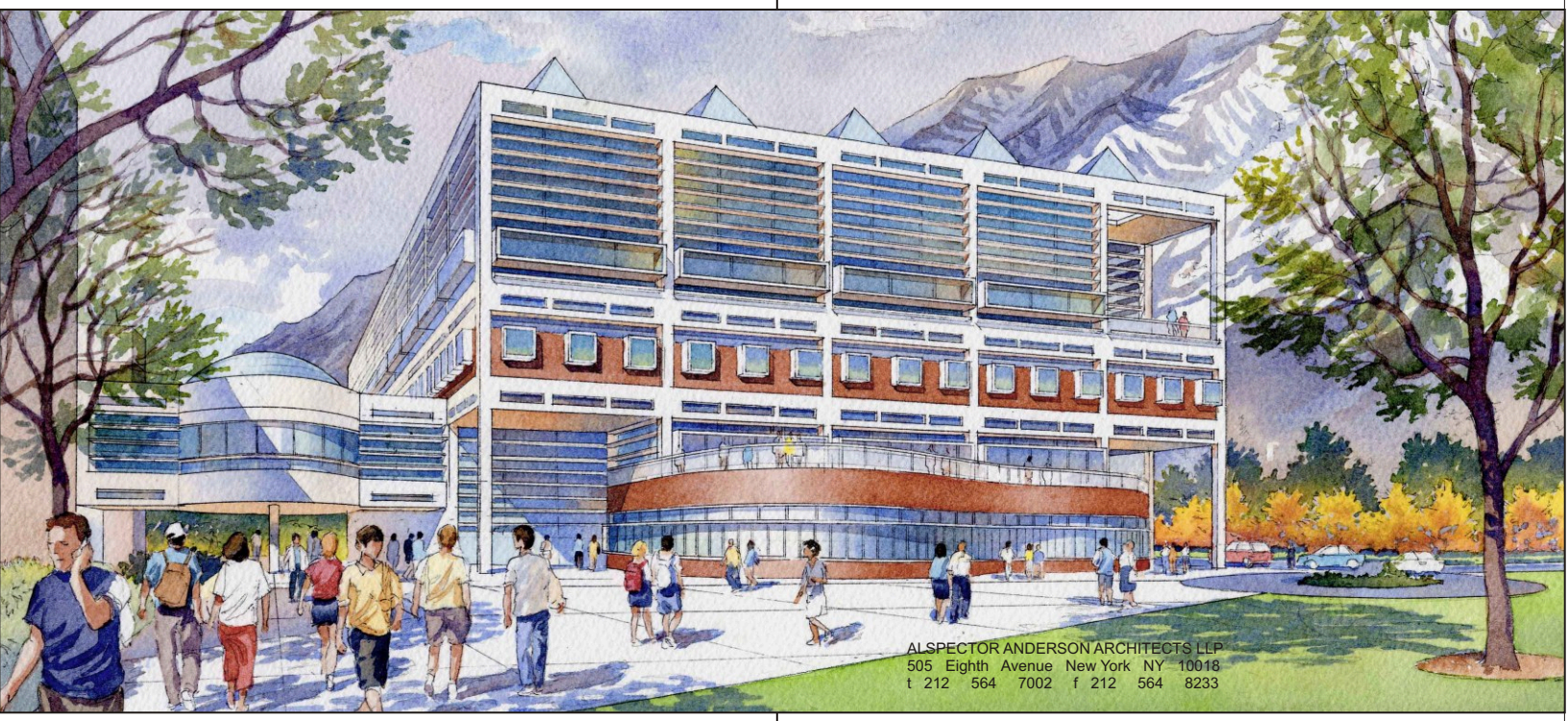
UTAH VALLEY STATE COLLEGE - DIGITAL LEARNING CENTER

FACILITIES PROGRAM



March 1, 2006
DFCM PROJECT NO. 05188790

COOPER ROBERTS SIMONSEN ASSOCIATES
With
MICHAELS ASSOCIATES DESIGN CONSULTANTS

March 2006

APPROVAL SIGNATURES

William A. Sederburg, President, UVSC Date

Bonnie Henrie, Dean, General Academics Date

Michael Freeman, Library Director Date

James Michaelis, Associate Vice President, Facilities Planning Date

Karl Worthington, Associate Vice President, Academic Affairs Date

Frank Young, Director, Space Development Date

Dave McKay, DFCM Program Director Date

ACKNOWLEDGEMENTS

CORE TEAM

The programming team would like to thank the Digital Learning Center Executive Committee and the Working Group for their valuable input and direction, without which it would not have been possible to prepare this facilities program. These groups made themselves available throughout the process as often as needed to provide answers and feedback. They were essential to making the difficult decisions necessary to prepare a realistic and relevant planning document that will be the basis for the design of the new Digital Learning Center.

These groups included the following members:

Executive Committee

William A. Sederburg	President, UVSC
Cory Duckworth	Vice President, Student Affairs & Strategic Planning
Brad Cook	Vice President, Academic Affairs
Ian Wilson	Vice President, Institutional Advancement and Marketing
Val Petersen	Vice President, Administration & External Affairs

Working Group

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Bonnie Henrie	Dean, General Academics
Mike Freeman	Director, Library Services
Kim Rollins	Assistant Director and Public Services Librarian
Karl Worthington	Associate Vice President, Academic Affairs
Jim Michaelis	Associate Vice President, Facilities/Planning
Frank Young	Director, Space Development
Ray Walker	Director, Information Technology
Eddie Sorensen	Director, Network & Infrastructure
Gene Nelson	UVSC Library Board
Blake Court	DFCM Program Director
Dave McKay	DFCM Program Director

COMPREHENSIVE LIST OF PARTICIPANTS

Programming this new facility required input from a broad range of individuals in addition to the members of the two groups listed above. Such involvement ranged from attending meetings to working with programmers one-on-one to describe and review specific space requirements. The following tables include all those we have been able to identify that assisted in the process.

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Utah Division of Facilities Construction and Management (DFCM)

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2.0 EXECUTIVE SUMMARY

2.1 INTRODUCTION

In early August 2005, the programming team began a study of UVSC's Digital Learning Center (DLC). This study includes a site evaluation, space needs analysis, and recommended concepts for design. Significant time was spent planning a building that would fit into the campus design standards for design and construction.

The programming team, comprised of Cooper Roberts Simonsen Architects (CRSA) in association with Michaels Associates Design Consultants (MADC) and Alspector Anderson Architects, met regularly with members of the DLC Executive Committee, Working Group, building staff, students, and other University stakeholders. Through the fall and winter of 2005/06 the project team:

- Conducted a series of meetings and workshops to address the vision and goals for the project;
- Quantified and mapped existing plans displaying the current uses and organization of the Library;
- Identified proposed space needs through an extensive series of programming interviews and summarized the results in program charts;
- Explored and evaluated options for re-organizing DLC activities from both a functional and cost standpoint;
- Reviewed the systems and infrastructure of the existing facility and identified issues;
- Outlined the connection to campus circulation and systems;
- Reviewed the current status of technology in the DLC and outlined a plan for future technology in the DLC;
- Incorporated reviews and recommendations by expert library programming consultants;
- The project team developed cost models to determine priorities and meet the overall project budget;
- Created room data sheets to document specific space requirements;
- Developed preliminary visual concepts for re-imaging the building exterior and interior;
- Addressed issues related to future planning; and
- Finalized a review of recommended concept plans.

A key topic addressed during the planning and programming work was to recommend spaces that could be housed within the limits of the proposed site plan and proposed campus circulation routes. Issues of departmental growth, the needs of new program components, and future planning would need to be addressed within the available area through defining planning priorities and creating planning efficiencies.

2.2 PROJECT PHILOSOPHY

The vision for the new Digital Learning Center is to recognize the role of the "Library as Hub" of student life on the UVSC campus. The DLC will serve as a home for a community of learners, a refuge for commuting students, and as a collaborative and vibrant environment for faculty, staff,

and members of the greater community. With this vision in mind, the following purposes and goals were established:

Planning

- Create a visually open facility through which users may navigate easily.
- Utilize the main level as the retail, food service and Information Commons zone from which one can easily find other services and activities.
- Arrange departments in a way that facilitates synergy among like functions.
- Maximize gathering, lounge and study space within the footprint.
- Locate service points and gather most needed functions in an intuitive pattern.
- Eliminate barriers (real and perceived) to disabled persons.
- Enhance users' connection to outdoor areas.

Technology

- Provide locations for technology-rich information services for students, faculty, staff and visitors.
- Create an Information Commons that is more than a typical computer lab.
- Ensure that the facility is as hospitable to technology as can be afforded.
- Anticipate future technological development and plan for the flexibility to accommodate that development.

Library Environments

- Create collaborative work environments for staff, students and users.
- Create a variety of lounge environments.
- Provide comfortable meeting and gathering spaces.
- Develop spaces for inquiry, consulting and conversation.
- Provide group meeting and study rooms.
- Develop high technology zones.
- Develop quiet zones.
- Respond to the desire for a Café.
- Place the Service Desk at the hub of the building.
- Respond to the needs for acoustic control.
- Create a space for exhibiting artwork.
- Provide a zone within the building to accommodate extended hours service.
- Provide natural light and upgrade finishes as budget allows.

Infrastructure

- Create a flexible facility that responds to current and future functional needs.
- Provide mechanical and electrical systems that exceed standards for function and efficiency.
- Provide the infrastructure necessary to service technology-rich environments.
- Address fire protection and life safety needs.
- Address structural and seismic issues.
- Address accessibility (ADA) requirements.

- Take advantage of opportunities to increase comfort and energy conservation opportunities.

2.3 SUMMARY OF FACILITY AND PROGRAM

Mission

The new building is intended to help the existing library fulfill its basic mission as it becomes a Digital Learning Center (DLC). This new home for the DLC will become an essential part of the campus's northward growth and a welcoming gateway to the campus.

The Digital Learning Center will be an attractive, modern building that will utilize a visually appealing and functional structure, linked to other campus buildings by means of the connecting corridor system. This corridor and the public services offered in the Extended Hours Zone of the DLC will play a vital role in creating a stimulating new image for UVSC. Including such services as Family Study and Group Study area, a Café, a copy center, and a premier 125-seat conference Room, this area will be a draw to students, faculty and campus visitors and tie seamlessly into the heart of the building, the Information Commons. This 100 plus-seat open access computer zone will feature multi-media software access, and research and reference support integrated with printing. The Teaching/Learning Center, Accessibility Services, Writing Lab and Faculty Service Center will also be located near to the Information Commons. The building will unfold with services on total of four, or possibly five, levels offering access to the collection, Special Collections/Archives, Periodicals, Media, and other staffed service areas.

Context

The new Digital Learning Center should fit within the context of the UVSC main campus. It should be a good neighbor to the buildings and campus around it, yet also remain distinctive. A suitable site has been selected for the DLC to the east of the Liberal Arts Building. Landscaping should seek to reduce water usage but blend with the adjacent campus.

Energy, Environmental, and Resource Conservation

A key planning idea in the programming process has been sustainability. The intent is to incorporate high-performance design that will provide maintenance efficiency and low operation costs. By doing so, the DLC will provide UVSC with an opportunity not only to benefit from a high-performance building, but also to promote and showcase the benefits of sustainable design.

Building

The Digital Learning Center will provide UVSC the opportunity to enhance the current Library's mission to "provide access to quality information resources, offer exceptional services and assistance, utilizing current technology to enhance research, promoting information literacy, and ensure intellectual freedom." The DLC continues the ongoing outreach initiative by planning for spaces that are:

- Socially rich, blending the café style atmosphere of commercial bookstores with the services of a well-respected collegiate library;
- Diverse digital resources with integrated research areas; and

- Multiple types of learning environments that support the varied needs of undergraduate and graduate students.

To facilitate the role of the "Library as Hub" on campus, the building must have a well-conceived floor plan. Section 6 of the document outlines the building's functional relationship and addresses the planning goals to create efficient, flexible and engaging environments.

Summary Space List

Section 7 of the program document outlines the types and spaces need of each room/area within the DLC. The DLC will occupy an estimated 180,000 gross square feet on four or five levels. The resulting net assignable area will be approximately 117,000 square feet (65% of the total). Consequently, approximately 63,000 square feet (35%) attribute to non-assignable areas—floor space occupied by public circulation, such as public lobbies and lounges, mechanical and electrical shafts and rooms, restrooms, wall thicknesses, and other non-assignable uses.

The program contains fourteen primary divisions as identified in Section 7 "Space Summary Space List," consisting of:

	Net Area	
▪ Entry	9,618	NSF
▪ Lobby	1,145	NSF
▪ Public Services	3,960	NSF
▪ Information Commons	15,165	NSF
▪ Teaching/Learning Center	3,400	NSF
▪ Writing Lab	2,000	NSF
▪ General Collection	50,876	NSF
▪ Periodicals	5,240	NSF
▪ Media	7,880	NSF
▪ Special Collections/Archives	4,445	NSF
▪ Technical Services	2,200	NSF
▪ Systems/IT Services	5,600	NSF
▪ Library Administration	1,750	NSF
▪ Building Support Spaces	3,715	NSF
TOTAL	**116,994**	**NSF**

The program for the Digital Learning Center includes collection space for the existing collection plus 16 years of growth at the current rate the collection is increasing. Distributed throughout the building will be 1,923 user seats. These user seats include lounge seating; chairs at reading tables; study carrels; computer workstations; accessible workstations; and seating in instructional spaces, seminar rooms, and the café.

In order to respond to the uncertainties of our current construction market conditions and the final amount of state funding available (which will not be finalized until early March after the legislative session ends), the space list includes two additional columns showing what would be included in a building of 165,000 GSF and a building of only 150,000 GSF.

Section 7.1 contains a summary of the net area assigned to each of these primary programmatic divisions. Section 7.2 lists each space individually. Finally, Section 7.3 gives verbal descriptions of the primary spaces and the proposed basic building organization.

Individual Space Outlines

The next section of the program document (Section 8) contains Individual Space Outlines—detailed summaries of the specific requirements of each individual space or room. These individual space outlines, or room data sheets, represent the heart of the program.

Additional Criteria

The remaining sections include descriptions of concepts and criteria that will be important to the design team, including, for example, specific requirements and standards related to building and life-safety codes, structural, mechanical, electrical, technology, and acoustical requirements.

The program also includes a discussion of possible design and construction phasing, a detailed project schedule, and a conceptual cost estimate along with appendices containing recommended zoning and stacking diagrams, an overview of the programming process, a detailed code analysis, and the UVSC Master Plan and preliminary visualization sketches used while developing the program.

2.4 PROJECT IMPLEMENTATION: COST AND SCHEDULE

Approximate Design and Construction Schedule

The schedule included in the program is based on the CM/GC design-assist delivery model that has predominated in large state projects in recent years.

Based on funding this coming legislative session, selection of the A/E team should be completed by the middle of May 2006. The design and construction process should then be phased to allow the building to be occupied in time for fall semester 2009 as summarized below:

Design Work:	Mid-May 2006 through early July 2007
Bidding & Construction, Work Package 1:	Mid-February 2007 through early August 2007
Bidding & Construction, Work Package 2:	Early July 2007 through May 1st, 2009
Building Commissioning:	May 2009
Move-in:	June 2009
Occupancy:	June 29, 2009

Design and construction schedules could be accelerated beyond this schedule through fast-track delivery methods, using multiple bid packages. This fast-tracking can be accomplished with either design-build or CM/GC delivery methods. Getting contractors, subcontractors, and suppliers under contract sooner and completing the project faster would lessen overall escalation costs. To provide a meaningful benefit in terms of the college's academic calendar, the project would have to be available for occupancy by the beginning of spring semester 2009, which begins in early January.

Cost Summary

The program includes a programmatic estimate of construction costs and total project costs, summarized as follows:

	Estimated Cost
Digital Learning Center—180 GSF (construction)	$ 31,153,000
General Conditions	$ 2,181,000
Bonding	$ 312,000
Contractor Overhead and Profit	$ 1,558,000
Design Contingency	$ 3,115,000
	$ 38,319,000
Escalation	$ 7,190,000
Digital Learning Center (Construction)	$ 45,509,000
Soft Costs	$ 10,162,000
Total Project Cost	**$55,671,000**

The program includes detailed backup for this programmatic estimate along with summary cost estimates for two additional options corresponding with the two additional columns in the space list for a building with 165,000 GSF and a building with 150,000 GSF.

3.0 MISSION STATEMENT

The following mission statements from Utah Valley State College have been gathered from public places throughout the institution and from the school's website:

3.1 UVSC Mission Statement

Utah Valley State College is a state college comprised of two interdependent divisions. The lower division embraces and preserves the philosophy and mission of a comprehensive community college, while the upper division consists of programs leading to baccalaureate degrees in areas of high community demand and interest. Utah Valley State College is dedicated to providing a broad range of quality academic, vocational, technical, cultural, and social opportunities designed to encourage students in attaining their goals and realizing their talents and potential, personally and professionally. The College is committed to meeting student and community lower division and upper division needs for occupational training; providing developmental, general, and transfer education; meeting the needs for continuing education for personal enrichment and career enhancement; and providing diverse social, cultural, and international opportunities, and student support services.

Our Student Community

Students are the major focus and first priority of UVSC. All decisions are examined to determine whether the results assist students in attaining their goals and maximizing their potential and talents both personally and professionally.

Our Faculty and Staff Community

Our dedicated faculty are enthusiastic about the satisfactions of teaching and giving generously of their time to students. UVSC is committed to maintaining an atmosphere for faculty and staff which encourages innovation, experimentation and entrepreneurial investigation relative to college programs and interests.

Our Diverse Community

UVSC strives to provide an environment which encourages a diverse population to participate in a broad range of educational opportunities, social enrichments and cultural experiences that reflect the value of diverse voices and disparate opinions.

Our Industrial Community

UVSC is committed to developing, broadening, and strengthening mutually beneficial partnerships with business and industry to provide an increasingly educated work force and to enhance economic growth and development in the community.

Our Global Community

Global awareness, understanding, and responsibility on campus and in the community are sought through internationalizing curriculum, lectures, seminars, and international exchanges.

The term "Community" is defined not only as a region to be served but also as a climate to be created

3.2 Library Mission Statement

UVSC's website also includes the following mission statement for the library itself. This mission statement was last updated April 13, 2004:

The Utah Valley State College Library supports the College mission of teaching, learning and scholarship by providing access to quality information resources, offering exceptional services, utilizing current technology to enhance research, promoting information literacy, and ensuring intellectual freedom.

3.3 Mission of the Digital Learning Center

The September 2003 edition (Volume 3 – Issue 1) of *The Library Connection*, the library's newsletter for the UVSC Faculty, provides further insight into how the new Digital Learning Center will expand the library's mission:

The New UVSC Digital Learning Center: Extending the Library Mission Through Technology

A strong library is the foundation of a great college. Every quality institution is judged by its ability to support advanced research for its students and faculty. With a desire to accommodate the growing number of bachelor degrees and scholarly work at Utah Valley State College, plans are moving forward for the new Digital Learning Center. The new library will move the traditional library model into the technological future by providing software and technologies to package information and will serve as an active learning space where students and instructors can congregate and collaborate. The Digital Learning Center will offer significantly increased space to support new collections, technology and services that promote and support excellence in learning and teaching at UVSC. President Sederburg has announced the new library as the number one capital priority on campus.

The project includes:

- *increased building space from 35,000 square feet to 180,000 square feet*
- *300+ networked computers*
- *computer lab with all software applications for gathering and packaging information*
- *reference computer area*
- *state-of-the-art media center*
- *more than 60 study rooms*
- *instructional labs*
- *accessibility services lab*
- *special collections*
- *map room*
- *archives*
- *digitized collections*
- *electronic books*
- *chat and email reference service*
- *streaming audio and video*
- *electronic reserve*
- *meeting room with teleconferencing capabilities*
- *wireless and network connections throughout*

Note that refinements in square footage and cost figures have been maintained in the present document.

As the foregoing article points out, President Sederburg has been the foremost champion of the Digital Learning Center and has made it the centerpiece of his capital facilities program. The following two excerpts from his documents express the mission the new DLC will play in the academic future of the institution:

First, we need great improvement in our present library. I am suggesting that we push for a digital learning center that will expand our library's capacity significantly. A new digital learning center will consolidate digital production facilities, enhance group learning activities, expand data base access, and connect the community into the campus. A digital learning center can make a strong statement that learning and scholarship is at the heart of the UVSC experience.

--"White Paper - Organizational Thoughts," December 1, 2003.

Our top priority in the facilities master plan is a Digital Learning Center. This building will stand as a symbol of what this institution truly values—knowledge. . . . We continue to push aggressively for the funding of the Digital Learning Center. I'll be testifying before the legislature on Wednesday, seeking legislative support.

--"A Value Oriented University," State of the College Address, February 1, 2005.

3.4 Design Team Charge

The design team will be charged with the responsibility of working with the DFCM and UVSC to design a facility that supports and enables the critical mission of the Digital Learning Center outlined above. This program describes and analyzes the components that must be included and the basic requirements that must be met, in order to satisfy this responsibility.

4.0 CONTEXT

The new Digital Learning Center should fit within the context of the UVSC main campus. It should be a good neighbor to the buildings and campus around it, yet remain distinctive. A suitable site has been selected for the DLC to the east of the Liberal Arts Building. Landscaping on this site, while seeking to reduce water usage, should blend with the adjacent campus grounds.

4.1 GOOD NEIGHBOR

4.2 DISTINCT DESIGN

4.3 SITE

4.4 LANDSCAPING

4.1 GOOD NEIGHBOR

As the newest building on UVSC's main campus, the Digital Learning Center will become part of a coherent existing college with a unified look and feel, an integrated campus building tradition, and consistently-applied planning principles. All structures in the main campus cluster have remained interconnected by a spacious pedestrian concourse in the manner of an extended indoor mall. The architectural expression of the various structures has reinforced the connection between them; the structural modules, materials, and forms of the buildings have remained remarkably consistent over the life of the campus.

In order to thrive within this context, the Digital Learning Center must work within the framework that has been painstakingly constructed over the 30-year history of the college in its current location.

4.2 DISTINCT DESIGN

The Digital Learning Center will be the largest building on campus in terms of gross square footage. At four or five stories, it will also be the tallest. As President Sederburg has emphasized (see Mission Statement above), this new library will represent the heart and soul of the institution's scholarly endeavors and as such, must embody the college's hopes and dreams for the future.

In order to emphasize the importance of the Digital Learning Center's mission, the college has made a goal to create a new building that will be a high-quality, distinctive facility, while working within the existing context. The intent is to preserve and incorporate those most vital and apparent aspects of the campus character while at the same time enriching the mix through its distinct nature.

So it is expected that the building will not turn its back on existing campus planning principles. It should connect to, and maintain, the look and feel of the campus in every way possible. At the same time, it should also stand out in a way that emphasizes its singular mission as the campus center for academic learning and inquiry.

4.3 SITE

The site for the Digital Learning Center was selected prior to the beginning of programming. We explored alternative sites during the programming process, but the project team (the working group in addition to the programming team) did not find compelling reasons to reconsider the site selection. The site slopes from east to west. College Drive runs along on the eastern edge and the site is raised several feet above the sidewalk level on the west edge of the site.

4.3.1 Location

The site for the Digital Leaning Center is located immediately east (closer to east northeast, but considered plan east for the campus and for the purposes of this program) of the recently completed Liberal Arts Building (see the site diagram at the end of this section). The site currently serves as a parking lot. For planning purposes, we have assumed that the Digital Learning Center would be located 60 feet away from the Liberal Arts Building and would be a maximum of 150 feet, or five 30-foot bays wide.

4.3.2 Site Circulation

Currently, predominant site circulation patterns include:

1) A well-established pedestrian pathway along the eastern edge of the Liberal Arts Building (western edge of the DLC site) and College Drive.
2) The main campus vehicular thoroughfare, along the eastern edge of the DLC site.

The pedestrian pathway serves as a major connection between campus parking lots to the north and the center of campus. It also provides an outdoor alternative to the interior campus concourse, accessible to users at the north end of the Liberal Arts Building. In siting and designing the Digital Learning Center, the design team must consider whether this outdoor pathway along the west edge of the DLC site is to be maintained or whether it could be interrupted by the DLC's connecting concourse. UVSC has expressed general preference for this pathway to remain uninterrupted. Potential outdoor pedestrian pathways along the east edge of the DLC should also be explored.

UVSC has no plans to change the current alignment of College Drive on the east edge of the Digital Learning Center site. In addition, the project does not include funds to allow any such re-alignment. Consequently, this roadway should be considered a fixed boundary on the east. As described below, College Drive will play an important role in access to the site for patron and service vehicles.

4.3.3 Site Utilities

The proposed site has close proximity to all necessary utilities either as buried lines or raceways through the campus-wide concourse system with one exception: sanitary sewer. The Liberal Arts Building next door, for example, was unable to have restrooms at its north end; an ejector is needed for the waste from drinking fountains at that end. A new sanitary sewer line (sized for master planned expansion) will need to be extended to 800 South (see section 11 for a detailed description of site utility requirements).

4.3.4 Views

As shown on the site diagram, the building will have desirable views in almost every direction except where those views are blocked by the Liberal Arts Building (and its mechanical penthouse, which rises another story). Decisions regarding the elevation of the first floor and how many stories the building is to have, will determine the extent to which those views to the west are available over the top of the Liberal Arts Building and how many of the upper stories of the building will be able to enjoy them.

4.3.5 Solar Exposure

The layout of the campus and the width of the available site will present creative challenges to designers as they consider the solar orientation for the Digital Learning Center. The anticipated building is elongated in the north/south direction, resulting in substantially more east and west facing building skin than north and south facing. Designers are encouraged to consider multiple strategies to deal with the solar heat gain difficulties associated with predominantly east and west facing building facades, such as minimizing expanses of glazing on these elevations, effective sun shading, and use of high performance glazing.

On the subject of high-performance glazing, we note with anticipation that a major glass company has announced a clear low-e insulating glazing product (which will be on the market by spring 2006) that will have an unprecedented 2.33 visible light to solar gain ratio. Such a glazing product may make it possible to increase glazing on east and west facades while still keeping solar heat gain under control. As noted, shading devices may also be appropriate. Beyond considerations of solar heat gain, they can also serve to reduce glare for building occupants.

4.3.6 Climate

Utah County's climate in winter is measurably less severe than that of Salt Lake and Davis Counties. In addition, UVSC's location low in the valley near the lake further moderates extreme cold temperatures; however, snow and ice are still major factors to be considered in the designing the site. Paving immediately adjacent to the north end of the building must be considered carefully and avoided where possible.

Summer climate conditions in Utah County can be hot and dry, typically a bit more than in Salt Lake and Davis County. Consequently, shading of outdoor pedestrian spaces and paving surfaces should be considered.

See the mechanical narrative (section 13 of the program) for detailed design temperatures for the project.

Prevailing winds come from the northwest in winter and from the west in summer. During both summer and winter, incoming cold fronts are often preceded by warm south winds that generally last for about a day. The clustered nature of the campus, and the network of corridors connecting all buildings, have an effect prevailing winds on the site. These effects often lead to highly individualized micro-climates that can cause certain outdoor areas to be either more or less temperate than the surrounding climate. Efforts should be made during design to evaluate and model the effects the Digital Learning Center will have on its immediate surrounding and design the site to take advantage of or mitigate these effects as appropriate.

4.3.7 UVSC Master Plan

The site for the DLC was selected during UVSC's recent update of its Master Plan, completed by Gould Evans. A discussion of the portions of the Master Plan having concerning the Digital Learning Center, together with excerpts from the final report, are included in Appendix 19.4.

4.3.8 Access and Parking

As the main perimeter vehicle circulation route to and around campus, College Drive will provide important site access. It is from College Drive that patrons will access a drop off/short-term parking area to the south of the building.

Patrons in vehicles should be able to access a book drop conveniently, perhaps with drive-through capability. Metered parking with less than one-hour limits would permit drop off and pick up and would also allow short visits to check out a book or run a quick errand. Designers should also consider a covered drop off area, if possible, to provide the highest possible level of accessibility into the facility in all weather conditions.

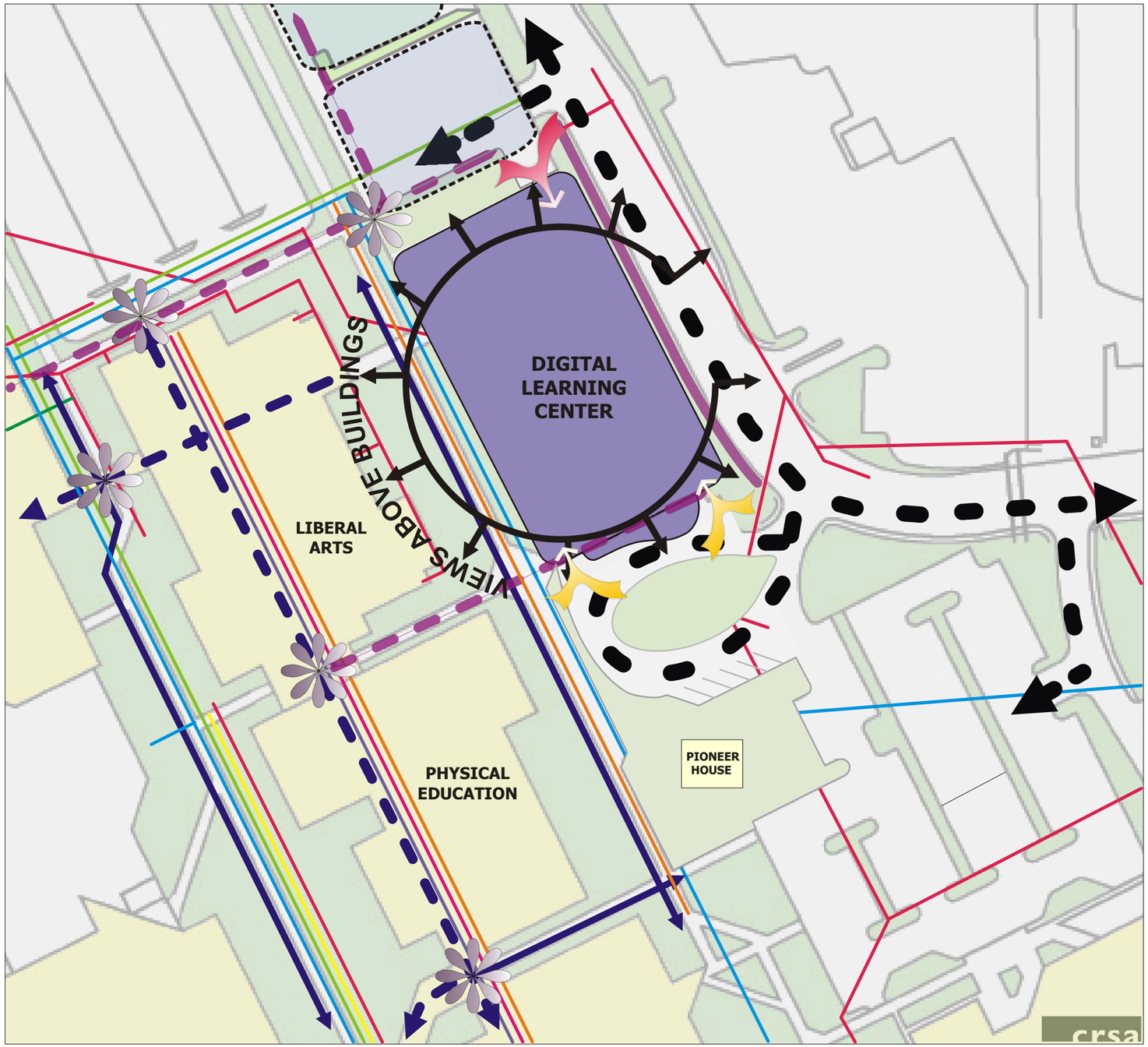
The new Digital Learning Center will take the place of a substantial amount of convenient parking. UVSC's master plan addresses several strategies for providing campus-wide parking requirements. The design team should work closely with UVSC facilities to ensure that the design of the Digital Learning Center takes future parking plans into consideration.

4.3.9 Service & Emergency Access

Service access to the north end of the Digital Learning Center will also be from College Drive. Provision must be made at this location for truck and emergency vehicle turnaround, particularly in light of planned expansion of the Digital Learning Center and/or a future General Academics Building to the north. (See Section 17 of this program for a discussion of DLC expansion to the north.)

Emergency vehicles and personnel must also have unobstructed access to drive lanes on the south side of the building discussed above. Any coverings over roadways must have adequate clearance for emergency vehicles. The design team should review with Orem City officials whether the pedestrian way between the Liberal Arts Building and the DLC site will have to be designed to function as an emergency roadway. Such a requirement would dictate both the presence of and the clearance under an elevated connecting concourse bridge.

SITE



LEGEND

- Automobile Access
- Internal Pedestrian Route
- External Pedestrian Route
- Possible Internal Pedestrian Route
- Possible External Pedestrian Route
- Pedestrian Entry
- Shipping and Receiving
- Digital Learning Center Location
- Possible DLC Expansion Area
- Future General Academics Building
- Direction of Views
- Intersection/Node
- Existing Sanitary/Sewer
- Existing Power
- Existing Culinary
- Existing Storm Drain
- Existing Irrigation
- Existing Fiber Optic
- Existing Chilled Water
- Existing Heated Water

4.4 LANDSCAPING

UVSC officials have expressed their desire for landscaping approaches that are similar to those on other parts of campus. At the same time, they have expressed a willingness to seek methods of reducing water usage while working within that general framework. See the following section on Energy, Environment, and Resource Conservation for further discussion about low-water landscaping.

When designing landscaping for the new facility, designers should pay careful attention to the microclimates that will be created around the building, as discussed in the section on climate above. Taking advantage of these microclimates may allow certain types of plants to thrive with less intervention than might otherwise be necessary, thus adding reasonable variety and interest to the campus surroundings.

Landscaping should be designed to be hardy and minimize maintenance; design decisions should coordinated closely with UVSC Physical Facilities personnel.

The DLC building exterior and parking areas will be designed to ensure user, automobile, and building safety and security. Parking areas, pedestrian walkways, and building entrances and exits will be well lit to increase safety and surveillance ability at night. Details on lighting of exterior spaces are outlined in the electrical/technology section of this document, Section 14.0. Additional security measures include surveillance cameras on the building entrances, along public walks, and emergency alarms/telephones in parking lots. These emergency telephones will meet campus design standards, and will automatically connect the caller with campus security. Additionally, a panic button will be installed at the circulation desk to allow DLC staff to alert campus security of any emergency or security problem outside or within the DLC. Additional portable personal alarm devices may be provided to staff working on the public floor or in a remote area of the building.

Security and safety can be passively encouraged through site design. Crime Prevention Through Environmental Design (CPTED) is a program based on the theory that spaces can be designed to minimize the likelihood of illegal or inappropriate activities through landscaping and design. For example, landscaping should be designed so that it does not obscure or impact the ability of security or police officers to easily survey and monitor an area. The idea of CPTED was first presented by C. Ray Jeffery in his 1971 book of the same name (Beverly Hills, CA: Sage). In recent years, it has become widely known, and law enforcement officials across the nation are increasingly trained in the program. A good resource is, “Crime Prevention Through Environmental Design: Applications of Architectural Design and Space Management Concepts,” by Timothy D. Crowe (Stoneham, MA: Butterworth-Heinemann, 1991), ISBN 0-7506-9058-5.

5.0 ENERGY, ENVIRONMENTAL, AND RESOURCE CONSERVATION

5.1 EXISTING CONDITIONS AND FACTORS

The recommendations proposed for the Digital Learning Center have been tailored to better accommodate the needs of the students and faculty at UVSC. Consequently, the design recommendations for the new Digital Learning Center incorporate a high level of environmental and energy performance. High-performance design would provide the Digital Learning Center with better maintenance efficiency and reduced operations costs, as well as providing UVSC with an opportunity to promote and showcase the benefits of sustainable design.

5.2 PROJECT GOALS

The new library should be designed to minimize its impact on the environment, reduce the use of energy and natural resources, and lower life-cycle costs for building materials and systems. Although the College has decided not to require LEED™ certification for this building, they have asked that the building incorporate principles of sustainability, environmental quality, resource conservation, and energy efficiency, while maintaining a reasonable project cost.

5.3 RECOMMENDATIONS

The following are concepts recommended to the building designers by the team for consideration in order to achieve these goals. Most of the concepts and the order in which they are arranged are loosely based on the U.S. Green Building Council's LEED™ certification checklist. Additionally, the design of the Digital Learning Center should incorporate the DFCM's new building energy policy that will be in place for spring 2006.

Sensible Site Development

- Public transportation access.
- No added parking.
- Light colored roofing.
- Trees to shade paved areas, where possible.
- Site lighting with no up-light component.

Water Conservation

- Limited drought-tolerant plantings where possible.

Energy and Environmental Conservation

- Non-CFC refrigerants.
- Maximum use of outside air for cooling wherever possible.
- Automatic dimming of electric lights tied to daylight sensors.
- Reduced ambient light levels with supplemental task lighting.
- Occupant sensors.
- High-efficiency motors.
- Variable frequency drives.

Renewable and Responsible Materials

- Storage and collection of recyclables.
- Construction waste management—more than half of construction salvaged or recycled.
- Reuse of building materials—as much as possible.
- Recycled content of construction materials—as much as possible.
- Local/regional materials—to minimize transportation impacts—as much as possible.

High-Quality Indoor Environment

- Carbon-dioxide monitoring in appropriate areas beyond minimum standard practice.
- Construction Indoor Air Quality Management Plan.
- Two-week post-construction building flush-out.
- Low-VOC adhesives, sealers, paints, and coatings.
- Carpet, pad, and adhesive systems that minimize off-gassing.
- Vented janitorial closets, bathrooms, copy rooms & chemical mixing rooms, with appropriate drainage for disposal of wastes.
- Useable daylight in as many occupied spaces as possible.
- Access to views from as many occupied spaces as possible.
- Shade devices on fenestration to mitigate glare and summer heat.

Innovation

- Education/outreach regarding energy and environmental issues for building visitors.
- Energy, environmental, and resource conservation measures exposed to view where possible and documented with interpretive materials as a part of a learning laboratory function.

Other Possible Considerations

Before incorporating any of the following additional measures, the design team must give careful consideration to whether they are feasible, given site and budget constraints, and whether they will provide sufficient and measurable benefits to offset all associated costs.

- Maximization of open space within limited site.
- Light colored paving.
- Possibility of high-efficiency landscape irrigation technology.
- Reduced water use at faucets, toilets, and showers—below EPA requirements.
- Use of self-supplied, renewable energy from PV arrays, or wind power technologies.
- Provision for ongoing monitoring and optimization of building performance over time.
- Wood and natural products without urea-formaldehyde resins.
- Rapidly-renewable materials in such areas as flooring or millwork in appropriate places.
- Possibility of natural ventilation (operable windows) with mechanical system override. This should only be considered in areas not accessible by the general public.
- Best Practice Commissioning: rigorous verification that the entire building is designed, constructed, and calibrated to operate as intended.

6.0 BUILDING

The needs and the mission of the UVSC library have outgrown the existing facility. The new Digital Learning Center has been programmed to incorporate new concepts and features and to provide the UVSC library facilities with a new image.

6.1 EXISTING LIBRARY

6.2 NEW BUILDING

6.3 UVSC DIGITAL LEARNING CENTER FEATURES

6.4 ARCHITECTURAL EXPRESSION

6.1 EXISTING LIBRARY

The Utah Valley State College Library is located on the third and fourth floors of the Richard D. & JoAnn B. Losee Learning Resource Center.

Circulation

The four story building configuration and the placement of the library on the upper two levels of the building positions the library on the main circulation path that runs through the campus. While numerous entry points are convenient for students, it generates a need to staff two separate security stations and forces students to change their route of travel when the library is closed. In addition, the accessible route through library encounters two non-continuous elevators require a transfer between levels three and four. Technically, there is no accessible route since at least one of the elevators does not comply with accessibility requirements.

Services

The library has made a concerted effort to utilize every square foot of their existing facility. In order to make space for collections and user seats, the library has made due by using their limited staff and cramped building to fill multiple functions.

Level three of the Losee Center houses the main entrance to the building at a set of security gates adjacent to the circulation desk. This main service point is staffed by circulation staff who have office space in an adjacent staff area. On this main level, the library offers a small information commons and research assistance desk located within the reference collection. Down the hall from the main desk, students have access to an overflow classroom that currently houses additional computer workstations. The remaining area of level three contains staff offices along with offices and support spaces for the School of Continuing Education.

Level four consists primarily of user services, staff offices and work areas. The bulk of the collection, including periodicals and media, are housed here. A dedicated area highlights new books. A small legal reference collection is located near group study rooms and user seats. The collection is sprinkled with user seats, typically tables seating four individuals and upholstered lounge seats. There are small group study rooms and a larger quiet study room. A computer lab, Accessibility Services Lab, small gallery, and media viewing room complete the user services on level four. The remainder of this level contains staff offices and work areas related to Archives/Special Collections, Library Administration, Technical Services, and Systems.

Function

The library design and layout to date has emphasized the importance public service areas over staff centered areas. In order to achieve a cohesive circulation route to access the public service areas, collections, and services, while still remaining responsive to the fact that the library is an interior component of the campus corridor system, the library staff has tried to place areas with large student interest near this circulation route. Visual access to collections and support spaces; including study and multi-media viewing rooms, computer access and user seats; from the primary circulation route allows both library patrons and those walking through an opportunity to understand the building layout and resource availability. The inclusion of the corridor system within the building does force library patrons to choose between “see and be seen” seats or user seats more focused on research and reading further from the hum of traffic.

The library has developed many effective user seat configurations, including lounge chairs, library table and chairs, study carrels, computer workstations and group study rooms. While a great majority of user seats are congregated into large areas, an effort has been made to place limited groupings of user seats at the building perimeter. These larger areas do provide the library some flexibility for hosting larger groups, but these events are still very limited because they tie up so many user seats. Areas typically in high demand revolve around the resources within the Information Commons, and the adjacent Reference Collection and Circulation Desk. Another area in which the library currently is unable to meet all of its patron's needs is within Media where all patrons must access viewing/listening tools within one Media Viewing Room. This layout focuses on the individual student, prohibiting collaborative group work.

Computer access is primarily related to the services offered in the open Information Commons or within enclosed instructional rooms. Instructional rooms serve two roles: back up or overflow for Information Commons or general computer users, and an area that can be reserved by library staff or the campus for teaching/learning space. Currently these instructional areas are also a resource for Distance Learning.

Due to the focus on public services, the staff centered areas are typically located at the perimeter of the building. While these locations have exterior windows, they are usually insular and remote from other staffed service areas, leading the staff to feel isolated without a "staff center" in the building. There is a small lunch room within Technical Services, adjacent to the loading dock, but it very small and requires staff to walk through a congested work area. Because the building is non-rectilinear, some areas tend to have triangular corners or odd configurations. By placing staffed centered areas at the building perimeter within oddly shaped spaces, the staff has had to focus on creative solutions for developing work areas that support their needs. In addition, there is limited area for staff growth to support the library needs. These three issues (remotely located staff areas, staff isolation, and odd shaped work areas) are further undermined by the fact that the library has a limited staff, many of whom fulfill multiple job duties. Currently, there is both limited staff and limited space; library staff "wearing multiple hats" may find it difficult to move between their different responsibilities and still maintain adequate space.

6.2 NEW BUILDING

6.2.1 Digital Learning Center Concept

The mission of the library at Utah Valley State College, "providing access to quality information resources, offering exceptional services and assistance, utilizing current technology to enhance research, promoting information literacy, and ensuring intellectual freedom," will remain the same, but the ability to fulfill its mission will be enhanced by the construction of a new library building, the UVSC *Digital Learning Center*. The new term connotes a place containing the collections and professional assistance found in a traditional library as well as the latest pervasive technologies and services to assist all patrons as they access, organize, and use knowledge. From research to recreation, from process to production, the Digital Learning Center will better respond to the needs of individuals and user groups.

Recent studies indicate that the newest adult generation (the "Net" or the "Millennial Generation") will soon be the largest group of users of Digital Learning Centers. These users deviate from traditional habits of study and research, and they have a unique, lifelong culture that should inform the planning of new facilities. "Millennials have such vastly different needs and expectations than Boomers that libraries are being forced to rethink and redesign library services, technologies, and buildings." Millennials expect more choices, want more personalization, are less conforming, and expect instant gratification. They are social, visual and informal learners, gamers and multi-taskers.[i] They are concerned about health and the environment, and they expect energy-efficient, green buildings.

