital signage, bar seating (compact and easy to distribute power along its length), Virtual Andrew on the dual boot laptops, and a maker space. She also suggested the use of shelving to separate quiet and group study spaces. Whiteboards on wheels could create ad-hoc walls for group study and collaboration.

*Notes from a walkthrough with Melanie Myers and Richard Schall of Library Information Technology (LIT)*

Power introduction could be quite problematic. The discussion covered various ways of introducing power to the space. It was suggested that FMS was good to talk to about introduction of electrical power. LIT's belief that introducing more power via the pillars proved to be the solution indicated by FMS.

LIT was able to suggest contacts for wireless concerns (Larry Gallagher) and data outlets (Peter Bronder). LIT also suggested contacting Ignatios Alexander about obtaining a detailed and complete rundown of our current electrical distribution system.

Follow-up information from Ignatios Alexander:

A work request to FMS regarding a review of our power distribution situation would be best. An initial message to FMS about whether this would be a reasonable idea and has been arranged. FMS may be comfortable with their current knowledge of the distribution system.

*Planned walkthrough with Campus Design and Facilities Development (CDFD) [Jan Held] and Environmental Health and Safety (EH&S) [Mark Bannister]*

Meeting pending.

*Consultation with Christine Tebes and Tina Marino of University Advancement*

At this stage, all that we can report is that possibilities are being explored and additional discussions between University Advancement and the Dean are needed.



*Notes from a Meeting/Walkthrough with Peter Bronder and Jason Dickerson of Cable Plant, and Shirl McGaffick, Network Engineer, regarding Data Outlets and Wireless Signal*

The following are some of the Cable Plant-related highlights from our meeting...

- Floor boxes cost more, but give more functionality
- Wall outlets (including those on columns) usually cost less to install, but may lead to patch cords stretched across aisle ways (tripping hazards)
- Existing outlets can be reused and moved according to the length that the existing cables will permit

For designing collaboration spaces and study spaces in the open area, care should be taken to not isolate these smaller spaces from wireless by creating (for example) 4 walls of stacks or whiteboards, which absorb and deflect RF signals (respectively). We should be able to work with most other configurations.

## Summary

As a means of summarization, we thought it would be helpful to construct a composite of all input that indicates which features the chosen architectural firm should address. The list is our best attempt at a prioritization of improvements which should aid in the production of a negotiable result.

Taking into account the assumptions made at the beginning of this document (e.g. shelving, office space, common space, service desk, etc.), improvements to the planned space include:

- 1) Additional group study space.
- 2) Less cramped private/quiet study areas.
- 3) Comfortable modular furniture.
- 4) Better delineation between group and quiet study.
- 5) New service desk/area.
- 6) A critically reconfigured entrance to allow for more efficient ingress/egress – this will resolve a long-standing problem.
- 7) More natural lighting, or barring that, more full-spectrum or warm lighting.^
- 8) More lounge areas/comfortable furniture.
- 9) More whiteboards and collaboration surfaces.
- 10) More electrical outlets.
- 11) Large wall-mounted monitors for viewing computer work – ideally incorporated into all group study rooms.
- 12) Better wireless and cell phone (for texting and browsing) signals.\*
- 13) A café or coffee facility in the library
- 14) More WOW-Factor elements such as plants, a second story or atrium, art that can take advantage of the high ceiling (Foucault's pendulum, mobile), an aquarium, a kitchenette, and lockers.

^ FMS may be providing this as a general upgrade of the facility.

\* This may be dealt with far in advance of the renovation – current safety concerns exist.

## Appendix A

### **SORRELLS E&S LIBRARY ILL OFFICE REQUIREMENTS (upon renovation of library):**

Ample shelving

Book truck storage space

Desk space w/PC and chair for student

Desk space w/PC, locking drawers, and chair for Lorri

Mail sorting/shipping/packaging desk area

Storage area for shipping/packaging materials

Storage area for office supplies

Storage area for courier supplies

Access to scanner (not necessarily in same room but in fairly close proximity)

Desk space for HP Laserjet printer

Large recycling container

2 large trash cans – 1 for Lorri's desk area & 1 for student desk area

Desk space for student bulletin board & time-sheet files

1 umbrella coat rack stand

\*\* If it is necessary for the ILL office to relocate, the room next door (currently used for binding/Janelle/Gigi) could be made suitable for ILL needs. It is about the same length, but about half the width of my current office. However, I would need the ability to rearrange the space to suit ILL needs\*\*

## Appendix B

### **Administrative Reference Coordinator Office Requirements:**

Office/cube with door

Desk w/PC and chair

Desk space for scanner/office printer

Shelving

Shelves for mail distributing

Trash can

Small recycling bin

Space for bulletin boards, and In/Out board

Area for mail sorting/shipping/packaging

Area for mail bins coming and going from postal services

Area for three file cabinets, files, office supplies and storage

Shelving or tables for personal items

1 umbrella coat rack stand

## Appendix C

### **SORRELLS E&S LIBRARY Circulation Supervisor's Office Requirements:**

Shelving

Desk w/PC and chair

Extra chair for student interviews, etc.

Storage area for office supplies

Desk space for student bulletin board & time sheets

Two file cabinets

Small trash can

Small recycling bin

1 umbrella coat rack stand

Door

## Appendix D

### **SORRELLS E&S LIBRARY Reserves/Circulation Assistant's Office Requirements:**

Desk w/PC and chair

Generous shelving for books, packing and shipping materials etc.

Horizontal surface for packing and shipping activity

Floor lamps (softer lighting)

Wall mounted dry erase board

File cabinet

Small trash can

Small recycling bin

1 umbrella coat rack stand

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## Appendix E

### **SORRELLS E&S LIBRARY Binding and Gifts Processing Office Space:**

126 linear feet of shelving space

Room for 4 book trucks plus maneuvering room

2 networked computer workstations and a printer

Some storage space – perhaps 50 boxes at any given time

Small trash can

Small recycling bin

1 umbrella coat rack stand

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## Appendix F

### **Basics Faculty Office Description:**

**3 piece surface work desk (middle section has pull out shelf for computer keyboard/mouse in L shape corner style) with cork board and under shelf lightening. Example at: <http://office-desks.nationalbusinessfurniture.com/Compact-L-Desk-with-Hutch-15926.aspx>**

**1 small office table with 2 to 4 chairs.**

**1 office lamp table (for lamp and business cards, etc.)**

**2 small waist-high bookshelf floor units**

**Wooden bookshelves affixed to available open wall spaces.**

**1 to 2 file cabinets.**

**1 desk client chair.**

**Either a desktop computer viewing screen (to use with clients) –OR- a wall fixed plasma screen for viewing laptop display to clients.**

**1 umbrella coat rack stand**

**Artwork for walls**