In response to this new culture, the Digital Learning Center will include the following services, spaces and infrastructure:

- An up-to-date and expanded collection of resources in many formats relevant to the projected educational needs of students, faculty, and staff;
- Patron-centered, professional personal assistance as well as one-to-one and one-to-many human-computer interactions that help people find and learn at their convenience;
- A variety of learning and instructional environments that respond to diverse learning styles;
- State-of-the-art information commons and teaching labs;
- Distributed on-site (laptop or desktop) computers that provide high end access to DLC resources;
- Extended hours for patron access to library-limited resources and for quiet study away from the distractions of home or dorm;
- *Express service* options for reserving, lending, and borrowing materials and equipment;
- A complete array of replication services;
- An academic assistance center to develop and hone basic learning and knowledge skills;
- Cyber café concessions and services for refreshment, noisy interaction, and socializing;
- Offices and work spaces that accommodate the newest technologies for acquiring, cataloging, and processing the collections;
- Ubiquitous, imbedded technologies such as fiber-optic, wireless and/or broadband connectivity to support patron and staff needs;
- Spaces that are wholly compliant with the spirit as well as the letter of ADA and life-safety codes;
- An energy-efficient building operating and control system;
- Proper air quality for human comfort and for optimal protection of the collection;
- Structure, planning and/or the systems to permit an efficient and seamless installation of compact or high-density collection storage if required at some future date;

- Sufficient parking and/or transportation to accommodate non-resident students and the broader community of users;
- Funding for adequate staff to manage the collections and equipment, to support the technologies, and to provide the services required by students, faculty and institution staff.

6.2.2 Function and Building Design

A well-conceived building floor plan (the arrangement or adjacencies of assigned and unassigned spaces within the building footprint) will facilitate the Digital Learning Center's role of "Library as Hub" on the UVSC campus by providing:

- Appropriate adjacencies among the departments and collections that address logic, convenience, efficiency and the need for contemplative and collaborative environments;
- Clear and spacious aisles that permit an unencumbered flow of people and materials;
- Consistent location of basic services – research assistance, telephones, restrooms, Quick Search terminals, and printers;
- Direct circulation paths to instruction spaces and to vertical circulation;
- Distribution of current technology and planning for the seamless integration of future technologies;
- Efficient and pleasant work places and workstations for staff;
- Flexible systems and morphable walls that allow the collections and functions to grow or change in a seamless manner;
- Fully-functional and interesting spaces that address multiple learning paths and work styles;
- Group study spaces distributed throughout the facility and sized to appropriately accommodate people, their resource materials and tools;
- Merchandising opportunities for new materials, collections and technologies, interactive information services, and anytime/anywhere personalized services;
- Obvious and welcoming entry;
- Planning for the potential seamless addition of high-density or compact storage;
- Security for patrons and their belongings, for collections, equipment and staff;
- Self-orienting floor plan with a simple organization of collections and services;
- Shipping and receiving area located near a staff/service elevator;
- Signage that reinforces the logical organization of spaces and is meaningful to new users;
- Universal design that accommodates persons of all abilities.

After the floor plan is confirmed in the Schematic Design phase, a furniture plan should be developed to test the floor plan. The furniture plan should reinforce the clarity of the organization of the building and anticipate graceful change. Goals for this furniture plan, include:

- Clear sight lines for assistance to patrons and supervision of materials and equipment;
- Functional furniture arrangements that are based on realistic furniture and equipment use;
- Help desks prominently located on each floor;
- Seating, in diverse types and sizes, distributed throughout the facility;
- Staff passageways that minimize disturbance to workers in office areas;
- Staff spaces that acknowledge continuously changing and increasingly complex work;
- Study areas distributed among the collections and zoned by noise level.

During the Design Development phase of the project, the plan that satisfies these goals will indicate *all* anticipated furnishings and equipment. That furniture plan will then inform the development of an accurate reflected ceiling plan for lighting, HVAC, and signage; a wiring outlet plan; a carpet plan; interior elevations and sections; and a finish schedule.

Once the furniture plan is developed, the specifications for furnishings, wall and floor coverings, signage, graphics and other aesthetic elements of the facility will follow during the Construction Documents phase, plans will be refined to reflect actual dimensions of *all* furnishings and equipment.

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[i] Stephen R. Acker, Michael D. Miller, "Campus Learning Spaces: Investing in How Students Learn," *EDUCAUSE Center for Applied Research Research Bulletin*, Vol. 2005, Issue 8(April 12, 2005), pp. 1-11.

6.3 UVSC DIGITAL LEARNING CENTER FEATURES

The new Digital Learning Center will, through its prominence, design, services and resources, become the hub of the Orem campus knowledge network and *the* place to be at UVSC. As a true learning center, the DLC will be a composite of the specialized learning spaces Philip Long and Stephen Ehrmann suggest may be found as separate elements across the campus:

- Thinking/conceiving spaces
- Designing spaces
- Presenting spaces
- Collaborating spaces
- Debating or negotiating spaces
- Documenting spaces
- Implementing/associating spaces
- Practicing spaces
- Sensing spaces
- Operating spaces[i]

6.3.1 Image

Located in the fast-growing, entrepreneurial city of Orem, Utah, with over two hundred high-tech companies, nearly 90,000 highly-educated citizens, and the greatest percentage of households with computers in the nation (66.1%),[ii] Utah Valley State College anticipates continued growth in courses that support the surrounding community's economy. *Money Magazine* recently called Orem "*America's most livable city*," and UVSC also enjoys an excellent reputation for its commitment to each student, to lifelong learning, and to a family-like camaraderie that permeates the campus.

Historically libraries have signified an institution's commitment to the highest standards of research, teaching, and learning. The architectural design of the UVSC Digital Learning Center should symbolize the innovative thinking within the institution, represent its educational aspirations and its role in developing leaders, point to its future university status, and by its style and function attract new generations of students, faculty, and donors.

Participants in the programming process were modest in their requests as they spoke of balancing their desire for excellence and innovation with the reality of limited funds, yet they were clear in their desire for a notable and responsive facility. Administrators and faculty requested an iconic structure that expresses excellence in character, efficiency, and comfort. They asked for a browsable collection of resources and for seminar spaces where they could bring their classes to use DLC resources as a group.

Students interviewed during the programming process requested spaces that were inviting, collegiate, and comfortable and open for extended hours, particularly late at night. They requested access to food, places for group and for quiet individual study, and a large, versatile space for cultural programs and activities. Programs co-sponsored between the Library, ASUVSC Student Life and activities such as poetry slams, music and film festivals, author discussions and books signings, and other activities; streaming news and information, and the availability of communal spaces will allow opportunities for informal encounters among faculty and students, business and academic leaders, community members and visitors to the community.

UVSC staff requested sufficient area to house the incrementally-expanding print collection *and* dynamic spaces that will respond both to changing technologies and to new methods for teaching and learning. They asked for more materials to support their own pursuit of graduate degrees and for more leisure-use popular materials.

Although the success of a building typically may be measured by a post-occupancy evaluation and includes a statistical accounting of the number of people served, materials housed, and staff accommodated, if the UVSC administration supports the creativity, experimentation, and playfulness of the users, an estimation beyond numbers can uncover potential new uses and different measures of success. The DLC may be deemed successful it is used in the manner that it was planned or even in new, productive ways. If it is always busy and cost-effective, it will appear successful by the facilities staff and those who watch the bottom line. But if it promotes deeper learning, if it transforms instructors' ability to teach and future students' ability to learn, if continues to adapt to changing needs then UVSC's Digital Learning Center will truly live up to its name and potential.[iii]

6.3.2 Flexibility and Technology

In an era of exponential change, as much flexibility as is affordable should be integrated into the design of the Digital Learning Center.

"Millennials want more flexibility in school work and their social lives. They are achievement oriented and have high expectations."[iv] Not only as patrons but also as employees in the DLC, the Milliennials' demand for flexibility may drive new modes of working. Outsourcing and flex-time could reduce the need for traditional staff office work spaces in the future. New technologies may affordably allow reference librarians to conduct personal, visual interviews from offsite even as the patron occupies a study seat in the DLC, at his home, or in her office, and the configuration of service desks and office areas may change accordingly.

By the time the new UVSC DLC is complete, digital natives[v] will outnumber digital immigrants, and they will assume that technology should be integrated into every fabric of their lives. Digital natives have experienced the rapid expiration of hardware and software and the equally rapid development of exciting new products, upgrades, or replacements. As new technologies and software become affordable, dependable, and desirable, the Digital Learning Center should host the better, newer systems to bridge the technological divide between the "haves" and the "have nots."

Crystal balls are cloudy, but futurists' predictions generally foreshadow changing communities and technologies. Some people predict keyboardless computing within ten years. That eventuality could spark a need for an acoustic design to soften the cacophony of voice commands or a simple reconfiguration of workstations to accommodate large touch or laser-activated monitors.

Nano technology promises to eliminate the need for the specific physical devices used to check out materials, and as the technology to automatically check in materials becomes more affordable, the work spaces now designated for check-in will change as well.

Interactive gaming systems may be integrated into information searching and other learning activities in the Digital Learning Center. Such systems could presage larger HDTV video devices for formal and informal group access and communication.

A fabric keyboard has been developed at MIT. A variation of it, stored in drawers until needed, might be used in the Media area at tables, in carrels, or even on the floor freeing up notation stations for additional uses in the future.

Advanced display technologies or large format video projection may occur on or within stretched fabric "rooms" rather than on screens or walls as "smart" fabrics become available to the general public. Supplemental illumination may come from individuals or the workspace itself rather from task lights as we now know them. Already solar panels are integrated into backpacks and jackets. As such power storage becomes more affordable and dependable, DLC patrons and their devices may be freed from electrical cables just as wi-fi and broadband technology frees them from cable access to the Internet and Intranets.

As concepts for teaching and learning are refined, the types and amount of group interaction may change as well, suggesting that at least some of the recommended group study spaces should be created without traditional walls.

6.3.3 Security

Safety and security for students, faculty and staff, collections, equipment and the building itself must be a priority for the new UVSC Digital Learning Center. Discrete and unobtrusive security measures and Crime Prevention Through Environmental Design (CPTED) principles should infuse the planning and design process.

The UVSC campus presently includes the security cameras tied into the campus police station and proximity locks discussed later in this document. Additional security methods in the Digital Learning Center may include:

- Natural Access Control with real or symbolic barriers, appropriate lighting; guards or staff at access points;
- Natural Surveillance with formal or informal patrols; windows – full-wall glazing of group studies, door glazing for seminar rooms; equipment such as mirrors, or fritted and one-way glass;
- Territorial reinforcement via the proper location and orientation of help desks; a sense of ownership by the staff; user ownership developed through proactive assistance and name recognition.
- Library materials security system with barcode or RFID tags that require a check-out process for use outside the DLC or in special areas of the building. A sensing device indicates if the materials are moved to an inappropriate location by sounding an alarm.

Whereas the site indicated by the Master Plan for the Digital Learning Center suggests the potential for two entrances to the building itself, it is important that only a single, public entrance/exit through the materials security system be permitted for access to the bulk of DLC services. The exact location and arrangement of the sensors is dependent upon the manufacturer selected and the organization of the main entry and lobby. The components of the library

materials security system may include: sensing screens, camera, alarm, and counting device. At UVSC a gate is neither desired nor required.

6.3.4 Circulation and Access

"Circulation" is a term with several definitions applicable to the UVSC Digital Learning Center. Comprehension of these various meanings will be critically important to the planning and design process.

- *The flow of people, information resources and equipment into, through, and out of the building.*
    - Entry/Egress for Users. The main entry should be easily discernible for first-time visitors to the campus, clearly visible and logically positioned for convenient access. Ideally, the main entry should include a port-cochere or sheltered area for the convenient drop-off of disabled individuals. The "front door" itself should be easy to find and easy to enter for people of all abilities.
    - The Flow of Patrons through the Building. The arrangement of collections and the location of services in the building should be so evident that a first-time user could navigate its expanse without the aid of a floor plan and so logical that student assistants may quickly and accurately re-shelve books and other library materials.
    - Circulation of Vehicles at Receiving and Shipping. The Digital Learning Center has perhaps the most diverse collection of services and resources, equipment and technologies of any building on campus. Vehicular circulation into and out of the receiving and shipping area must be clear, efficient, and safe, and to the extent possible, screened from view.
    - Staff Entrance. Although most staff members will enter through the "front door," a pedestrian door near Shipping and Receiving should be included for the 24-hour access required by IT and Systems personnel.
- *Mediated Service Point for Circulating Materials and Equipment.* Materials and or equipment are checked out for use in the building or off-site and then checked in with the help of staff at a service point near the lobby. Inter Library Loan requests are received and items distributed, materials and equipment are checked in and sorted for return to shelves, and assistance is obtained with library policies, borrowing privileges and paying fines. This service area, often called Circulation or Check-Out Desk, has the potential to experience the greatest change in technology, service concepts, and collections. Its organization and design should be appropriately responsive to those anticipated changes. It must include an ADA-compliant station for both patrons and staff.
- *Express (Circulation) Stations.* In addition to the traditional Circulation Desk above, self-service kiosks where users may independently and speedily check out materials are to be located near the building entrance and distributed in consistent locations on each floor of the building. At least one such station must be ADA compliant.
- *The Department in charge of Circulation (*at UVSC - *Public Services)*. The UVSC Public Services staff not only supervises the circulation of materials and equipment, but also includes the reference staff that assists patrons with research and technology questions.

Like "Circulation," the word "Access" also has several meanings applicable to the Digital Learning Center.

- *Physical access* to areas in and around the building that accommodates people of all abilities. The Digital Learning Center plays a prominent role in enhancing teaching and learning as well as supporting the institution's strategic goals. As such, it should be the most accessible building on campus for students and for faculty.
- *Permission to use the resources and equipment* in the DLC.
- *Permission to access the virtual resources, databases,* or other materials that UVSC has the rights to via subscriptions or cooperative agreements.

A glossary of other terms connected with a library or digital learning center is included in 19.6 of the Appendix.

6.3.5 Research Assistance

Personal one-to-one research assistance and the integration of learning technologies will be introduced in the Information Commons. The Information Commons, a symbol of UVSC's commitment to proactive service, is the central core of the Digital Learning Center's resources, services, and digital points of access. It is envisioned as a large electronic reading room encompassing one hundred or more computer terminals, printers and scanners, a help desk, and the reference collection.

Following the *ACRL Guidelines for Undergraduate Libraries*, UVSC Public Services (Reference) staff, skilled in using information resources, work here in collaboration with computing staff and student assistants (Tech Vests) to provide assistance wherever and whenever it is needed – in person at user workstations as well as at Help Desks. The floor plan, furnishings layout and signage will enhance this approach to service, and a new system of recognizing and responding to patron requests will improve response times and assure patron satisfaction.

Private research assistance and extended reference interviews may be handled by appointment with reference librarians in their offices which are to be distributed at the building's perimeter. Anywhere/anytime research assistance for UVSC students and faculty also may be available via the Internet and telephone.

6.3.6 Multi-Purpose Funtionality

To maximize the investment in the Digital Learning Center, programming team participants recommended potential areas of multi-purpose use and space efficiencies. When not otherwise scheduled by DLC staff, conference rooms, seminar rooms, teaching labs, and group studies in the DLC may be reserved by faculty or students for collaborative work, training, or receptions via UVSC's administrative scheduling software.

A portion of the Digital Learning Center, as requested by its users, will be designed for extended hours of use, possibly even 24x7 if demand and funding are sufficient. This Extended Hours Study Area may serve as an Entry Core, outside DLC security, and as an informal or "noisy" study area during normal operating hours. It will include an acoustically separate area for Family Study with furnishings and activities for children as well as adults.

To increase convenience and the potential market for printing/copying service, access to the copy center outside DLC security as well as from inside the building is desired. The service center should provide self-service and mediated high-level printing and copying functions. With two entrances and the potential for two security zones, the hours of use and range of services may be adjusted to fit varying demand throughout the school year.

Space efficiencies also may be realized by sharing work stations (staff who perform similar functions on different shifts may share workstations but maintain individual drawer pedestals and storage spaces for work-in-progress and personal items); by sharing office support equipment, such as scanners, faxes, and copiers; by co-locating such equipment in nearby suites; by using group studies as staff training rooms, and by digitizing or converting departmental standard drawer files to shelf files or to digital records to save space and reduce retrieval time.

Because the print collection at UVSC is aggressively examined and weeded to assure that the most viable and current resources are available and because UVSC does not anticipate becoming a research institution or the grantor of extensive graduate degrees, in the short-term no requirement for an Automated Storage and Retrieval System (ASRS) is anticipated. However, the planning team recommends that the new DLC be designed so that an ASRS may be seamlessly added should the number of degrees offered increase dramatically, the research requirement of a retrospective collection be added, or a significant portion of the space now programmed to house the collections become needed for another use.

During the planning charrettes, faculty and students expressed a desire for physically browsable general and reference collections. Bound periodicals and the archive collections may be housed in traditional compact shelving. Consisting of standard cantilever or four-post shelving mounted on carriages which roll on tracks imbedded in the floor, compact shelving typically doubles the storage capacity of an area by reducing the number of access aisles. Appropriate structural support for higher live loads must be provided wherever high-density shelving is located based on the type and weight of the materials to be stored. The collection of bound periodicals is to be publicly accessible and located near the Periodicals staff. The UVSC Archives materials are to be available for in-house use with assistance from the archivist.

The UVSC Library hosts at least six traveling art shows and exhibits every year in addition to an impressive and sizeable permanent collection. Although the original request for a gallery could not be included in the program, wall space and display lighting to permit the continuation of this much-appreciated tradition should be incorporated into the design of circulation, lobby, and reception spaces in the Digital Learning Center.

6.3.7 Comfort and Furnishings

In “Learning Spaces,”[vi] Malcolm Brown mentions nine traits of the Net Generation that should be accommodated in the educational environment. The programming team concurred that the traits and spaces he describes and the furniture that supports the activities therein should be included in the Digital Learning Center:

- Small group work spaces for group activity oriented activities;
- Access to tutors, consultants, and faculty in the learning space (Information Commons) for goal and achievement oriented learners;
- Table space for a variety of tools for multi-taskers;

- Integrated lab facilities for experimental, trial-and-error learners;
- Availability of labs, equipment, and access to primary resources for the pragmatists and inductive learners;
- Accessible facilities for diverse groups of learners;
- Shared screens and printing capability for visual learners;
- Access to experts and workgroup facilitators for interactive learners.

In addition to traditional reading tables, carrels, computer workstations, and lounge seats among DLC's collections, bistro tables for two and booths for six are to be provided in and near the Café, the Information Commons, or other locations where informal study and social conversations may take place.

The Café will serve beverages and a limited menu of food items, and it will also serve as an extension of the DLC's informal study and learning space. An exterior entrance and one from the DLC interior, both outside the zone of DLC materials security, will provide access.

Nearly all courses of study incorporate group projects as an integral part of mastering a subject and the few existing library group study rooms are in high demand. The program for the new Digital Learning Center outlines a variety of spaces distributed throughout the entire facility that may be reserved for groups ranging from two to ten people. Although group study areas generally include white boards, electrical convenience outlets, connections to DLC resources, the Internet, local printing, and often to wall-hung video monitors or digital projection, the reconfigurable furnishings might include tablet arm lounge seats and ottoman/occasional tables in one type of space and modular tables and ergonomic chairs in another.

Furnishings, fixtures and equipment must be carefully selected and specified for optimal use and for long-term value. Even in an era of electronic miniaturization, human factors indicate that for optimal use, work spaces should typically be larger than the old standard of twenty-five square feet per seat. Most seating in the DLC has been projected at an average of thirty-eight square feet per seat.

One of the reasons, other than pure territoriality, for a single user to occupy one-half of an entire four-place (48" x 72") table is that a typical four-place table allows only a two foot by three foot space per person for materials and tools. Consider, for example, the space consumed by an open three-ring binder (twenty-three inches) and add to that an eight and one-half inch by eleven-inch pad of paper angled for writing (fifteen inches). A thirty-four inch wide space is too small for anyone to work efficiently or comfortably with those and any other auxiliary materials. In addition, physical space taken up by the users themselves is unlikely to decrease over the coming decades.

A similar condition occurs at computer workstations where a keyboard and mouse consume approximately twenty-six inches leaving only eleven inches on each side of a forty-eight inch wide surface for notes, manuals, or other reference materials. As a result, users must make do - by either consuming more space on a large table if the other seats are unoccupied, by bringing up additional furniture, or by just endlessly shuffling papers.

To support the institution-supplied electronic resources, furniture must be durable, flexible, include wire-management and provide easy accessibility to connecting ports or outlets. Chairs at

workstations with technology equipment should be the ergonomic, armless task type with a height-adjustable seat.

Lounge chairs of several sizes should be specified so that the whole gamut of users may be comfortably accommodated, and the chairs should be structured for use by three-hundred pound users. Lounge chairs with tablet arms and bases with casters are popular in group and informal study areas; large-scale, leather-upholstered modular sofas with attached cushions and solid surface or wood arm caps are long-wearing and are easy to maintain; and lounge chairs with resilient, woven net polymers stretched over metal frames are lightweight, comfortable, colorful and washable. The provision of ottomans or footstools in lounge areas is highly recommended. Some lounge chairs should have 17”-18” high firm seats and arms that extended to the front of the seat to accommodate physically disabled individuals with little quadricep strength.
Public computer workstations may include a means of downloading information to storage media built into the hardware for patrons who do not maintain e-mail accounts. Five percent of the public workstations should be adjustable in height from 28” to 38.” Quick Search stations for library catalog or brief e-mail access should include an adjustable height backless stool on casters with an appropriate height range for the surface it serves.

The cumbersome task of comparing information stored in large volumes such as dictionaries or atlases should be solved by locating similar materials convenient to a large, sloped surface capable of holding at least two volumes at a time. Similarly, reference to large format digital documents such as maps or floor plans, would benefit from the provision of two large-format monitors per workstation so that one might be used for zooming in and out and the other to keep the whole image at hand or so that two images may be compared at a larger scale.

Whereas audio-visual equipment was once stand-alone, it is anticipated that all computers and most electronic devices will have multi-media capability and will require the use of headsets or, perhaps, virtual reality devices in order to take advantage of all available information. Storage for those headsets and acoustic attenuation of any sound leaks should be addressed wherever such devices will be used.

Classrooms or large seminar rooms should include space for an instructor’s station or lectern with loaded with presentation software that permits the simultaneous use of several types of media. Presets for lighting should be conveniently accessible to the instructor, and technical support should be available on an immediate basis via direct line telephone. A master switch is recommended for computer monitors or laptops. Work surfaces should be modular and the room geometry should also support a variety of teaching and learning styles. Each room should include a wall-mounted writing surface and storage and display for class handouts. At least one high-speed networked printer should be available nearby. Although natural light is desirable, neither instructor nor students should face a window, and glare control as well as black-out shades should be provided with controls convenient to the instructor.

Office work stations, whenever possible, should also be modular to permit easy reconfiguration when tasks or personnel change. Free-standing work surfaces that support equipment are more stable and generally preferable to those that are panel supported. However, the ability to adjust the surface height may be critical to the most ergonomically-correct use of said equipment. Free-standing drawer pedestals are also generally preferable to work-surface supported pedestals as they allow more options in their configuration.

Where shelves are required in office spaces, wall-hung shelving above work surfaces is recommended to save floor space and to provide at-hand convenience. Although cabinet doors present a neater appearance in areas where visitors are likely, open shelves permit quick perusal and access to contents and reduce the potential of hoarding out-of-date or unneeded items. When lockable metal storage cabinets are required, the specification of additional shelves and organizers will increase capacity and general organization.

The thoughtful specification of versatile, well-constructed, and attractive furnishings appropriate to tasks and users will contribute immensely to the success of the Digital Learning Center.

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[i] Philip D. Long and Stephen C. Ehrmann, "Future of the Learning Spaces: Investing in How Students Learn," EDUCAUSE *Review*, Vol. 40, No. 4 (July/August 2005), pp. 55

[ii] CEDO, *DEMOGRAPHICS :: BUSINESS* ,Business Growth/Retail Sales, http://www.cedo.org/ao_demo_business.html

[iii] Chris Johnson and Cyprien Lomas, "Design of the Learning Space: Learning & Design Principles," *EDUCAUSE Review*, Vol. 40, No. 4 (July/August 2005), pp. 16-28.

[iv]"Reinventing Library Buildings and Services for the Millennial Generation," *Library Administration & Management*, Vol. 19., No. 4 (Fall 2005), pp. 165-175

[v] Term coined by Marc Prensky: "Digital Natives, Digital Immigrants,: *On the Horizon*, Vol. 9, No. 5, (October 2001), <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>

[vi] Malcom Brown, "Learning Spaces," in Educating the Net Generation, ed. Diana G. Oblinger and James L. Oblinger (Boulder, Colo: EDUCAUSE, 2005), 12.3, e-book, available at http://www.educause.edu/LearningSpaces/6072. [vi] Philip D. Long and Stephen C. Ehrmann, "Future of the Learning Spaces: Investing in How Students Learn," EDUCAUSE *Review*, Vol. 40, No. 4 (July/August 2005), pp. 55

[vi] CEDO, *DEMOGRAPHICS :: BUSINESS* ,Business Growth/Retail Sales, http://www.cedo.org/ao_demo_business.html,

[vi] Chris Johnson and Cyprien Lomas, "Design of the Learning Space: Learning & Design Principles," *EDUCAUSE Review*, Vol. 40, No. 4 (July/August 2005), pp. 16-28.

[vi]"Reinventing Library Buildings and Services for the Millennial Generation," *Library Administration & Management*, Vol. 19., No. 4 (Fall 2005), pp. 165-175

[vi] Term coined by Marc Prensky: "Digital Natives, Digital Immigrants,: *On the Horizon*, Vol. 9, No. 5, (October 2001), <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>

[vi] Malcom Brown, "Learning Spaces," in Educating the Net Generation, ed. Diana G. Oblinger and James L. Oblinger (Boulder, Colo: EDUCAUSE, 2005), 12.3, e-book, available at http://www.educause.edu/LearningSpaces/6072.

6.4 ARCHITECTURAL EXPRESSION

Future design of the UVSC Digital Learning Center will be dependent on a strong understanding of the original vision and consequent detailed program for the building. The following is a contextual analysis of the architectural expression that has guided the development of the program and the conceptual rendering prepared for President Sederburg.

6.4.1 Master Planning Context

The master plan for the UVSC campus, prepared by Gould Evans Associates, provided the context for existing and proposed future development of the UVSC campus by elucidating campus strategies for enlarging, improving and extending existing campus buildings and grounds. It was within this context that the renderings, concept designs and development diagrams developed as specific and deliberate responses to the context of planned campus development. Consequently, the Digital Learning Center program impacts only minor, but important, details of the campus master plan while still generally adhering to its overall intent.

6.4.2 Campus Architectural Context and the Digital Learning Center

The unique building and planning system created by the original UVSC campus architects has demonstrated its durability, flexibility and appropriateness since its inception in the 1970's. It has repeatedly proved itself worthy of respect and demonstrated its adaptability to a variety of programs and systems using select materials. The UVSC campus design standards are also robust enough to inspire and yet allow for clarification and creativity. The concept design of the Digital Learning Center represented in the rendering prepared for President Sederburg utilized the campus standard 30 foot square bays—an appropriate dimension for a contemporary library building—to inspire a platonic transformation into the third dimension. This design concept allowed the incorporation of public interior spaces that distinguish the facility, reflect the importance and uniqueness of the program to the institution and provide an inspirational place for teaching, learning and the exchange of ideas in this new century. The programming team recommends an approach that takes its cues from existing campus planning, but adapts to the central significance of the Digital Learning Center enterprise.

7.0 SUMMARY SPACE LIST

7.1 SUMMARY

7.2 ROOM AND SPACE LISTING

7.3 BUILDING ORGANIZATION

7.1 SUMMARY

The following table summarizes the square footage allocation included in this program. After an initial budget review, the project team decided to base the core of the programming work on a 180,000 GSF building (including the connecting corridor linking the library to the central campus concourse system). Additionally, in order to account for the uncertainties of today's construction market, we have worked with UVSC to develop alternate plans for a building totaling either, 165,000 GSF and 150,000 GSF (neither including the connecting corridor linking the library to the central campus concourse system). These alternatives illustrate general priorities for what spaces to incorporate in the Digital Learning Center and can be used as a basis for fine-tuning what is ultimately included in the project. Determination as to what is included in the design documents will depend on:

- Final funding amounts established by the 2006 legislature,
- Real cost escalation that occurs between the date of this document and the time design gets underway in earnest, and
- Updated estimates of expected additional construction cost inflation over the intervening period between the onset of design work and the project bid date (i.e. the date the project is completely bought out—once subcontractor bids and awards have been made on the final work package[1]).

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[1] The schedule included in section 16 of this document shows the main (and final) work package being completed in early July 2007.

7.1 SUMMARY

#	COMPONENT	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats
1	ENTRY ARCADE	9,618	7,440	6,870	311	4
2	LOBBY	1,145	1,145	945	0	0
3	PUBLIC SERVICES	3,960	3,605	3,605	0	18
4	INFORMATION COMMONS	15,165	14,765	12,615	215	11
5	TEACHING/LEARNING CENTER	3,400	3,400	3,400	93	0
6	WRITING LAB	2,000	920	840	66	4
7	GENERAL COLLECTION	50,876	49,930	44,180	1,098	-
8	PERIODICALS	5,240	4,540	4,160	0	10
9	MEDIA	7,880	7,480	7,480	115	18
10	SPECIAL COLLECTIONS / ARCHIVES	4,445	3,845	3,845	25	6
11	TECHNICAL SERVICES	2,200	2,020	1,900	0	16
12	SYSTEMS AND I.T. SERVICES	5,600	5,600	5,600	0	22
13	LIBRARY ADMINISTRATION	1,750	1,670	1,570	0	5
14	BUILDING SUPPORT	3,715	790	550		
	TOTAL NET AREA	116,994	107,150	97,560	1,923	114
	EFFICIENCY FACTOR	65%	65%	65%		
	TOTAL GROSS AREA	179,991	164,846	150,092		

7.2 ROOM AND SPACE LISTING

The following table includes all the rooms and spaces programmed for the Digital Learning Center. As with the summary, the space list is based on a 180,000 GSF building, but columns totaling 165,000 GSF and 150,000 GSF are also included. Detailed requirements for these spaces are included in Section 8.

The number of staff and user seats listed are based on the 180,000 GSF column. Staff seats and dedicated users seats, such as those in the 4.1.3b Information Commons General Workstations, have been counted directly from allocations noted from room data sheets. General user seat totals, for areas such as the 1.2.2 Café Seating and 7.2.1 General User Seats, are base on an allocation of 38 square feet per seat.

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
1	ENTRY ARCADE			9,618	7,440	6,870	311	4		
1.1	Extended Hours Study			2,660	2,660	2,510	98	0		
1.1.1	Informal Study Court	1	600	600	600	600	36			1
1.1.2	Extended Hours Study	1	600	600	600	600	20			1
1.1.3	Extended Hours Group Study	1	410	410	410	410	22			1
1.1.4	Extended Hours Family Study	1	750	750	750	600	20			1
1.1.5	Printing/Copy Area	1	100	100	100	100				1
1.1.6	Vending	1	200	200	200	200			Food and Supplies	1
1.1.7	Restrooms								Family-style restroom	1
1.1.8	Outdoor Seating Area (patio)									
1.2	Café			2,600	2,600	2,300	82	0		
1.2.1	Serving Area	1	500	500	500	400				1
1.2.2	Kitchen/Food Prep Area	1	300	300	300	400				
1.2.3	Seating Area	1	1,800	1,800	1,800	1,500	82			1
1.3	Copy Center			1,108	980	860	0	4		
1.3.1	Public Self-Serve Area	2		0	0					1
1.3.2	Work Area			460	460	340				
1.3.2.a	*Cashier*	*1*	*100*	*100*	*100*			*2*		*1*
1.3.2.b	*Copy Work Area*	*1*	*264*	*264*	*264*			*2*		*1*
1.3.2 c	*Storage*	*1*	*96*	*96*	*96*					*1*
1.3.3	Media Self-Service Lab	1	648	648	520	520				1
1.4	Meeting Space			3,250	1,200	1,200	131	0		
1.4.1	DLC Premier Conference Room	1	3,250	3,250	1,200	1,200	131			1
2	LOBBY			1,145	1,145	945	0	0		
2.1	Lobby			1,145	1,145	945	0	0		
2.1.1	Lobby	1	1,000	1,000	1,000	800			Includes directory, EWCs, and telephones	1
2.1.2	3-D Display - New Books	1	60	60	60	60				1
2.1.3	3-D Display - Featured Books	1	60	60	60	60				1
2.1.4	2-D Display	1	10	10	10	10			Includes Flat Screen Active Directory, LED Announcement, Message Posting Area	1
2.1.5	Security Sensors	1	15	15	15	15				1

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
3	PUBLIC SERVICES			3,960	3,605	3,605	0	18		
3.1	Circulation Area			1,020	925	925	0	5		
3.1.1	Service Desk	1	480	480	385	385		5		1
3.1.2	Reserve/ILL (pick-up) Collection	1	300	300	300	300				1
3.1.3	Express Check	1	240	240	240	240				1
3.2	Staff & Support			2,940	2,680	2,680	0	13		
3.2.1	Circulation Head	1	120	120	120	120		1		1
3.2.2	Interlibrary Loan Borrower/Lender	1	300	300	180	180		2		1
3.2.3	Information Commons Coordinator	1	120	120	120	120		1		.
3.2.4	Circulation Work Area			2,130	1,990	2,110				1
3.2.4.a	*Media/AV Checkout & Storage*	*1*	*300*	*300*	*300*					*1*
3.2.4.b	*Circulation/Reserve/ILL Check In*	*1*	*320*	*320*	*300*					*1*
3.2.4.c	*Circulation/Reserves/ILL Sort & Returns Shelving*	*1*	*300*	*300*	*300*					*1*
3.2.4.d	*Work Study/Technical Vest Work Area*	*2*	*75*	*150*	*150*			*2*	*8 lockers*	*1*
3.2.4.e	*Library Assistants*	*7*	*80*	*560*	*560*			*7*		*1*
3.2.4.f	*Cart Storage*	*1*	*80*	*80*	*80*				*10 carts*	*1*
3.2.4.g	*Copier/Fax*	*1*	*75*	*75*	*50*					*1*
3.2.4.h	*Security Monitors*	*1*	*60*	*60*	*60*					*1*
3.2.4.i	*Printer*	*1*	*75*	*75*	*25*					*1*
3.2.4.j	*Scanner/Workstation*	*1*	*75*	*75*	*40*					*1*
3.2.4.k	*Recycling*	*1*	*70*	*70*	*60*					*1*
3.2.4.l	*Storage/Custodial*	*1*	*65*	*65*	*65*					*1*
3.2.5	Storage	1	120	120	120	120				1
3.2.6	Media Cart Storage	1	150	150	150	150			Faculty check-out for campus-wide use	
4	INFORMATION COMMONS			15,165	14,765	12,615	215	11		
4.1	Information Commons			8,685	8,325	6,175	162	3		
4.1.1	Research Assistance Desk	1	195	195	195	195		3		1
4.1.2	Quick Search	1	120	120	120	120				1
4.1.3	Public Access Workstations			8,130	7,770	5,610				
4.1.3.a	*Info Pods*	*3*	*270*	*810*	*810*	*810*	*12*			*G, 2,3*
4.1.3.b	*General Workstations*	*120*	*51*	*6,120*	*5,760*	*4,000*	*120*			*1*
4.1.3 c	*Multimedia Workstations*	*30*	*40*	*1,200*	*1,200*	*800*	30			1
4.1.4	Printer Area			240	240	250				
4.1.4.a	*Printers*	*12*	*20*	*240*	*240*	*240*				*1*
4.2	Faculty Services Center			400	400	400	12	0		
4.2.1	Faculty Services Center	1	400	400	400	400	12			1
4.3	Accessibility Services		1,040	1,240	1,240	1,240	41	2		
4.3.1	Lab for Assistive Devices			1,000	1,000	1,000	41	1		
4.3.1.a	*Collaborative Lab*	*1*	*250*	*250*	*250*		*20*			*1*
4.3.1.b	*Quiet Lab*	*1*	*450*	*450*	*450*		*17*			*1*
4.3.1.c	*Dragon Speak/Scanning Stations (Large Print)*	*4*	*50*	*200*	*200*		*4*			*1*
4.3.1.d	*Printing*	*2*	*50*	*100*	*100*					*1*
4.3.2	Office	1	120	120	120	120		1		1
4.3.3	Storage	1	120	120	120	120				1
4.4	Reference			4,840	4,800	4,800	0	6		
4.4.1	Reference Collection	1	4,000	4,000	4,000	4,000				1
4.4.2	Reference Librarians	6	120	720	720	720		6		2
4.4.3	Copy/Workroom	1	120	120	80	80				2

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
5	TEACHING/LEARNING CENTER			3,400	3,400	3,400	93	0		
5.1	Instructional Rooms		1,200	3,400	3,400	3,400	93	0		
5.1.1	Teaching Labs	3	1,000	3,000	3,000	3,000	93		2 must be adjacent with operable partition	1
5.1.2	Storage	2	200	400	400	400				1
6	WRITING LAB			2,000	920	840	66	4		
6.1	Staff Office	1	120	120	120	120		1		1
6.2	Student Staff Work Room	1	120	120	120	120		3		1
6.3	Lab	1	1760	1,760	680	600	66			1
7	GENERAL COLLECTION			50,876	49,930	44,180	1,098	-		
7.1	Collection			21,330	31,730	30,280	9	0		
7.1.1	Circulating			20,650	31,050	29,600				
7.1.1.a	*General Collection*	*1*	*20,000*	*20,000*	*30,400*				*Include space to market new titles in each subject area*	*G, 2, 3*
7.1.1.b	*New Book Display/Browsing*	*1*	*650*	*650*	*650*		*8*			*2*
7.1.2	Non-Circulating			680	680	680				
7.1.2.a	*Map Cases/GIS*	*1*	*680*	*680*	*680*		*1*		*Cases serve as reference surfaces; GIS station @ 80 sq. ft.*	*G*
7.2	User Seats			29,546	18,200	13,900	1,089	0		
7.2.1	General User Seats	497	38	18,886	12,540	8,740	497			*G, 2, 3*
7.2.2	Collaborative Studies/Seminar Rooms			10,660	5,660					
7.2.2.a	*4-Person Study Space*	*28*	*100*	*2,800*	*2,300*	*1,400*	*112*			*G, 2, 3*
7.2.2.b	*6-Person Study Space*	*20*	*120*	*2,400*	*2,400*	*2,800*	*120*			*G, 2, 3*
7.2.2.c	*10-Person Study Space*	*4*	*240*	*960*	*960*	*960*	*40*			*G, 2, 3*
7.2.2.d	*Seminar Room*	*5*	*900*	*4,500*	*0*	*0*	*320*		*Two sets of two rooms adjacent with operatble partitions*	*G, 2, 3*
8	PERIODICALS			5,240	4,540	4,160	0	10		
8.1	Staff			360	360	280	0	3		
8.1.1	Periodicals Librarian	1	120	120	120	120		1		G
8.1.2	Periodicals Staff	2	120	240	240	160		2		G
8.2	Support			480	480	480	0	7		
8.2.1	Work Room	1	480	480	480	480				G
8.2.1.a	*Current Processing*	*1*	*100*	*100*	*100*			*2*		*G*
8.2.1.b	*Donations Processing*	*1*	*120*	*120*	*120*			*2*		*G*
8.2.1.c	*Workstudy*	*1*	*100*	*100*	*100*			*2*		*G*
8.2.1.d	*Mending/Book Repair*	*1*	*160*	*160*	*160*			*1*		*G*
8.3	Public Area			4,400	3,700	3,400	0	0		
8.3.1	Bound Periodicals	1	3,000	3,000	2,800	2,500			Back issues into compact storage	G
8.3.2	Current Periodicals	1	1400	1,400	900	900			Place in sloped shelving to better market the collection of current journals Includes newspapers	G

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
9	MEDIA			7,880	7,480	7,480	115	18		
9.1	Staff & Support			520	520	520	0	4		
9.1.1	Librarian Office	1	180	180	180	180		1		2
9.1.2	Staff Workroom	1	260	260	260	260		3		2
9.1.3	Storage	1	80	80	80	80				2
9.2	Public Area			5,580	5,180	5,180	115	0		
9.2.1	Workstations	1	980	980	980	980	45		35 viewing stations, 10 musical notation stations	2
9.2.2	User Seats	1	320	320	320	320	8			2
9.2.3	Media Collection	1	2,900	2,900	2,600	2,600				2
9.2.4	6-Person Media Viewing Room	3	160	480	480	480	18			2
9.2.5	Media Enhanced Seminar Room	1	900	900	800	800	44		Piano	
9.3	Media Services			1,780	1,780	1,780	0	14		
9.3.1	Office	1	120	120	120	120		1		G
9.3.2	Staff Work Area			530	530	530				G
9.3.2.a	*Full Time Staff Office*	*2*	*100*	*200*	*200*			*2*		*G*
9.3.2.b	*Part Time Staff Office*	*2*	*85*	*170*	*170*			*4*		*G*
9.3.2.c	*Reception/Help Desk*	*1*	*80*	*80*	*80*			*1*		*G*
9.3.2.d	*Work Area*	*1*	*80*	*80*	*80*					*G*
9.3.3	Conference Room	1	140	140	140	140			Seating for 6	
9.3.4	Work Room	1	390	390	390	390		6		G
9.3.5	Media Engineering Storage	1	450	450	450	450				G
9.3.6	Media Services Storage	1	150	150	150	150				
10	SPECIAL COLLECTIONS / ARCHIVES			4,445	3,845	3,845	25	6		
10.1	Staff			120	120	120	0	1		
10.1.1	Librarian	1	120	120	120	120		1		G
10.2	Support			1,725	1,725	1,725	15	4		
10.2.1	Workroom	1	600	600	600	600		4		G
10.2.2	Classroom	1	600	600	600	600	15			G
10.2.3	Digitization/Film Room	1	120	120	120	120				G
10.2.4	Clean Up Area	1	180	180	180	180				G
10.2.5	Supply Storage	1	225	225	225	225				G
10.3	Public Area			800	800	800	10	1		
10.3.1.a	Consultation Room	1	500	500	500	500	10		Table seats, terminal station, printer, listening seats	G
10.3.1.b	Reception/Exhibits	1	300	300	300	300		1		G
10.4	Collections Area			1,800	1,200	1,200	0	0		
10.4.1	Stacks	1	1,800	1,800	1,200	1,200			Compact shelving	G

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
11	TECHNICAL SERVICES			2,200	2,020	1,900	0	16		
11.1	Staff			870	870	750	0	7		
11.1.1	Librarian	1	150	150	150	150		1		G
11.1.2	Acquisitions Staff	3	120	360	360	360		3		G
11.1.3	Cataloging Staff	3	120	360	360	240		3		G
11.2	Support			1,330	1,150	1,150	0	9		
11.2.1	Work Room			760	580	580				G
11.2.1.a	*Acquisitions Staging/Work Study*	*1*	*220*	*220*	*120*	*120*		*2*		*G*
11.2.1.b	*Cataloging Staging/Work Study*	*1*	*200*	*200*	*120*	*120*		*2*		*G*
11.2.1.c	*Book Processing Work Area*	*1*	*340*	*340*	*340*	*340*		*2*		*G*
11.2.2	Donations			310	310	310				G
11.2.2.a	*Processing*	*1*	*150*	*150*	*150*	*150*		*3*		*G*
11.2.2.b	*Storage*	*1*	*160*	*160*	*160*	*160*				*G*
11.2.3	Storage & Copier/Printer	1	260	260	260	260				G
12	SYSTEMS AND I.T. SERVICES			5,600	5,600	5,600	0	22		
										G
12.1	Systems			1,100	1,100	1,100	0	11		
12.1.1	Office	3	120	360	360	360		3		G
12.1.2	Work Study	1	150	150	150	150		2		G
12.1.3	Staff Work Room	1	590	590	590	590		6		G
										G
12.2	IT			4,500	4,500	4,500	0	11		
12.2.1	Offices	2	120	240	240	240		2		G
12.2.2	Work Study	1	80	80	80	80		1		G
12.2.3	Printing (secure)	1	120	120	120	120				G
12.2.4	Printing/Copy Work Room	1	80	80	80	80				G
12.2.5	Testing/Maintenance Room	1	350	350	350	350		8		G
12.2.6	War/Conference Room	1	350	350	350	350			Seating for 20	G
12.2.7	Storage	1	350	350	350	350				G
12.2.8	Server Room	1	2,300	2,300	2,300	2,300				G
12.2.9	Tape Vault	1	200	200	200	200				G
12.2.10	UPS/Air Conditioning	1	430	430	430	430				G
										G
										G
13	LIBRARY ADMINISTRATION			1,750	1,670	1,570	0	5		
13.1	Administrative Suite			1,350	1,270	1,170	0	5		
13.1.1	Library Director	1	180	180	180	180		1		3
13.1.2	Assistant Director/Development Director	2	150	300	300	300		2		3
13.1.3	Manager, Financial Operations	1	150	150	150	150		1		3
13.1.4	Administrative Assistant/Reception	1	200	200	200	120		1		3
13.1.5	Conference Room	1	400	400	320	300			Seating for 20	3
13.1.6	Copy/Mail/Storage Room	1	120	120	120	120				3
13.2	Break Room			400	400	400	0	0		
13.2.1	Break Room	1	400	400	400	400			Seating for 12	G

#	SPACE LIST	Quantity	S.F.	Net S.F.	Proposed Area 165,000	Proposed Area 150,000	User Seats	Staff Seats	Notes	Level
14	BUILDING SUPPORT SPACES (MOST ARE INCLUDED IN NET/GROSS)			3,715	790	550	0	0		
14.1	Custodial									
14.1.1	Closet									
14.2	Central Supplies Storage									
14.3	Supply Distribution Closets									
14.4	Mechanical/Electrical/Communications									
14.4.1	Electrical Room (one per floor)									
14.4.2	Telephone Services (MDF/IDF Room)									
14.4.3	Data Distribution Rooms									
14.5	Shipping and Receiving			400	400	300				
14.5.1	Mail Room/Supplies Storage	1	400	400	400	300		1		G
14.5.2	Mail Distribution/Information Display									
14.6	Storage									G
14.7	Loading Dock	1	390	390	390	250				G
14.8	Circulation & Public Spaces			2,925	-	0				
14.8.1	Floor Lobbies									
14.8.2	Elevator									
14.8.3	Corridors									
14.8.4	Service Elevators									
14.8.5	Concourse			2,925						
	TOTAL NET AREA			116,994	107,150	97,560	1,923	118		
	EFFICIENCY FACTOR			65%	65%	65%				
	TOTAL GROSS AREA			179,991	164,846	150,092				

7.3 BUILDING ORGANIZATION

The following is a narrative description of the context and rational for the building organization as it is outlined in the space summary:

7.3.1 Entry Arcade

The Entry Arcade will provide an appropriately distinctive entrance to the UVSC Digital Learning Center, a building filled with the latest technologies. With the possibility of a two-story space and integral sun-control, a voluminous space could perform several additional functions: it would function as a lantern for the campus at night and as an organizing element for the building during the day; it would also bring light and cross-campus views to the interior. An open entry volume could serve as the locus for orienting visitors to the building from several directions outside the DLC materials security system.

Information Kiosk

A touch-screen information kiosk just inside the main entry would allow students and visitors to browse, unaided, though hyperlinked information databases about UVSC, services within the DLC, and activities on campus and in the larger community. If staffed, the kiosk could also add a friendly, personal note to questions otherwise answered electronically. Additionally, advanced display technologies and electronic streaming data feeds could bring the larger world of information into the building in a very visual way, creating a place for people to watch and discuss the latest world and local events.

Informal Study Court and Extended Hours Study

Adjacent to the Public Entrance and outside DLC materials security, the Informal Study Court, a gathering space for students and faculty, would facilitate informal conversations by providing tables and seating for those who prefer an “active” study environment. To best stimulate informal gathering, the study court should include: wireless access to information resources within the DLC; access to the Copy/Printing facility; and a Family Studies area with learning and activity resources for children in a colorful and acoustically appropriate environment. Restrooms, telephones, and access to the Café and Lobby should be conveniently accessible so the Entry Arcade could be used as an Extended Hours Study. Convenient access to the Materials Return slots would allow quick return of library materials without going through the DLC security zone.

Café

Another multi-purpose space, a Café, as a component of or in addition to the Entry, could provide a secondary entrance to the building. This secondary entrance would permit the Café to maintain different hours than the Entry and to operate independently of the main area of the Digital Learning Center. As an auxiliary University entity, flexibility in hours and services will be key, thus the Café enclosure must be able to be hidden when open and not draw attention to itself when the Café is closed. Featuring finishes similar to that of a high-end bookstore coffee bar with booths and bistro tables and/or built-in window seats, this welcoming spot would be the venue for lively conversation and relaxation, food, Internet access, and limited vending (ATM, supplies, and snacks when regular food service is closed). The Café will also provide back-of-house food preparation facilities for catering.

DLC Premier Conference Room

A state-of-the-art and versatile multi-media environment, accessible outside DLC security, will invite students, faculty and the Orem community to teleconferences, broadcast or webcast seminars, cultural,

gaming or other special programs. The tiered-floor space, where sound and vibration is isolated, will offer excellent acoustics and lighting and will provide a complete gamut of sophisticated voice, data, and video networks for presentation or reception. Furnished with fixed tables and task chairs, lectern, large projection screens and a high-resolution video projection system will insure the Conference Room is fully utilized by both DLC librarians and other campus entities. Access to outdoor seating and gathering areas and food service serving area must be planned for.

Copy Center

The Copy Center, an auxiliary University entity, will provide students, faculty and staff with both self-service and mediated copying, printing, and high-end graphics production services a la Kinko's. With a full complement of equipment and work space in the Media Self-Service Lab this convenient location promises to be highly used by students, faculty and staff. The Copy Center will be accessible from outside the collection security system as well as at a service window from within the Digital Learning Center.

7.3.2 Lobby

An inner lobby would be the point of access to the heart of the Digital Learning Center once visitors pass through the materials security system sensor screens. Direct access to public elevators and stairs will permit DLC visitors to quickly find their way to their favorite collection or study spot.

Displays

Every library requires a variety of display opportunities. The Digital Learning Center will use store fixture displays, retail-quality lighting, striking signage and architecturally-integrated opportunities to merchandize the collections and services available. Arresting three-dimensional displays in the Lobby will draw attention to new materials by subject area or season. Glass-encased displays may feature posters, book jackets and media containers. Electronic displays will alert visitors to special events, class times and streaming news. Large digital television units, singly or in arrays, will bring high-interest video news and information features to public and smaller group venues. Bulletin boards will allow for posting of pre-approved flyers announcing upcoming events.

Security

Monitoring and recording cameras will provide staff and campus police with some visual surveillance of the main public areas as well as lesser used public corridors and open office spaces in the DLC. Tied to video displays at both the Public Service desk and campus security, their presence will signal the University's commitment to the physical security of students, campus personnel, collections and equipment.

The collections security system will trigger an audible alarm and a photograph if materials are taken past the sensing screens without proper authorization. Equipment will also be tied into the campus security system and its removal will trigger a silent alarm in the building but alert campus police.

As the DLC moves to a single entry point for patrons an electronic people-counter should be integrated into the entry so as to give an accurate count of daily building use.

7.3.3 Public Services

Circulation Service Desk

Although most students prefer the speed and independence of Express Stations, a Public Services Help Desk will also be available to provide mediated (staff-assisted) check-in and check-out of the DLC's general collection, ILL materials, reserve materials, and media equipment. A copy of each course textbook will available at the Help Desk for two-hour use within the DLC on a reserve basis. Inter Library Loan materials will also be circulated at this service point along with circulating media equipment for faculty and students. In addition the Help Desk will also provide assistance with paying fines, pick ups and returns, space reservations for group study and seminar spaces, and general policy or directional questions. The Help Desk will also include ADA-compliant stations for both staff and patrons.

Express Stations

Check-out of all items in the circulating collection, fine payment, reserve and ILL requests, and space reservations may also be handled at Express Stations, kiosks with computer terminals and receipt printers. At least one ADA-compliant kiosk must be provided; this will include a larger surface on which to arrange materials prior to check-out, clearance for knees and feet, and an accessible keyboard or touch-screen with an appropriate reach range for a wheelchair occupant.

Staff and Support

Traditional office work and collaboration space, combined with the latest modular furnishings will provide environments responsive to current and future responsibilities of the Public Services staff. As the technology for circulating and organizing the collection relies less on human intervention and physical labor, staff assignments may continue to morph from back to front-of-house positions with an emphasis on accessibility to patrons' workstations rather than patrons coming to staff workstations or service desks. Shared equipment and storage suites still will be required for support of new assignments although the type of equipment and the amount of physical storage may change radically in a single generation.

7.3.4 Information Commons

The Information Commons will be the Digital Learning Center's most visible indication of its commitment to first-class, proactive user service and the integration of learning technologies. It is the central core of the DLC's resources, services, and digital points of access. This large space will include the Public Service Help Desk, the Reference Collection, and over 100 DLC provided high-end computers that provide access to the DLC's digital resources and integrated productivity software.

Research Assistance Desk

Public Services reference librarians will provide one-to-one assistance to faculty and students from a service point within the Information Commons. A home base for the Tech Vests (student assistants who provide assistance with technology matters) the Research Assistance Desk must be permeable, allowing for staff to easily service the floor and assist patrons with quick research questions. The desk, as hub of Information Commons activities, needs to act as a beacon that is immediately visually accessible from the main library lobby and services on the floor.

Arrayed around the Research Assistance Desk will be public access workstations, including workstations equipped to handle intensive multimedia work, distributed devices for printing and scanning. Workstations must be arranged to meet the needs of individual users, groups, and researchers seeking

assistance. In addition, staff from the Research Assistance Desk must be able to freely circulate, access equipment, and provide support services.

The layout of the Information Commons includes access to the Copy Center at a service desk or window, but no direct access into Copy Center. Associated copy machines will be placed within the Information Commons.

Faculty Services Center

Conceived as a small, “airline club-like” environment where faculty members may use DLC replication equipment, request or pick up items from Inter Library Loan, peruse new periodicals and materials in their subject areas, engage in short term research, or meet with a DLC librarian, the Faculty Services Center is to be conveniently located near the Lobby and the Public Services staff. Carrels, small tables, lounge chairs and technology stations to serve ten people are desired.

Accessibility Services

Located in relatively close proximity to the main entry, Accessibility Services will house two distinct study areas, a Collaborative Lab and a Quiet Lab, complete with an array of equipment to serve patrons with vision or hearing disabilities, and other special needs. An office and work space for the librarian, and storage for specialized equipment complete the suite. Vibration isolation of impact equipment, such as Braille writers, and sound isolation of printers and Dragon-type audio software must be balanced with an environment that assists hearing-impaired people in listening and studying with a partner. Work surfaces and chairs should be fingertip adjustable in height to accommodate individual patron’s ergonomic use of the resources in the area. Supplemental, articulated task illumination may be required by some users either on request or included at each work station. Group work areas centered within both Labs will provide an area for community building, tutoring and informal presentations.

Reference Collection

The non-circulating reference collection will be located adjacent to the Information Commons and convenient to Public Services staff at the Research Assistance Desk and entering patrons.

Reserve Reading and Study Spaces

Lounge, laptop stations, reading tables, large individual carrels, will provide a variety of quiet study options near the Reserves and Reference collections, and a few collaborative study rooms will facilitate group work and one-on-one consultation.

7.3.5 Main Level Services

Teaching Labs

Three teaching labs are to be located on the main level so that entering classes offer little disruption to those patrons wishing to use the resources of the Information Commons in relative quiet. These labs will be designed to service media resource and research instruction to facilitate the needs of library staff and college faculty. Semi-fixed computer workstations, instructor lectern, projection equipment will provide a state-of-the art instructional suite within the DLC. All rooms will be located on raised access flooring and will provide for the flexible furnishings layout. Two of the three labs must be adjacent, and open to each other at an operable acoustic partition. Each room will have high quality audio/visual instructional technology, lighting and acoustic control.

Writing Center

The Writing Center will be visually accessible and inviting to patrons and first time visitors. DLC users will find full and part-time staff available to assist them in offices and work space adjacent to the focal point of the Writing Center, the Lab. While service is typically provided one-on-one, reading room tables that accommodate spreading out research and writing will allow for staff to work in concert with students. Lounge seats and research/reference materials must be convenient to the entry and accessible to writing center users.

7.3.7 General Collection

Floor Lobbies and Info Pods

Floor lobbies will be welcoming beacons on all collections levels. Through the use of materials and finishes these areas will house building-wide display systems which will announce DLC events, latest news, and campus activities, directory, directional signage, and an integrated posting area. Acoustic control and durability are factors that must be integrated into the design.

Info Pods will be state-of-the-art and versatile research hubs centralized on each floor. As a focal point to one's journey to and through the collection the self-service Info Pod will also provide an area for public librarians to give direction and distributed research assistance adjacent to the collection. Although the primary goal of the Info Pods will be to facilitate way finding and quick search, space must be provided for staff at a workstation behind a transaction counter with access to secure files and work surface. Quick search computer stations will give DLC users the opportunity to located components of the collection without supporting lengthy research or computer use. Copying, printing, and scanning will all be available at a centralized copier station, as well as access to recycling and garbage bins. Immediate adjacency to local librarians and the collection will provide both oversight and access.

Collection

The DLC has a growing collection which must be accommodated in such a way that patrons easily find their search topics, find opportunity to browse, and are informed of new collections as they arrive. Consistent stack layout, interweaving of user seats and access to views of the campus must all be accommodated. Stacks must be illuminated efficiently and lighting can be used to draw user attention to signage or quick search stations at stack ends. The New Book Display and Browsing Collection will be highlighted in a dedicated area on the collections floors. Marked by a higher level of finish, lighting specific to the collection, art niches, and users seats designed for lingering will make this area a welcome sanctuary within the DLC.

User Seats

The success of the DLC may be measured on the ability to create comfortable clusters of user seating throughout the DLC. Whether individual nooks for quiet contemplation and research, groupings of seats that mirror the types of group work so prevalent in UVSC pedagogy, or research tables – seating must reflect needs of all campus users. In the end, user seats will tie the DLC together, support accessibility to the collection, and supply areas in which the communities of the college can grow and flourish. Lighting must be designed to highlight these areas, not as a sole extension of the collection, but rather as unique nodes which will support access to and interaction with the collection. Materials and finishes in user seating area must serve the DLC well, requiring well-wearing and aesthetically pleasing choices.

Collaborative Studies

In addition to user seats, the crafting of enclosed collaborative study areas must support the group work ethic of the campus. Glassy enclosures will make these rooms visually accessible and inviting to DLC users. It is the campus' hope that these 4-, 6-, and 10-person group study rooms meet the needs of a variety of users. Whether used for tutoring, group work, team planning sessions, informal seminar sessions, preparation of classroom assignments or a bit of socializing, these rooms will supply a variety of comfortable tables, chairs and lounge seating. Some spaces will have flat panel monitors where users can connect their laptops, prepare a PowerPoint presentation or view an academic assignment. All will have wireless connectivity, data and power access, and dimmable lighting to support a variety of work.

Public Service Librarians
Placing public service librarians on a secondary collections floor will provide for localized, distributed staff away from the Information Commons. These staff members need access to support areas, such as copy/printing/files and meeting space. Grouping public service librarians with 6-person collaborative studies will provide for a modicum of flexibility as staff needs change.

Library Administration
As the organizing body of the library, the administrative suite must be easily located. Providing comfortable staff offices, welcoming reception center, and a well-equipped conference room will support the needs of the entire library staff.

7.3.8 First Level Services

The first level is planned to accommodate both public service aspects of the library program and service areas that will act independently of the DLC. Autonomous program areas, including Media Services and IT Systems, manage campus-wide technology services and require 24/7 access. Periodicals, Special Collections/Archives, and Library Systems must be accessible to the service needs of DLC patrons.

Periodicals

Staff and support space are to be located with easy access from a back-of-house work room to on floor collections services. An open and easy to manage workroom will provide a consolidated work zone for staff process current materials and donations, work study work areas and mending/book repair. Open to the Technical Services work area, these two areas will be able to more seamlessly manage staff, work flow, and access support equipment and storage areas.

The Periodicals Librarian must be placed with direct visual access of the collection, access to the work room, and with accessibility to the Info Pod on this level.

Technical Services

Open office work areas form the backbone of the Technical Services Suite. A staff workroom will provide dedicated work areas for part-time acquisitions and cataloging staff, as well as layout space to support the ongoing task of book processing. The unpredictable ebb and flow of donations will be handled in an area that will accommodate storage and processing. Full-time staff are to be arrayed so that work flows from acquisitions, to the Technical Services Director, to Cataloging, to book process in a seamless manner. Integrated storage and access to the support staff and equipment in the work rooms is a must. A support area will accommodate supplies storage, printing and copying, and files and materials storage. Security of new materials must be highlighted and cabinets, carts, and files must either be lockable, visually monitored by staff, or be able to be removed from the main circulation path within offices or work areas.

Special Collections/Archives

The Utah Valley State College Archives serve as a central preservation resource for publications and historical records of UVSC. It also collects and preserves current and historical materials related to the histories of the nearby towns of Orem, Lindon, and Vineyard, from the "pioneer" era (mid-1840's) on up, with emphasis placed on the World War II era forward. The Archives further seeks to include current and historical materials focusing of the history of business in Utah County. Included in the collections will be the oral history and folklore projects of UVSC students.

The Archives will make its collections available for research to the campus community and to the public at large, and thus plays a public outreach function in the DLC. As such the Archives must engage the public and campus through research and instruction. The Reception/Exhibits area within the Consultation Room, and the adjacent Classroom, form the foundation of the public service components of the Archives. Visual access to the public service components of the Archives will be through glazed openings and doors, but oversight by Archives staff to ensure collection security is mandatory. Visitors will be required to check in personal belongings before accessing the secure collection. Collections management responsibilities fall to Archives Librarian who will oversee visitor services, collections management and acquisitions processing.

A staff workroom will need access to collections processing equipment, the Digitization/Film Room, Clean-up Area and Supply Storage. While these space will be primarily used by staff and access must be provided to the Classroom through a secure entry.

The Archives Collection will be housed in a single room and will provide compact storage that will allow for future collections growth. This room must be equipped with UV-free lighting, all metal shelving and low-VOC materials. The design and operation of mechanical systems will be specific to the special collection housed within, but must also be continuous in all staffed work areas. Card access and video surveillance will be specified to provide a high level of security for the growing collection.

Systems and IT Services

Library systems staff will be housed in a suite of space designed to accommodate a central workroom from which one can access private offices and a work study workroom. Immediate access to materials storage, layout space and electrical services are required. Delivery access and the distribution of equipment must be accommodated at adjacent hallways and entrances. Staff continuously monitor IT systems throughout campus and require frequent on foot travel to other buildings. 24/7 access and the creation of a back-of-house work area in the first level of the DLC must accommodate these staff activities.

IT Services staff and supporting spaces will be housed within a secure suite which will require redundant card access, video surveillance, and intrusion detection at specific doors and entrances. A flexible area for interactive staff work will be created around three rooms: Testing/Maintenance, War/Conference and Storage. A staff support area will allow for private offices, open work areas, and work study space. As IT Services at time accepts very large deliveries delivered to the loading dock, doorway widths and heights must be configured to accept items that can not be broken down into smaller pieces.

Areas requiring additional security include Secure Printing, Server Room, Tape Vault, and UPS/Air Conditioning. Raised access floor in this suite will require moisture detection, but will provide for flexible power and data service.

Media Services

The Media Services suite is a staff centered area that must also accommodate the storage of materials and equipment that will be distributed throughout the UVSC campus and the DLC. Staff manage projects which frequently take them out of the building and requires 24/7 access. Storage of equipment in two secure rooms must be accommodated with card access, intrusion detection and video surveillance. A staff work room is the hub of activity with in the Media Services suite and houses work benches, equipment and tool storage, and plenty of layout space to accommodate the ever rotating variety of projects. The staff work area will house staff in closed and open office configurations, provide a conference room, reception/help desk and work area which must accommodate printing, layout, and storage.

Support Areas

A staff break room, located in the back-of-house area of the first level, must be accessible to 24/7 staff of Media Services, Systems, and IT Systems. Kitchenette services, including microwave, refrigerator and sink, will allow for limited food preparation by staff. Featuring plentiful seating, posting areas, the break room must be a comfortable area that allows the staff a respite from the public service aspects of their work.

Mail Room and Supplies Storage

A central supply storage and mail room is a node of staff services that must be accessible to all staff and immediately accessible from the loading dock. This an area through which most shipping and receiving deliveries must be processed, including Interlibrary Loan items and supplies. Storage for materials, equipment and plenty of layout space will make this room both functional but easy to maintain. Supplies storage must be both accessible and secure, some of which will need to be housed within lockable storage cabinets and others on shelves. With the high turnover of paper for copying and printing, doors to this room must accommodate both cart and hand truck deliveries. Visual access to the loading dock may be desired, but at the least immediate access and monitoring of the call button are desired. This area will not be staffed full-time, and thus it must have a level of security to match the value of materials housed within.

Loading Dock

The DLC requires a suitable loading dock to meet the bulk of their deliveries which come from a central campus distribution point in small vans, by independent overnight delivery services or trucks equipped with dock lifts. The loading dock must be secure, with a call button or telephone routed to the Technical Services suite. Small fenced areas must be developed to accommodate short term storage for deliveries and pickup. An overhead door and double doors leading to a common back-of-house hallway and freight elevator must accommodate large deliveries on pallet jack, hand truck or cart. Durable finishes, corner guards and adequate lighting are required.

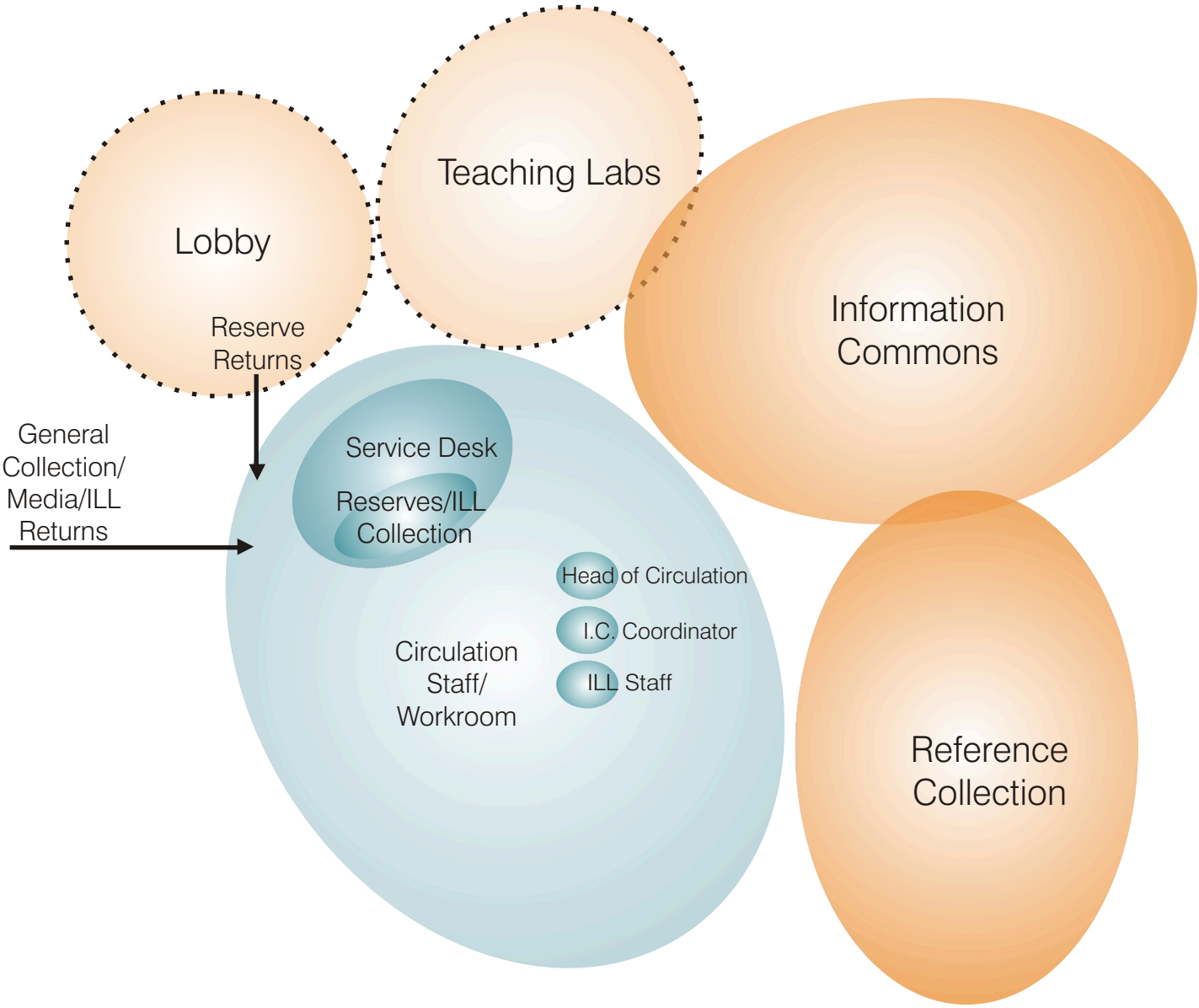
8.0 INDIVIDUAL SPACE OUTLINES

The following individual space outlines describe the requirements of the assignable spaces to be contained within the Digital Learning Center, including the size, use, characteristics, technology, mechanical and electrical components, and equipment and furnishings,. These space outlines do not include the non-assignable areas of the building, such as the common areas. The individual space outlines spaces, not rooms; rest rooms, support spaces, circulation, and other building spaces may be spaces may be contained within a single room. To determine the total square footage for items such as workstations listed in the space outlines, multiply the area given in the space outline by the number of spaces listed.

8.1 ENTRY

#	SPACE LIST	Quantity	S.F.	Net S.F.
1	ENTRY ARCADE			9,618
1.1	Extended Hours Study			2,660
1.1.1	Informal Study Court	1	600	600
1.1.2	Extended Hours Study	1	600	600
1.1.3	Extended Hours Group Study	1	410	410
1.1.4	Extended Hours Family Study	1	750	750
1.1.5	Printing/Copy Area	1	100	100
1.1.6	Vending	1	200	200
1.1.7	Restrooms			
1.1.8	Outdoor Seating Area (patio)			
1.2	Café			2,600
1.2.1	Serving Area	1	500	500
1.2.2	Kitchen/Food Prep Area	1	300	300
1.2.3	Seating Area	1	1,800	1,800
1.3	Copy Center			1,108
1.3.1	Public Self-Serve Area	2		0
1.3.2	Work Area			460
1.3.2.a	*Cashier*	*1*	*100*	*100*
1.3.2.b	*Copy Work Area*	*1*	*264*	*264*
1.3.2 c	*Storage*	*1*	*96*	*96*
1.3.3	Media Self-Service Lab	1	648	648
1.4	Meeting Space			3,250
1.4.1	DLC Premier Conference Room	1	3,250	3,250

First Level Services



1.1.1 **Informal Study Court**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	36	Guest(s)
	Proposed NSF	600	SF
	Room/Space Quantity:	1	
USE	Activities:	General study area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near café and main entry	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, no glare or brightness control	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	n/a	
EQUIPMENT AND FURNISHINGS	Work Surface:	(5) 4-person booths (4) 3' x 6' tables	
	Seating:	(16) guest chairs	

1.1.2 **Extended Hours Study**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	20	Guest(s)
	Proposed NSF	600	SF
	Room/Space Quantity:	1	
USE	Activities:	General study area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near family study, entry, small group study rooms	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	n/a	
EQUIPMENT AND FURNISHINGS	Work Surface:	(24 LF) work surface, systems furnishing (2) 3' x 6' work tables	
	Seating:	(14) task chairs (6) tablet arm lounge seats	
	Storage:	(6 LF) base cabinet	
	Shelving:	(24 LF) 12" D wall mounted, adjustable, cantilever shelving (24 LF) under shelf task lighting	
	Electronics:	(1) printer, laser	
	Special Equip:	(8) task lights, reading lamps at seating areas	

1.1.3 **Extended Hours Group Study**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	22	Guest(s)
	Proposed NSF	410	SF
	Room/Space Quantity:	1	
USE	Activities:	Small group study	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Main public circulation route	
	Special Requirements:	Semi-Enclosed space with visibility from adjacent spaces	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, isolate from adjacent spaces	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	None	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, glass wall - visible from adjacent spaces	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	n/a	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 4' dia. round tables	
	Seating:	(16) guest chairs, stackable (1) 5' loveseat (4) tablet arm lounge chair	
	Wall Mount:	(4) 3' x 4' white board	

1.1.4 **Extended Hours Family Study**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:		Occupant(s)
	Unassigned Capacity:	20	Guest(s)
	Proposed NSF	750	SF
	Room/Space Quantity:	1	
USE	Activities:	Family friendly group study room capable of accommodating young children at play in an adjacent area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near extended hours study areas	
	Special Requirements:	Enclosed room consisting of a 450 SF area for adults separated with glass wall from a 150 SF area for children	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	VCT and carpet tile	
	Wall Finish:	Painted gypsum board, glazed walls, and chalkboard paint	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	None	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	n/a	
EQUIPMENT AND FURNISHINGS	Work Surface:	(24 LF) work surface, systems furnishing (2) 3' x 6' work tables	
	Seating:	(14) task chairs (6) tablet arm lounge seats	
	Storage:	(6 LF) base cabinet	
	Shelving:	(24 LF) 12" D wall mounted, adjustable, cantilever shelving (12 LF) under shelf task lighting	
	Electronics:	(1) printer, laser	
	Special Equip:	(8) task lights, reading lamps at seating areas and work surfaces	
	Children's Area:	(2) 48" sq., 28" H children's table (6) children's lounge chairs (8) children's chairs, 15" H (12 LF) 18" H drawers as base cabinet (24 LF) 12" D wall mounted, adjustable, cantilever shelving	

1.1.5 **Printing/Copy Area**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	1	
USE	Activities:	Self-serve copying and printing area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Within extended hour study area, easy access from group study rooms and informal study court	
	Special Requirements:	Open area with separated access from library and public circulation path adjacent to main entrance	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, supress equipment generated noise	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	None	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, secure equipment	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6 LF) work surface, systems furnishing	
	Electronics:	(1) printer, laser (1) coin/card operated copier, free-standing, high-speed, sorter	
	Special Equip:	(1) large garbage can (1) large recycling bin	

1.1.6 **Vending**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	200	SF
	Room/Space Quantity:	1	
USE	Activities:	Vending	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Within extended hour study area	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	None	
	Wire Management:	Horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	See mech. design criteria	
EQUIPMENT AND FURNISHINGS	Special Equip:	(4) vending machines, one with water (1) large garbage container (1) large recycling container	

1.1.7 **Restrooms**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	0	SF
	Room/Space Quantity:	2	
USE	Activities:	Restroom area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	In extended hours study area	
	Special Requirements:	Family-style restroom, no square footage allocated - in net to gross factor	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Ceramic tile	
	Wall Finish:	Ceramic tile and painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, fluorescent and incandescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Sprinkler	
	Plumbing:	See mech. design criteria	
EQUIPMENT AND FURNISHINGS	Special Equip:	(1) diaper changing table	

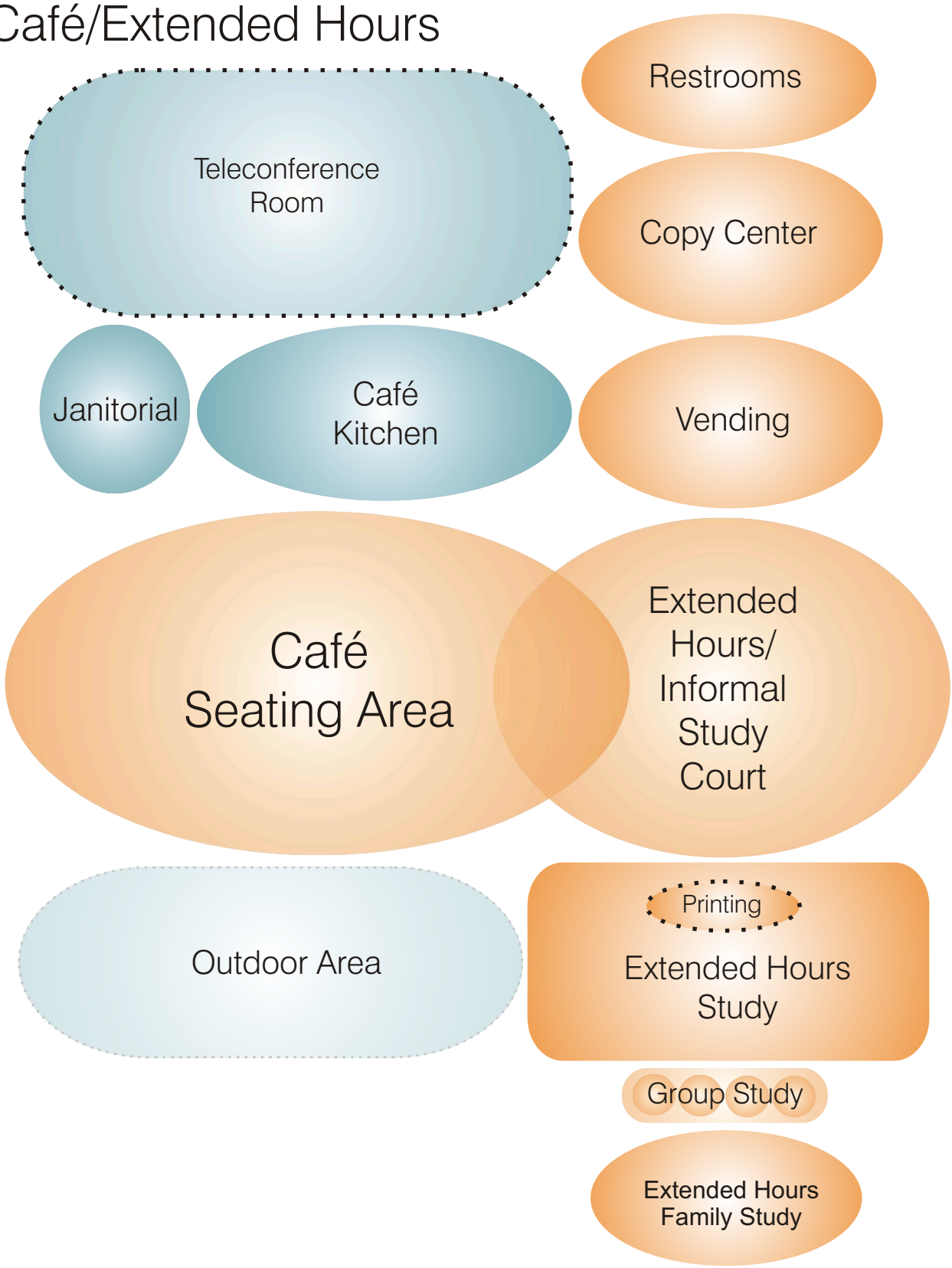
1.1.8 **Outdoor Seating/Patio**

First Level **Extended Hours Study**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	45	Guest(s)
	Proposed NSF	0	SF
	Room/Space Quantity:	1	
USE	Activities:	Outdoor seating for café	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near café and extended hours study areas	
	Special Requirements:	No square footage assigned	
CHARACTERISTICS	Ceiling Height:	n/a	
	Floor Finish:	Stone or tile	
	Wall Finish:	n/a	
	Ceiling Treatment:	n/a	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	n/a, outdoors	
	Artificial Lighting:	See elec./tech. design criteria, exterior	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	n/a	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 3' diameter bistro tables, outdoor (6) 4' round table, outdoor	
	Seating:	(8) barstools with back, outdoor (20) café chairs, outdoor (4) lounge seats, outdoor	

Café/Extended Hours



1.2.1 **Serving Area**

First Level **Café**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	500	SF
	Room/Space Quantity:	1	
USE	Activities:	Food prep and serving area	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near café seating area, kitchen, extended hour area, and teleconference room	
	Special Requirements:	Enclosed area; doors to loading zone for food delivery, teleconference room, and café seating area, see 15.1 Food Services	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Ceramic tile	
	Wall Finish:	Painted gypsum board and glazed opening between 1.2.1 and 1.2.2	
	Ceiling Treatment:	Suspended vinyl-faced lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	See mech. design criteria	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) built-in transaction counter	
	Electronics:	(2) computer workstations with touch screen monitor, CPU, and cash drawer	
	Special Equip:	(2) 5' cold cases - glass front refrigerated cabinet (1) 5' hot and cold serving area (1) cold deli display case (2) display warmer (1) hot food merchandiser (1) dual hot beverage unit with warmer or extra thermos units	

1.2.2 **Kitchen/Food Prep Area**

First Level **Café**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	5	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	300	SF
	Room/Space Quantity:	1	
USE	Activities:	Food preparation	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near serving area, café seating, and teleconference room	
	Special Requirements:	Enclosed area; doors to loading zone for food delivery, teleconference room, and café seating area, see 15.1 Food Services	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Ceramic tile	
	Wall Finish:	Painted gypsum board and glazed opening between 1.2.1 and 1.2.2	
	Ceiling Treatment:	Suspended vinyl-faced lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria, exhaust	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, visual alarm, pull box, and sprinkler	
	Plumbing:	See mech. design criteria	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 2' 6" x 6' prep tables with stainless steel work surface	
	Storage:	(12 LF) base cabinet with stainless steel countertop, sink and garbage disposal (50 LF) base cabinet	
	Special Equip:	(2) 6' commercial refrigerators (1) freezer, chest (1) commercial 6-burner range (1) commercial oven (1) 60 qt. mixer (1) warming oven (3) prep units (1) counter top fryer (1) under counter dishwasher or (1) conveyor dishwasher (1) microwave oven	

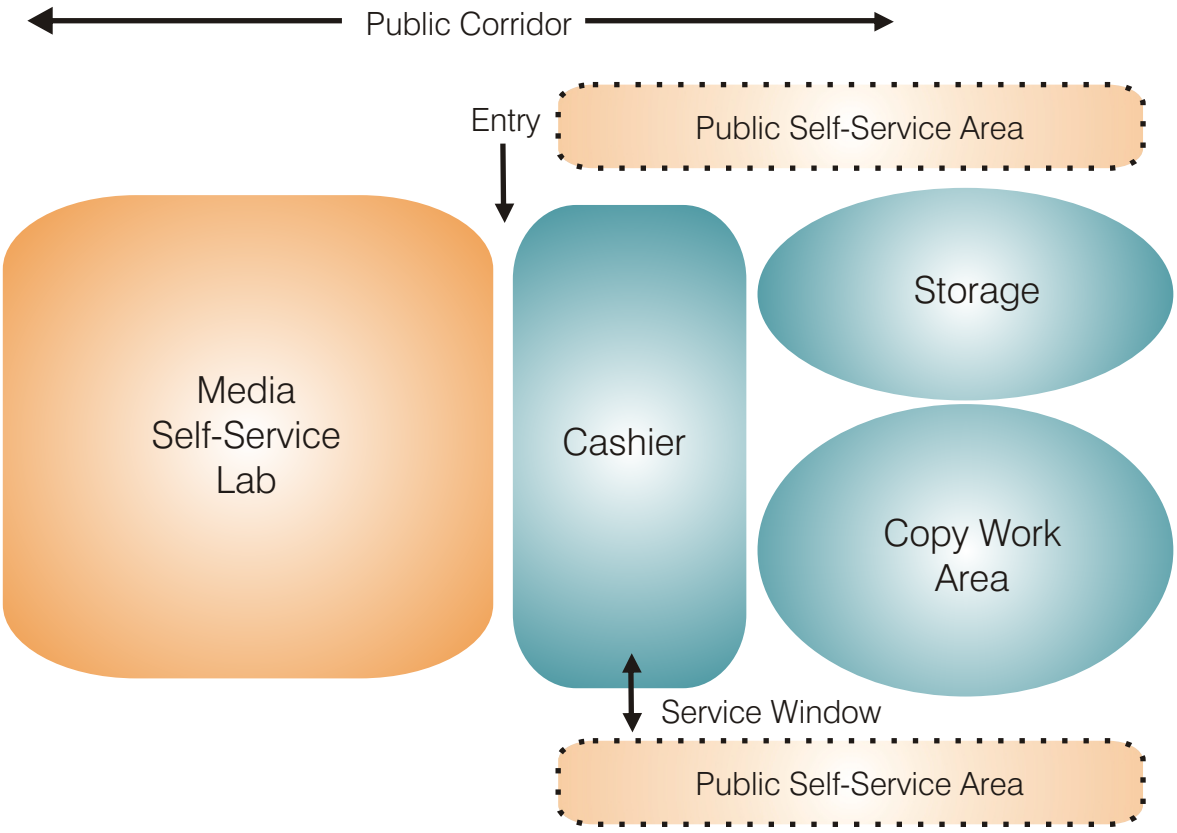
1.2.3 **Seating Area**

First Level **Café**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	82	Guest(s)
	Proposed NSF	1,800	SF
	Room/Space Quantity:	1	
USE	Activities:	Seating for café, some studying and internet access	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near café kitchen, within extended hours area	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Ceramic tile and carpet tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended vinyl-faced lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	None	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(38 LF) bar counter, built-in (3) 3' x 6' tables (5) 3' diameter round bistro tables (8) 4-person, 5' x 6' banquettes (1) 6-person, 8' x 6' banquette	
	Seating:	(32) café chairs (12) bar stools with backs	
	Storage:	(1) brochure display unit with 24 openings - 8.5"x11" paper (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Shelving:	(5) 12" D x 36" W x 90" H built-in, single face, wood bookcases	

Copy Center



Information Commons

1.3.1 **Public Self-Serve Area**

First Level **Copy Center**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	0	SF
	Room/Space Quantity:	1	
USE	Activities:	General work area	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to staffed copy center and information commons	
	Special Requirements:	Open area, no square footage allocated - in net to gross factor, copiers in public areas - one in information commons and one in public corridor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, supress equipment generated noise	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 2' 6" x 5' work table	
	Special Equip:	(2) coin/card operated copiers, free-standing, high-speed, sorter	

1.3.2.a **Cashier**

First Level **Copy Center**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	1	
USE	Activities:	Cashier station at work surface	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within copy work area and media self-service lab, near information commons	
	Special Requirements:	Open area within copy center, pass through opening to information commons self-service area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Seating:	(2) task stools without backs	
	Storage:	(12 LF) base cabinet for transaction counter and storage	
	Electronics:	(1) cash register or computer workstation with cash drawer	
	Special Equip:	(8 LF) slat wall	

1.3.2.b **Copy Work Area**

First Level **Copy Center**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	264	SF
	Room/Space Quantity:	1	
USE	Activities:	General copy center work	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to copy center cashier and storage, and near information commons	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria, exhaust	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 2' 6" x 6' work tables	
	Seating:	(2) task chairs, armless	
	Shelving:	(4) 3' x 4' x 6' H heavy-duty utility shelving units (4) 11" D shelf + 2" frame x 90" H, single-face sections	
	Electronics:	(2) computer workstations with monitor, keyboard, and CPU, and cash drawer (1) copier, free-standing, high-speed with sorter (1) fax machine (1) wide format, ink jet printer - 44" width capacity	

1.3.2.c **Storage**

First Level **Copy Center**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	96	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage for materials and supplies	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to copy work area, and near information commons	
	Special Requirements:	Semi-enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(3) 12" D x 90" H, 4-post shelving sections (10 LF) 15" D wall mounted, adjustable, cantilever shelving	

1.3.3 **Media Self-Service Lab**

First Level **Copy Center**

Entry Arcade

IDENTIFICATION AND SIZE

Assigned Capacity:	0	Occupant(s)
Unassigned Capacity:	5	Guest(s)
Proposed NSF	648	SF
Room/Space Quantity:	1	

USE

Activities:	Self-service media copying
Access:	Public
Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM
Adjacency:	Adjacent to copy center cashier, storage, and copy work area. Near information commons
Special Requirements:	Open Area

CHARACTERISTICS

Ceiling Height:	10' minimum
Floor Finish:	Carpet - tile
Wall Finish:	Painted gypsum board
Ceiling Treatment:	Suspended acoustical lay-in panels
Acoustic Treatment:	See acoustic design criteria

TECHNOLOGY

AV Requirements:	See elec./tech. design criteria
Voice:	See elec./tech. design citeria
Wire Management:	Both vertical and horizontal wire management
Data:	See elec./tech. design criteria

MECHANICAL/ ELECTRICAL

Natural Lighting:	Not required
Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred
HVAC:	See mech. design criteria
Electrical:	See elec./tech. design criteria
Security:	See elec./tech. design criteria, security cameras
Fire Protection:	Smoke detector, sprinkler, and visual alarm
Plumbing:	n/a

EQUIPMENT AND FURNISHINGS

Work Surface:	(6 LF) work surface, systems furnishing (1) 4' x 4' corner unit spray booth (2) 3' x 6' work tables
Seating:	(6) task stools without backs (2) armless task chairs (2) mid-scale, upholstered, firm lounge chairs
Storage:	(26 LF) 24" D base cabinet with two knee spaces (1) die cut cabinet (1) roll dispenser
Electronics:	(1) coin/card operated copier, free-standing, high-speed, sorter (1) coin/card operated color copier, free-standing, high-speed, sorter (1) computer workstation with monitor, keyboard, and CPU
Special Equip:	(1) thermal roll laminator - 38" capacity (1) mat board cutter (1) foam and poster board cutter (2) large rotary trimmers (1) dry mount press

1.4.1 **DLC Premier Conference Room**

First Level **Meeting Space**

Entry Arcade

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	131	Guest(s)
	Proposed NSF	3,250	SF
	Room/Space Quantity:	1	
USE	Activities:	Premier space used for lectures, some video and teleconferencing, and occasional live performances.	
	Access:	Staff and public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to café and lobby	
	Special Requirements:	Upgraded finishes, sloped floor, case study room layout, lift for wheelchair access	
CHARACTERISTICS	Ceiling Height:	12' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Wood paneling and painted gypsum board	
	Ceiling Treatment:	Painted gypsum board	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, data projector and projection screen	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Required, with mandatory glare, brightness control, blackout capacity	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent with scene control	
	HVAC:	See mech. design criteria, provide control for space	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(312.5 LF) fixed, 24" D work surface	
	Seating:	(131) guest chairs, stackable	
	Storage:	(16 LF) base cabinet, wood finish (16 LF) wall cabinet, wood finish	
	Special Equip:	(1) fixed lectern with AV and data (1) technology cabinet	

8.2 LOBBY

#	SPACE LIST	Quantity	S.F.	Net S.F.
2	LOBBY			1,145
2.1	Lobby			1,145
2.1.1	Lobby	1	1,000	1,000
2.1.2	3-D Display - New Books	1	60	60
2.1.3	3-D Display - Featured Books	1	60	60
2.1.4	2-D Display	1	10	10
2.1.5	Security Sensors	1	15	15

2.1.1 **Lobby**

First Level **Lobby**

Lobby

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	100	Guest(s)
	Proposed NSF	1,000	SF
	Room/Space Quantity:	1	
USE	Activities:	Waiting area and main entrance to building	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near circulation service desk, book return slots, and restrooms	
	Special Requirements:	Airy, open and light area, high ceiling, focal point for building with upgraded finishes,	
CHARACTERISTICS	Ceiling Height:	12' +	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Stone, wood, or painted gypsum board	
	Ceiling Treatment:	Gypsum board and acoustical lay-in panels + upgraded finishes and design	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria, wall mounted telephone jack	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	See mech. design criteria, electric water cooler	
EQUIPMENT AND FURNISHINGS	Seating:	(2) 2' x 5' benches	
	Storage:	(1) brochure display unit with 24 openings - 8.5"x11" paper (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Wall Mount:	(1) illuminated orientation map/directory for library	
	Electronics:	(1) flat panel display, large format	
	Special Equip:	(1) wall mount help telephone	

2.1.2 **3-D Display-New Books**

First Level **Lobby**

Lobby

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	60	SF
	Room/Space Quantity:	1	
USE	Activities:	General browsing	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within main entry lobby and primary circulation route	
	Special Requirements:	Semi-enclosed alcove	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(1) free-standing retail-type display system	

2.1.3 **3-D Display - Featured Books**

First Level **Lobby**

Lobby

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	60	SF
	Room/Space Quantity:	1	
USE	Activities:	General browsing	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within main entry lobby and primary circulation route	
	Special Requirements:	Semi-enclosed alcove	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(1) free-standing display bookstore-type display system	

2.1.4 **2-D Display**

First Level **Lobby**

Lobby

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	10	SF
	Room/Space Quantity:	1	
USE	Activities:	General browsing	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within main entry lobby and primary circulation	
	Special Requirements:	Semi-enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, flat panel LCD display and cable drop	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(1) lockable, glass cabinet with tackable back wall surface	
	Electronics:	(1) flat panel display, large format	

2.1.5 **Security Sensors**

First Level **Lobby**

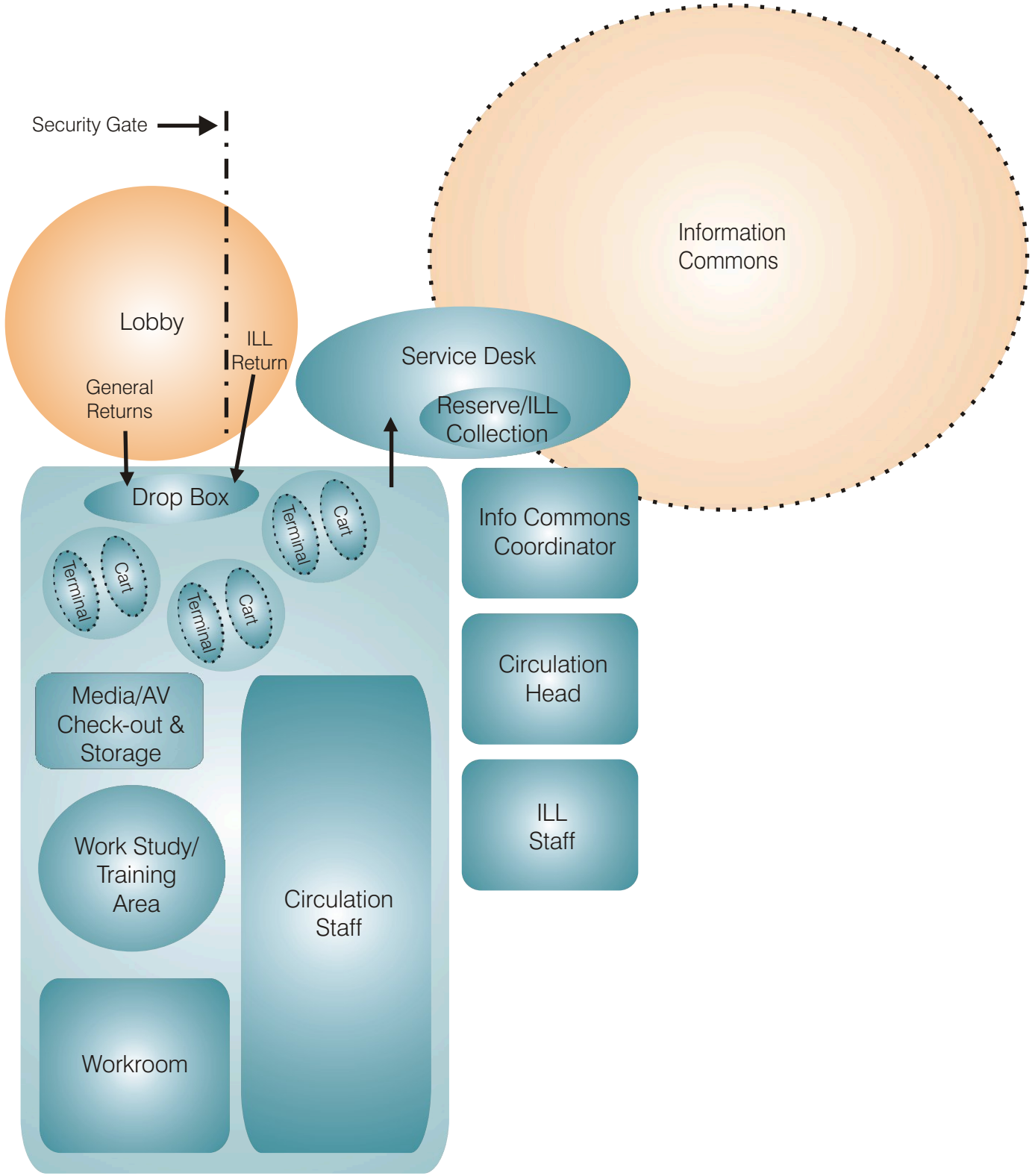
Lobby

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	15	SF
	Room/Space Quantity:	1	
USE	Activities:	Library security	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near main exits and circulation service desk	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Painted gypsum board	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock and security cameras at entrance	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Special Equip:	(6) bank of proprietary security screens with integrated people counter	

8.3 PUBLIC SERVICES

#	SPACE LIST	Quantity	S.F.	Net S.F.
3	PUBLIC SERVICES			3,940
3.1	Circulation Area			1,020
3.1.1	Service Desk	1	480	480
3.1.2	Reserve/ILL (pick-up) Collection	1	300	300
3.1.3	Express Check	1	240	240
3.2	Staff & Support			2,920
3.2.1	Circulation Head	1	120	120
3.2.2	Interlibrary Loan Borrower/Lender	1	300	300
3.2.3	Information Commons Coordinator	1	120	120
3.2.4	Circulation Work Area			2,110
3.2.4.a	*Media/AV Checkout & Storage*	*1*	*300*	*300*
3.2.4.b	*Circulation/Reserve/ILL Check In*	*1*	*300*	*300*
3.2.4.c	*Circulation/Reserves/ILL Sort & Returns Shelving*	*1*	*300*	*300*
3.2.4.d	*Work Study/Technical Vest Work Area*	*2*	*75*	*150*
3.2.4.e	*Library Assistants*	*7*	*80*	*560*
3.2.4.f	*Cart Storage*	*1*	*80*	*80*
3.2.4.g	*Copier/Fax*	*1*	*75*	*75*
3.2.4.h	*Security Monitors*	*1*	*60*	*60*
3.2.4.i	*Printer*	*1*	*75*	*75*
3.2.4.j	*Scanner/Workstation*	*1*	*75*	*75*
3.2.4.k	*Recycling*	*1*	*70*	*70*
3.2.4.l	*Storage/Custodial*	*1*	*65*	*65*
3.2.5	Storage	1	120	120
3.2.6	Media Cart Storage	1	150	150

Circulation Workroom



3.1.1 **Service Desk**

First Level **Circulation Area**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	5	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	480	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near lobby, circulation workroom, circulation staff	
	Special Requirements:	Semi-enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, supress equipment generated noise	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at all doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(56 LF) work surface, systems furnishing (16 LF) transaction counter, systems	
	Seating:	(6) armless task chairs	
	Electronics:	(4) computer workstation with monitor, keyboard, and CPU (1) video surveillance security monitor	
	Special Equip:	(4) barcode scanner (existing) (4) sensitizer/desensitizer or RFID pad (existing)	

3.1.2 **Reserve / ILL (pick-up) Collection**

First Level **Circulation Area**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	300	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and book pick-up	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to circulation service desk, circulation workroom	
	Special Requirements:	Open area with semi-enclosed desk	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(4) 22" D shelf + 2" frame x 90" H, double-face sections	

3.1.3 **Express Check**

First Level **Circulation Area**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	240	SF
	Room/Space Quantity:	1	
USE	Activities:	Self-serve book check-out stations	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near circulation service desk, near lobby	
	Special Requirements:	Open area, two standing and one accessible check-out stations	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, supress equipment generated noise	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing	
	Electronics:	(3) computer workstations with keyboard, CPU, and wall or furniture mounted flat panel monitors	
	Special Equip:	(3) express check stations	

3.2.1 **Circulation Head**

First Level **Staff and Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near circulation work area	
	Special Requirements:	Enclosed office	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms (3) guest chair	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (4 LF) 12.5" D open shelving, systems furnishing (4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	

3.2.2 **Interlibrary Loan Borrower/Lender**

First Level **Staff and Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	300	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Visible and accessible by the public, locate near faculty services center, information commons, and shipping and receiving, next to circulation with separate entrance	
	Special Requirements:	Enclosed workspace	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 5' oval conference table, on casters (35 LF) work surface, systems furnishing	
	Seating:	(2) task chairs with arms (1) guest chair	
	Storage:	(2) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (2) pencil drawers, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(2) additional shelf/shelving organizer packages, systems furnishing (4 LF) 12.5" D open shelving, systems furnishing (4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(2) computer workstations with monitor, keyboard, and CPU, (1) scanner, flatbed (existing) (1) fax machine (existing)	

3.2.3 **Information Commons Coordinator**

First Level **Staff and Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Visible and accessible to the public, locate near information commons, next to circulation with a separate entrance from each Circ Workroom and Info Commons	
	Special Requirements:	Enclosed workspace	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms (3) guest chair	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (4 LF) 12.5" D open shelving, systems furnishing (4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(1) 3' x 4' tack board (1) 3' x 4' white board	

3.2.4.a **Media/AV Checkout and Storage - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE

Assigned Capacity:	0	Occupant(s)
Unassigned Capacity:	0	Guest(s)
Proposed NSF	300	SF
Room/Space Quantity:	1	

USE

Activities:	Storage of media materials and equipment for checkout
Access:	Staff
Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM
Adjacency:	Within circulation workroom, near circulation service desk and adjacent to 3.2.5 Media Cart Storage
Special Requirements:	Locked media storage cabinetry, media check-in work space

CHARACTERISTICS

Ceiling Height:	8' minimum
Floor Finish:	Carpet - tile
Wall Finish:	Painted gypsum board
Ceiling Treatment:	Suspended acoustical lay-in panels
Acoustic Treatment:	See acoustic design criteria

TECHNOLOGY

AV Requirements:	See elec./tech. design criteria
Voice:	See elec./tech. design citeria
Wire Management:	Both vertical and horizontal wire management
Data:	See elec./tech. design criteria, ganged data outlets for 25 laptops

MECHANICAL/ ELECTRICAL

Natural Lighting:	Not required
Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting
HVAC:	See mech. design criteria
Electrical:	See elec./tech. design criteria
Security:	See elec./tech. design criteria, keyed locks on cabinets, security cameras
Fire Protection:	Smoke detector, sprinkler, and visual alarm
Plumbing:	None

EQUIPMENT AND FURNISHINGS

Storage:	(16 LF) 2' D x 6' H cabinets with lockable doors, containing (21) 2' x 2' x 2' pull-out drawers (1) 4' W x 2' D x 8' 6" H cabinet, containing (4) 12" divided vertical storage slots (6 LF) 12" D cabinets with lockable doors, containing (25) 12" x 12" x 12" cubbies (12 LF) 3' D cabinets with lockable doors, containing (8) 3' x 3' x 3' cubbies
Electronics:	(1) computer workstation with monitor, keyboard, and CPU
Special Equip:	(1) bar code scanner (existing) (2) 4' x 3' portable laptop storage cart on casters

3.2.4.b **Circulation/Reserve/ILL Check-in - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	3	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	320	SF
	Room/Space Quantity:	1	
USE	Activities:	Check-in of books, periodicals, and reserve and media materials	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within circulation workroom; near circulation, reserves, inter-library loan, and check-in stations	
	Special Requirements:	Open area, storage space for three carts	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(3) 2' 6" x 3' work table	
	Seating:	(3) armless task chair	
	Storage:	(4) 3' x 4' drop boxes, one for donations (3) depressible book carts (1) brochure display unit with 24 openings - 8.5"x11" paper (1) brochure display unit with 24 openings - 2.5"x11" paper, with place for donation slips	
	Electronics:	(3) computer workstations with monitor, keyboard, and CPU (3) barcode scanners (existing) (3) sensitizer/desensitizer or RFID pad (existing)	

3.2.4.c **Circulation/Reserve/ILL Sort & Returns Shelving - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	300	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage of books, periodicals, and reserve and media materials for reshelving	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within circulation work room; near circulation, reserve, inter-library loan, and check-in station	
	Special Requirements:	Enclosed area, storage space for carts	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(6) 22" D shelf + 2" frame x 90" H, double-face sections	
	Special Equip:	(3) depressible book carts	

3.2.4.d **Work Study/Technical Vest Work Area - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	75	SF
	Room/Space Quantity:	2	
USE	Activities:	Check-in and training of work study students, storage of personal items	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within circulation work room, near circulation check-in, and staff offices	
	Special Requirements:	Within enclosed room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing	
	Seating:	(1) task chair, armless (1) guest chair	
	Storage:	(8) 16" x 24" x 24" D cubbies (1) pedestal storage unit, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (6 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(1) computer workstation with monitor, keyboard, and CPU	
	Wall Mount:	(4 LF) 18" H tackable wall surface	

3.2.4.e **Library Assistants - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	7	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within circulation work room, near circulation service desk	
	Special Requirements:	Open office with visual access to circulation service desk	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
	Storage:	(1) guest chair, stackable	
		(1) 2-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(3 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	

3.2.4.f-l **Print, Copy, Scan, Storage, Recycling - Circulation Work Area**

First Level **Staff & Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	500	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage of library carts, general work area, staff support, storage, recycling, etc.	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within circulation workroom	
	Special Requirements:	Storage space for 10 carts, see detail space allocation in Space Summary	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 3' x 6' work table	
	Seating:	(2) armless task chairs (2) task stools without backs	
	Storage:	(5) 18" x 3' x 6' H metal storage cabinets (10 LF) base cabinet (10 LF) wall cabinet	
	Shelving:	(12 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
	Electronics:	(1) copier, free-standing, high-speed, sorter (1) printer, laser (existing) (1) computer workstation with monitor, keyboard, and CPU (1) scanner, flatbed (existing) (1) typewriter (existing)	
	Special Equip:	(3) large recycling bins (1) large garbage bin	

3.2.5 **Storage**

First Level **Staff and Support**

Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Circulation workroom	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, direct fluorescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(6) 3' x 4' x 6' heavy duty utility shelving units (gorilla rack)	

3.2.6 **Media Cart Storage**

First Level **Staff & Support**

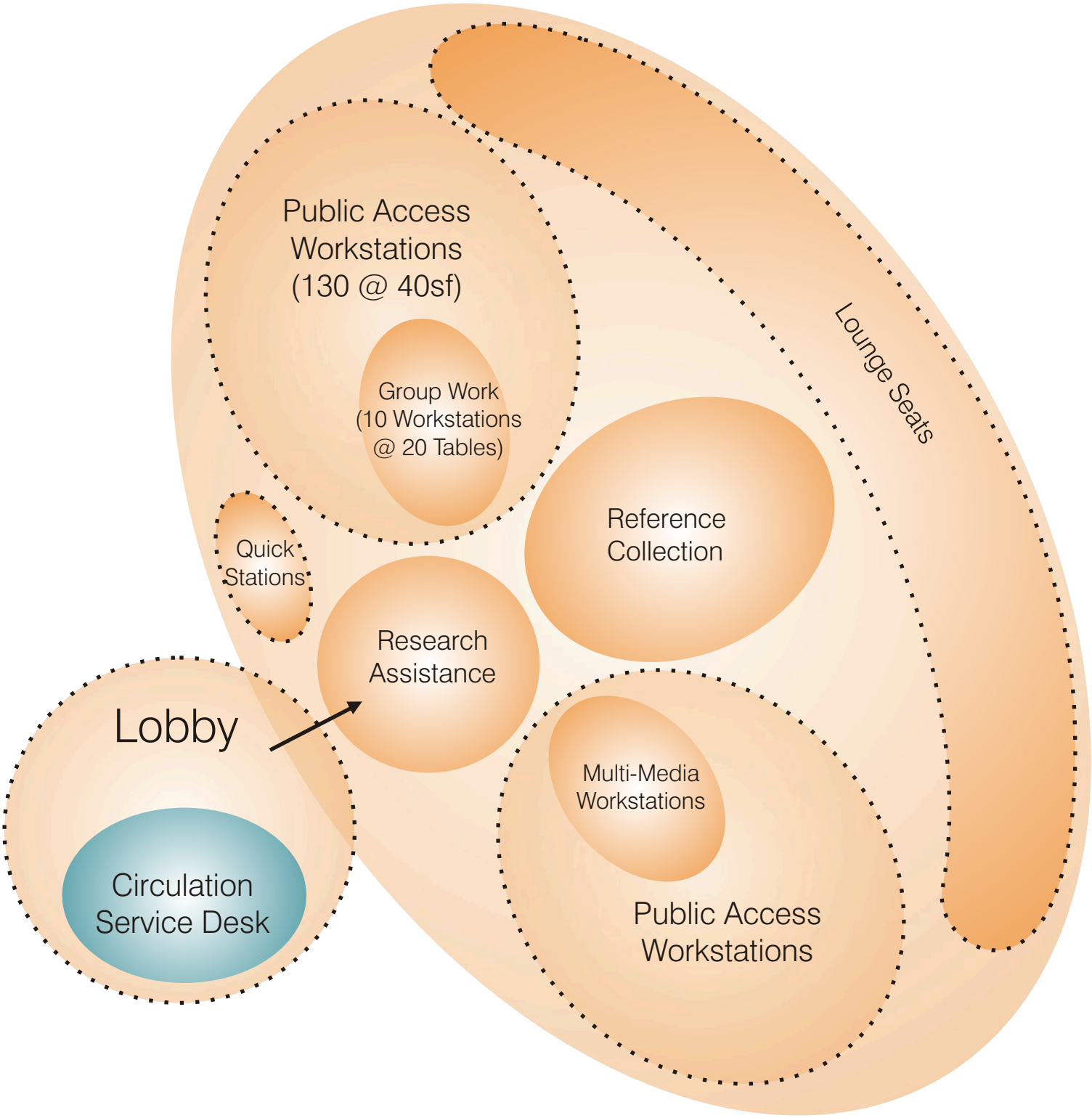
Public Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage of media carts	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near circulation work room and 3.2.3.a Media/AV checkout and storage	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Special Equip:	(10) 3' x 3' x 4' presentation carts with AV and data (2) 3' x 4' x 6 ' TV and DVD/VHS carts	

8.4 INFORMATION COMMONS

#	SPACE LIST	Quantity	S.F.	Net S.F.
4	INFORMATION COMMONS			15,165
4.1	Information Commons			8,685
4.1.1	Research Assistance Desk	1	195	195
4.1.2	Quick Search	1	120	120
4.1.3	Public Access Workstations			8,130
4.1.3.a	*Info Pods*	*3*	*270*	*810*
4.1.3.b	*General Workstations*	*120*	*51*	*6,120*
4.1.3 c	*Multimedia Workstations*	*30*	*40*	*1,200*
4.1.4	Printer Area			240
4.1.4.a	*Printers*	*12*	*20*	*240*
4.2	Faculty Services Center			400
4.2.1	Faculty Services Center	1	400	400
4.3	Accessibility Services		1,040	1,240
4.3.1	Lab for Assistive Devices			1,000
4.3.1.a	*Collaborative Lab*	*1*	*250*	*250*
4.3.1.b	*Quiet Lab*	*1*	*450*	*450*
4.3.1.c	*Dragon Speak/Scanning Stations (Large Print)*	*4*	*50*	*200*
4.3.1.d	*Printing*	*2*	*50*	*100*
4.3.2	Office	1	120	120
4.3.3	Storage	1	120	120
4.4	Reference			4,840
4.4.1	Reference Collection	1	4,000	4,000
4.4.2	Reference Librarians	6	120	720
4.4.3	Copy/Workroom	1	120	120

Information Commons



4.1.1 **Research Assistance Desk**

First Level **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	3	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	195	SF
	Room/Space Quantity:	1	
USE	Activities:	Staffed library assistance	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near information commons, general workstations, reference collection	
	Special Requirements:	Configured as one assistance desk, not fixed casework, direct visual access to lobby and information commons	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(33 LF) work surface, systems furnishing (15 LF) work surface for transactions, systems furnishing	
	Seating:	(6) armless task chair	
	Storage:	(3) pedestal storage unit, systems furnishing (1) brochure display unit with 24 openings - 8.5"x11" paper (1) brochure display unit with 24 openings - 2.5"x11" paper (3) desk accessory package, systems furnishing (3) pencil drawer, systems furnishing	
	Electronics:	(3) fixed computers with dual monitor, and locked keyboard tray, and CPU	

4.1.2 **Quick Search**

First Level **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General collection searching	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	At entry to information commons	
	Special Requirements:	Two standing height and one accessible search station	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing, standing height	
	Electronics:	(3) computer workstations with keyboard, CPU, and monitor	

4.1.3.a **Info Pods (Other Levels)**

G, 2, & 3 **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	4	Guest(s)
	Proposed NSF	270	SF
	Room/Space Quantity:	3	
USE	Activities:	Self service workstations for general computing, research, wayfinding. Also available for librarians to use when offering assistance to students	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Floor lobby (required)	
	Special Requirements:	One pod on each level of collection	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing (16 LF) work surface, systems furniture, standing height	
	Seating:	(1) backless task stools (4) guest chair	
	Storage:	(1) lockable pedestal storage unit, systems furnishing (1) 2-drawer lateral file, lockable, systems furnishing (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Wall Mount:	(1) library map and directory	
	Electronics:	(5) computer workstations with fixed dual monitors, locking keyboard tray, and locking under-counter or remote CPU (1) coin/card-operated copier, free-standing, high-speed, sorter (1) printer, laser (1) pencil sharpener (existing)	

4.1.3.b **General Workstations**

First Level **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	40	SF
	Room/Space Quantity:	120	
USE	Activities:	General access public workstations	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within information commons, near research assistance desk, printers	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS		110 workstations each with:	
	Work Surface:	(1) 2' 6" x 3' worktable	
	Seating:	(1) armless task chair	
	Electronics:	(1) computer workstation with CPU, monitor, and keyboard	
		10 workstations each with:	
	Work Surface:	(1) 3' x 6' wired worktables	
	Seating:	(4) armless task chairs per table	
	Electronics:	(2) computer workstations per table	
	Electronics:	(4) scanning stations (distributed)	

4.1.3.c **Multimedia Workstations**

First Level **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	40	SF
	Room/Space Quantity:	30	
USE	Activities:	Specialized work area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within the information commons, near research assistance desk and printers	
	Special Requirements:	Enclosed space, glazed wall with view into information commons	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 2' 6" x 5' work tables	
	Seating:	(1) task chairs, armless	
	Electronics:	(1) computer workstation with monitor, keyboard, and CPU	

4.1.4.a **Printers**

First Level **Information Commons**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	20	SF
	Room/Space Quantity:	12	
USE	Activities:	General printing	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Scattered throughout information commons	
	Special Requirements:	Default printers for each cluster of workstations	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 2' 6" x 3' work table	
	Electronics:	(1) printer, laser	

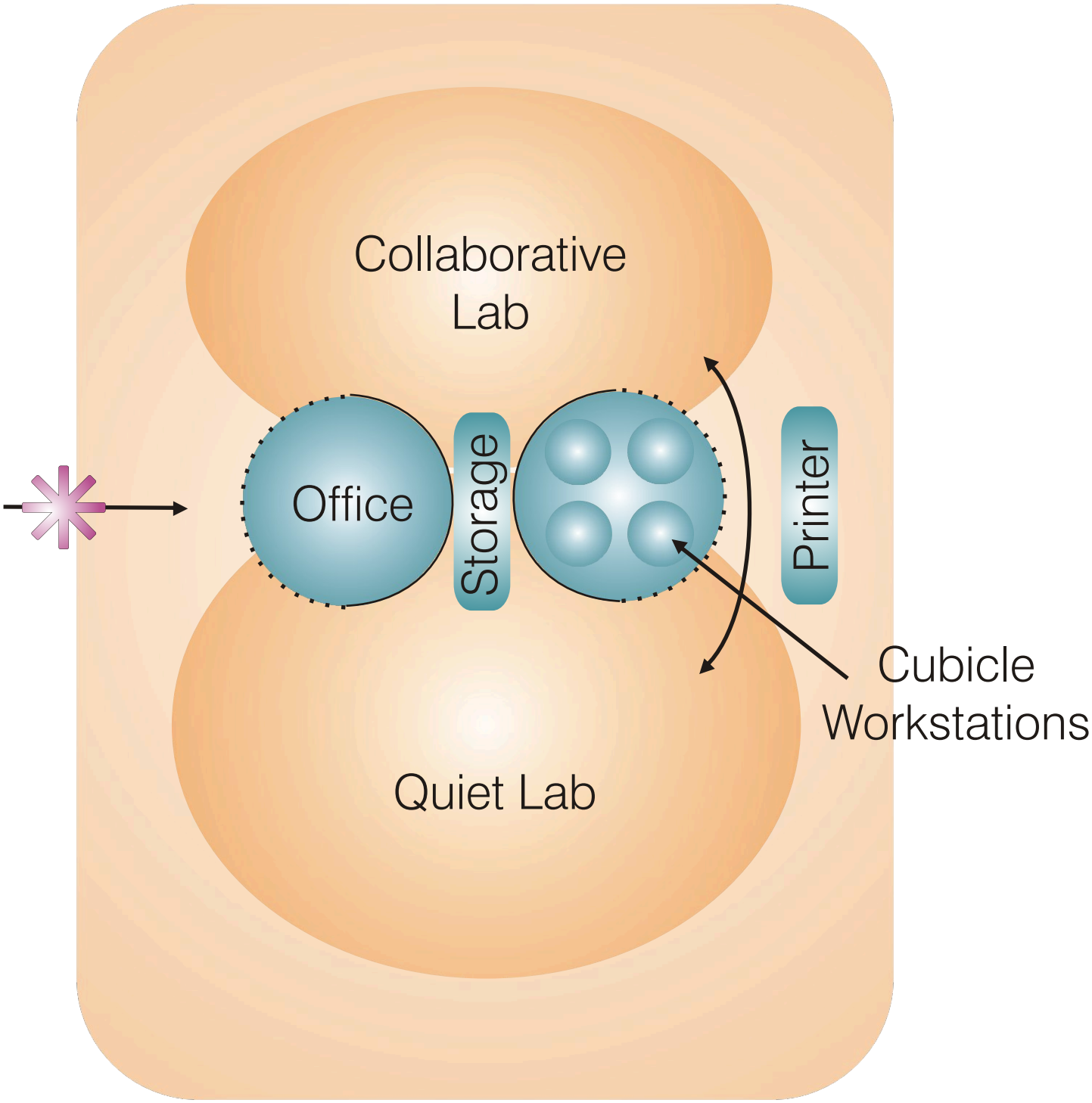
4.2.1 **Faculty Services Center**

First Level **Faculty Services Center**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	12	Guest(s)
	Proposed NSF	400	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area for faculty	
	Access:	Faculty and staff	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Adjacent to circulation desk, interlibrary loan borrower, and reference service desk	
	Special Requirements:	Enclosed workroom	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' x 5' work table (1) 3' 6" x 6' work table (3) 2' 6" x 2' 6" occasional table (1) 2' x 4' coffee table	
	Seating:	(1) 5' loveseat (6) guest chairs (4) mid-scale lounge chairs	
	Storage:	(5 LF) base cabinet with lockable doors (5 LF) wall cabinet with open, adjustable shelves (40) 15" x 18" x 18" 3-unit lockers, airport type (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Electronics:	(2) computer workstations with keyboard, monitor, and CPU, (1) copier, desktop (1) printer, laser	
	Special Equip:	(1) wall mounted telephone (2) floor lamps (1) 3' x 4' white board (1) 3' x 4' tack board	

Accessibility Services



4.3.1.a **Collaborative Lab**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	20	Guest(s)
	Proposed NSF	250	SF
	Room/Space Quantity:	1	
USE	Activities:	General computing and study by deaf students	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Connected to quiet lab via printing area, adjacent to accessibility service office	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Vertical, horizontal, and floor outlets at central workstations	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(10) 2' 3" x 3' adjustable-height work tables, (existing) (10) 3' 6" x 6' work tables	
	Seating:	(16) adjustable height armless task chairs, orthopedic (1) three seat sofa (2) mid-scale upholstered lounge chairs	
	Shelving:	(24 LF) 12" D wall mounted, adjustable, cantilever shelving	
	Electronics:	(6) computer workstations with monitor, keyboard, and CPU (1) Kurzweil scanner (existing)	
	Wall Mount:	(1) 4' x 6' white board (1) 3' x 4' tack board	

4.3.1.b **Quiet Lab**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	17	Guest(s)
	Proposed NSF	450	SF
	Room/Space Quantity:	1	
USE	Activities:	General computing and studying by disabled students	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Connected to collaborative lab via printing area, adjacent to accessibility service office	
	Special Requirements:	3'6" entry door with push plate for automatic open in hall and room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6) 2' 3" x 3' adjustable-height work tables (10) 2' 6" x 5' work tables (8 LF) work surface for reception	
	Seating:	(16) adjustable height armless task chairs, orthopedic (1) task chair with arms	
	Shelving:	(24 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(6) computer workstations with monitor, keyboard, and CPU (1) Kurzweil scanner (existing)	
	Wall Mount:	(1) 3' x 4' white board (1) 3' x 4' tack board	

4.3.1.c **Dragon Speak/Scanning Stations (Large print)**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	50	SF
	Room/Space Quantity:	4	
USE	Activities:	Dragon speak and scanning	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Within deaf and hearing labs, near accessibility service office	
	Special Requirements:	Enclosed areas within collaboration and quiet labs, divided by systems furniture partitions	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(3 LF) work surface, systems furnishing	
	Seating:	(1) 2' 3" x 3' adjustable height work table	
	Electronics:	(1) adjustable, armless task chair, orthopedic (1) computer workstation with monitor, keyboard, and CPU, (1) Kurzweil scanner (existing) or (1) dragon speak system (existing)	

4.3.1.d **Printing**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	50	SF
	Room/Space Quantity:	2	
USE	Activities:	General printing for accessibility services	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Connected to deaf and hearing labs, near accessibility services office	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, supress equipment generated noise	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria, help line connection to reference desk	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(8 LF) work surface, systems furnishing	
	Electronics:	(1) printer, laser (1) copier at accessible height, desktop (1) Kurzweil scanner (existing)	

4.3.2 **Office**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to deaf and hearing labs, near entry to accessibility services	
	Special Requirements:	Enclosed office within collaboration and quiet labs, visual access to entry and labs	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
		(2) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(4 LF) 12.5" D open shelving, systems furnishing	
		(4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(3 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
		(1) high-speed scanner (existing)	
	Special Equip:	(1) accent light, reading lamp	
	Wall Mount:	(6 LF) 18" H tackable wall surface	

4.3.3 **Storage**

First Level **Accessibility Services**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage for accessibility services	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near deaf and hearing labs	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6 LF) work surface, systems furnishing	
	Shelving:	(40 LF) 12" D wall mounted, adjustable, cantilever shelving (10 LF) 15" D wall mounted, adjustable, cantilever shelving	

4.4.1 **Reference Collection**

First Level **Reference**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	4,000	SF
	Room/Space Quantity:	1	
USE	Activities:	Reference materials	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near research assistance desk, user seats	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(86) 22" D shelf + 2" frame x 90" H, double-face sections, existing	

4.4.2 **Reference Librarians**

Second Level **Reference**

Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	6	
USE	Activities:	General office work and meeting area	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near 6-person group study rooms and copy/work room	
	Special Requirements:	Enclosed office	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, two data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
		(1) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(4 LF) 12.5" D open shelving, systems furnishing	
		(4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(3 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(6 LF) 18"H tackable wall surface	

4.4.3 **Copy / Work Room**

Second Level **Reference**

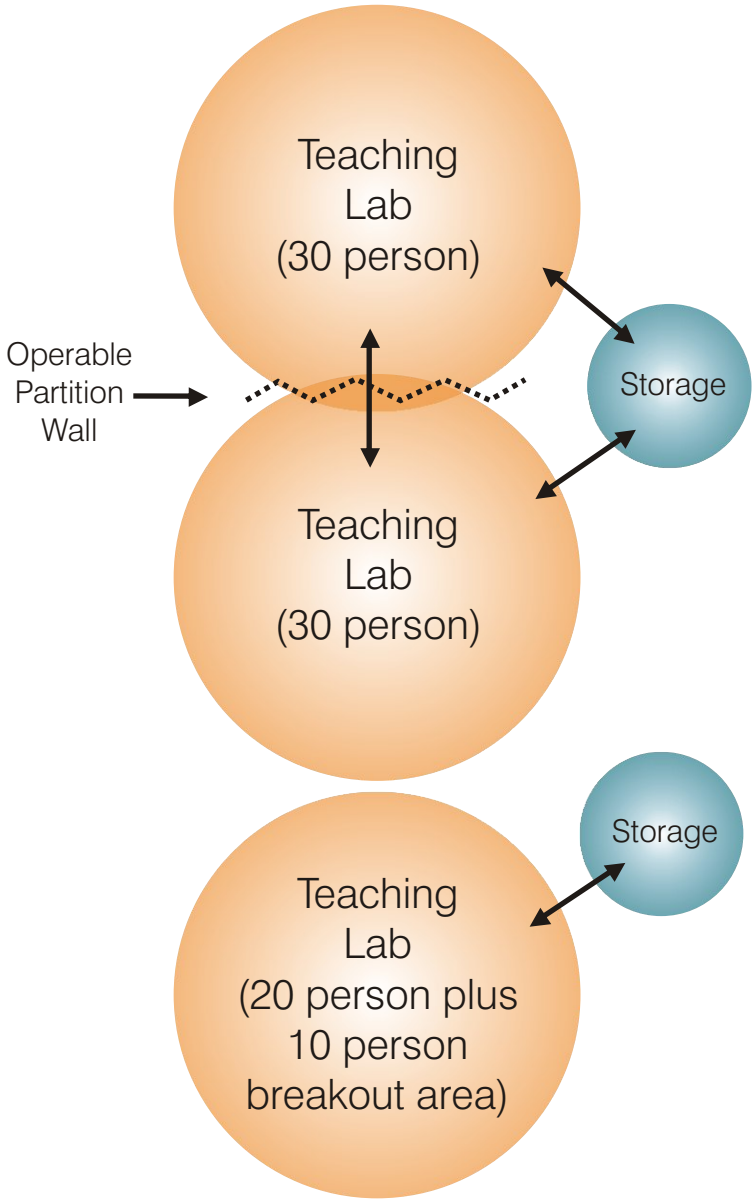
Information Commons

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General copying and printing	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near reference librarian offices and 6-person group study rooms	
	Special Requirements:	Enclosed room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' x 5' work table	
	Seating:	(1) armless task chair	
	Storage:	(8 LF) base cabinet	
	Shelving:	(8 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(1) printer (existing), (1) fax (existing), (1) copier, and (1) scanner (existing); or (1) multi-function device	
	Wall Mount:	(1) 3' x 4' tack board (1) 3' x 4' white board	

8.5 TEACHING/LEARNING CENTER

#	SPACE LIST	Quantity	S.F.	Net S.F.
5	TEACHING/LEARNING CENTER			3,400
5.1	Instructional Rooms		1,200	3,400
5.1.1	Teaching Labs	3	1,000	3,000
5.1.2	Storage	2	200	400

Teaching/Learning Center



5.1.1 **Teaching Labs**

First Level **Instructional Rooms**

Teaching/Learning Center

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	31	Guest(s)
	Proposed NSF	1,000	SF
	Room/Space Quantity:	3	
USE	Activities:	Library instruction	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near information commons and instructional rooms storage	
	Special Requirements:	Two of three rooms connected with operable partition, double doors to chair and table storage, and double doors to public corridor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15) 3' x 6' work tables	
	Seating:	(31) armless task chairs	
	Special Equip:	(1) lectern with AV and data (1) technology cabinet (1) operable panel partition between two of the labs	
	Wall Mount:	(2) 4' x 6' white boards	
	Electronics:	In two of the labs: (31) computer workstations with monitor, keyboard, and CPU In one of the labs: (21) computer workstations with monitor, keyboard, and CPU	

5.1.2 **Storage**

First Level **Instructional Rooms**

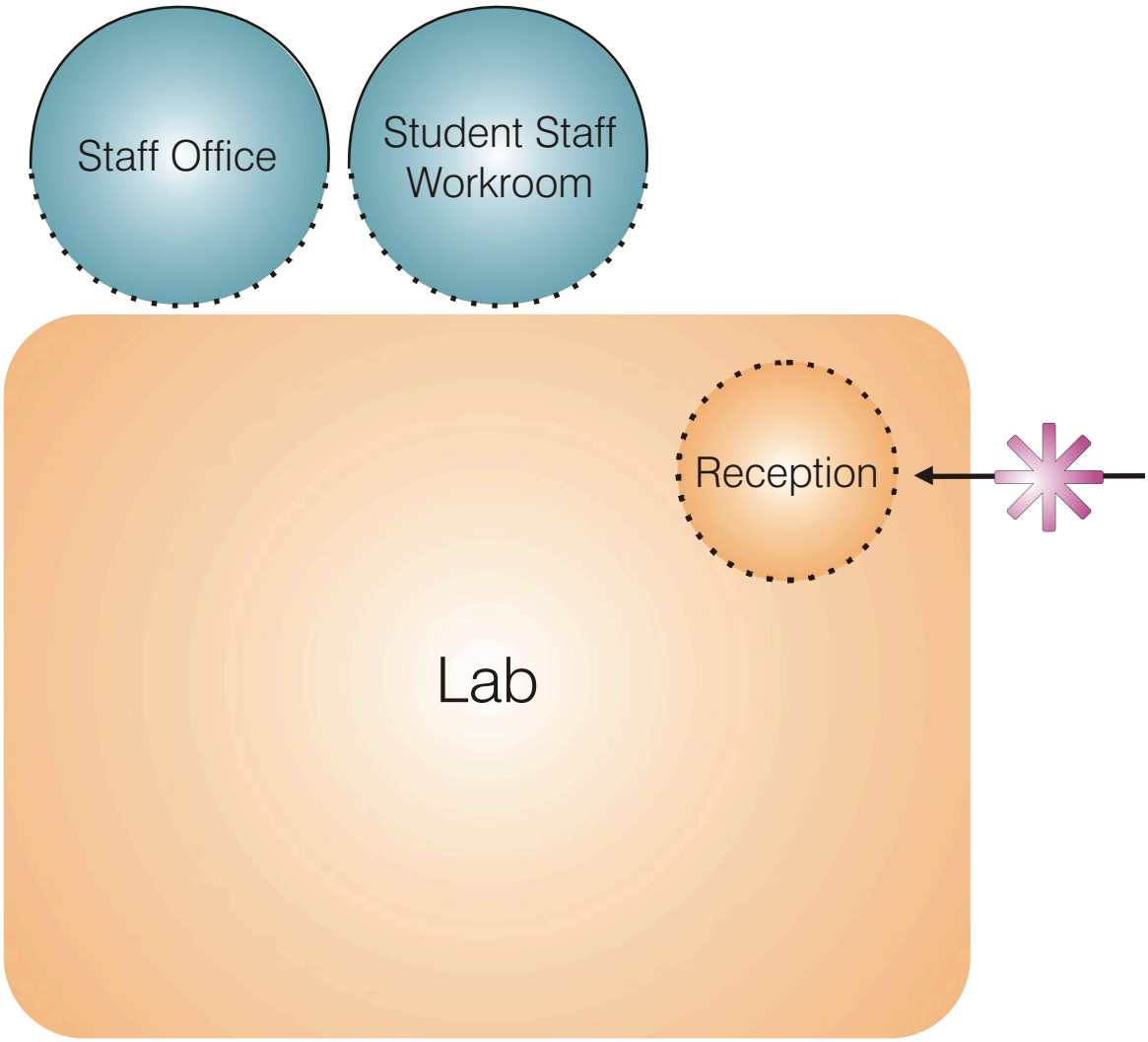
Teaching/Learning Center

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	200	SF
	Room/Space Quantity:	2	
USE	Activities:	Storage for materials, laptop docking cart, and chair and table carts	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near teaching labs	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, direct fluorescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Sprinkler	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(3) 18" x 3' x 6' 6" H metal storage cabinets	
	Shelving:	(40 LF) 12" D wall mounted, adjustable, cantilever shelving	

8.6 WRITING LAB

#	SPACE LIST	Quantity	S.F.	Net S.F.
6	WRITING LAB			2,000
6.1	Staff Office	1	120	120
6.2	Student Staff Work Room	1	120	120
6.3	Lab	1	1760	1,760

Writing Lab



6.1 **Staff Office**

First Level **Writing Lab**

Writing Lab

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to writing lab, student/staff work room, and information commons	
	Special Requirements:	Enclosed office, glazed window to lab	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(14 LF) work surface, systems furnishing (1) 5' oval table on casters	
	Seating:	(1) task chair with arms (2) guest chairs, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (4 LF) 12.5" D open shelving, systems furnishing (4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor (1) printer, laser (existing)	
	Wall Mount:	(1) 3' x 4' white board (1) 3' x 4' tack board	

6.2 **Student/Staff Work Room**

First Level **Writing Lab**

Writing Lab

IDENTIFICATION AND SIZE	Assigned Capacity:	3	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General work area	
	Access:	Staff and work study students	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to writing lab, office, and information commons	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing	
	Seating:	(3) armless task chairs	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(3) pedestal storage units, systems furnishing	
		(3) pencil drawers, systems furnishing	
		(3) desk accessory packages, systems furnishing	
	Shelving:	(3) additional shelf/shelving organizer packages, systems furnishing	
		(12 LF) 12.5" D open shelving, systems furnishing	
		(12 LF) under shelf task lighting	
	Electronics:	(3) computer workstations with monitor, keyboard, and CPU	
		(1) printer, laser (existing)	
	Special Equip:	(1) coat rack	
	Wall Mount:	(1) 3' x 4' white board	
		(1) 3' x 4' tack board	

6.3 **Lab**

First Level **Writing Lab**

Writing Lab

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	66	Guest(s)
	Proposed NSF	1,760	SF
	Room/Space Quantity:	1	
USE	Activities:	General lab area, reception, and reference materials	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to office and student/staff work room	
	Special Requirements:	Open area; glazed window to information commons; entrance from information commons, office, and student/staff work room	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(14) 3' 6" x 6' work tables (4) 2' 6" x 2' 6" occasional tables (2) 2' 6" x 4' carrels with overhead shelf	
	Seating:	(58) guest chairs (8) upholstered mid-scale lounge chairs	
	Shelving:	(4) 11" D shelf + 2" frame x 90" H, single-face sections	
	Wall Mount:	(2) 3' x 4' white board (2) 3' x 4' tack board	

8.7 GENERAL COLLECTION

#	SPACE LIST	Quantity	S.F.	Net S.F.
7	GENERAL COLLECTION			50,914
7.1	Collection			21,330
7.1.1	Circulating			20,650
7.1.1.a	*General Collection*	*1*	*20,000*	*20,000*
7.1.1.b	*New Book Display/Browsing*	*1*	*650*	*650*
7.1.2	Non-Circulating			680
7.1.2.a	*Map Cases/GIS*	*1*	*680*	*680*
7.2	User Seats			29,584
7.2.1	General User Seats	498	38	18,924
7.2.2	Collaborative Studies/Seminar Rooms			10,660
7.2.2.a	*4-Person Study Space*	*28*	*100*	*2,800*
7.2.2.b	*6-Person Study Space*	*20*	*120*	*2,400*
7.2.2.c	*10-Person Study Space*	*4*	*240*	*960*
7.2.2.d	*Seminar Room*	*5*	*900*	*4,500*

7.1.1.a **General Collection**

G, 2, & 3 **Collection**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	20,000	SF
	Room/Space Quantity:	1	
USE	Activities:	Browsable book stacks, including space to market new titles in each subject area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near user seats	
	Special Requirements:	Open areas	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(909) 22" D shelf + 2" frame x 90" H, double-face sections	

7.1.1.b **New Book Display/Browsing**

Second Level **Collection**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	8	Guest(s)
	Proposed NSF	650	SF
	Room/Space Quantity:	1	
USE	Activities:	General browsing and display of new books	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near main access at second level	
	Special Requirements:	Upgraded finishes	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Wood paneling and painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 2' x 4' coffee tables	
	Seating:	(8) upholstered mid-scale lounge chairs	
	Shelving:	(3) 12" D x 36" W x 48" H, built-in, wood, bookshelves, single face (13) 12" D x 36" W x 90" H, built-in, wood, bookshelves, double face, with (3) 4' art niches in shelving with accent lighting	
	Special Equip:	(2) floor lamps	

7.1.2.a **Map Cases/ GIS**

Garden Level **Collection**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	680	SF
	Room/Space Quantity:	1	
USE	Activities:	Non-circulating maps and digital information	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near archives	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 3' 6" x 6' work tables	
	Seating:	(2) task chair, armless	
	Storage:	(20) 2' 6" x 3' 6", 5-drawer map cases	
	Electronics:	(1) GIS workstation with large monitor, keyboard, CPU (1) printer, laser	

7.2.1 **General User Seats**

All **User Seats**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	38	SF
	Room/Space Quantity:	497	
USE	Activities:	General seating areas distributed throughout library	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near collections	
	Special Requirements:	Open area: 60% tables and chairs, 30% lounge seating, 10% individual study spaces	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surfaces and Seating:	Tables and Chairs: (57) 3' 6" x 6' work tables (227) armless task chairs (18) 4-person booths - 5' x 6' banquettes Lounge Seating: (55) 2' 6" x 2' 6" occasional tables (55) upholstered mid-scale lounge chairs (16) upholstered large-scale lounge chairs (31) upholstered tablet-arm lounge chairs (20) ottomans (10) 5' loveseats (30 LF) built-in bench (14 seats) (6) 2' x 5' benches (2 seats per bench) Individual Study Spaces: (50) 2' 6" x 4' study carrels (50) armless task chairs	

7.2.2.a **4-Person Study Space**

G, 2, & 3 **User Seats**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	4	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	28	
USE	Activities:	General study space	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near collection	
	Special Requirements:	Enclosed area with full-height glazed walls to assist with visual monitoring	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' x 5' work table	
	Seating:	(4) armless task chairs	
	Wall Mount:	(1) 3' x 4' white board	

7.2.2.b **6-Person Study Space**

G, 2, & 3 **User Seats**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	6	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	20	
USE	Activities:	General study area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Four near 4.4.2 Reference Librarian offices and copy/work room	
	Special Requirements:	Enclosed area with full height glazed walls to assist with visual monitoring	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' 6" x 6' work table	
	Seating:	(6) guest chairs	
	Wall Mount:	(1) 3' x 4' white board	
		or	
	Work Surface:	(1) 5' loveseat	
	Seating:	(4) mid-scale lounge chairs (2) ottomans	
	Wall Mount:	(1) 3' x 4' white board	

7.2.2.c **10-Person Study Space**

G, 2, & 3 **User Seats**

General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	10	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	4	
USE	Activities:	General study area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near collection	
	Special Requirements:	Enclosed area with full height glazed walls to assist with visual monitoring	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) large oval conference table	
	Seating:	(10) guest chairs	

7.2.2.d **Seminar Room**

G, 2, & 3 **User Seats**

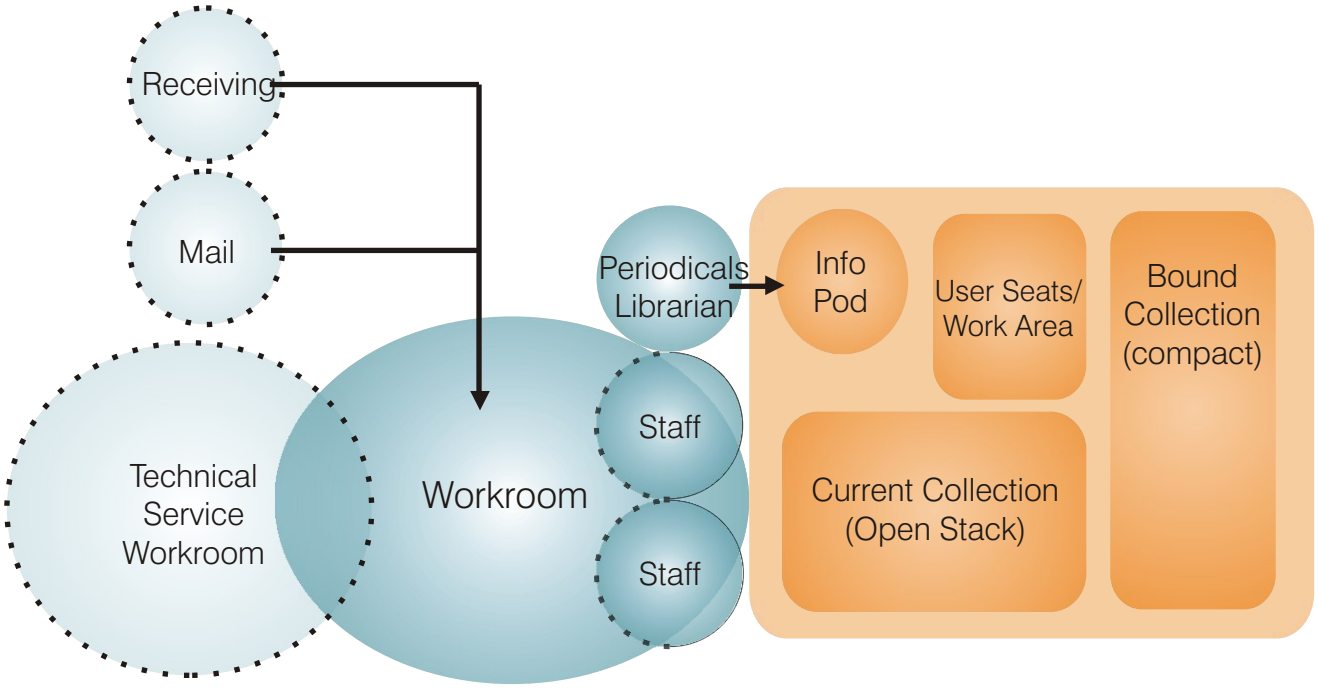
General Collection

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	64	Guest(s)
	Proposed NSF	900	SF
	Room/Space Quantity:	5	
USE	Activities:	General instruction room	
	Access:	Semi-Private	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near collection	
	Special Requirements:	Enclosed area, two on level 3, two on level 4	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16) 3' x 5' work tables	
	Seating:	(64) guest chairs, stackable	
	Storage:	(1) brochure display unit with 24 openings - 2.5"x11" paper	
	Special Equip:	(1) lectern with AV and data (1) technology cabinet	
	Wall Mount:	(2) 4' x 6' white boards	

8.8 PERIODICALS

#	SPACE LIST	Quantity	S.F.	Net S.F.
8	PERIODICALS			5,240
8.1	Staff			360
8.1.1	Periodicals Librarian	1	120	120
8.1.2	Periodicals Staff	2	120	240
8.2	Support			480
8.2.1	Work Room	1	480	480
8.2.1.a	*Current Processing*	*1*	*100*	*100*
8.2.1.b	*Donations Processing*	*1*	*120*	*120*
8.2.1.c	*Workstudy*	*1*	*100*	*100*
8.2.1.d	*Mending/Book Repair*	*1*	*160*	*160*
8.3	Public Area			4,400
8.3.1	Bound Periodicals	1	3,000	3,000
8.3.2	Current Periodicals	1	1400	1,400

Periodicals



8.1.1 **Periodicals Librarian**

Garden Level **Staff**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near periodicals collection, garden level info pod	
	Special Requirements:	Enclosed office, view to collection	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
		(2) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
		(1) additional shelf/shelving organizer package, systems furnishing	
	Shelving:	(4 LF) 12.5" D open shelving, systems furnishing	
		(4 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(6 LF) tackable wall surface	

8.1.2 **Periodicals Staff**

Garden Level **Staff**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	2	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Open offices within workroom, access to Periodicals Collection	
	Special Requirements:	Open offices, cart storage space	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(14 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
	Storage:	(2) lockable 2-drawer vertical file	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(4 LF) of 12" D open shelving, systems furnishing	
		(6 LF) of enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and large monitor	
		(1) printer shared among offices (existing)	
		(1) call number printer (existing)	
	Wall Mount:	(6 LF) tackable wall surface	

8.2.1.a **Current Processing**

Garden Level **Support**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	1	
USE	Activities:	Processing of current periodicals	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to mending and book repair, adjacent to work study work room and periodicals staff offices	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 2' 6" x 5' work tables (15 LF) work surface, systems furnishing	
	Seating:	(2) armless task chairs	
	Storage:	(1) 18" x 3' x 6' 6" high lockable metal storage cabinet (1) pedestal storage unit, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(30 LF) 12" D wall mounted, adjustable, cantilever shelving	

8.2.1.b **Donations Processing**

Garden Level **Support**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	Processing of donated periodicals	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to current processing workroom, work study, and mending/book repair	
	Special Requirements:	Storage space for bindery boxes, open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' 6" x 6' work table	
	Seating:	(2) armless task chairs	
	Shelving:	(40 LF) 12" D wall mounted, adjustable, cantilever shelving	

8.2.1.c **Work Study**

Garden Level **Support**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work by work study students	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to current processing, book mending, donations processing, and periodical staff offices	
	Special Requirements:	Storage space for carts, open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing	
	Seating:	(2) task chairs with arms	
	Storage:	(2) pedestal storage units, systems furnishing (2) pencil drawers, systems furnishing (2) 2-drawer lateral file cabinet, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(20 LF) 12" D wall mounted, adjustable, cantilever shelving (6 LF) under shelf task lighting	
	Electronics:	(2) computer workstations with monitor, keyboard, and CPU (1) printer, laser (existing)	
	Wall Mount:	(6 LF) 18" H tackable wall surface	

8.2.1.d **Mending/Book Repair**

Garden Level **Support**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	160	SF
	Room/Space Quantity:	1	
USE	Activities:	Mending and repair of damaged books and materials	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near work study work area	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	VCT and carpet tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design criteria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	See mech. design criteria	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' x 5' work table	
	Seating:	(1) armless task chair	
	Storage:	(15 LF) base cabinet with 18" x 30' x 6" D integral stainless steel utility sink, and 16" H backsplash, 4' knee space, and 50% small drawers, 50% large roll out drawers	
	Wall Mount:	(1) roll rack (to hold 3 - 5' rolls)	
	Shelving:	(12 LF) 12" D wall mounted, adjustable, cantilever shelving	
	Special Equip:	(2) book presses (existing)	

8.3.1 **Bound Periodicals**

Garden Level **Public Area**

Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	3,000	SF
	Room/Space Quantity:	1	
USE	Activities:	Display, storage, and browsing of bound periodical collection	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near current periodicals and info pod	
	Special Requirements:	Open area, compact shelving	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(150) 24" D x 90" H compact double-face sections, mechanical-assist, all metal with wire shelves	

8.3.2 **Current Periodicals**

Garden Level **Public Area**

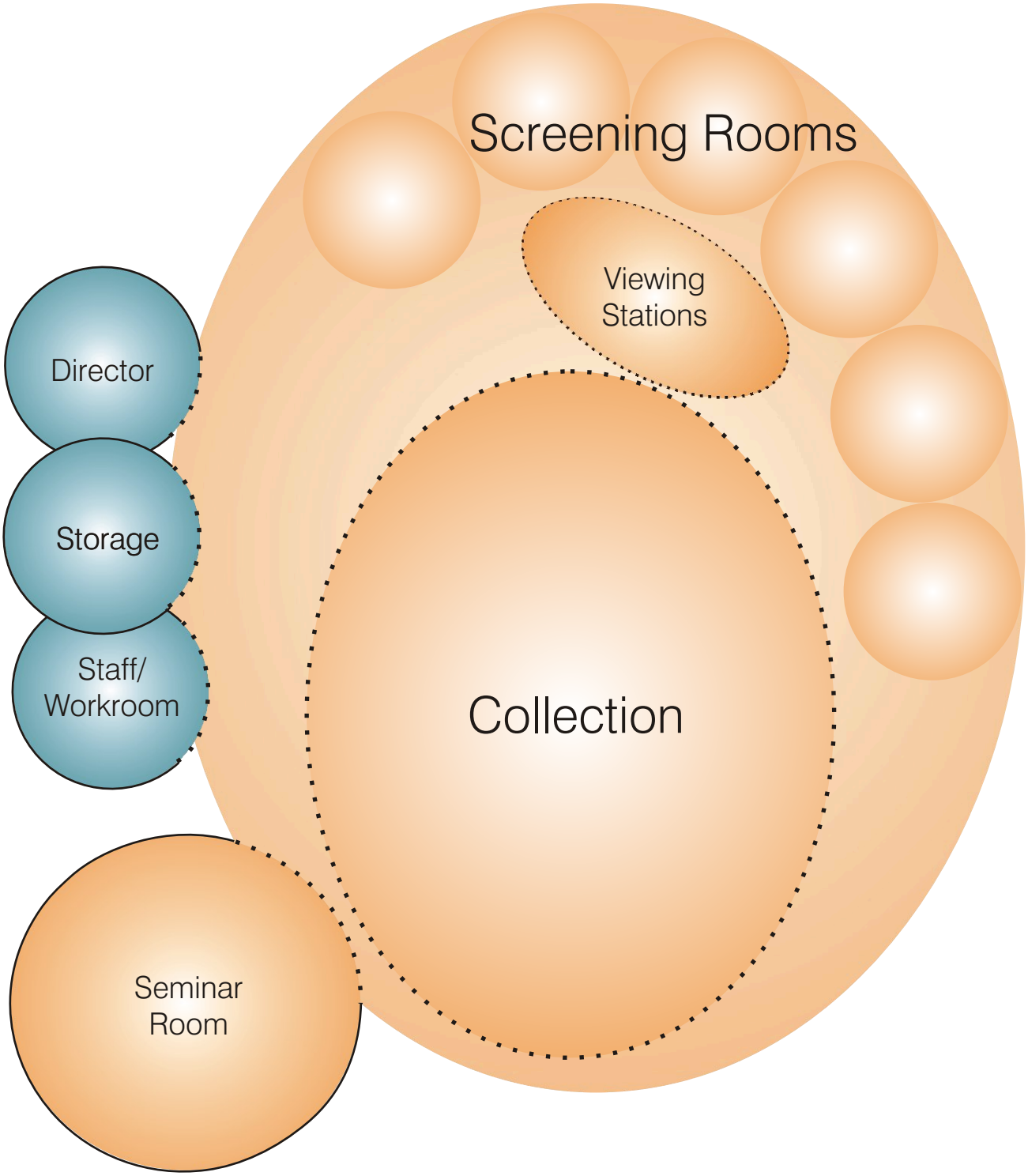
Periodicals

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	1,400	SF
	Room/Space Quantity:	1	
USE	Activities:	General collections browsing area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near info pod, periodicals, and bound collection	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(46) 28.5" D x 90" H, , periodical display and storage, double-face sections, (existing) (2) 11" D + 2" frame x 66" H, single-face sections with 6-tier newspaper stick rack	

8.9 MEDIA

#	SPACE LIST	Quantity	S.F.	Net S.F.
9	MEDIA			7,880
9.1	Staff & Support			520
9.1.1	Librarian Office	1	180	180
9.1.2	Staff Workroom	1	260	260
9.1.3	Storage	1	80	80
9.2	Public Area			5,580
9.2.1	Workstations	1	980	980
9.2.2	User Seats	1	320	320
9.2.3	Media Collection	1	2900	2,900
9.2.4	6-Person Media Viewing Room	3	160	480
9.2.5	Media Enhanced Seminar Room	1	900	900
9.3	Media Services			1,780
9.3.1	Office	1	120	120
9.3.2	Staff Work Area			530
9.3.2.a	*Full Time Staff Office*	*2*	*100*	*200*
9.3.2.b	*Part Time Staff Office*	*2*	*85*	*170*
9.3.2.c	*Reception/Help Desk*	*1*	*80*	*80*
9.3.2.d	*Work Area*	*1*	*80*	*80*
9.3.3	Conference Room	1	140	140
9.3.4	Work Room	1	390	390
9.3.5	Media Engineering Storage	1	450	450
9.3.6	Media Services Storage	1	150	150

Media


Screening Rooms
Viewing Stations
Director
Storage
Staff/ Workroom
Collection
Seminar Room

9.1.1 **Librarian Office**

Second Level **Staff**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	180	SF
	Room/Space Quantity:	1	
USE	Activities:	General office and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to media storage room, media staff workroom and media collection	
	Special Requirements:	Enclosed office, glazed wall with view onto media collection	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) 5' oval table (1) task chair with arms (2) guest chairs, stackable	
	Storage:	(1) 2-drawer lateral file (1) 4-drawer lateral file (2) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(2) additional shelf/shelving organizer packages, systems furnishing (30 LF) 12.5" D open shelving, systems furnishing (16 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor (1) TV (1) DVD player (1) HDD (1) VCR (1) 3' x 4' tack board	

9.1.2 **Staff Workroom**

Second Level **Staff**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	3	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	260	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to media storage and media desk	
	Special Requirements:	Enclosed office, glazed open with view of media desk	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Desired, but not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 5' oval table (40 LF) work surface, systems furnishing	
	Seating:	(3) armless task chairs	
	Storage:	(2) 18" x 3' x 6' H lockable metal storage cabinets (3) pedestal storage units, systems furnishing (3) pencil drawers, systems furnishing (3) desk accessory packages, systems furnishing	
	Shelving:	(3) additional shelf/shelving organizer packages, systems furnishing (10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (70 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(3) computer workstations with monitor, keyboard, and CPU (2) TVs (2) DVD players (2) VCRs	

9.1.3 **Storage**

Second Level **Support**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	1	
USE	Activities:	General storage	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	between librarian office and staff workroom, adjacent to media floor	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, direct fluorescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(70 LF) 12" D wall mounted, adjustable, cantilever shelving (70 LF) 15" D wall mounted, adjustable, cantilever shelving	

9.2.1 **Workstations**

Second Level **Public Area**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	45	Guest(s)
	Proposed NSF	980	SF
	Room/Space Quantity:	1	
USE	Activities:	Student media viewing with headphones and notation stations	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near media collections and media viewing rooms	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(35) 2' 6" x 4' carrels with overhead shelf (10) 3' x 5' carrels for notation, with pull out keyboard trays and overhead shelf	
	Seating:	(45) task chairs, armless	
	Electronics:	(10) computer workstations with monitor, keyboard, CPU, and music notation keyboard (35) viewing stations with LCD monitor, DVD/VCR, and cable access	

9.2.2 **User Seats**

Second Level **Public Area**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	8	Guest(s)
	Proposed NSF	320	SF
	Room/Space Quantity:	1	
USE	Activities:	General seating area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Adjacent to seminar room and media collection	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 2' 6" x 2' 6" occasional table (1) 3' 6" x 6' work tables	
	Seating:	(4) upholstered mid-scale lounge chairs (4) task chairs	

9.2.3 **Media Collection**

Second Level **Public Area**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	2,900	SF
	Room/Space Quantity:	1	
USE	Activities:	General browsing area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near user seats	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(88) 16" D shelf + 2" frame x 90" H, double-face sections (3) 24" x 36" x 6" D built-in, glass front, display cabinets with tackable wall surface, accent lighting, and lockable back	

9.2.4 **6-Person Media Viewing Room**

Second Level **Public Area**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	6	Guest(s)
	Proposed NSF	160	SF
	Room/Space Quantity:	3	
USE	Activities:	General viewing area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Toward interior of building	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, flat panel LCD display, DVD/VCR, and cable drop	
	Voice:	None	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	None or low ambient light	
	Artificial Lighting:	See elec./tech. design criteria, incandescent with dimmer	
	HVAC:	See mech. design criteria	
	Electrical:	None	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 2' 6" x 2' 6" occasional table	
	Seating:	(6) lounge seats, mid-scale	
	Electronics:	(1) DVD player on fold-down shelf (1) flat panel display, large format	

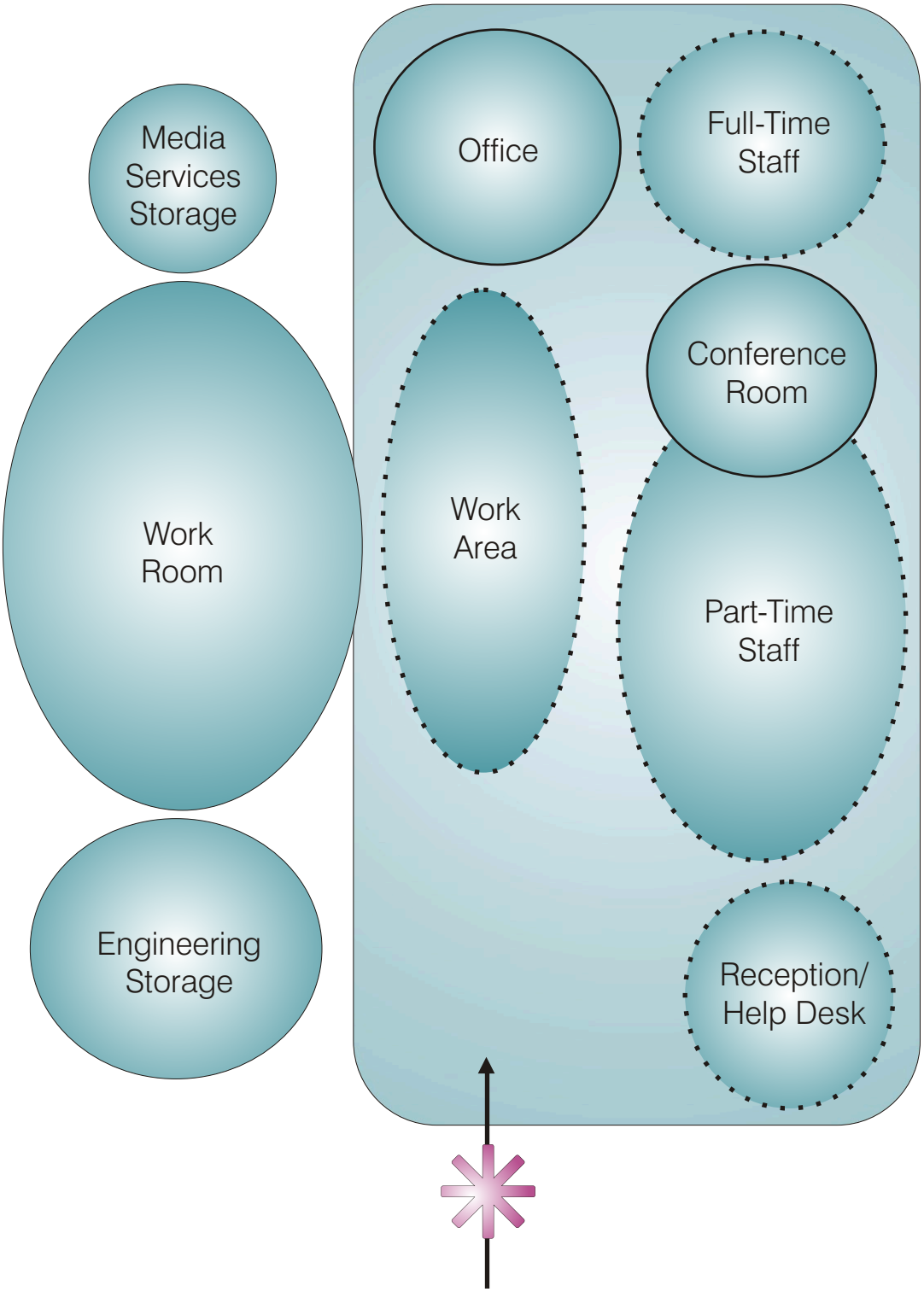
9.2.5 **Media Enhanced Seminar Room**

Second Level **Public Area**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	44	Guest(s)
	Proposed NSF	800	SF
	Room/Space Quantity:	1	
USE	Activities:	Media seminar space, video and teleconferencing	
	Access:	Semi-Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near user seats	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	None or low ambient light	
	Artificial Lighting:	See elec./tech. design criteria, incandescent with dimmer	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock and security cameras at entrance	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Seating:	(44) guest chairs, stackable	
	Special Equip:	(60 LF) track lighting mounted along walls (1) surround sound speaker system (2) 4' x 6' moveable white boards (1) technology cabinet (1) lectern with AV and data	

Media Services



9.3.1 **Office**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services staff and work areas	
	Special Requirements:	Enclosed office, raised floor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing	
	Seating:	(1) 5' oval conference table	
		(1) task chair with arms	
	Storage:	(2) armless task chairs	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(6 LF) 12.5" D open shelving, systems furnishing	
		(6 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(1) 3' x 4' white board	

9.3.2.a **Full-Time Staff Offices**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	100	SF
	Room/Space Quantity:	2	
USE	Activities:	General work area	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services offices, work areas, reception/help desk	
	Special Requirements:	Enclosed office, raised floor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing	
		(1) task chair with arms	
	Seating:	(1) guest chair	
	Storage:	(1) 2-drawer lateral file	
		(2) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(6 LF) 12.5" D open shelving, systems furnishing	
		(6 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(6 LF) tackable wall surface	

9.3.2.b **Part-Time Staff Offices**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	85	SF
	Room/Space Quantity:	2	
USE	Activities:	General storage	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services staff offices and work areas	
	Special Requirements:	Open office, raised floor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, general ceiling lighting, task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 5' oval conference table on casters (22 LF) work surface, systems furnishing	
	Seating:	(2) task chairs with arms (1) guest chair	
	Storage:	(2) 2-drawer lateral file (2) pedestal storage unit, systems furnishing (2) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (15 LF) 12.5" D open shelving, systems furnishing (15 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (12 LF) under shelf task lighting	
	Electronics:	(2) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(12 LF) tackable wall surface	

9.3.2.c **Reception / Help Desk**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	1	
USE	Activities:	Reception and waiting area and general office work	
	Access:	Public	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services staff offices, loading dock	
	Special Requirements:	Open office, raised floor, security cameras at public corridor entry	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing (1) 2' x 4' coffee table	
	Seating:	(1) task chair with arms (2) mid-scale lounge chairs	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (6 LF) 12.5" D open shelving, systems furnishing (6 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Special Equip:	(1) coat rack	

9.3.2.d **Work Area**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	1	
USE	Activities:	Printing and copying	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services staff offices, reception/help desk, and work room	
	Special Requirements:	Open area, raised floor, security cameras at entry to staff work area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(8 LF) work surface, systems furnishing	
	Shelving:	(16 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(1) copier, desktop (1) printer, laser	

9.3.3 **Conference Room**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	6	Guest(s)
	Proposed NSF	140	SF
	Room/Space Quantity:	1	
USE	Activities:	General meeting and work area	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services full time staff offices and work rooms	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 10' oval conference table	
	Seating:	(6) task chairs	

9.3.4 **Work Room**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	6	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	390	SF
	Room/Space Quantity:	1	
USE	Activities:	Equipment assembly and repair shop	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services storage and engineering storage	
	Special Requirements:	Enclosed room, raised floor, security cameras at entrance to staff work area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, projection screen	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6) 3' x 5' work table	
	Seating:	(6) armless task chairs	
	Storage:	(6) pedestal storage units, systems furnishing	
	Wall Mount:	(1) 2' x 5' x 5' H tool chest on casters	
	Shelving:	(2) 18"' x 3' x 6' 6" H metal storage cabinets	
	Electronics:	(24 LF) 15" D wall mounted, adjustable, cantilever shelving	

9.3.5 **Media Engineering Storage**

Garden Level **Media Services**

Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	450	SF
	Room/Space Quantity:	1	
USE	Activities:	General storage of equipment and parts for campus distribution	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near media services work areas, next to loading dock	
	Special Requirements:	Enclosed room and raised floor, security camera at entry to staff work area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(24) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), on casters (15) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack)	

9.3.6 **Media Services Storage**

Garden Level **Media Services**

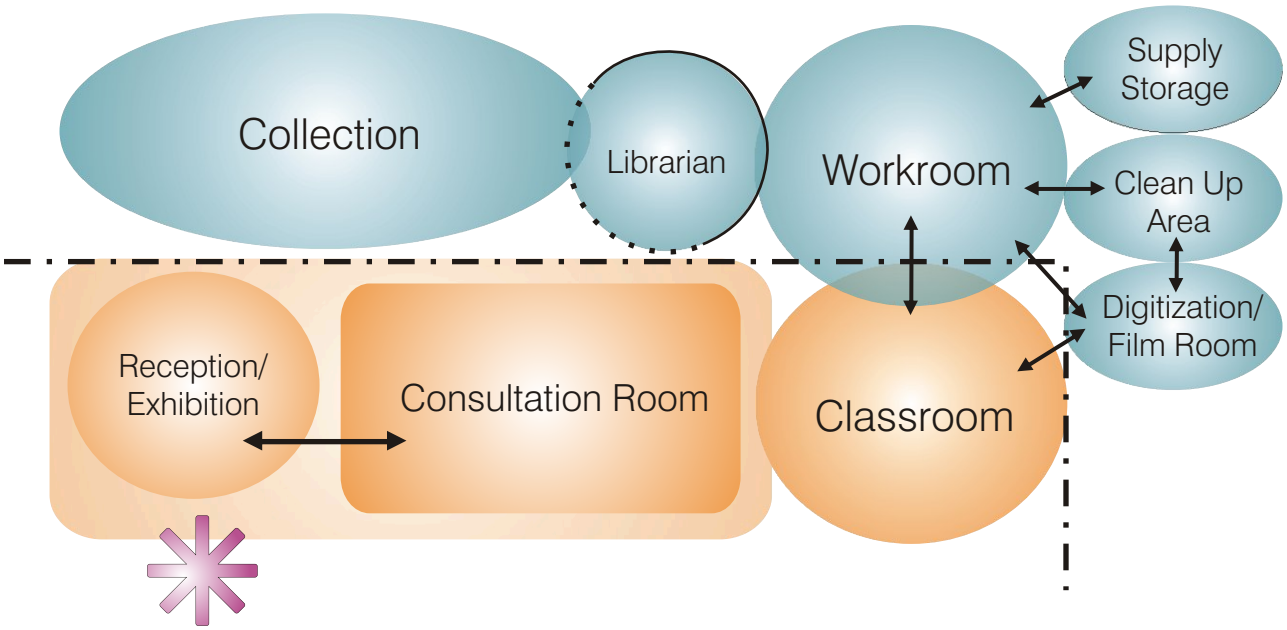
Media

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	General storage of media services equipment and parts for DLC distribution	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to media services reception and workroom	
	Special Requirements:	Enclosed room, raised floor, security camera at entry to workroom	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(8) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), on casters (8) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack)	

8.10 SPECIAL COLLECTIONS/ARCHIVES

#	SPACE LIST	Quantity	S.F.	Net S.F.
10	SPECIAL COLLECTIONS / ARCHIVES			4,445
10.1	Staff			120
10.1.1	Librarian	1	120	120
10.2	Support			1,725
10.2.1	Workroom	1	600	600
10.2.2	Classroom	1	600	600
10.2.3	Digitization/Film Room	1	120	120
10.2.4	Clean Up Area	1	180	180
10.2.5	Supply Storage	1	225	225
10.3	Public Area			800
10.3.1.a	Consultation Room	1	500	500
10.3.1.b	Reception/Exhibits	1	300	300
10.4	Collections Area			1,800
10.4.1	Stacks	1	1,800	1,800

Archives & Special Collections



10.1.1 **Librarian Office**

Garden Level **Staff**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to consultation room and work room	
	Special Requirements:	Enclosed office, glass wall to consultation room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(15 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
		(2) guest chairs, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(15 LF) 12.5" D open shelving, systems furnishing	
		(15 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(8 LF) tackable wall surface	

10.2.1 **Workroom**

Garden Level **Support**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	4	Guest(s)
	Proposed NSF	600	SF
	Room/Space Quantity:	1	
USE	Activities:	General work area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to classroom through 12' high overhead glazed garage door. Near librarian office, supply storage, clean-up area, digitization/film room, and collection.	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6) 3' x 5' work tables on casters	
	Seating:	(4) armless task chairs	
	Storage:	(8 LF) base cabinets with 50% large drawers, 25% small drawers, 25% shelves, and 2 knee openings (8 LF) wall cabinets with 50% open adjustable shelves, 50% closed adjustable shelves	
	Shelving:	(5) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), on casters	
	Electronics:	(2) computer workstations with monitor, keyboard, and CPU	

10.2.2 **Classroom**

Garden Level **Support**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	15	Guest(s)
	Proposed NSF	600	SF
	Room/Space Quantity:	1	
USE	Activities:	General classroom area	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to workroom by 12' high overhead scrolling, glazed garage door. Connected to pubic corridor. Adjacent to supply storage, clean up area, digitization/film room.	
	Special Requirements:	Enclosed area, connected to public corridor	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(6) 3' x 5' work tables on casters	
	Seating:	(16) armless task chairs	
	Storage:	(7 LF) base cabinets with 50% large drawers, 25% small drawers, 25% shelves, and 2 - 4' knee openings (7 LF) wall cabinets with 50% open adjustable shelves,50% closed adjustable shelves (5) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), on casters	
	Shelving:	(5) computer workstations with monitor, CPU, and keyboard	
	Electronics:		

10.2.3 **Digitization/Film Room**

Garden Level **Support**

Special Collections/Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	Scanning and digitizing of archive materials	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Between and connected to workroom and classroom	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design criteria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	None or low ambient light	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock and security cameras at entrance	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing	
	Seating:	(2) armless task chairs	
	Storage:	(2) pedestal storage units, systems furnishing (2) pencil drawers, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(2) additional shelf/shelving organizer packages, systems furnishing (80 LF) 12" D wall mounted, adjustable, cantilever shelving	
	Electronics:	(2) computer workstation with monitor, keyboard, and CPU, (1) scanner, flatbed (existing) (1) copier, desktop	

10.2.4 **Clean Up Area**

Garden Level **Support**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	180	SF
	Room/Space Quantity:	1	
USE	Activities:	General clean up area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Between and connected to workroom and classroom	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Ceramic tile, painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL / ELECTRICAL	Natural Lighting:	None or low ambient light	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria, exhaust	
	Electrical:	None	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	See mech. design criteria, hot and cold water and deep utility sink	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) 30" D base cabinet with integral stainless steel counter, sink, and 16" H backsplash	
	Storage:	(6 LF) wall cabinet, enclosed with adjustable shelves (1) 18" x 3' x 6' 6" H lockable metal cabinet	
	Wall Mount:	(1) canvas sheet material roll rack	
	Special Equip:	(1) 24" x 36" x 8" D sink with wall mounted controls (1) book press (existing)	

10.2.5 **Supply Storage**

Garden Level **Support**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	225	SF
	Room/Space Quantity:	1	
USE	Activities:	General storage	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to workroom	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, direct fluorescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(4) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), on casters	
	Shelving:	(112 LF) 15" D wall mounted, adjustable, cantilever shelving	

10.3.1.a **Consultation Room**

Garden Level **Public Area**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	10	Guest(s)
	Proposed NSF	500	SF
	Room/Space Quantity:	1	
USE	Activities:	Reception, and reading room	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Connected to public corridor, adjacent to librarians office and workroom, near collection	
	Special Requirements:	Enclosed area, glass wall with view from office and public corridor, upgraded finishes	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and accent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 3' x 6' work tables on casters (8 LF) work surface, systems furnishing	
	Seating:	(10) armless task chairs	
	Electronics:	(1) computer workstation with monitor, keyboard, CPU, and headphones	
	Special Equip:	(40 LF) of track lighting along one wall	

10.3.1.b **Reception / Exhibits**

Garden Level **Public Area**

Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	300	SF
	Room/Space Quantity:	1	
USE	Activities:	Waiting and exhibit area	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Open to consultation room with reception desk and secure storage for users, adjacent to public corridor	
	Special Requirements:	Open area, glass wall adjacent to public corridor, upgraded finishes	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms	
	Storage:	(12) 18" x 24" x 18" D lockers (2) pedestal storage units, systems furnishing (2) pencil drawers, systems furnishing (2) desk accessory packages, systems furnishing (2) 2' x 2' x 4' H vitrines with track lighting (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Shelving:	(8 LF) 12" D wall mounted, adjustable, cantilever shelving	
	Electronics:	(1) coin/card operated copier, free-standing, high-speed, sorter	

10.4.1 **Stacks**

Garden Level **Collections Area**

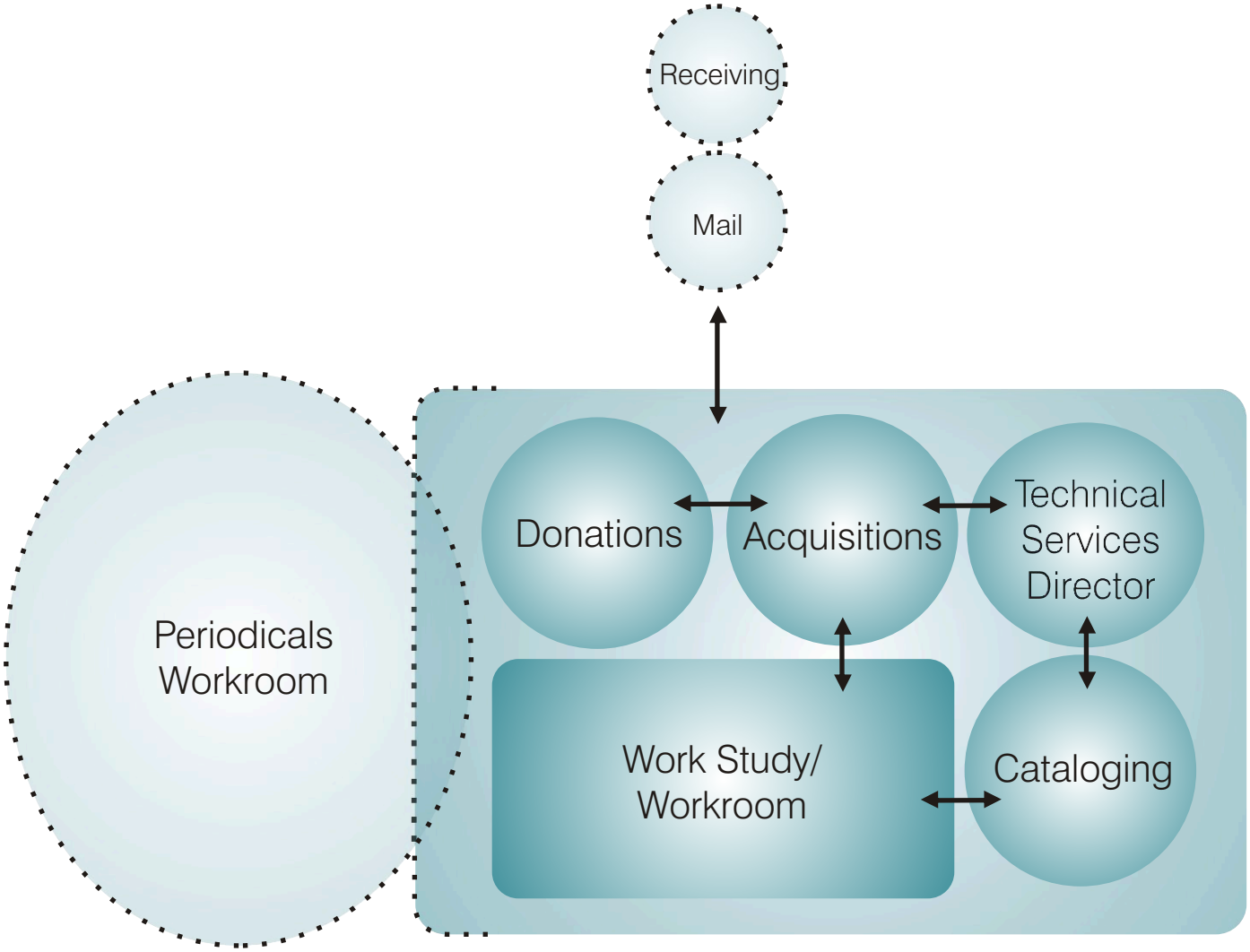
Special Collections / Archives

IDENTIFICATION AND SIZE	Assigned Capacity:		Occupant(s)
	Unassigned Capacity:		Guest(s)
	Proposed NSF	1,800	SF
	Room/Space Quantity:	1	
USE	Activities:	Secure collection storage area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Adjacent to consultation room and near workroom	
	Special Requirements:	Enclosed area, 4' W door, all shelving to be metal	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Exposed concrete (sealed)	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(10) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack) (55 LF) 12" D wall mounted, adjustable, cantilever shelving (160) 24" D x 90" H compact shelving, mechanical-assist, metal with wire shelves (1) freezer, chest for archival film storage	
	Special Equip:	(1) dehumidification cabinet	

8.11 TECHNICAL SERVICES

#	SPACE LIST	Quantity	S.F.	Net S.F.
11	TECHNICAL SERVICES			2,200
11.1	Staff			870
11.1.1	Librarian	1	150	150
11.1.2	Acquisitions Staff	3	120	360
11.1.3	Cataloging Staff	3	120	360
11.2	Support			1,330
11.2.1	Work Room			760
11.2.1.a	*Acquisitions Staging/Work Study*	*1*	*220*	*220*
11.2.1.b	*Cataloging Staging/Work Study*	*1*	*200*	*200*
11.2.1.c	*Book Processing Work Area*	*1*	*340*	*340*
11.2.2	Donations			310
11.2.2.a	*Processing*	*1*	*150*	*150*
11.2.2.b	*Storage*	*1*	*160*	*160*
11.2.3	Storage & Copier/Printer	1	260	260

Technical Services



11.1.1 **Librarian**

Garden Level **Staff**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to technical services staff workroom	
	Special Requirements:	Enclosed office, storage space for carts	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, STC 40-45	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing (1) 5' oval table on casters	
	Seating:	(1) task chair with arms (2) guest chairs, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(10) additional shelf/shelving organizer package, systems furnishing (30 LF) 12.5" D open shelving, systems furnishing (30 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors	
	Wall Mount:	(1) 3' x 4' white board (1) 3' x 4' tack board	

11.1.2 **Acquisitions Staff**

Garden Level **Staff**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	3	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to acquisitions work study, near restrooms	
	Special Requirements:	Open office, storage space for carts	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed locks on cabinets	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) wall mounted work surface, systems furnishing	
	Seating:	(1) task chair with arms	
		(1) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(2) 4-drawer lateral file, systems furnishing, shared	
		(2) 4-drawer lateral file, systems furnishing, shared	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(10 LF) 12.5" D open shelving, systems furnishing	
		(10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors	
		(2) printers, laser (existing)	

11.1.3 **Cataloging Staff**

Garden Level **Staff**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	3	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near work study area, near shipping and receiving, close to restrooms	
	Special Requirements:	Three open offices, storage space for TV/VCR cart	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed locks on cabinets	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) wall mounted work surface, systems furnishing	
	Seating:	(1) task chair with arms (1) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (5 LF) 12.5" D open shelving, systems furnishing (5 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors (2) printers, laser (existing) (1) TV/VCR cart	

11.2.1.a **Acquisitions Staging / Work Study**

Garden Level **Staff**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	220	SF
	Room/Space Quantity:	1	
USE	Activities:	General study area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to cataloging staging/work study and book processing	
	Special Requirements:	Open offices, storage space for carts	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 3' x 5' work tables on casters	
		(10 LF) work surface, systems furnishing	
	Seating:	(2) armless task chairs	
	Storage:	(2) 2-drawer lateral file cabinets, systems furnishing	
		(2) pedestal file cabinets, systems furnishing	
		(2) pencil drawers, systems furnishing	
		(2) desk accessory packages, systems furnishing	
	Shelving:	(2) additional shelf/shelving organizer packages, systems furnishing	
		(2) lamination and book jacket rolls mounted above counter	
		(20 LF) 12.5" D open shelving, systems furnishing	
		(9 LF) under shelf task lighting	
	Electronics:	(2) computer workstations with 1 monitors each, keyboard, and CPU	
		(2) printers, laser, shared (existing)	
	Wall Mount:	(1) 3' x 4' white board	

11.2.1.b **Cataloging Staging / Work Study**

Garden Level **Staff**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:		Guest(s)
	Proposed NSF	200	SF
	Room/Space Quantity:	1	
USE	Activities:	General study area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to acquisitions staging/work study and book processing	
	Special Requirements:	Open area, storage space for carts	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets and UPS	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 3' x 5' work tables on casters (10 LF) work surface, systems furnishing	
	Seating:	(2) armless task chairs	
	Storage:	(2) 2-drawer lateral file cabinets, systems furnishing (2) pedestal file cabinets, systems furnishing (1) roll rack (2) pencil drawers, systems furnishing (2) desk accessory packages, systems furnishing	
	Shelving:	(4) additional shelf/shelving organizer packages, systems furnishing (36 LF) 12.5" D open shelving, systems furnishing (18 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (9 LF) under shelf task lighting	
	Electronics:	(2) computer workstations with 2 monitors each, keyboard, and CPU (1) printer, laser, shared (existing)	
	Special Equip:	(1) map laminator (existing)	

11.2.1.c **Book Processing/Book Repair Work Area**

Garden Level **Support**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	340	SF
	Room/Space Quantity:	1	
USE	Activities:	General work area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Connected to cataloging staging/work study and acquisitions	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, cable drop	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 2' 6" x 5' work tables (4) 2' 6" x 5' x 30" H worktables	
	Seating:	(4) armless task chairs	
	Shelving:	(60 LF) 12.5" D open shelving, systems furnishing (15 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with 2 monitors, keyboard, and CPU	
	Special Equip:	(1) wall mounted telephone	

11.2.2.a **Donations Processing**

Garden Level **Support**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	3	Occupant(s)
	Unassigned Capacity:		Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	General work area, sorting of donations	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to donations processing, near service elevator and shipping and receiving	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 3' x 5' work tables (5 LF) work surface, systems furnishing	
	Seating:	(3) armless task chairs	
	Shelving:	(9) 11" D shelf + 2" frame x 90" H, single-face sections (10 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(1) computer workstation with 2 monitors, keyboard, and CPU	
	Special Equip:	(1) large garbage bin (2) large recycling bins	

11.2.2.b **Donations Storage**

Garden Level **Support**

Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	160	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage of incoming donations	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Near shipping and receiving	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(16) 11" D shelf + 2" frame x 90" H, single-face sections	
	Electronics:	(1) printer, laser (existing) (1) typewriter (existing)	
	Special Equip:	(3) cutting mats (existing) (1) paper shredder (existing) (1) hand truck (existing) (1) large recycling bin	

11.2.3 **Storage & Copier/Printer**

Garden Level **Support**

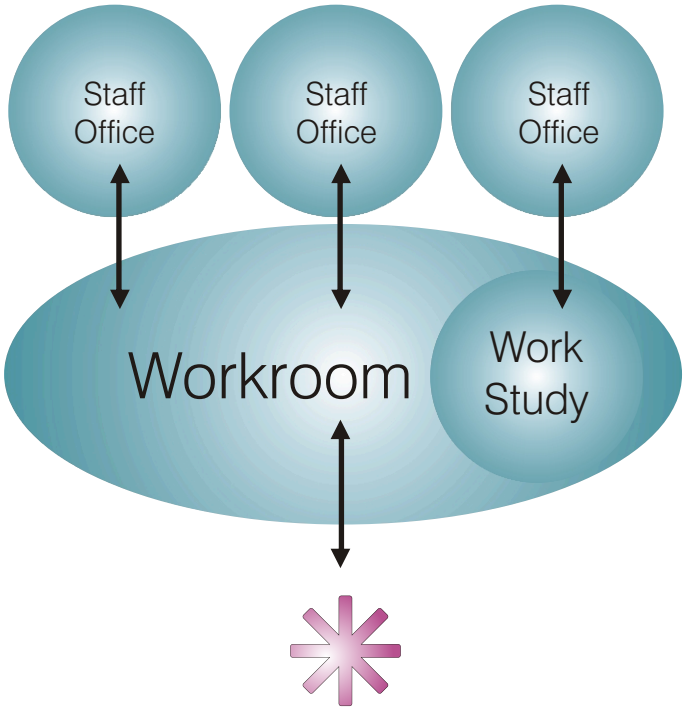
Technical Services

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	4	Guest(s)
	Proposed NSF	260 360	SF
	Room/Space Quantity:	1	
USE	Activities:	General storage	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Adjacent to loading dock, donations processing and storage, adjacent to periodicals workroom	
	Special Requirements:	Open/semi-enclosed copy and storage area with connected loading and storage area, storage space for paper	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 4' round table (12 LF) work surface, systems furnishing	
	Seating:	(4) armless task chairs	
	Storage:	(5) 18" x 3' x 6' high lockable metal storage cabinet (2) 2-drawer lateral file cabinet, systems furnishing	
	Shelving:	(12 LF) 12.5" D open shelving, systems furnishing (4) 11" D shelf + 2" frame x 90" H, single-faced sections	
	Electronics:	(1) copier, free-standing, high-speed, sorter	

8.12 SYSTEMS AND INFORMATION TECHNOLOGY SERVICES

#	SPACE LIST	Quantity	S.F.	Net S.F.
12	SYSTEMS AND I.T. SERVICES			5,600
12.1	Systems			1,100
12.1.1	Office	3	120	360
12.1.2	Work Study	1	150	150
12.1.3	Staff Work Room	1	590	590
12.2	IT			4,500
12.2.1	Offices	2	120	240
12.2.2	Work Study	1	80	80
12.2.3	Printing (secure)	1	120	120
12.2.4	Printing/Copy Work Room	1	80	80
12.2.5	Testing/Maintenance Room	1	350	350
12.2.6	War/Conference Room	1	350	350
12.2.7	Storage	1	350	350
12.2.8	Server Room	1	2,300	2,300
12.2.9	Tape Vault	1	200	200
12.2.10	UPS/Air Conditioning	1	430	430

Systems


Staff Office
Staff Office
Staff Office
Workroom
Work Study

12.1.1 **Offices**

Garden Level **Systems**

Systems and I.T. Services

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	3	
USE	Activities:	IT staff offices	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near IT testing /maintenance, IT staff work area, and server room	
	Special Requirements:	Enclosed offices, no need for raised floor	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, three data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, three double gang 120V boxes at each workstation	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms (1) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (10 LF) 12.5" D open shelving, systems furnishing (10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors, (1) printer, laser, shared among offices	
	Wall Mount:	(6 LF) tackable wall surface (1) 3' x 4' white board	

12.1.2 **Work Study**

Garden Level **Systems**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	2	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	Work study offices and work area	
	Access:	Staff and work study	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to IT staff and testing/maintenance	
	Special Requirements:	Enclosed room, includes staff work room	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, provide absorbtive surfaces as necessary	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria, pressurized air	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(22 LF) work surface, systems furnishing (1) 5' oval table on casters	
	Seating:	(2) armless task chairs (1) guest chair	
	Storage:	(2) pedestal storage units, systems furnishing (2) pencil drawers (2) desk accessory package, systems furnishing	
	Shelving:	(2) additional shelf/shelving organizer packages, systems furnishing (14 LF) 12.5" D open shelving, systems furnishing	
	Electronics:	(2) computer workstations with 2 monitors, keyboard, and CPU	

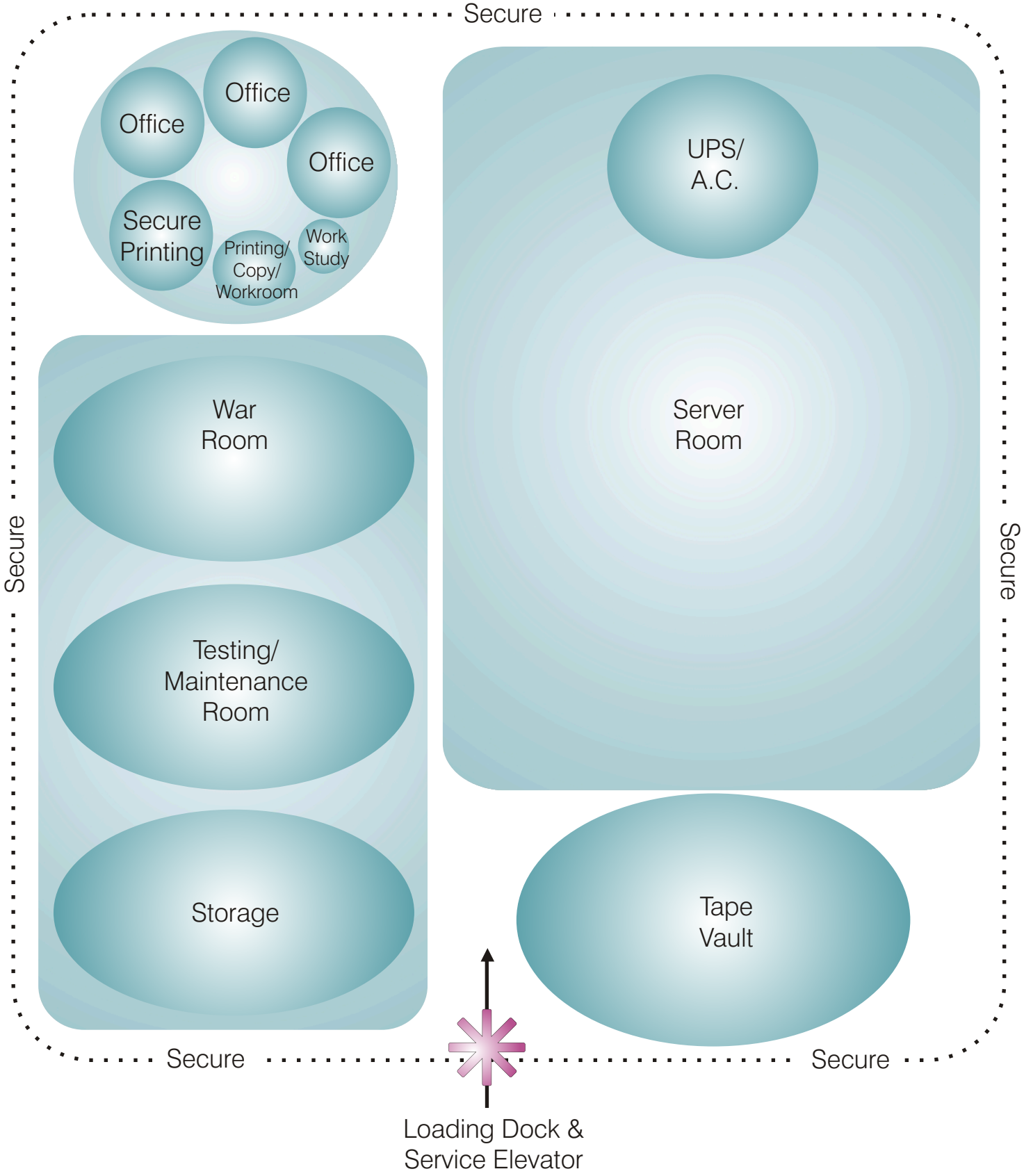
12.1.3 **Staff Work Room**

Garden Level **Systems**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	6	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	590	SF
	Room/Space Quantity:	1	
USE	Activities:	Equipment assembly and repair	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to systems staff	
	Special Requirements:	Raised floor, enclosed area including work study work area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, two data ports at each worksurface and above white bo	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria, pressurized air	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 3' x 4' workbenches with carpeted work surface, lockable drawers, and open shelf below, stool height	
	Seating:	(6) task stools with backs	
	Storage:	(4) 18" x 3' x 6' 6" H lockable metal storage cabinets (2) 5-drawer vertical file cabinets (2) 2' x 4' x 5' H tool chests on casters	
	Shelving:	(16 LF) 15" D wall mounted, adjustable, cantilever shelving, above workbenches (12 LF) under shelf task lighting	
	Special Equip:	(1) big flat panel display/monitor mounted above white board	
	Wall Mount:	(1) 3' x 4' white board	

Information Technologies



12.2.1 **Offices**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	2	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to IT staff, testing/maintenance room, and server room	
	Special Requirements:	Raised floor, enclosed room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, three data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(20 LF) work surface, systems furnishing	
	Seating:	(1) task chair with arms (1) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (10 LF) 12.5" D open shelving, systems furnishing (10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors, (1) printer, laser, shared among offices	
	Wall Mount:	(6 LF) tackable wall surface	

12.2.2 **Work Study**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	1	
USE	Activities:	Workstudy staff work area, equipment assembly and repair	
	Access:	Staff and workstudy	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to IT staff and testing/maintenance room	
	Special Requirements:	Raised floor, open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Systems furniture, 6' walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, three data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing	
	Seating:	(1) armless task chair	
	Storage:	(1) 2-drawer lateral file cabinet, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (8 LF) 12.5" D, open shelving, systems furnishing	
	Electronics:	(1) computer workstation with keyboard, CPU, and 2 monitors	

12.2.3 **Printing (secure)**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	Secure document printing	
	Access:	Staff (limited)	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to IT staff	
	Special Requirements:	Enclosed room, raised floor	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 5' oval table on casters	
	Seating:	(1) armless task chair	
	Electronics:	(2) printers, laser other equipment supplied by owner	

12.2.4 **Printing/Copy/Work Room**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	80	SF
	Room/Space Quantity:	1	
USE	Activities:	Work room for coping, printing and document prep	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to IT staff offices	
	Special Requirements:	Raised floor, open area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(12 LF) work surface, systems furnishing, stool height	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
	Shelving:	(12 LF) 12" D wall mounted, adjustable, cantilever shelving	
	Electronics:	(1) printer, laser	
		(1) copier, free-standing, high-speed, sorter	

12.2.5 **Testing/Maintenance Room**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	8	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	350	SF
	Room/Space Quantity:	1	
USE	Activities:	Equipment assembly and repair	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to war room, storage room, near IT staff	
	Special Requirements:	Raised floor, enclosed room, large door (4' x 8') or roll-up door with access to War Room	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, three data ports	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 3' x 4' workbenches with carpeted work surface, lockable drawers, and open shelf below, stool height (2) 3' x 4' workbenches, stool height	
	Seating:	(8) task stools with backs	
	Shelving:	(16 LF) 15" D wall mounted, adjustable, cantilever shelving above workbenches (16 LF) under shelf task lighting (3) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack) on casters	
	Wall Mount:	(3) 4' x 6' white boards (4) 3' x 4' white boards	

12.2.6 **War/Conference Room**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	20	Guest(s)
	Proposed NSF	350	SF
	Room/Space Quantity:	1	
USE	Activities:	Work area and informal meeting room	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Access to Testing/Maintenance	
	Special Requirements:	Raised floor, enclosed room, prefer 48"-wide single door to 12.2.5 testing/maintenance	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(4) 3' x 6' wired worktables	
	Seating:	(20) guest chairs, stackable with storage rack (1) operable partition to separate war room from storage (8) 4' x 6' white boards	

12.2.7 **Storage Room**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	350	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to testing and maintenance room, and internal IT corridor	
	Special Requirements:	Raised floor, 120 SF secure storage, prefer (1) 48"-wide single door rather than double doors	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Shelving:	(8) 3' x 4' x 6' H utility shelving unit (i.e. Bakers' Rack), two on casters (4) 3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack), one on casters	

12.2.8 **Server Room**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	2,300	SF
	Room/Space Quantity:	1	
USE	Activities:	Secure campus-wide data center	
	Access:	Staff (secure)	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Adjacent to testing/maintenance room, connected to UPS/air conditioning, near tape vault	
	Special Requirements:	Raised floor, adhere to National Computer Room Standards, 20 SF needed per cabinet bank, 4' x 8' door from testing/maintenance room, separate cable trays for copper and fiber, power in floor and wiring above.	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	None or low ambient light	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria, provide control for space	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	IDF and MDf:	(8) UPS, edge (75) racks, 7' x 27" x 18" (150) switches, 17" x 38" x 17", installed in racks	
	Server:	(1) HP Eva 8000 SAN, 6' x 4' x 7'6", shared (30) 2' x 4' x 7'6" closed cabinets, arranged back-to-back. prefer WrightLine (1) UPS, main (3) switches, 17" x 38" x 17", stored within cabinets (20) KVM, 17" x 3" x 14", prefer Raritan brand, stored within cabinets (48) servers, 7" x 30" x 19", stored within cabinets	
	Secure Server:	(10) 2' x 4' x 7'6" closed cabinets, arranged back-to-back (1) UPS, main (3) switches, 17" x 38" x 17", stored within cabinets (20) KVM, 17" x 3" x 14", prefer Raritan brand, stored within cabinets (20) servers, 7" x 30" x 19", stored within cabinets	
	Consoles:	(2) 4' x 8' modular work tables, prefer WriteLine brand (6) task stools (4) 4' x 8' consoles, prefer WriteLine brand	

12.2.9 **Tape Vault**

Garden Level **IT**

Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	200	SF
	Room/Space Quantity:	1	
USE	Activities:	Storage of back-up tapes	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Near server room	
	Special Requirements:	Raised floor	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(4) 4' x 3' x 7' tape cabinets, prefer WriteLine brand	

12.2.10 **UPS/Air Conditioning**

Garden Level **IT**

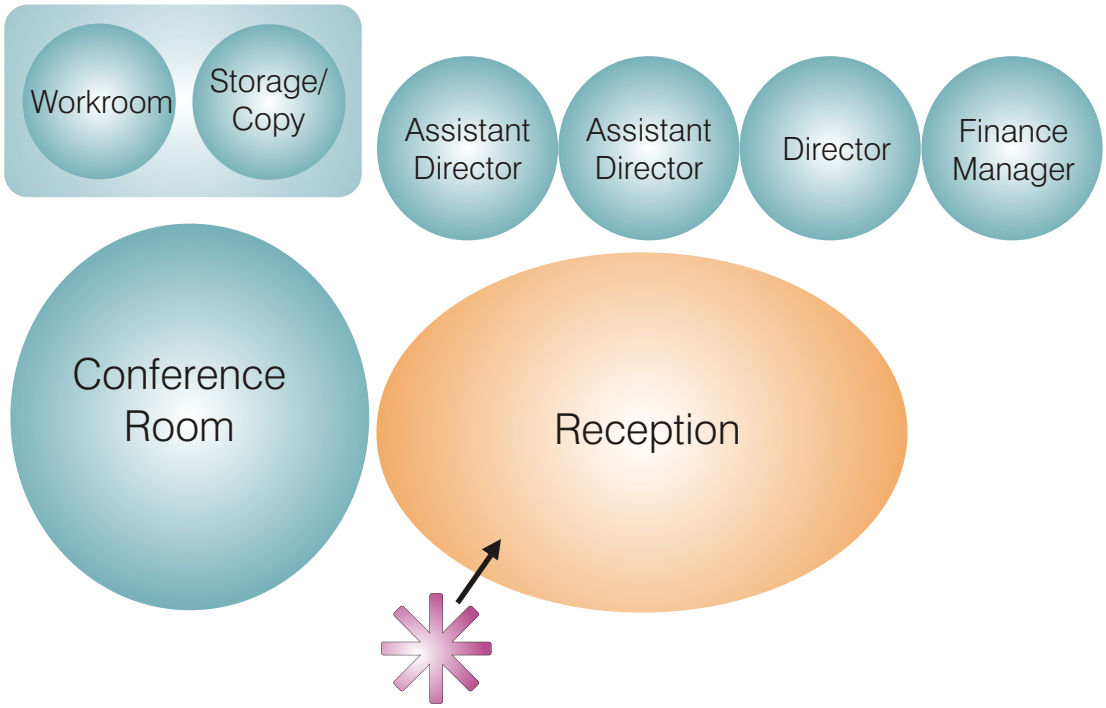
Systems and IT

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	430	SF
	Room/Space Quantity:	1	
USE	Activities:	Equipment and backup systems	
	Access:	Staff	
	Frequency/Hours:	7 days a week, 6:00 AM to 2:00 AM (normally 6:00 AM to midnight)	
	Adjacency:	Connected to server room	
	Special Requirements:	Raised floor	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Resilient tile, anti-static	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	None	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS		n/a	

8.13 LIBRARY ADMINISTRATION

#	SPACE LIST	Quantity	S.F.	Net S.F.
13	LIBRARY ADMINISTRATION			1,750
13.1	Administrative Suite			1,350
13.1.1	Library Director	1	180	180
13.1.2	Assistant Director/Development Director	2	150	300
13.1.3	Manager, Financial Operations	1	150	150
13.1.4	Administrative Assistant/Reception	1	200	200
13.1.5	Conference Room	1	400	400
13.1.6	Copy/Mail/Storage Room	1	120	120
13.2	Break Room			400
13.2.1	Break Room	1	400	400

Library Administration



13.1.1 **Library Director**

Third Level **Staff**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	180	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work and meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within Library Administration Suite	
	Special Requirements:	Enclosed office, upgraded finishes	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, isolate from adjacent spaces	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, two data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(18 LF) work surface, systems furnishing (1) 5' oval table	
	Seating:	(1) task chair with arms (3) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (12 LF) 12.5" D open shelving, systems furnishing (12 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (2) 12" D x 36" W x 90" H built-in, wood bookcases, single face (12 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor (1) printer, laser (existing)	
	Wall Mount:	(12 LF) 18" H tackable wall surface	

13.1.2 **Assistant Director/Development Director**

Third Level **Staff**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	2	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within Library Administration Suite	
	Special Requirements:	Enclosed office	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, isolate from adjacent spaces	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria, two data ports at each workstation	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing	
		(1) 5' oval table	
	Seating:	(1) task chair with arms	
		(3) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing	
		(1) 4-drawer lateral file, systems furnishing	
		(1) pedestal storage unit, systems furnishing	
		(1) pencil drawer, systems furnishing	
		(1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing	
		(10 LF) 12.5" D open shelving, systems furnishing	
		(10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing	
		(9 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor	
	Wall Mount:	(9 LF) 18" H tackable wall surface	

13.1.3 **Manager, Financial Operations**

Third Level **Staff**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	2	Guest(s)
	Proposed NSF	150	SF
	Room/Space Quantity:	1	
USE	Activities:	General office work	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within Library Administration Suite	
	Special Requirements:	Enclosed office	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed walls	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at each room	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(16 LF) work surface, systems furnishing (1) 5' oval table	
	Seating:	(1) task chair with arms (2) guest chair, stackable	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) 4-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (10 LF) 12.5" D open shelving, systems furnishing (10 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (9 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor (1) printer, laser (existing)	
	Wall Mount	(9 LF) 18" H tackable wall surface	

13.1.4 **Administrative Assistant / Reception**

Third Level **Staff**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	3	Guest(s)
	Proposed NSF	200	SF
	Room/Space Quantity:	1	
USE	Activities:	General office and waiting area	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Located at the main entrance into the Library Administration Suite	
	Special Requirements:	Enclosed area encompassing both a reception workstation and a seating area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL / ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(18 LF) work surface, systems furnishing (8 LF) work surface, transaction counter (2) 2' 6" x 2' 6" occasional tables	
	Seating:	(1) task chair with arms (3) mid-scale lounge chairs	
	Storage:	(1) 2-drawer lateral file, systems furnishing (1) pedestal storage unit, systems furnishing (1) pencil drawer, systems furnishing (1) desk accessory package, systems furnishing	
	Shelving:	(1) additional shelf/shelving organizer package, systems furnishing (8 LF) 15.5" D enclosed shelving with flipper doors, systems furnishing (6 LF) under shelf task lighting	
	Electronics:	(1) computer workstation with keyboard, CPU, and monitor (1) printer, laser (existing)	
	Wall Mount:	(8 LF) 18" H tackable wall surface	

13.1.5 **Conference Room**

Third Level **Support**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	20	Guest(s)
	Proposed NSF	400	SF
	Room/Space Quantity:	1	
USE	Activities:	General meeting area	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within the Library Administration Suite, adjacent to 13.1.4	
	Special Requirements:	Enclosed area, direct access to both the Administrative Suite and from the public corridor.	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria, isolate from adjacent spaces	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria, data projector and projection screen	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent with scene control	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria, 120V wall outlets	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 4' x 14' wired conference table	
	Seating:	(14) task chairs (6) guest chairs	
	Storage:	(6 LF) base cabinet, wood finish (6 LF) wall cabinet, wood finish	
	Wall Mount:	(2) 3' x 5' white boards	

13.1.6 **Copy/Mail/Storage Room**

Third Level **Support**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	1	Guest(s)
	Proposed NSF	120	SF
	Room/Space Quantity:	1	
USE	Activities:	General copying and storage	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within Library Administration Suite, adjacent to 13.1.4	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	Carpet - tile	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	n/a	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(6 LF) base cabinet (6 LF) wall cabinet (3) 4-drawer lateral files (6) mail slots, mail station	
	Electronics:	(1) copier, desktop	
	Wall Mount:	(1) 3' x 4' tack board (1) 3' x 4' white board	

13.2.1 **Break Room**

Garden Level **Support**

Library Administration

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	12	Guest(s)
	Proposed NSF	400	SF
	Room/Space Quantity:	1	
USE	Activities:	Lunch room and informal meeting space	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 8:00 AM to 6:00 PM	
	Adjacency:	Within back of house area on Garden Level, needs to serve both for Library staff and as an after hours amenity for IT, Systems and Media Services	
	Special Requirements:	Enclosed area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Painted gypsum board and glazed side lights	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria, wall mounted telephone jack	
	Wire Management:	None	
	Data:	None	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	Hot and cold water, kitchen sink with disposal, and 2 floor drains	
EQUIPMENT AND FURNISHINGS	Work Surface:	(2) 4' dia. round tables (10 LF) bar height counter, built-in	
	Seating:	(8) guest chairs (4) barstools with backs	
	Storage:	(12 LF) wall cabinets (12 LF) base cabinets with 5 LF at accessible sink (10 LF) magazine rack (1) brochure display unit with 24 openings - 2.5"x11" paper	
	Special Equip:	(1) microwave oven (1) refrigerator with ice maker (2) vending machines (1) dishwasher, under counter	
	Wall Mount:	(2) 3' x 4' tack boards	

8.14 BUILDING SUPPORT SPACES

#	SPACE LIST	Quantity	S.F.	Net S.F.
14	BUILDING SUPPORT SPACES (MOST ARE INCLUDED IN NET/GROSS)			3,715
14.1	Custodial			
14.1.1	Closet			
14.2	Central Supplies Storage			
14.3	Supply Distribution Closets			
14.4	Mechanical/Electrical/Communications			
14.4.1	Electrical Room (one per floor)			
14.4.2	Telephone Services (MDF/IDF Room)			
14.4.3	Data Distribution Rooms			
14.5	Shipping and Receiving			400
14.5.1	Mail Room/Supplies Storage	1	400	400
14.5.2	Mail Distribution/Information Display			
14.6	Storage			
14.7	Loading Dock	1	390	390
14.8	Circulation & Public Spaces			2,925
14.8.1	Floor Lobbies			
14.8.2	Elevator			
14.8.3	Corridors			
14.8.4	Service Elevators			
14.8.5	Concourse			2,925

Building Services

- **8.14.0 General**
- **8.14.1 Custodial Closet**
- **8.14.2 Storage Rooms**
- **8.14.3 Storage (See 8.14.2)**
- **8.14.4 Mechanical Rooms, Electrical Rooms, Telecom/Data Rooms**
- **8.14.5 Shipping and Receiving**
- **8.14.6 Storage (See 8.14.2)**
- **8.14.7 Loading Area/Dock**
- **8.14.8 Circulation and Public Spaces**

8.14.0 General

For sealed concrete here and elsewhere in the program, provide high-gloss, water-based urethane coating system (two coats).
At mop sinks, extend tile wainscot one row of tile wider than width of mop sink on both sides.

8.14.1 Custodial Closet

General

- Custodial room on each level of the building.
- Utilitarian space.
- Each custodial room should contain:
    - 1 sink
    - Storage space for cleaning supplies
    - Approximately 30 square feet minimum
    - Louvered door

Finishes

- Floor: Sealed concrete
- Walls: Painted gypsum board, ceramic tile wainscot at mop sink
- Ceiling: Open to structure

8.14.2 Storage Rooms

General

- Both central supplies storage as well other needed storage on each level.
- Utilitarian space.
- Should contain appropriate shelving for storage.

Finishes

- Floor: Sealed concrete
- Walls: Painted gypsum board
- Ceiling: Open to structure

8.14.3 Storage (See 8.14.2)

8.14.4.1 Mechanical Rooms

General

- Main mechanical room in mechanical penthouse.
- Crane access through large doors to the exterior.

Finishes

- Floor: Sealed concrete – traffic coating where needed.

- Walls: Metal panels and gypsum board, painted as appropriate.
- Ceiling: Open to structure

8.14.4.2 Electrical Rooms

General

- Main electrical room on ground floor near the center of the building.
- Electrical room on each level of the building, centrally located and stacked vertically.
- Requirements as necessary for proper building functions.
- Do not land lock between concrete shear walls. Needs access to adjacent ceiling spaces.

Finishes

- Floor: Sealed concrete
- Walls: Painted gypsum board, or CMU, or concrete
- Ceiling: Open to structure

8.14.4.3 Telecom/Data Rooms

General

- Telecom/Data room on each level of the building, stacked vertically.
- Utilitarian space.

Finishes

- Floor: Sealed concrete
- Walls: Painted gypsum board, with fire-treated, painted plywood panels on
- walls to secure equipment.
- Ceiling: Open to structure

8.14.5 Shipping and Receiving

General

- Mail room with supplies storage (225 S.F.)
- Mail distribution and information display (80 S.F)
- See individual space outlines that follow for additional information

Finishes

- Floor: VCT
- Walls: Painted gypsum board
- Ceiling: 8' minimum - suspended acoustical lay-in panels

8.14.6 Storage (See 8.14.2)

8.14.7 Loading Area/Dock

General

- Primarily an exterior area with a concrete loading platform at grade. (250 S.F.)
- Near shipping and receiving
- Near service elevator
- Near garbage and recycling
- Double door into building.
- See individual space outlines that follow for additional information

Finishes

- Floor: Exposed concrete (sealed)
- Walls: Painted gypsum board
- Ceiling: 10' minimum – exposed structure

8.14.8 Circulation and Public Spaces

Entrances

The main entrance should be on the south-west corner of the building on Level 1 providing easy access from pedestrian and vehicle routes, as well as the Physical Education and Liberal Arts buildings. A secondary entrance for public access can be located just opposite the main entrance on the south-east corner. Both entrances will direct visitors into the entry and lobby areas, while still requiring all persons to enter the library proper at a single location for security reasons.

Finishes

- Floor: Stone or tile
- Walls: Wood, stone or painted gypsum board
- Ceilings: 2X2 lay-in panels

Elevators

The Digital Learning Center should include two passenger elevators and a freight elevator. The passenger elevators should have a weight capacity of at least 3,500 lbs. Operating speed should be a minimum of 350 fps, with 2-car group operations. Doors should meet stretcher code (center opening). All elevators should be large enough to accommodate a gurney. Minimum interior dimensions are 6'-8" wide and 5'-5" front to back. All elevators should be fully accessible, meet ADA requirements, and include a telephone. Both passenger elevators should be shown centrally located in the building with two-car operation, giving each level quick access from all sections of the floor. We recommend traction passenger elevators. The freight elevator may be either traction or hydraulic.

The freight elevator should have a weight capacity of at least 4,500 lbs. with doors providing a minimum clear opening of 4'-0". During design, confirm actual clear dimensions and weight capacity based on sizes and weights of crated exhibits, books, supplies, and other materials to be transported. The freight elevator should provide access to the rooftop mechanical penthouse.

Floor finish should be and easily cleanable surface, such as resilient rubber, stone, or tile. Interior cab finished should be consistent with lobby finishes.

Toilet Rooms

Toilet rooms for each sex should be provided on every floor of the Digital Learning Center. All men's and women's toilet rooms are to be ADA compliant. Restrooms on the main floor should be located near Accessibility Services and have 42-inch-wide doors.

The following toilet room accessories will be owner-furnished:

- Toilet paper dispensers,
- Paper towel dispensers,
- Soap dispensers,
- Feminine napkin dispensers,
- Toilet seat cover dispersers.

See Code section for an analysis of required plumbing fixtures.

Family-style/single-occupancy restrooms should be provided in appropriate places throughout the building. For example, single-occupancy restrooms should be located near Accessibility Services and near the Extended Hours Family Study Area.

Finishes

- Floors: Ceramic tile
- Walls: Ceramic tile wainscot, epoxy painted gypsum board
- Ceilings: Epoxy painted gypsum board
- Toilet Partitions: Vandalism-resistant

Hallways (Circulation Routes)

Interior hallways and pedestrian circulation routes should be laid out as logically as possible and should connect with each other to help way finding. Major circulation routes within all stack areas should be wide enough to accommodate patrons standing at the end of ranges, displays, and other intrusions into the walking area.

Major circulation axes should terminate at windows wherever possible. This will provide a welcome visual relief by allowing light and exterior views from circulation zones.

Wherever possible, glass should be utilized in hallways and circulation routes to allow views adjacent spaces. In addition, accessible water fountains should be available in hallways following building code requirements.

Outside corners wall ends in all hallways and other high traffic areas should be furnished with full-height, flush-mounted resilient corner guards with impact resistant plastic covers over continuous aluminum retainers and integral flanges to receive gypsum board tape and finish compound.

Suggested Finishes

- Floors Carpet or stone or tile at areas of higher traffic
- Walls Painted gypsum board or accent material such as wood or stone in limited areas
- Ceilings Lay-in ceiling panels

Connecting Concourse

One hallway of particular significance is the concourse that will connect the DLC to the rest of campus. This concourse should be 30 feet wide and should connect to the existing campus circulation backbone at the junction between the Liberal Arts and the Physical Education buildings.

For code reasons, the width of the passageway within the concourse must remain at least 20 feet clear, so there may be opportunities for program functions such as extended study to overlap with the concourse in a minor way. However, since it is primarily a passageway, attempts to share it with program space may not be fruitful.

Given the potential difficulties of using this area for program functions, and given the fact that this circulation requirement significantly exceeds what can normally be covered by a standard net-to-gross ratio; the area associated with this concourse is in addition to the areas shown on the space list. We have included in the cost estimate a 30 foot by 150 foot concourse.

Our planning concept is that this will be an elevated concourse so that the existing pedestrian pathway to the east of the LA building can pass underneath. In order to create sufficient clearance over the top of this existing pedestrian pathway, the connecting concourse will need to slope upwards. The existing pathway might also be graded lower; however extensive lowering cannot be accomplished without impacting recently installed utilities (fiber optics). If the concourse is sloped, the slope should be maintained at 5% or less so that it will not be considered a ramp by code.

Finishes for the connecting concourse should be consistent with those suggested for hallways above and should fit in with existing finishes in the circulation backbone it connects to.

Stairways

At least two egress stairways should be provided, one near each end of the building. At least one stairway should provide access to the mechanical penthouse and main roof of the building. Stairways that serve all floors must be enclosed in 2 HR rated enclosures. Additional vertical circulation may be appropriate near the center of the building.

Suggested Finishes (Egress Stairs)

- Floor: Resilient stair treads and flooring
- Walls: Painted gypsum board or concrete
- Ceilings Lay-in ceiling panels

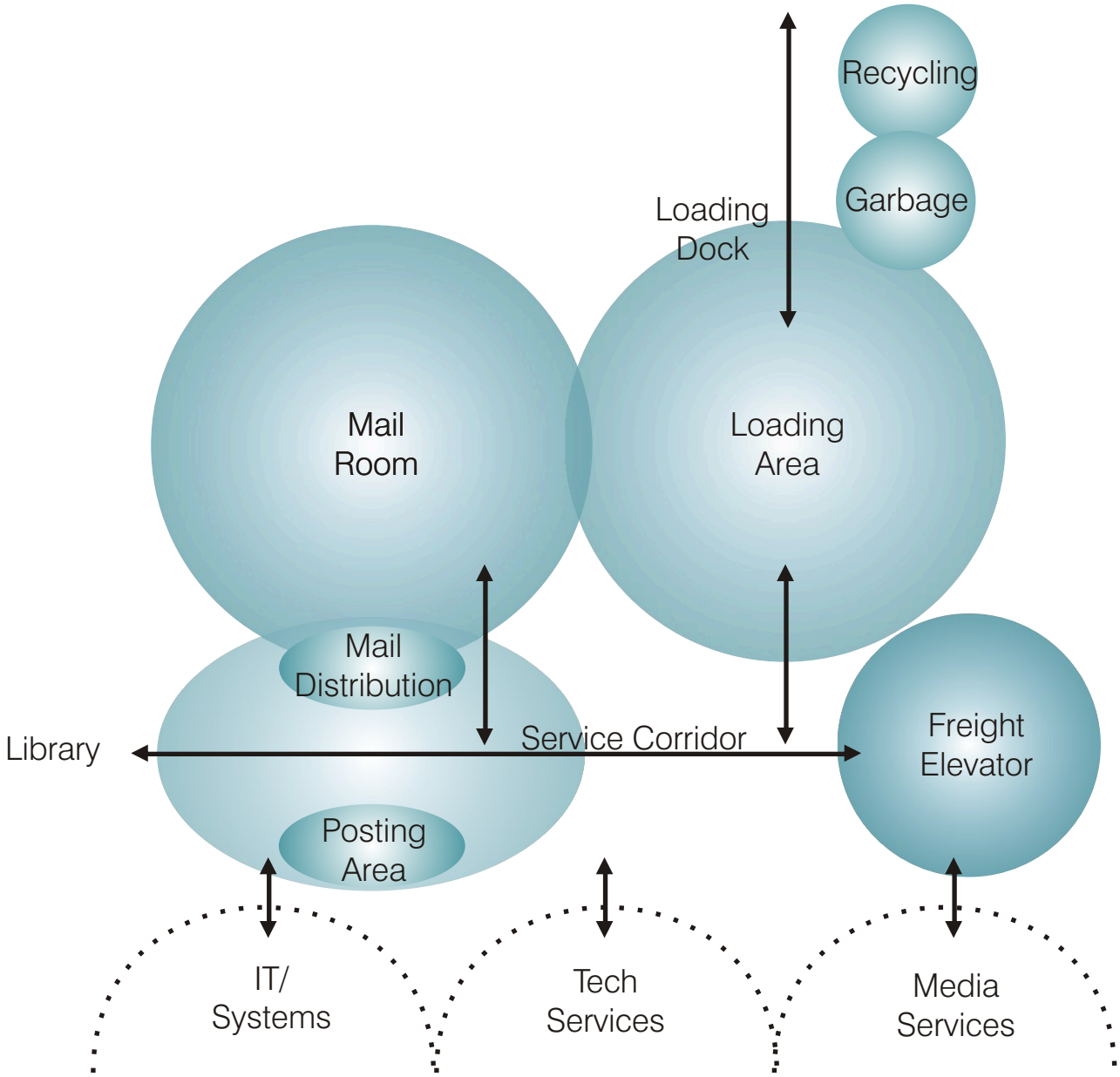
Suggested Finishes (Additional Stair)

- Floor: Stone or wood
- Walls: Wall covering or painted gypsum board
- Ceilings: Painted gypsum board

Floor Lobbies

See individual space outlines that follow.

Shipping & Receiving/Mail Room



14.5.1 **Mail Room / Supplies Storage**

Garden Level **Shipping & Receiving**

Building Support

IDENTIFICATION AND SIZE	Assigned Capacity:	1	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	400	SF
	Room/Space Quantity:	1	
USE	Activities:	Mail sorting, all shipping and receiving for library, deliveries, recycling, and main office supply/distribution storage for library	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Loading dock, technical service delivery door and IT/Systems	
	Special Requirements:	Storage space for carts	
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria, wall mounted telephone jack	
	Wire Management:	None	
	Data:	None	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent and task lighting	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, keyed lock at entrance doors	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Work Surface:	(1) 3' x 4', standing height workbench with drawers and open shelf below	
	Storage:	(60) staff mailboxes, accessible from both mail room and public corridor (12 LF) base cabinet with small drawers, and open shelves below	
	Shelving:	(4) 18"' x 3' x 6' 6" H metal storage cabinets (85 LF) 12" D, wall mounted, adjustable, cantilever shelving (50 LF) 15" D, wall mounted, adjustable, cantilever shelving	

14.5.2 **Mail Distribution / Information Display**

Garden Level **Shipping & Receiving**

Building Support

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF		SF
	Room/Space Quantity:	1	
USE	Activities:	Posting of library announcements within staff accessed corridor	
	Access:	Staff	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Shipping/Receiving, Loading Dock	
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	8' minimum	
	Floor Finish:	VCT	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	None	
MECHANICAL / ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, direct fluorescent	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Wall Mount:	(2) 3' x 4' tack boards (1) 3' x 4' marker board	

14.7 **Loading Dock**

Garden Level **Loading Dock**

Building Support

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	390	SF
	Room/Space Quantity:	1	
USE	Activities:	Shipping and receiving, short term storage	
	Access:	Staff and public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Mail room, Technical Services, IT, Systems, and Media Services	
	Special Requirements:	Roll-up overhead door and adjacent man door, telephone exterior entrance, 8' double-door leading to Freight Elevator	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Exposed concrete (sealed)	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Exposed structure, painted	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	None	
	Voice:	See elec./tech. design criteria, wall mounted telephone jack	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Not required	
	Artificial Lighting:	See elec./tech. design criteria, exterior	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, proximity card lock and security cameras	
	Fire Protection:	Smoke detector, sprinkler, and visual alarm	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(3) 15" D x 90" H, 4-post shelving sections	
	Special Equip:	(1) chest freezer (1) intercom system	

14.8.1 **Floor Lobbies**

G, 2, & 3 **Circulation and Public Spaces**

Building Support

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF		SF
	Room/Space Quantity:		
USE	Activities:	Public circulation route	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:	Near elevator and info pods	
	Special Requirements:	Open area	
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Stone, wood, or painted gypsum board	
	Ceiling Treatment:	Suspended acoustical lay-in panels	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria, wall mounted telephone jack	
	Wire Management:	Both vertical and horizontal wire management	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria, security cameras	
	Fire Protection:	Smoke detector, visual alarm, pull box, and sprinkler	
	Plumbing:	None	
EQUIPMENT AND FURNISHINGS	Storage:	(1) brochure display unit with 24 openings - 2.5"x11" paper	
	Wall Mount:	(64 LF) tackable wall surface	

14.8.5 **Concourse**

First Level **Circulation and Public Spaces**

Building Support Spaces

IDENTIFICATION AND SIZE	Assigned Capacity:	0	Occupant(s)
	Unassigned Capacity:	0	Guest(s)
	Proposed NSF	2,925	SF
	Room/Space Quantity:	1	
USE	Activities:	Public circulation, interior connection to adjacent buildings	
	Access:	Public	
	Frequency/Hours:	Monday through Saturday, 7:00 AM to 11:00 PM	
	Adjacency:		
	Special Requirements:		
CHARACTERISTICS	Ceiling Height:	10' minimum	
	Floor Finish:	Tile, stone, terrazzo, or other durable surface	
	Wall Finish:	Painted gypsum board	
	Ceiling Treatment:	Gypsum board and acoustical lay-in panels + upgraded finishes and design	
	Acoustic Treatment:	See acoustic design criteria	
TECHNOLOGY	AV Requirements:	See elec./tech. design criteria	
	Voice:	See elec./tech. design citeria	
	Wire Management:	None	
	Data:	See elec./tech. design criteria	
MECHANICAL/ ELECTRICAL	Natural Lighting:	Preferred, glare and brightness control required	
	Artificial Lighting:	See elec./tech. design criteria, indirect fluorescent preferred	
	HVAC:	See mech. design criteria	
	Electrical:	See elec./tech. design criteria	
	Security:	See elec./tech. design criteria	
	Fire Protection:	Smoke detector, visual alarm, pull box, and sprinkler	
	Plumbing:	See mech. design criteria	

EQUIPMENT AND FURNISHINGS

9.0 FURNISHINGS, FIXTURES, AND EQUIPMENT

* Note: The following FF&E summary does not include all AV and telephone equipment needed for the building, as much of this will be included in the construction budget.

DIGITAL LEARNING CENTER - NEW FF&E ESTIMATE:	**$3,715,825**
DIGITAL LEARNING CENTER - NEW FF&E DELIVERY AND SETUP (2%) FEE:	**$74,317**
DIGITAL LEARNING CENTER - FF&E SUPPLIED BY OWNER:	**$111,369**
FOOD SERVICE, COPY CENTER, AND IT - NEW FF&E ESTIMATE:	**$2,585,200**
TOTAL FF&E ESTIMATE:	**$6,486,711**
TOTAL DLC FF&E BUDGET:	**$3,500,000**

	TOTAL COST	QUANTITY	UNIT COST
Work Surface:	**$1,043,205**	**Quantity**	**Unit Cost**
Work surface, systems furnishing (in LF)	$254,600	1273	$200
Work surface, systems furnishing, standing height (in LF)	$8,800	44	$200
Free standing workstation accessories, systems furnishing	$6,000	6	$1,000
3' x 3' modular corner work surface, systems furnishing	$0	0	$550
2' 6" x 2' 6" modular corner work surface, systems furnishing	$0	0	$475
Transaction counter, systems furnishing (in LF)	$3,900	39	$100
Built-in bar/transaction counter (in LF)	$6,400	64	$100
24" D work surface (in LF)	$54,135	401	$135
2' 6" x 5' work table	$49,400	76	$650
3' x 5' work table	$101,500	145	$700
3' x 6' work table	$89,600	128	$700
2' 6" x 3' work table	$58,000	145	$400
2' 6" x 6' work table	$670	1	$670
3' dia. bistro table, outdoor	$3,400	4	$850
2' 3" x 3' adjustable work table	$12,000	10	$1,200
2' 6" x 2' 6" occasional table	$32,500	65	$500
2' x 4' coffee table	$3,500	7	$500
3' x 6' wired work table	$21,600	18	$1,200
2'6" x 5' x 30" H work table	$3,200	4	$800
4-person booth (5' x 6' banquettes)	$26,350	31	$850
6-person booth (8' x 6' banquettes)	$1,200	1	$1,200
Children's 48" sq. x 26" H table	$1,700	2	$850
4' round table	$6,000	12	$500
4' round table, outdoor	$3,000	6	$500
5' oval table on casters	$12,750	15	$850
Large oval conference table	$15,000	5	$3,000
Small oval conference table	$2,500	1	$2,500
4' x 8' work bench with carpeted work surface	$15,200	8	$1,900
4' x 8' work bench	$4,800	3	$1,600
4' x 2' 6" carrel with overhead shelf	$105,000	70	$1,500
5' x 2' 6" notation station carrel	$18,000	10	$1,800
4' x 2' 6" media viewing carrel with LCD panel, DVD/VCR, and cable drop	$122,500	35	$3,500

DIGITAL LEARNING CENTER FACILITIES PROGRAM

FURNISHINGS, FIXTURES, AND EQUIPMENT

Seating:	$807,150	Quantity	Unit Cost
Task chair with arms	$23,400	52	$450
Task chair, armless	$211,750	847	$250
Task chair, armless, orthopedic	$18,000	36	$500
Café chair	$8,000	32	$250
Café chair, outdoor	$5,000	20	$250
Guest chair, stackable	$266,100	887	$300
Lounge chair, mid-scale	$118,400	148	$800
Lounge chair, large-scale	$19,200	16	$1,200
Lounge Chair, outdoor	$2,000	4	$500
Children's lounge chair	$3,600	6	$600
Children's size chair	$1,200	8	$150
Tablet-arm chairs	$0	0	$200
Tablet-arm lounge chair	$44,800	32	$1,400
Backless task stool	$3,800	19	$200
Bar stool with back	$15,000	30	$500
Bar stool with back, outdoor	$2,400	8	$300
Sofa. 3-seat	$2,500	1	$2,500
5' loveseat	$34,500	23	$1,500
Ottoman	$14,700	42	$350
2 x 5' bench	$6,800	8	$850
Built-in bench (in LF)	$6,000	30	$200
Storage:	**$281,375**	**Quantity**	**Unit Cost**
Pedestal storage unit, systems furnishing	$30,100	86	$350
Pencil drawer, systems furnishing	$8,600	86	$100
Desk accessory package, systems furnishing	$6,975	93	$75
2-drawer lateral file	$20,650	59	$350
4-drawer lateral file	$4,500	9	$500
2-Drawer Vertical File	$400	4	$100
4-drawer vertical file	$900	2	$450
5-drawer flat file storage cabinet	$12,000	20	$600
3' x 4' x 6' 6" H metal cabinet with 2 extra shelves	$8,800	11	$800
3' x 4' x 6' 6" high metal cabinet, lockable	$16,150	19	$850
3-unit lockers, 15" x 18" x 18"h opening, airport type	$18,200	52	$350
Base cabinet (in LF)	$47,700	159	$300
Base cabinet with stainless steel worksurface and sink (in LF)	$21,500	43	$500
18" H drawers as base cabinet (in LF)	$3,600	12	$300
Wall cabinet (in LF)	$18,250	73	$250
Wall cabinet, display with lockable glass doors (in LF)	$3,600	4	$900
2' D x 6' H lockable cabinet containing (21) 2' x 2' x 2' drawers	$32,000	16	$2,000
4' W x 2' D x 8' 6" H cabinet containing (4) 12" divided vertical storage slots	$800	1	$800
12" D lockable cabinet containing (25) 12" x 12" x 12" cubbies (in LF)	$2,100	6	$350
3' D lockable cabinet containing (8) 3' x 3' x 3' cubbies (in LF)	$6,000	12	$500
16" x 24" x 24" cubbies	$6,000	16	$375
3D display unit - bookstore style	$800	1	$800
3D display unit - retail style	$800	1	$800

Magazine rack	$250	1	$250
Brochure display unit with 24 openings - 8.5"x11" paper	$4,200	7	$600
Brochure display unit with 24 openings - 2.5"x11" paper	$6,500	13	$500
Wall Mount:	**$50,300**	**Quantity**	**Unit Cost**
Roll material dispenser	$10,500	7	$1,500
4' x 6' white board	$16,200	18	$900
3' x 4' white board	$14,200	71	$200
3' x 4' tack board	$2,400	12	$200
18" H tackable wall surface (in LF)	$7,000	140	$50
Shelving:	**$925,345**	**Quantity**	**Unit Cost**
Single-face stack ends (high)	$4,600	20	$230
single-face stack ends (low)	$0	0	$200
Double-face stack ends (high)	$42,000	100	$420
Double-face stack ends (low)	$2,100	6	$350
Under-shelf task lighting (in LF)	$27,375	365	$75
Additional shelf/shelving organizer package, systems furnishing	$5,625	75	$75
12.5" D open shelving, systems furnishing (in LF)	$47,700	636	$75
15.5" D, enclosed shelving with flipper doors, systems furnishing (in LF)	$44,000	440	$100
12" D wall mounted, adjustable, cantilever shelving (in LF)	$107,520	512	$210
15" D wall mounted, adjustable, cantilever shelving (in LF)	$66,220	308	$215
8" D shelf + 2" frame x 48" H single-face sections	$0	0	$130
16" D shelf + 2" frame x 48" H double-face sections	$0	0	$192
8" D shelf + 2" frame x 90" H single-face sections	$0	0	$186
16" D shelf + 2" frame x 90" H double-face sections	$25,872	88	$294
11" D shelf + 2" frame x 90 " H single-face sections	$20,400	100	$204
22" D shelf + 2" frame x 90 " H double-face sections	$363,646	1051	$346
8" D + 2" frame x 66" H, single-faced sections with 6-tier newspaper stick rack	$486	2	$243
24" D x 90" H compact shelving, mechanical-assist, metal with wire shelves (sections)	$128,700	390	$330
12" D x 90" H, 4-post shelving (sections)	$351	3	$117
15" D x 90" H, 4-post shelving (sections)	$0	0	$135
3' x 4' x 6' H utility shelving unit (i.e. Bakers' Rack)	$1,600	8	$200
3' x 4' x 6' heavy duty utility shelving unit (i.e. Gorilla Rack)	$27,600	92	$300
12" D x 36" W x 48" H wood bookcase, single face	$900	3	$300
12" D x 36" W x 48" H wood bookcase, double face	$0	0	$350
12" D x 36" W x 90" H wood bookcase, single face	$2,800	7	$400
12" D x 36" W x 90" H wood bookcase, double face	$5,850	13	$450
Electronics:	**$435,680**	**Quantity**	**Unit Cost**
Coin/card operated copier free-standing, high-speed with sorter	$6,500	5	$1,300
Copier, desktop	$5,600	7	$800
Multi-function printer/copier/fax/scanner/sorter/stapler	$1,000	1	$1,000
Flat screen monitor - 15"	$0	0	$300
Flat screen monitor - 17"	$0	0	$400
Flat screen monitor - 22" +	$0	0	$700
Large format, flat panel display	$19,200	6	$3,200
LCD projector, ceiling-mount	$32,000	16	$2,000

6' electronic white board	$0	0	$2,500
People counter	$0	0	$5,000
Proximity security card reader	$3,000	2	$1,500
Venda card unit	$0	0	$800
Personal alarm	$0	0	$20
Streaming message board, 6' x 1'	$2,000	1	$2,000
Microwave oven	$500	1	$500
Intercom system	$500	1	$500
Surround sound speaker system	$600	1	$600
Computer workstation (monitor, keyboard, CPU)	$223,200	279	$800
Mini DV decks	$15,000	10	$1,500
Multimedia Computer workstations (monitor, keyboard, CPU) PC	$12,000	3	$4,000
Multimedia Computer workstations (monitor, keyboard, CPU) MAC	$42,000	7	$6,000
Computer workstation (2 monitors, keyboard, CPU)	$34,000	34	$1,000
Computer workstation (monitor, keyboard, CPU, and headphones)	$900	1	$900
Computer workstation (wall or furniture-mounted monitor, keyboard, CPU)	$7,200	6	$1,200
Computer workstation (monitor, keyboard, CPU, and notation keyboard)	$15,000	10	$1,500
Standard television	$900	3	$300
Flatbed scanner	$800	4	$200
Laser printer	$12,600	21	$600
DVD player	$600	6	$100
HDD	$400	1	$400
VHS recorder/player	$180	3	$60
Special Equip:	**$172,770**	**Quantity**	**Unit Cost**
Collection Signage (on stack ends)	$3,750	75	$50
Wall mounted telephone	$120	4	$30
Standard refrigerator	$2,000	1	$2,000
Freezer, chest	$1,200	2	$600
Standard dishwasher	$400	1	400
Electric water cooler (drinking fountain)	$700	1	$700
Large recycling bin on casters (104-gallon capacity)	$1,800	6	$300
Large garbage bin on casters (104-gallon capacity)	$600	2	$300
Desk wastebasket (one per staff workspace)	$920	92	$10
High wastebasket (1 per 500SF of collection and information commons)	$4,770	106	$45
Square sink wastebasket restroom	$440	8	$55
Paper recycling wastebasket (one per staff workspace)	$920	92	$10
Task light, desk lamp	$4,250	17	$250
Diaper-changing table	$400	2	$200
Orientation map/directory, illuminated	$15,000	3	$5,000
Security screens with integrated people counter	$4,200	6	$700
Security system monitor	$1,200	2	$600
CCTV security camera	$15,000	30	$500
Display rail (LF)	$0	0	$40
Planter, 30" dia.	$0	0	$800
Planter, 15" dia.	$0	0	$500
Planter, 12" dia.	$0	0	$200

Lectern (may be height-adjustable, modular, with AV, or with Elmo)	$14,000	4	$3,500
Technology cabinet	$2,600	4	$650
Integrated storage unit for presentation materials	$0	0	$2,500
3' x 3' x 4' presentation cart with AV and data	$1,750	10	$175
3 ' x 4' x 6' TV and DVD/VHS cart	$36,200	181	$200
Hospitality cart	$0	0	$700
Mail cart	$300	1	$300
Portable laptop return/storage cart	$3,000	2	$1,500
Book cart, 3-flat shelves	$7,500	15	$500
Depressible book cart (Smart Bin - 2500)	$4,800	6	$800
2' x 5' x 5' H tool chest on casters	$3,000	3	$1,000
Express check station	$28,000	2	$14,000
Coat rack	$500	2	$250
Coat valet, folding	$0	0	$1,500
2' x 4' Display Vitrine	$3,000	2	$1,500
Dolly for (10) stacking guest chairs	$500	2	$250
Portable stage (4' x 8')	$0	0	$400
Articulating keyboard arms	$0	0	$200
Articulating monitor arms	$0	0	$200
Oblique hanging-file inserts and rails (3 LF)	$0	0	$300
Clocks, battery-operated	$4,950	55	$90
6' mail station	$800	1	$800
Slat wall (in LF)	$400	8	$50
3' x 4' drop box	$1,000	4	$250
Floor lamp	$1,200	4	$300
4' x 6' moveable white board	$1,400	2	$700
Dehumidification cabinet	$200	1	$200
Supplied by Owner	**$111,369**	**Quantity**	**Unit Cost**
2' 3" x 3' adjustable work table	$12,000	10	$1,200
Telephone, cordless	$0	0	$400
Dragon speak system	$600	2	$300
Kurzweil scanner	$18,000	6	$3,000
Magnification unit	$0	0	$100
Microform reader/printer	$0	0	$2,000
Fax machine	$600	2	$300
Pencil sharpener	$75	3	$25
Postage machine and scale (monthly rental)	$30	1	$30
Sensitizer/desensitizer or RFID pad	$25,200	7	$3,600
Bar code scanner	$640	8	$80
Bar-code label printer	$800	2	$400
Receipt printer	$1,500	5	$300
Call number printer	$400	2	$200
Shredder, desk size industrial quality	$300	1	$300
Laminator	$200	2	$100
Typewriter	$300	2	$150
Laser printer	$20,400	34	$600

Cutting mats	$90	3	$30
Hand truck	$60	1	$60
Laser color printer	$0	0	$4,500
Flatbed scanner	$600	3	$200
High-speed scanner	$3,000	1	$3,000
Copier free-standing, high-speed with sorter	$3,600	3	$1,200
Book press	$6,000	3	$2,000
15.25" D x 90" H periodical display and storage units, single-face sections	$0	0	$216
28.5" D x 90" H periodical display and storage units, double-face sections	$16,974	46	$369
Food Services	**$67,800**	**Quantity**	**Unit Cost**
2' 6" x 6' prep tables with stainless steel work surface	$3,600	2	$1,800
Vending machine	$3,000	5	$600
Vending machine with water	$600	1	$600
Commercial 6-burner range	$3,300	1	$3,300
Commercial oven	$9,000	1	$9,000
60 qt. mixer	$6,550	1	$6,550
Warming oven	$4,000	1	$4,000
Cold deli display case	$3,000	1	$3,000
Prep units	$4,800	3	$1,600
Display warmer	$2,000	1	$2,000
Hot food merchandiser	$2,300	1	$2,300
Counter top fryer	$1,000	1	$1,000
Under counter dishwasher	$0	0	$3,600
Conveyor dishwasher	$9,000	1	$9,000
6' commercial refrigerator	$6,000	2	$3,000
Freezer, chest	$600	1	$600
5' hot and cold serving area	$2,000	1	$2,000
5' cold case - glass front refrigerated cabinet	$4,150	1	$4,150
Microwave oven	$500	1	$500
Dual hot beverage unit with warmer or extra thermos units	$800	1	$800
Computer workstation (touch screen monitor, CPU and cash drawer)	$1,600	2	$800
Copy Center Equipment	**$20,200**	**Quantity**	**Unit Cost**
Copier free-standing, high-speed with sorter	$2,400	2	$1,200
Copier free-standing, high-speed color with sorter	$1,500	1	$1,500
Coin/card operated copier free-standing, high-speed with sorter	$2,600	2	$1,300
Thermal roll laminator	$4,000	1	$4,000
Mat board cutter	$300	1	$300
Foam and poster board cutter	$1,500	1	$1,500
Large rotary trimmer	$800	2	$400
Dry mount press	$1,800	1	$1,800
Die cut cabinet	$500	1	$500
Wide format printer - 44" wide, ink jet	$3,500	1	$3,500
4' x 4' spray booth	$500	1	$500
Computer workstation (touch screen monitor, CPU and cash drawer)	$800	1	$800

IT Equipment	$2,497,200	Quantity	Unit Cost
SAN 6ft x 4ft x 7ft 6in (HP Eva 8000 SAN)	$409,000	1	$409,000
Disk space for the HP Eva 8000 SAN	$500,000	1	$500,000
Server			
Closed cabinets (2'x4'x7'6") arranged back-to-back, Wright Line Brand	$60,000	30	$2,000
Switches 17.4in x 38.4in x 17.3in (go in closed cabinets)	$240,000	3	$80,000
KVM 17in x 2.7in x 14in (go in closed cabinets)	$210,000	30	$7,000
Servers 7in x 30in x 19in (go in closed cabinets)	$336,000	48	$7,000
Secure Server			
Closed cabinets (2'x4'x7'6") arranged back-to-back	$20,000	10	$2,000
Switches 17.4in x 38.4in x 17.3in (go in closed cabinets)	$240,000	3	$80,000
KVM 17in x 2.7in x 14in (go in closed cabinets)	$140,000	20	$7,000
Servers 7in x 30in x 19in (go in closed cabinets)	$140,000	20	$7,000
Firewall with intrusion detection and failover (Cisco ASA 525)	$55,000	1	$55,000
Layer - 7 firewall/packet shapper (Tipping Point)	$125,000	1	$125,000
Other Furnishings			
Modular work tables (4'x8') Wright Line Brand	$6,000	2	$3,000
Task stools	$3,000	6	$500
Copier free-standing, high-speed with sorter	$1,200	1	$1,200
Consoles (4' x 8') Wright Line Brand	$12,000	4	$3,000

10.0 CODE

PRELIMINARY CODE INFORMATION (2003 International Building Code)

Note: A full code analysis as required by DFCM Design standards must be performed during the course of design.

UVSC Digital Learning Center

Proposed Areas of DLC (4-Story Scenario Not Including Connecting Concourse)

Garden Level:	45,000 SF
1st Floor:	45,000 SF
2nd Floor:	45,000 SF
3rd Floor:	45,000 SF
TOTAL	**180,000 SF**

Assumed Footprint: 150 X 300 Feet

Occupancy Type: B, A-3, A-2

Considered as non-separated uses (§302.3.1). No fire separations required based on occupancy.

Construction Type

Type I – B Fully Sprinkled

Allowable Area

Treated as Anchor Building associated with covered mall occupancy for campus-wide connecting concourse (unlimited area). More than 3 stories allowed if area calculated per §503, §504, and §506 (§402.6).

Basic Allowable Area = unlimited (based on most restrictive occupancy)

TOTAL AREA PROGRAMMED = 180,000 SF

BUILDING IS ALLOWABLE AS TYPE I-B FULLY SPRINKLED

No rated corridors required. No internal separation walls required. No separation required between DLC and campus concourse (§402.7.3.1).

Programmed Occupant Load of DLC

Garden Level:	1,086
1st Floor	1,086
2nd Floor	570
3rd Floor	522
TOTAL	**3,264**

CODE

EXITING	**Max. Occupant Load**	**Exit Width Required** (sprinkled bldg.)
1st Floor	1,1086	162.9”
2nd Floor	1,086	217.2”
3rd Floor	570	114.0”
4th Floor	522	104.4”
TOTAL	**3,264**	

Stair width required: 122.4”

PLUMBING FIXTURES REQUIRED (2003 International Building Code)

Total Fixtures Required

Level	**Men**			**Women**		**Drinking**
	Urinals	**WCs**	**Lavs**	**WCs**	**Lavs**	**Fountains**
Garden Level	2	2	3	4	3	4
1st Floor	7	4	8	11	8	9
2nd Floor	4	2	5	6	5	6
3rd Floor	4	2	4	6	4	6
TOTAL Building	17	10	18	25	18	24

Note that sum of floor-by-floor totals in some cases exceed the requirements for the new building taken as a whole.

11.0 CIVIL/UTILITIES

Background

Utah Valley State College (UVSC) is planning to expand its facilities to include a Digital Learning Center (DLC) to accommodate their growing student population. The DLC will be constructed on Lot M, northeast of the Liberal Arts building (LA). This lot is currently used as a student parking lot as shown in the picture below.

Several utilities, including water, power, sewer, and fiber optic, will need to be routed to service the DLC. Proposed utility alignments are described below. These alignments were located based on currently available infrastructure information received from UVSC. Sheet 1 and Sheet 2 show utility locations in the vicinity of the DLC. Sheet 3 illustrates the entire alignment of the proposed sanitary sewer.

Grading

The proposed DLC site is generally flat, and minimal grading will be necessary. Because the water table is relatively high in this area (6 feet below natural grade), it is recommended that the elevation of the DLC finished floor remain at or above 4,603 feet. This will eliminate the need for an underdrain system for the DLC. By comparison, the sub-level of the LA building is 4,588 feet, which necessitated an underdrain system. If a sublevel were to be required for the DLC, its drainage could be connected to the LA system. However, extensive piping would be needed to continually drain the water table.

Storm Water

Storm water in the DLC area is currently discharged into a 15” pipe which leads to a 24” pipe as shown on Sheet 1. Storm water is not detained on site and ultimately discharges to Utah Lake. The 15” pipe that runs diagonally from the northwest corner of the DLC is beneath the proposed structure and is therefore not in a practical location. It is recommended that this portion of pipe be relocated to the north of the DLC; remaining in line with the pipe north of the LA. The line must also be extended along the west side of the DLC as shown on Sheet 1. New connections need to be made for roof and site drains into the relocated 15” pipe.

Sanitary Sewer

Wastewater from LA, PE and EC is currently discharged into a pipe that begins on the west side of LA. This pipe continues south past PE on the east side of EC as shown on Sheet 2. Due to the location of LA and PE and the invert of the pipe, it is not feasible to run the sanitary sewer line from the DLC to the current sewer location. Instead, a new 12" sewer line must be installed as part of this project. It is recommended that the sewer be located to the north of the DLC, run west to east before turning north through the existing parking lot. The line would ultimately discharge to the existing 24" sanitary sewer line located beneath 800 South as shown on Sheet 3. Preliminary analyses of contour data in this area suggest that this is a feasible alignment. This line will serve as a main trunk and is sized to accommodate future expansion projects in the area. The line should be located in accordance with UVSC masterplan requirements. The new sewer will require manholes every 400 feet.

Irrigation Water

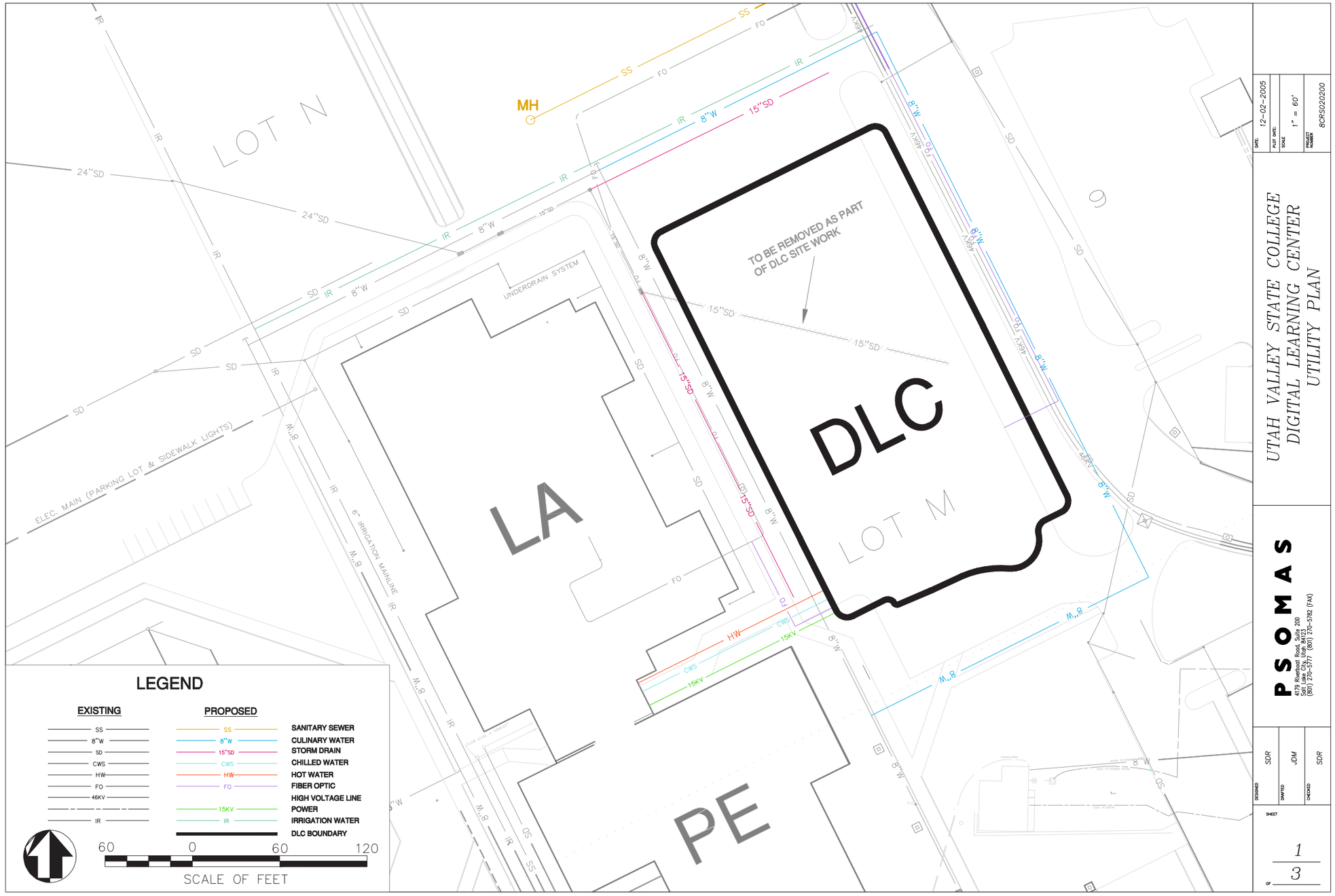
Irrigation water is currently piped through a 6" line on the west side of LA and PE. As part of this project, this line must be extended perpendicular from the north of LA to its current alignment as shown on Sheets 1 and 2.

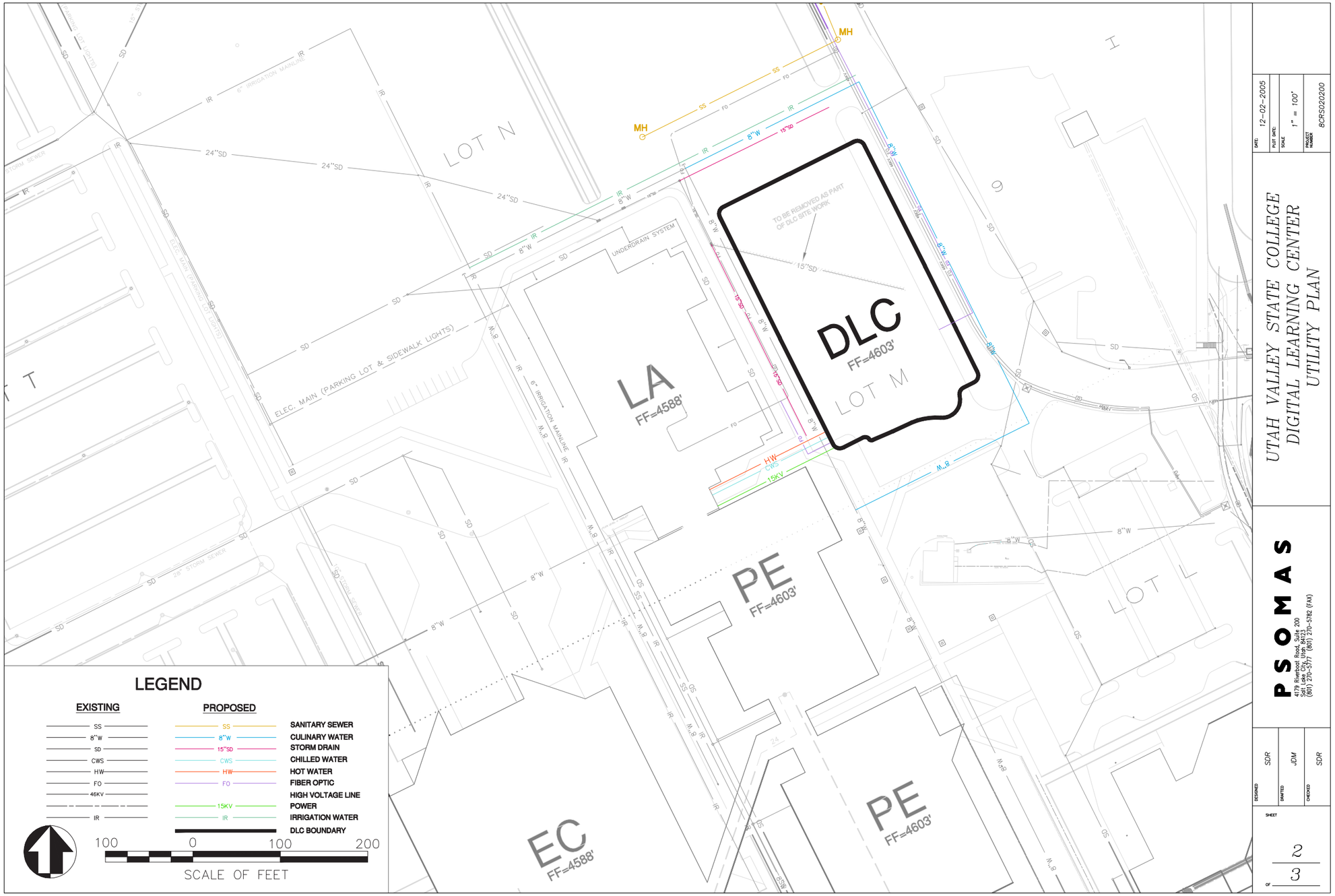
Culinary & Fire Suppression Water

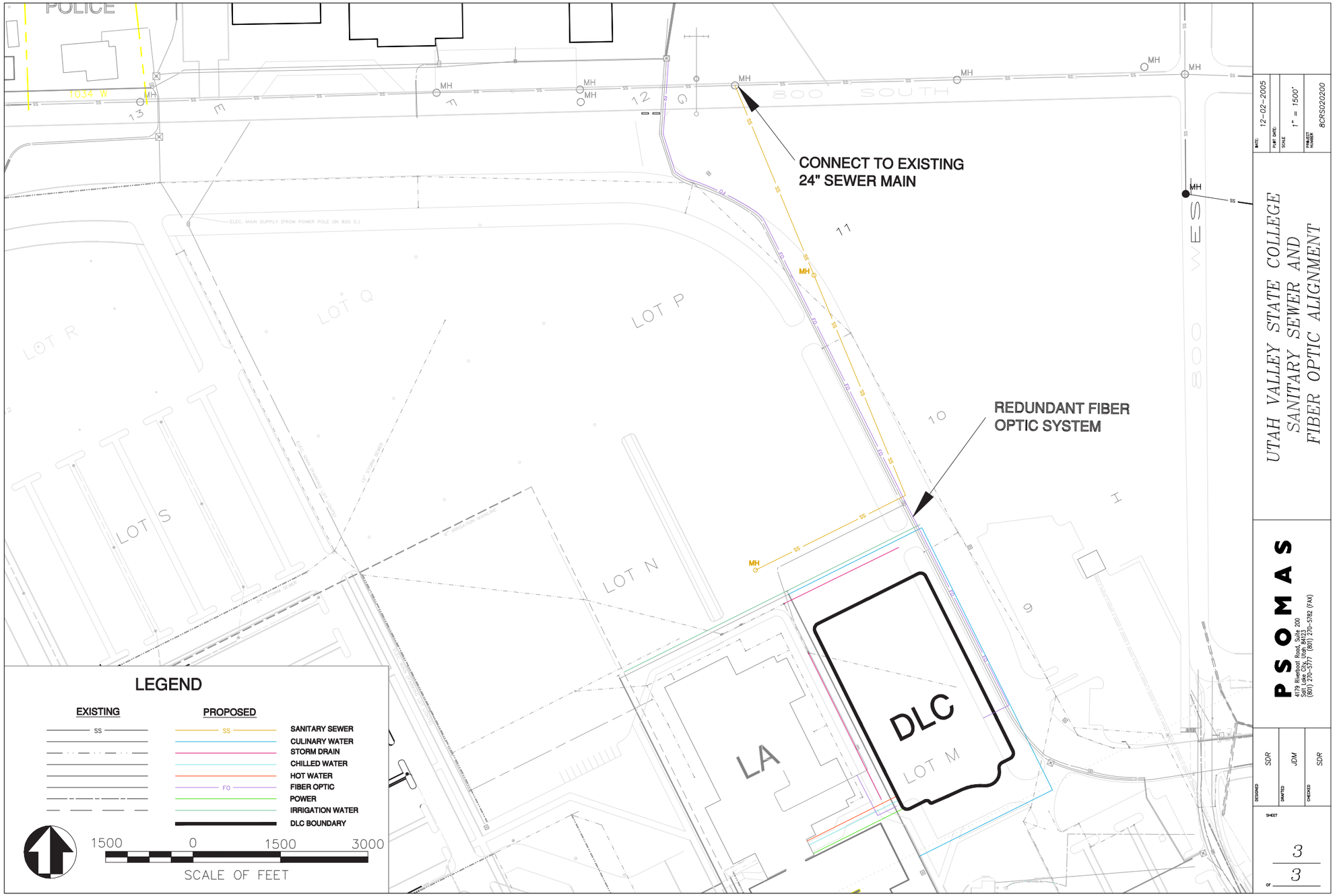
Culinary and fire suppression water is currently pumped through an 8" pipe in a loop around LA and two PE buildings. To service the DLC, it is recommended that the loop continue from the current northeast corner, around the DLC and tie back into the existing line near the southwest corner of the DLC.

Hot and Cold Water, Fiber Optic and Power

Hot and cold water, fiber optic and power currently service LA. To service the DLC, it is recommended that these utilities be routed from the southeast end of LA to the southwest end of the DLC as shown on Sheets 1 and 2. A redundant fiber optic system must also be installed on the east side of the DLC as shown on Sheet 1.


LOT N
LOT M
LA
PE
DLC
TO BE REMOVED AS PART OF DLC SITE WORK
MH
UNDERDRAIN SYSTEM
ELEC. MAIN (PARKING LOT & SIDEWALK LIGHTS)
6" IRRIGATION MAINLINE
24"SD
15"SD
8"W
SD
IR
SS
FO
HW
CWS
15KV
46KV
LEGEND
EXISTING
PROPOSED
SANITARY SEWER
CULINARY WATER
STORM DRAIN
CHILLED WATER
HOT WATER
FIBER OPTIC
HIGH VOLTAGE LINE
POWER
IRRIGATION WATER
DLC BOUNDARY
60 0 60 120
SCALE OF FEET
UTAH VALLEY STATE COLLEGE
DIGITAL LEARNING CENTER
UTILITY PLAN
DATE: 12-02-2005
PLOT DATE:
SCALE 1" = 60'
PROJECT NUMBER 8CRS020200
PSOMAS
4179 Riverboat Road, Suite 200
Salt Lake City, Utah 84123
(801) 270-5777 (801) 270-5782 (FAX)
DESIGNED SDR
DRAFTED JDM
CHECKED SDR
SHEET 1 OF 3


LOT N
LOT T
LOT O
LOT L
LA
FF=4588'
DLC
FF=4603'
LOT M
PE
FF=4603'
PE
FF=4603'
EC
FF=4588'
TO BE REMOVED AS PART OF DLC SITE WORK
UNDERDRAIN SYSTEM
ELEC. MAIN (PARKING LOT & SIDEWALK LIGHTS)
6" IRRIGATION MAINLINE
24"SD
15"SD
8"W
MH
SS
FO
IR
SD
HW
CWS
15KV
LEGEND
EXISTING
PROPOSED
SANITARY SEWER
CULINARY WATER
STORM DRAIN
CHILLED WATER
HOT WATER
FIBER OPTIC
HIGH VOLTAGE LINE
POWER
IRRIGATION WATER
DLC BOUNDARY
100 0 100 200
SCALE OF FEET
UTAH VALLEY STATE COLLEGE
DIGITAL LEARNING CENTER
UTILITY PLAN
DATE: 12-02-2005
PLOT DATE:
SCALE: 1" = 100'
PROJECT NUMBER: 8CRS020200
PSOMAS
4179 Riverboat Road, Suite 200
Salt Lake City, Utah 84123
(801) 270-5777 (801) 270-5782 (FAX)
DESIGNED SDR
DRAFTED JDM
CHECKED SDR
SHEET 2 OF 3


POLICE
1034 W
MH
13
E
T
12
Q
11
10
9
800 SOUTH
800 WEST
CONNECT TO EXISTING
24" SEWER MAIN
REDUNDANT FIBER
OPTIC SYSTEM
ELEC. MAIN SUPPLY (FROM POWER POLE ON 800 S.)
LOT R
LOT Q
LOT P
LOT S
LOT N
LA
DLC
LOT M
LEGEND
EXISTING
PROPOSED
SS
FO
SANITARY SEWER
CULINARY WATER
STORM DRAIN
CHILLED WATER
HOT WATER
FIBER OPTIC
POWER
IRRIGATION WATER
DLC BOUNDARY
1500
0
1500
3000
SCALE OF FEET
DATE: 12-02-2005
PLOT DATE:
SCALE: 1" = 1500'
PROJECT NUMBER: 8CRS020200
UTAH VALLEY STATE COLLEGE
SANITARY SEWER AND
FIBER OPTIC ALIGNMENT
PSOMAS
4179 Riverboat Road, Suite 200
Salt Lake City, Utah 84123
(801) 270-5777 (801) 270-5782 (FAX)
DESIGNED SDR
DRAFTED JDM
CHECKED SDR
SHEET 3
OF 3

12.0 STRUCTURAL

12.1 BACKGROUND INFORMATION

This new facility campus library is planned to be a four or five story building with a total square footage of 180,000 square feet (45,000 feet per floor) maximum. The new building is to be complementary to the existing campus architectural style (concrete frame buildings).

Also of consideration is the interconnection of this facility with the rest of the campus. Currently the campus is connected together both at-grade and sometimes at second floor levels to form an interior mall. An elevated connecting structure is programmed to continue this approach. This structure should be designed as a separate structure and will need to be separated from existing and new structures with expansion joints.

12.2 CODE

The purposed code to be used is the 2003 International Building Code along with State of Utah Amendments and DFCM Design Requirements. Note that the date chosen for the code is the 2003 version since it is anticipated that the design work will begin prior to the adoption of the 2006 version (January 1, 2007). DFCM typically allows the enforcement code for a project to be the code in effect at beginning of design phase and not the construction start date (expected to be spring 2007).

Currently it is not anticipated that major structural changes will be upcoming in the new code. One change that could have some impact on this project is the use of new seismic maps in the 2006 code. Since these are currently available, these maps have been reviewed for this project site and have been found to have minimal impact on the seismic design of this building.

12.3 CONSTRUCTION

Currently the maximum floor plate sizes being laid out for this building are 150 feet by 300 feet (45,000 square feet) per floor with 30' by 30' bays. Because of the nature of this building, two different types of framings systems should be considered:

1. Concrete structure. This system would consist of reinforced concrete waffle slabs, concrete pan joist systems or flat plate systems conventionally reinforced which systems are typical of construction used for most of the other buildings built on campus. (Please note that post-tensioned floor systems have been purposely omitted from this list due to the difficulty in cutting floor penetrations through the floor in the future.) These types of concrete floor systems have several inherent advantages, namely, built in fire resistively and good floor vibration characteristics (without any special design considerations). Because of the nature of this building, both of these considerations are very important to the users.

Other considerations in design are the need for wiring for computers used in this facility and long term defection (creep) of the concrete construction. Some considerations for the wiring are the location, i.e. placed under the floor system and/or recessed floor for a raised access floor system. Designers should consider the following:

a. With the concrete system there is no need for sprayed on fire proofing and since there will be dropped ceilings, the wiring can run under the floors with punches through the relatively thin slab between the waffles in a waffle slab system or between the ribs in a pan joist system.

b. A flat plate system is more difficult since it is a much thicker slab for conventional reinforcing and for post-tensioned concrete the floor system must be x-rayed to locate post-tensioned reinforcing before drilling or coring holes.
c. For a raised access floor system, consideration needs to be made for the location of the recess necessary for placing the raised access floor system. Ideally changes in slab elevation should occur along structural column lines.

To minimize long term deflections (creep) in the concrete floor system, the concrete design should include the use of camber, compression reinforcing and/or added structural stiffness beyond minimal standards.

Disadvantages of concrete systems in comparison with steel systems include the fact that they are typically somewhat more costly in our area than structural steel and are typically slower to erect.

2. Steel Structure. This type of system would consist of concrete on steel deck made into a composite system with steel wide flange beams by the use of shear studs. Typically, this type of construction will need sprayed on fire proofing and special design to control floor vibration.

For computer wiring, steel floor systems have the following options.

a. The wiring can be placed under the floor system. However, over time the fireproofing becomes a concern because it must be maintained and becomes a source of debris.
b. An electrified steel deck can be used. An advantage of this system is that it can be accessed from above and not interfere with the fireproofing. This system is somewhat less flexible than accessing the wiring from below the floor structure and somewhat more costly than normal steel decking.
c. The raised access floor system has some of the same restrictions as the concrete system in that changes in slab elevation should occur along structural column lines.

This system's primary advantage over concrete systems is cost and ease of construction, including erection time.

12.4 LATERAL SYSTEM

It is anticipated that the most effective lateral system for this structure will be concrete shear walls for a concrete system and steel braced frames for the steel system. Other systems to be considered will be concrete or steel moment frames. Moment frames systems provide the maximum flexibility for the architectural and mechanical layouts, however, these systems tend to be more expensive than concrete shear walls or steel braced frames.

To make a concrete shear wall system work, the elevator and stair cores will need to be distributed evenly throughout the building. Coordination in locations of vertical shafts for mechanical duct work will be critical, as concrete shear walls can be difficult to penetrate.

12.5 FOUNDATIONS

A geotechnical investigation by RB&G Engineering, Inc. dated May 11, 2001 was made for the adjacent building. Among the findings in their report was that the soils at this site have a low bearing capacity, the soils are moderately subject to liquefaction during an earthquake, and there is a relatively high water table. As result of these findings the geotechnical investigation recommends the following construction types for the foundation:

1. Spread footings may be used provided that they are placed on compacted structural fill. As a minimum, the thickness of this compacted fill should be three feet.
2. Pile footings may be used as an option to the spread footings.
3. Note that for the adjacent project it was decided to use a mat footing for the building.

Note that all of the above items can be designed in such a way as to mitigate the liquefaction problems.

The geotechnical investigation also recommends that a drain system be placed around the periphery of the building extending into a brown lean clay layer to lower the ground water level. This drain system should be located at least 5 feet outside the building lines and cross drains should be constructed within the building area to ensure that the ground water level is maintained below the compacted structural fill. The elevation selected for the ground floor may determine the extent to which such a drain system is needed.

12.6 SEISMIC RESTRAINT OF LIBRARY STACKS

The library reading stacks and other related elements must be laterally braced for earthquake forces. Many times library reading stacks are braced by anchoring the stack shelving to the floor system. In choosing the floor slab system the design team should coordinate with the library consultant on the design of this anchorage.

12.7 CODE DESIGN CRITERIA

Floor Loads: As a general criterion the user is requesting to use 150 psf throughout the building to provide maximum flexibility in locating stack areas at any location throughout the building. This load is higher than the DFCM design requirements for buildings which is 80 psf live load plus 20 psf for partitions. This will lead to a somewhat more expensive structure but it will provide the greatest flexibility for the users.

There are several areas were the floor structure must be designed for 300 psf for compact shelving (i.e. circ reserves, bound periodicals, archive storage, and donation storage). Currently the plan is to provide four 30' by 30' bays with this higher load capacity, at least two bays on grade and a maximum of two bays on suspended levels.

In areas with special loading such as computer server rooms, etc. the floor structure must be designed for the actual loads anticipated if these loads are greater than the specified general loads. Consideration should be given to locating potentially higher load areas on the at-grade floor levels.

The structure should be designed to minimize floor vibrations. A concrete structure designed for a stack load of 150 psf with an overall floor thickness meeting minimum requirements as specified in ACI 318 may be deemed to meet this criterion. Steel composite beam structures shall be designed to meet floor vibration criteria as specified in the recommendations as found in "Design Guide Series #11, Floor Vibrations Due to Human Activity" as published by AISC. As a suggested minimum target level from the Table 4.1 of the referenced guideline document, use the input "Constant Force Po" equal to 65 lbs and the accepted "Acceleration Limit a_0/g x 100%" equal to 0.5%.

Roof Loads: The roof should be designed for a minimum snow load of 30 psf plus any snow drift requirements at changes in roof elevations and against any large roof projections.

Seismic: Based on the 2003 IBC Seismic Design Parameters CD (version 3.1) and a geotechnical investigation by RB&G Engineering, Inc., the following seismic design factors should be used:

At location Latitude = 40.280 North and Longitude 111.716 West

Spectral Acceleration for Short Periods	S_S	=	1.17g
Spectral Acceleration for 1-Second Period	S_1	=	0.46g
Site Class (Table 1615.1.1).....	S_C	=	D
Site Coefficient	F_S	=	1.03
Site Coefficient	F_V	=	1.54
Design Acceleration Short Period (S_{DS} = 2/3($S_S F_S$)).....	S_{DS}	=	0.80g
Design Acceleration 1-Second Period (S_{D1} = 2/3($S_1 F_V$)....	S_{D1}	=	0.47g
Building Response Factor			
Concrete Walls.....	R	=	5½
Masonry Walls.....	R	=	5

Seismic Design Category D (Note that this design category requires a detailing level similar to that found in the 1997 UBC for seismic zone 3)

Wind: 90mph (3 Second Gust), Exposure C

13.0 MECHANICAL/PLUMBING

APPLICABLE CODES AND STANDARDS

Conform to the latest edition of the following codes and standards, or the requirements defined in this program, whichever is more restrictive:

2003 IBC
2003 IMC
2003 IPC
2003 IFC
2003 IECC
Division of Facilities Construction and Management (DFCM) Design Requirements, May, 2005
DFCM CADD Criteria, August 2001

AVAILABLE UTILITIES

HEATING HOT WATER

A 10"Φ heating hot water supply and return main extends the length of the existing Liberal Arts (LA) Building corridor, and is valved and capped at the north end.

Design supply temperature is 105°F , with design ΔT = 15°F.

The existing LA building is connected to that piping, with peak demand of 1,900 MBH.

CHILLED WATER

A 10"Φ chilled water supply and return main extends the length of the existing LA Building corridor, and is valved and capped at the north end.

Design supply temperature is 48°F , with design ΔT = 12°F

The existing LA building is connected to that piping, with peak demand of 4,750 MBH.

CULINARY WATER

A 4"Φ domestic cold water main extends the length of the existing LA Building corridor, and is valved and capped at the north end.

Anticipated service size is 2"Φ

NATURAL GAS

A 3"Φ low pressure (5 psig) gas main extends the length of the existing LA Building corridor, and is valved and capped at the north end.

Natural gas consumption will be limited to domestic water heating, and service size will be 1"Φ maximum. Provide building shut off valve in an easily accessible location.

SANITARY SEWER

A new sewer main will be installed on the north side of the building as part of this project.

Anticipated building drain size = 6"Φ.

Gravity-flow sanitary sewer is required. Sewage ejection is not acceptable.

STORM SEWER

New storm drain will be available at the north side of the building.

FIRE SERVICE

New 8"Φ service will be installed in a complete loop around the building as part of this project.

GENERAL REQUIREMENTS FOR MECHANICAL DESIGN

TEMPERATURE

Outdoor design temperatures:	winter:	7 °F (ASHRAE 99.6%)
(Salt Lake City)	summer:	97.0_{DB} /62.9_{WB} °F (ASHRAE .4%)
	evaporative:	86.4_{DB} /66.7_{WB} °F (ASHRAE .4%)

Indoor design temperatures:		
(Occupied)		Maintain at temperatures specified in the space conditions matrix, +/- 2 °F
(Unoccupied)	winter:	55 °F
	summer:	80 °F

NOISE

Use the RC Mark II method for rating HVAC system related noise, and meet the criteria established in the space conditions matrix.

VENTILATION/INDOOR AIR QUALITY

Comply with ASHRAE 62.1-2004 for minimum ventilation requirements. Provide carbon dioxide (CO_2) monitoring system for demand-controlled ventilation, in accordance with ASHRAE 62.1-2004, Appendix D, as indicated in the zone matrix

Design a ventilation system that results in an air change effectiveness greater than or equal to 0.9 as determined by ASHRAE 129-1997. Follow recommended design approaches in ASHRAE 2005 Fundamentals, Chapter 33.

Develop and implement an IAQ Construction Management Plan that includes the use of high efficiency filters (Minimum Efficiency Reporting Value (MERV) = 8, as determined by ASHRAE 52.2-1999), at each return air grille for systems used during construction.

Provide MERV 5 pre-filters and MERV 13 final filters at central air handlers upon completion of project.

In addition to toilet exhaust, provide separate exhaust system as noted in the space conditions matrix, and demonstrate that the rooms are maintained at a negative pressure of 0.03" wg relative to adjoining spaces. Note that the owner has requested that all public toilet rooms be built without doors.

HUMIDITY

Winter humidification is not required, except as noted on space conditions matrix

Summer maximum space humidity will be maintained at less than 50% because of the chilled water coils. However, no specific humidity control is required, except as noted in archival storage rooms.

PROJECT DOCUMENTATION

Provide a design narrative that includes the following:

- Basis of design, including all information required to prepare the design
- Sequence of operation of all systems, as well as their interaction with other systems
- System description, including operating parameters and assumptions
- Acceptance testing requirements, in tabular form, for use by the installing contractor and verification by the design engineer. This may be incorporated into the commissioning documentation
- A description of the methods used by the design team to achieve sustainability, including the integrated design process; and a description of the results, i.e. a description of the sustainable elements included in the design. Include in this section how the requirements of this program were met.
- Results of the energy simulation, with a design energy performance standard for the building.

ENERGY EFFICIENCY

Determine the energy cost budget for this building in compliance with ASHRAE/IESNA 90.1-2004, Section 11, then document that the proposed design reduces annual energy cost by at least 10%, using the methodology of ASHRAE/IESNA 90.1-2004, Appendix G. Cost-effective energy efficiency measures beyond this goal are encouraged.

Additionally, comply with the latest DFCM standards for building energy performance in effect at start of design.

This analysis must be performed by a qualified, independent firm, separate from the mechanical or electrical designer.

Design in accordance with the minimum requirements of ASHRAE/IESNA 90.1-2004. Document compliance using COMchek-EZ.

Strategies that the mechanical engineer can implement to reduce the building energy consumption for heating and cooling include:

- Oversize the duct and piping systems for low static pressure losses.
- Oversize coils to reduce pressure drop.
- Design new coils for higher temperature range on fluid side to reduce system flow.
- Use variable flow heating, chilled and condenser water systems
- Provide demand controlled ventilation in areas with varying occupancy.
- Evaluate a dedicated outdoor air system with zone radiant heating and cooling

- Evaluate the use of operable windows with automatic zone interlock to prevent system operation when windows are open

BUILDING ENVELOPE

Reference IECC 2003, Climate Zone 12b for minimum envelope requirements

INTERNAL LOADS

Use the following loads if more specific design information is not available:

People:	250 Btuh, sensible 200 Btuh, latent
Lights:	1.25 watts/ft^2, overhead
Equipment:	0.75 laptop PC per person in stacks and student areas 1 desktop PC per seat in offices 1 copier per 10 people in office groups 3 watts/ft^2 in high equipment density areas (info commons, quick print stations, express checkout, accessibility services and other printer/copier areas)
Server / Network Operations:	100 watts/ft^2

Modify internal load calculations as required when more specific design information becomes available, in order to maintain indoor design temperatures and optimize size and cost of mechanical systems.

POTABLE WATER CONSUMPTION

Design the plumbing system so that the annual potable water consumption by interior plumbing fixtures is no more than 90% of the Energy Policy Act of 1992 plumbing fixture maximum.

Strategies available to achieve water consumption reductions include 0.5 gpm lavatory faucets, 0.5 gpm urinal flush valves, low water consumption flush-valve water closets, and other similar items. Use only those items and types of products acceptable to the owner. Waterless urinals are not acceptable.

COMMISSIONING

Coordinate construction documents with the DFCM-selected commissioning agent. Commissioning of the building will comply with requirements for building commissioning detailed in the DFCM Solicitation for Commissioning Services.

MEASUREMENT AND VERIFICATION

Provide continuous metering equipment and 4-20 MA signal outputs, integrated with building BMS system for the following uses:

Chilled water Btu consumption at building.
Heating water Btu consumption at building
Domestic water consumption at building

SYSTEMS

GENERAL DESCRIPTION

Provide central station custom or field built-up air handler(s) with cooling and heating coils as required to meet minimum ventilation standards. Use backward-inclined centrifugal fans with variable speed control. Locate air handling equipment indoors in a roof-mounted penthouse, or basement mechanical room with adequate service clearance. Locate prime-source mechanical equipment (i.e. heat exchangers, pumps) in mechanical room.

Provide single duct air distribution with VAV reheat boxes in all zones. Use minimum two row coils in all zones because of the 105°F heating water supply temperature.

Use variable speed return/relief fans.

Provide separate, self-contained air handlers for each area defined as having extended occupancy. These areas are defined in the HVAC matrix, and include the entry and the café.

HEATING WATER

Central plant heating hot water is generated from heat recovery chillers. Adequate capacity exists for this project. Natural gas boilers available for supplemental heating of that water in emergency situations only.

Generate building heating hot water through a plate and frame heat exchanger, utilizing the campus low temperature system. Maximum allowable pressure drop on each side of the heat exchanger is 10 psig.

On source side of heat exchanger, note that campus supply temperature is 105°. Design approach is 5°F

On load side of heat exchangers, provide constant volume primary pumping and variable volume secondary pumping, with combined heating water transport energy consumption as follows:

	Maximum Water Transport Energy (bhp/1,000,000 Btuh)
Full Load	2.50
50% Load	1.15

Provide air handler coils as follows:

Tube		Fins	
Min Rows	Min Thickness (in)	Max Spacing (fpi)	Max Thickness (in)
2	0.035	6	0.0075

Specify piping of domestic manufacture.

Design piping system, including isolation valves and appropriate piping arrangements to allow maintenance of sub-zones of the heating water system without requiring complete shutdown. Review piping schematic with Physical Plant personnel.

CHILLED WATER

Excess chilled water capacity exists in the upper central plant. Shift the existing business building load (approximately 200 tons) from the lower plant to the upper plant by making valve and piping modifications. This work is scheduled to be self-performed by UVSC before design begins. Review status of chilled water system, and ensure that adequate capacity has been shifted.

Evaluate the potential to operate independently of the central plant with a self-contained water – cooled chiller. This option could effectively add capacity to the North Campus, reserving central plant capacity for future expansion.

Provide variable speed distributed pumping for building distribution, without heat exchanger.

Design the chilled water transport energy consumption as follows:

Load	Maximum Water Transport Energy (bhp/ton)
Full Load	0.05
50% Load	0.04

Provide air handler coils as follows:

Tube		Fins	
Min Rows	Min Thickness (in)	Max Spacing (fpi)	Max Thickness (in)
6	0.035	10	0.0075

Specify piping of domestic manufacture.

Provide isolation valves at each air handler.

SERVER ROOM / NETWORK OPERATIONS ROOM

Provide at least two dedicated air conditioning units per room, with N+1 redundancy. Air distribution will be via raised computer room flooring. Heat rejection via air-cooled condensing units, with low ambient capability.

ARCHIVAL STORAGE

Archives, including workroom, storage room and stacks, require a dedicated air conditioning unit, capable of maintaining the following parameters at all times, including power outages:

Temperature setpoint: .....68°F ± 2°F
Temperature rate of change:.....1°F / hour
Relative Humidity: .....40% ±5%
Relative Humidity Rate of Change: .....5% / hour

AIR DISTRIBUTION

Document fan sizing calculations with zone-by-zone load calculations.

Use automatic dampers on exhaust fans in lieu of barometric dampers.

Document that transport energy consumption meets the following criteria:

Load	Maximum Air Transport Energy (bhp/1,000 cfm)
Full Load	1.0
50% Load	0.30

Require pressure testing of all duct systems in accordance with 2003 IMC.

Provide each space with individual room temperature control. Provide zoning plan during schematic design review that indicates proposed zoning plan for review and approval by Facilities Planning staff.

Provide custom air handlers, with double wall construction.

Construct all new supply and transfer air ductwork with galvanized sheet metal.

Construct all new medium pressure ductwork to SMACNA 6" pressure class.

Construct all new low pressure ductwork to SMACNA 2" pressure class.

Seal both types of ductwork to SMACNA seal class A.

Leak test all medium pressure ductwork.

Do not duct return air outside the mechanical rooms. Return air path will be through return air plenums above ceilings, or unducted through spaces without ceilings. Short metal transfer ducts/sound boots will be used to allow return air paths to penetrate walls that extend to the structural deck above.

Duct return air inside the mechanical rooms to the air handlers.

Provide new outside air intakes for the building, and coordinate location relative to loading docks, generators and other sources of local air pollution.

PLUMBING

Provide pressure reducing valve station for domestic water service in mechanical room between 4"Φ main in LA ceiling and point of first consumption in new building.

Do not route pressurized piping over stacks, archives, computer rooms or other rooms that would suffer catastrophic damage from fluid leakage.

Use Type L copper supply piping, no-hub SV service cast-iron waste piping above grade and PVC below grade.

Specify piping of domestic manufacture.

Size hot and cold water piping to maintain 30 psi at hydraulically most remote fixture, and with maximum velocity of 6 fps.

Size roof drain system for 4" / hour maximum rainfall.

Support all piping from building structure via approved hangers and supports. Support piping to maintain required grading and pitching of lines, prevent vibration, and allow for expansion and contraction.

Insulate hot water, domestic cold water and primary roof drain piping. Provide all-service jacket in concealed areas, PVC jacket in exposed.

Identify all piping with markers at 20'-0" on center.

Provide full sized isolation ball valve at each floor, and at each terminal device.

Preferred plumbing fixtures are Kohler, with Sloan Regal flush valves (automatic urinal, manual water closet). Wall hung, vitreous china.

Waterless urinals are not acceptable.

Provide wall-hung, vitreous china lavatories, single temperature supply with battery-operated sensor faucet.

Provide deep seal traps for floor drains. No trap primers.

Provide hose bibs on outside walls, two each on the east and west, and one each on the north and south. Provide a hose bib in each toilet room, with loose key handle

Generate domestic hot water with gas-fired water heater. Generate and store at 140°F, provide central tempering valve and circulate to fixtures at 105°F. Terminate hot water within 5'-0" of last fixture. Soft water is not required.

FIRE PROTECTION

Provide fire sprinkler protection throughout building. System to comply with NFPA, campus fire marshal and State of Utah Fire Marshal requirements.

A fire pump is not anticipated, because the flow and pressure requirements can likely be met from the campus system. The design team shall conduct a fire flow analysis per DFCM criteria during the design phase to confirm this assumption.

In the computer equipment rooms, provide a dry-type fire extinguishing system in compliance with NFPA 2001: Standard for Clean Agent Fire Extinguishing Systems, 2000 Edition. Two equipment rooms are programmed, at approximately 500 ft^2 each. No sprinkler coverage is required in these rooms. FM-200 is strongly preferred as the extinguishing medium.

Provide individual floor control assembly, including zone check assembly, at each floor

Sprinkler Occupancy Hazard Classifications are as follows:

Office and Public Areas: .....Light Hazard.
Service Areas: .....Ordinary Hazard, Group 1.
Mechanical Equipment Rooms: .....Ordinary Hazard, Group 1.
Building Service Areas: .....Ordinary Hazard, Group 1.
Electrical Equipment Rooms: .....Ordinary Hazard, Group 1.
General Storage Areas: .....Ordinary Hazard, Group 1.
Library Stack Areas: .....Ordinary Hazard, Group 2.

Minimum Density for Automatic-Sprinkler Piping Design as follows: (Reduce Design areas with quick response heads when applicable and increase design area as required for pitched ceilings.)

Light-Hazard Occupancy: .....0.10 gpm over 1,500 ft^2. area.
Ordinary-Hazard, Group 1 Occupancy: .....0.15 gpm over 1,500 ft^2. area.
Ordinary-Hazard, Group 2 Occupancy: .....0.20 gpm over 1,500 ft^2. area.
Special Occupancy Hazard: .....As determined by authorities having jurisdiction.

Maximum Protection Area per Sprinkler: As follows (except as modified by authorities having jurisdiction)

Office Space: .....225/400 ft^2.
Storage Areas: .....130/400 ft^2.
Mechanical Equipment Rooms: .....130 ft^2.
Electrical Equipment Rooms: .....130 ft^2.
Other Areas: .....According to NFPA 13 recommendations, unless otherwise indicated.

Components and Installation: Capable of producing piping systems with 175-psig minimum working-pressure rating, unless otherwise indicated.

Specify all piping and components Schedule 40 minimum, and of domestic manufacture.

Class I, standpipe system design shall be designed assuming 150 psi available at fire department connection. Pressure and required flow shall be provided by fire pumper truck.

SMOKE CONTROL

In the present conceptual layout of the building there are two locations where there may be an opening connecting two stories, which meets the IBC 404.1.1 definition of atrium. Section 404.4 requires a smoke control system as defined in Section 909, but it also provides an exception to that requirement when the floor opening meets the requirements of Section 1019.1, Exception 9. An atrium on the lower level meets this exception, and so a smoke control system is not required for an atrium there. An atrium on the upper level would not meet any of the allowable exceptions, and therefore would require a smoke control system.

For the required smoke control system, provide a rational analysis report in compliance with IBC 909. The purpose of this report is to obtain approval from the Utah State Fire Marshal, DFCM and UVSC for the design fire rational analysis, which will then be used in the design of the atrium smoke control system.

CONTROL

Provide Direct Digital Control (DDC) system. The UVSC Campus Standard is Yamas Controls

Integrate the mechanical and electrical systems. Provide microprocessor to microprocessor communication between the DDC and variable frequency drives, air handler(s), electrical distribution, lighting, emergency generators, UPS system and building power. Provide 15% reserve capacity for additional points to be made available for non-mechanical/electrical monitoring.

Provide written sequence of operation on drawings for all systems controlled by the DDC system.

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
1	**ENTRY**													
1.2	Extended Hours Study													
1.2.1	Informal Study Court	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	30 - 40	Conference/meeting	yes		1				1
1.2.1	Extended Hour Study	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	25 - 35	Conference/meeting	yes		1				1
1.2.2	Extended Hours 2 Person Study	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	25 - 35	Conference/meeting			1				1
1.2.3	Extended Hours 6 Person Study	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	25 - 35	Conference/meeting			1				1
1.2.4	Extended Hours Family Study	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	30 - 40	Conference/meeting			1				1
1.2.5	Printing/Copy Area	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	40 - 50	Office space		0.50	1				1
1.2.6	Vending	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	40 - 50	Office space		0.30	1		x	x	1
1.2.7	Restrooms	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	n/a	Office space		75 / fixture	1	x	x	x	1
1.3	Kitchen / Serving Area													
1.3.1	Café Seating Area	Sun - Sat	6:00 a.m. - 2:00 a.m.	72	74	40 - 50	Cafeteria/fast food dining		0.30		x	x	x	
1.4	Copy Center													
1.4.1	Staff Office	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
1.4.2	Public Self-Serve Area	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 –50	Office space		0.50					
1.4.3	Staffed Copy Area	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 – 50	Office space		0.50					
1.4.4	Storage Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	n/a	Storage rooms		1.00					
2	LOBBY													
2.1	Lobby													
2.1.1	Lobby	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Lobbies			1				1
2.1.2	3-D Display - New Books	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Museums/galleries			1				1
2.1.3	3-D Display - Featured Books	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Museums/galleries			1				1
2.1.4	2-D Display	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Museums/galleries			1				1
2.1.5	Security Sensors	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Lobbies							
3	PUBLIC SERVICES													
3.1	Circulation Area													
3.1.1	Service Desk	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
3.1.2	Reserve/ILL (pick-up) Collection	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
3.1.3	Express Check	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
3.2	Staff & Support													
3.2.1	Circulation Head	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
3.2.2	Interlibrary Loan Borrower/Lender	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
3.2.3	Circulation Work Area													
	Media / AV Checkout & Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 – 40	Office space							
	Circulation/Reserve/ILL Check In	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
	Circulation/Reserves/ILL Sort & Returns Shelving	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
	Workstudy / Technical Vest Lockers & Sign In	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
	Library Assistants (7 @ 80 sf)	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
	Information Commons Coordinator	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
	Cart Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space							
	Copier/Fax	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space							
	Security Monitors	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
	Printer	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space		0.50					
	Scanner/Workstation	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space		0.50					
	Recycling	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Storage rooms		1.00					
	Storage/Custodial	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Storage rooms		1.00		x	x	x	
3.2.4	Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Storage rooms		1.00					
3.2.5	Media Equipment Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Storage rooms		1.00					
4	INFORMATION COMMONS													
4.1	Information Commons													
4.1.1	Research Assistance Desk	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
4.1.2	Quick Search	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
4.1.3	Public Access Workstations													

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
4.1.3.1	Info Pods (on other levels)	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Computer lab							
4.1.3.2	General Workstations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Computer lab	yes						
4.1.3.3	Quick Print Stations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Computer lab		0.50					
4.1.3.4	Multimedia Lab	Mon - Sat	7:00 a.m. – 11:00 p.m.	72	74	40 – 50	Computer lab							
4.1.4	Printer Area/Scanning													
4.1.4.1	Printers	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Computer lab		0.50					
4.1.4.2	Scanning Stations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Computer lab		0.50					
4.2	Faculty Services Center													
4.2.1	Faculty Services Center	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
4.3	Accessibility Services													
4.3.1	Lab for Assistive Devices													
4.3.1.1	Deaf Lab	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
4.3.1.2	Hearing Lab	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
4.3.1.3	Dragon Speak Scanning Stations	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
4.3.1.4	Printing	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space		0.50					
4.3.2	Office	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
4.3.3	Storage	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Storage rooms							
4.4	Reference													
4.4.1	Reference Collection	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
4.4.2	Reference/Public Service Librarians	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
4.4.3	Copy / Workroom	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
5	TEACHING/LEARNING CENTER													
5.1	Instructional Rooms													
5.1.1	Teaching Labs	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Lecture classroom	yes						
5.1.2	Storage	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Storage rooms		1.00					
6	WRITING LAB													

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
6.1	Staff Office	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
6.2	Student Staff Work Room	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
6.3	Lab	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Classrooms (age 9 plus)	yes						
6.4	Reception/Check in	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
7	GENERAL COLLECTION													
7.1	Collection													
7.1.1	Circulating													
7.1.1.1	General Collection	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
7.1.1.2	New book display / browsing	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
7.1.2	Non-Circulating													
7.1.2.1	Map Cases/GIS	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
7.2	User Seats													
7.2.1	General User Seats	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
7.2.2	Collaborative Studies/Seminar Rooms													
7.2.2.1	2-Person Study Space	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	25 - 35	Conference/meeting	yes						
7.2.2.2	6-Person Study Space	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	25 - 35	Conference/meeting	yes						
7.2.2.3	10-Person Study Space	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Conference/meeting	yes						
7.2.2.4	Seminar Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Classrooms (age 9 plus)	yes						
7.2.3	Terminals/Printers/Copiers on Each Floor	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Office space		0.50					
8	PERIODICALS													
8.1	Staff													
8.1.1	Periodicals Librarian	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
8.1.2	Periodicals Staff	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
8.2	Support													
8.2.1	Work Room	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
8.3	Public Area													

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
8.3.1	Help Desk	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
8.3.2	Bound Periodicals	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
8.3.3	Current Periodicals	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
	Workstations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
	User Seats	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office Space							
	Quick Search Station	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9	MEDIA													
9.1	Staff & Support													
9.1.1	Librarian Office	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.1.2	Staff Workroom	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
9.1.3	Storage	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Storage Rooms							
9.2	Public Area													
9.2.1	Workstations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	40 - 50	Office space							
9.2.2	User Seats	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.2.3	Media Ready Reference	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.2.4	Media Collection	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Libraries							
9.2.5	6-Person Media Viewing Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Conference/meeting	yes						
9.2.6	Media Enhanced Seminar Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Conference/meeting	yes						
9.3	Media Services													
9.3.1	Office	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.3.2	Staff Work Area													
9.3.2.1	Full-Time Staff Office	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.3.2.2	Part-Time Staff Office	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.3.2.3	Reception / Help Desk	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	25 - 35	Reception							
9.3.2.4	Work Area	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
9.3.3	Work Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
9.3.4	Media Engineering Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Storage Rooms							
9.3.5	Media Services Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Storage Rooms							
10	SPECIAL COLLECTIONS / ARCHIVES													
10.1	Staff													
10.1.1	Librarian	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
10.2	Support													
10.2.1	Workroom	Mon - Sat	8:00 a.m. - 6:00 p.m.	68	68	30 - 40	Conference/meeting			3				
10.2.2	Classroom	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Classrooms (age 9 plus)	yes						
10.2.3	Digitization/Film Room	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
10.2.4	Clean Up Area	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space		1.00		x	x	x	
10.2.5	Supply Storage	Mon - Sat	8:00 a.m. - 6:00 p.m.	68	68	30 - 40	Storage rooms		1.00	3				
10.3	Public Area													
10.3.1	Consultation Room	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Media center							
10.3.2	Reception/Exhibits	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	25 - 35	Museums/galleries							
10.4	Collections Area													
10.4.1	Stacks	Sun - Sat	12:00 a.m. -12:00 p.m.	68	68	25 - 35	Libraries			3		x	x	
11	TECHNICAL SERVICES													
11.1	Staff													
11.1.1	Librarian	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
11.1.2	Acquisitions Staff	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
11.1.3	Cataloging Staff	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
11.2	Support													
11.2.1	Acquisitions Staging/Work Area	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
11.2.2	Cataloging Staging/Work Area	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
11.2.3	Book Processing/Book Repair Work Area	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space		1.00		x	x	x	
11.2.4	Donations Work Area													

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
11.2.4.1	Processing	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space		1.00		x	x	x	
11.2.4.2	Storage	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Storage rooms		1.00					
11.2.5	Copier/Printer	Mon - Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space		0.50					
12	SYSTEMS AND I.T. SERVICES													
12.1	Systems													
12.1.1	Office	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.1.2	Work Study	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space			4				
12.1.3	Staff Work Room	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space			4				
12.2	IT	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.1	Offices	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.2	Work Study	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.3	Printing (secure)	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.4	Printing / Copy Work Room	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.5	Testing / Maintenance Area	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Office space							
12.2.6	War/ Conference Room	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Conference/meeting	Yes						
12.2.7	Storage	Mon – Sat	8:00 a.m. - 6:00 p.m.	72	74	30 - 40	Storage space							
12.2.8	Server Room	Sun – Sat	12:00 a.m. – 12:00 p.m.	68	68	30 - 40	Computer (not printing)							
12.2.9	Tape Vault	Sun – Sat	12:00 a.m. – 12:00 p.m.	68	68	30 - 40	Computer (not printing)							
12.2.10	UPS	Sun – Sat	12:00 a.m. – 12:00 p.m.	68	68	30 - 40	Computer (not printing)							
13	LIBRARY ADMINISTRATION													
13.1	Administrative Suite													
13.1.1	Library Director	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
13.1.2	Assistant Director/Development Director	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
13.1.3	Manager, Financial Operations	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
13.1.4	Administrative Assistant/Reception	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Office space							
13.1.5	Conference Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Conference/meeting			1				x

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
13.1.6	Copy/Mail/Storage Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	n/a	Storage rooms							
13.2.7	Teleconference	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74	30 - 40	Conference/meeting							
13.2	Break Room													
13.2.1	Break Room	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space		0.30		x	x	x	
13.2.2	Infirmary	Mon - Sat	7:00 a.m. - 11:00 p.m.	72	74		Office space		0.25		x	x	x	
15	BUILDING SUPPORT SPACES													
	Custodial													
	Sink (one per floor)	Mon – Sat	7:00 a.m. – 11:00 p.m.	65	85	n/a	Office space		1.00		x	x	x	
	Storage	Mon – Sat	7:00 a.m. – 11:00 p.m.	65	85	n/a	Storage rooms		1.00					
	Office	Mon – Sat	7:00 a.m. – 11:00 p.m.	72	74	n/a	Office space							
	Central Supplies Storage	Mon – Sat	7:00 a.m. – 11:00 p.m.	65	85	n/a	Storage rooms		1.00					
	Supply Distribution Closets	Mon – Sat	7:00 a.m. – 11:00 p.m.	65	85	n/a	Storage rooms		1.00					
	Mechanical	Sun – Sat	12:00 a.m. – 12:00 a.m.	65	85	n/a	n/a				x	x	x	x
	Electrical/Communications	Mon - Sun	12:00 a.m. - 12:00 a.m.	65	65	n/a	Computer (not printing)					x	x	
	Electrical Room (one per floor)	Mon - Sun	12:00 a.m. - 12:00 a.m.	65	65	n/a	Computer (not printing)							
	Telephone Services (MDF/IDF Room)	Mon - Sun	12:00 a.m. - 12:00 a.m.	65	65	n/a	Computer (not printing)							
	Data Distribution Rooms	Mon - Sun	12:00 a.m. - 12:00 a.m.	65	65	n/a	Computer (not printing)							
	Shipping and Receiving	Mon - Sat	7:00 a.m. - 11:00 p.m.	65	85	n/a	Shipping/receiving				x	x	x	
	Mail Room/Supplies Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	65	85	n/a	Office space							
	Mail Distribution/Information Display	Mon - Sun	12:00 a.m. - 12:00 a.m.	72	74	n/a	Storage rooms		1.00					
	Storage	Mon - Sat	7:00 a.m. - 11:00 p.m.	65	85	n/a	Storage rooms		1.00					
	Loading Dock	Mon - Sat	7:00 a.m. - 11:00 p.m.	65	85	n/a	Shipping/receiving		1.00					
	Service Elevator	Mon - Sat	7:00 a.m. - 11:00 p.m.	65	85	n/a	n/a							
	Comments:	1	Dedicated HVAC, separate from campus system											
		2	Countertop cooking devices for grilled sandwiches, tortilla grille, small warming ovens for											

SPACE LIST		HVAC Requirements									Plumbing Requirements			
		Operating Schedule		Heating Setpoint (°F)	Cooling Setpoint (°F)	Noise Criteria (RC(N))	Ventilation			Comments	HW	CW	W/V	NG
		Days	Hours				ASHRAE 62.1-2004 Table 6-1 Occupancy Category	DCV	Exhaust Rate (cfm/ft²)					
			things prepared elsewhere, microwaves. Otherwise, chilled food counters, self-serve coolers, at most two transaction stations.											
		3	Archival Storage. Reference text for temperature, humidity and rate of change requirements											
		4	Maintain positive pressure relative to adjacent spaces											

14.0 ELECTRICAL / TECHNOLOGY

14.1 ELECTRICAL SYSTEMS

14.1.1 ELECTRICAL CODES AND STANDARDS
14.1.2 SITE ELECTRICAL
14.1.3 BUILDING ELECTRICAL SERVICE AND DISTRIBUTION
14.1.4 LIGHTING
14.1.5 FIRE ALARM
14.1.6 TELECOMMUNICATIONS RACEWAYS

14.2 TECHNOLOGY SYSTEMS

14.2.1 TECHNOLOGY CODES AND STANDARDS
14.2.2 STRUCTURED CABLING SYSTEMS
14.2.3 SECURITY SYSTEMS
14.2.4 AUDIO AND VIDEO SYSTEMS
14.2.5 CLOCK SYSTEMS

14.1 ELECTRICAL SYSTEMS

14.1.1 Codes and Standards

Codes which are directly applicable to design of the electrical systems are listed below. Comply with each of the latest adopted publications. It is not the intent of this program to restate, contradict or reduce requirements of any of these codes and standards. They are an integral part of this program and the requirements of the project. In case of conflicts between these standards or with program requirements, the designer/contractor shall obtain written clarification prior to submitting proposal. Where discrepancies or multiple interpretations occur, the most stringent (which is generally recognized as the most costly) shall be enforced.

ADA, Americans with Disabilities Act

ASHRAE 90.1 Energy Code

DFCM, Division of Facilities Construction and Management, Design Requirements

EIA/TIA, Electronics Industries Association/Telecommunications Industry Association

International Building Code

IESNA, Illuminating Engineering Society of North America

NFPA, National Fire Protection Association (applicable sections including but not limited to):

NFPA 70, National Electrical Code

NFPA 72, National Fire Alarm Code

UL, Underwriter's Laboratories

Utah State Fire Marshal Laws, Rules and Regulations

Utah Valley State College Infrastructure and Master Cabling Specifications

The intent of this document is to set forth constraints and establish minimum levels of function and quality. Wherever possible, an attempt is made to identify quantities, however, it is recognized that final quantities and exact locations of every device or equipment item cannot be determined at the program level and that this is a function of the final design solution to the program. The designer is responsible for using this program as the minimum requirements and continuing the design process and coordination with the design team and end users to ensure that complete, functioning systems are delivered that meet the needs of the users.

14.1.2 Site Electrical

Medium Voltage

The campus owns and maintains its 12,470V distribution system. Utah Power currently supplies the campus at two locations: the original Central Plant near the Business Building and Student Center, and the newer Satellite Plant located in the basement of the Computer Sciences Building. There are two main distribution loops throughout campus – one serving the north side of campus and the other serving the east side. Much of the distribution is done through the campus concourse system, overhead in rigid metal conduit. The current load on the entire campus

averages between 5 MW and 6 MW. A new substation is under construction and nearing completion at the north edge of campus. At the time of this printing, the substation was not yet operational, but will be in the near future. It will be connected to the main 15 kV switchgear in the Central and Satellite Plants and will serve as the only source of power for the campus. (The existing Utah Power feeds will be shut off).

The new Digital Learning Center will be located towards the north end of campus. Maintain the 15 kV loop system for operational redundancy and reliability. Any radial feeds will not be acceptable. There are at least three viable options for serving the new building. During the design, evaluate all alternatives based on cost and benefit and fully involve campus personnel in the decision so that the new work is coordinated with any other projects or activities that may occur. Account for future campus buildings in the design, and the ease with which the 15 kV distribution loop can be further extended and maintained. Capacities shall be verified during the design. Any upgrade in the campus distribution system that is required to serve the new building is a requirement of this project.

1) The north loop can be extended to the new building from the recently completed Liberal Arts Building. A 4-way switch is located in the basement at the north end of this building that receives its two feeds from the McKay Events Center and directly from the Central Plant. Extension of the loop would require the McKay feed to be disconnected, spliced and extended to the new building. A new feed would then be brought back to the existing switch at the Liberal Arts Building, completing the loop. The north loop is nearing its capacity, but it is expected that capacity remains for the new Digital Learning Center. During design, the electrical engineer shall verify the loads of this north loop to ensure that capacity is still available for the new building.

2) The other option is to intercept the main feed from the new substation. The duct bank from the substation to the central and satellite plants passes along College Drive, directly east of the new building, with a manhole very near the southeast corner of the building. The central plant feed could be intercepted in this manhole, with a loop extended to the new building and back, continuing on to the central plant.

3) A third option would be a combination of options 1 and 2, whereby the loop could be completed from the Liberal Arts Building to the new building, and then continuing on to intercept the main feed from the new substation.

Provide a VFI switch at the new building to feed the transformer(s) with spares for future loop expansion. All new switches shall be the vacuum type, pad-mounted. The campus prefers the switches to be located indoors, however, they may be located outdoors providing they are protected from weather. Do not locate switches in manholes on this campus.

Transformer(s) may be located indoors in a vault or outdoors on a pad. If indoors, access shall be provided with oversized doorways and/or access hatches that will allow a crane to lift the transformer out. If outdoors, maintain good vehicle access to the transformer. Whether vault-mounted or pad-mounted transformers are used is a function of the building design and aesthetics and shall be evaluated and determined by the design team. All new transformers shall be liquid-filled, FR3 type.

Minimum size for any new underground 15 kV duct bank shall be (4) 5” C, concrete encased. Any runs overhead in the interior concourses of the campus shall be in 5” rigid galvanized metal conduit, painted red, with pull boxes as required.

Site Telecommunications Raceways

Telecommunications cabling is distributed throughout the campus with a cable tray system, overhead in the connecting concourses of the campus, and then into and throughout each building. The cabling requirements for the new building are discussed in the Technology section of this program, and only the pathway requirements are identified here. Extend cable tray from the Liberal Arts Building concourse into the main telecommunications room of the new Digital Learning Center (telecommunications raceways within the building are discussed below). New tray in all areas shall be open ladder-type to match existing.

In addition to the cable tray, a telecommunications duct bank was recently installed from the north, along College Drive. It branches off into the Liberal Arts Building. There is a manhole east of the Liberal Arts Building, which will be west of the new building. Provide (4) 4" conduits (w/pull strings) from the new building into this manhole for copper and fiber access through this route. This will give access to the existing duct bank to the east, allowing a redundant path into the Computer Sciences building on the east side of campus. Duct banks shall be concrete encased and buried a minimum of 24". Ensure that empty conduit access will exist between the manhole, the main communications rooms, and the cable tray in the connection concourses and that there will be a redundant loop between the existing concourses and the duct bank leading to the CS building.

14.1.3 Building Service and Distribution

Main Service

Design main electrical room close to medium voltage transformer(s) for the building. Each main switchboard shall be provided with digital metering that is capable of being remotely read through a web-browser or other type of digital interface. Service voltage shall be 277/480V, 3-phase, 4-wire. Evaluate whether 120/208V should be derived from a single medium-voltage service transformer, or from step-down, dry-type transformers distributed throughout the building and served from the 480V distribution. For power quality, separate different types of loads onto different feeders and load centers, such as motors, lighting, convenience power and clean computer power. In general, large motors and equipment shall be served at 480V, 3 phase; lighting at 277V; outlets and small equipment at 120V. Verify voltage requirements with each specific equipment item.

Motor Control Centers

Provide motor control centers for areas where 3 or more motors are grouped. All 3-phase motors shall be provided with phase-loss protection. Provide disconnect switches within sight of all motors. Provide variable frequency drives (VFD's) where required for mechanical equipment in compliance with DFCM and Campus requirements, and sized at least 10% over the connected motor load. Minimum total harmonic current distortion when measured at the input terminals of the VFD shall be not greater than 15%. The design electrical engineer may evaluate the variety of harmonic filtering and mitigation techniques and choose the best method to achieve this performance.

Transformers

Where 480-120/208V, dry-type, step down transformers are used for loads requiring this voltage, consideration shall be given to the harmonic content of the loads when sizing and specifying these transformers, while taking into account overall energy efficiency of the system. Evaluate the use of high-efficiency, K-rated and harmonic-mitigating transformers based on initial cost, energy payback and tolerance to harmonic loads. Fewer, larger transformers should be favored

over multiple smaller transformers to optimize load diversity and harmonic cancellation. All power equipment (transformers) must be located outside of MDF's/IDF's and computer room.

Panelboards

Provide panelboards in vertically stacked electrical rooms. The electrical rooms should be centrally located as much as possible, while taking into account other building and architectural considerations. Provide two or more rooms per floor to ensure that branch circuit distances do not exceed 150'. Dedicate these rooms to electrical distribution and not for storage or any other purposes. Consideration shall be given to the ease and accessibility of running new and future conduits out of each room, for example, do not land lock the room between stairs, elevators, restrooms, shearwalls, etc. that would make future work difficult. If inaccessible ceilings surround the room, stub (5) spare 3/4" conduits from each panelboard to accessible ceiling areas. Provide large block-outs above the ceiling through any concrete walls. Dedicate an area of each room for current and future riser conduits or busways so that wall-mounted equipment will not impede vertical distribution. Panelboards serving normal lighting and outlet circuits shall be located on the same floor as the circuits they serve. All branch panelboards shall have hinged front covers, as opposed to screw-on or latching covers.

Spare Capacity

Switchboards, panelboards, transformers and other distribution equipment shall be provided with 25% spare capacity and spaces/spares for future growth and flexibility. Electrical equipment rooms shall have 25% additional space for future equipment. Design system to minimize shutdowns for future additions or work.

Branch Circuits

Load branch circuits to no more than 80% of what is allowed by NFPA 70. Where outlets are intended for a specific piece of equipment, the load of the outlet shall be based on the equipment nameplate. Otherwise, allow no more than 6 convenience outlets per circuit or 4 outlets per circuit serving workstation computer terminals. Allow sufficient capacity for plug-in task lights and other peripherals typical of desk items. Outlets with dedicated branch circuits (one outlet per circuit) are required for vending machines, copy machines, break room counters, refrigerators, dishwashers, A/V cabinets and other locations likely to have equipment requiring dedicated circuits. Each branch circuit homerun shall have no more than 3 circuits per raceway. Neutral conductors shall be sized for the anticipated harmonic currents that they will carry. As a minimum, the shared neutral conductor shall be one size larger than the phase conductors for all outlet branch circuits.

Conductors

All conductors shall be copper. Conductors for branch circuits shall be sized to prevent voltage drop exceeding 3% at the farthest load. The total voltage drop on both feeders and branch circuits shall not exceed 5%. When calculating the voltage drop, the load shall be assumed to be at the most distant outlet and 80% of the ampacity of the branch circuit and feeder conductors. Specify that actual load tests and voltage readings be taken upon completion of installation to verify these requirements, and deficiencies corrected.

Raceways

Design all wiring in raceways, minimum ¾"C. Type MC or AC cable is not permitted. Do not embed any conduit or raceway in elevated concrete slabs (it is permissible in slabs on grade). Design cable tray system so that station cable raceways do not extend more than 50' max to

cable tray. Stub conduits to the cable tray. Include pull strings in all empty conduits. Include raceway for all security, audio/visual, and technology systems whether furnished as part of the construction contract or furnished by the Owner.

Equipment and Furniture

It is the responsibility of the design engineer to obtain equipment catalog sheets and installation diagrams and include power and raceway for all equipment requiring electrical connections. Provide power and raceway rough-in for all equipment and furniture identified in the program documents, whether it is furnished as part of this project or under a separate contract, for complete operation. Coordinate furniture connections with furniture designers and/or systems suppliers.

Fault Current and Coordination Study

Perform a fault current and coordination study to indicate available fault current at all points in the 15 kV and Building distribution systems. Design new equipment rated for the amount of available fault current. Study system coordination and select fuses or breakers to ensure minimum system outage due to overloads or fault currents. Set breakers with adjustable long time, short time, instantaneous and/or ground fault settings for optimum system coordination. Per the 2005 NEC, emergency systems shall be selectively coordinated.

Transient Voltage Surge Suppression

Provide transient voltage surge suppression (TVSS) and “noise” protection at service equipment (each main) and on branch panelboards in the facility which serve computer terminals. TVSS units may be integral to the panelboard or switchboard, or individually mounted “stand-alone” units. However, if individual units are used, they shall be placed immediately adjacent to the panelboard or switchboard to minimize the effects of increasing clamping voltages due to excessive lead lengths.

Additional TVSS protection is recommended to be provided by way of surge/outlet strips for each workstation. The surge strips would not only provide the additional outlets needed for the many computer peripheral devices that are used today, but also offer an additional level of protection. The surge strips are recommended to be provided under the furnishings and equipment budget on an as-needed basis. The surge strip should be commercial-grade quality and have at least 26 kA per phase maximum surge rating.

Outlets

Outlets shall be 20A, minimum. Refer to program and space plan sheets for basic requirements. Unless noted otherwise, the following shall be used as a general guideline where more specific requirements are not elsewhere identified. Each outlet location shall be coordinated with the design team and end user during design. Where the term “outlet” is used, this refers to a 20A duplex receptacle outlet (unless otherwise noted).

Classrooms, Lecture Halls and other Instructional Spaces: Provide outlets for instructor’s station, audio/visual equipment and each student. Ensure that there is at least one duplex outlet for each 10’ of wall space. Provide floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space. Where tables are fixed in place, coordinate power outlets mounted directly into the millwork.

Student Commons, Lounges and Study Areas: Provide power outlets for laptop computers, at least one duplex for each group of 4 seats, but no less than one outlet per each 12’ of wall

space. Provide floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space. A flexible power grid using raised floor or cellular deck system should be strongly considered to ensure maximum flexibility for desktop and/or laptop computers.

Offices: For each workstation, provide one outlet dedicated to computer terminals and one normal outlet, and one additional normal outlet for every 10' of wall space. Provide sufficient outlets to accommodate task lighting for all staff workstations.

Conference and Board Rooms: One outlet for every 10' of wall space, plus one outlet dedicate to computer terminals on two walls. Provide floor outlets underneath conference room tables. Coordinate installation of outlets in conference table tops with furniture/millwork.

Lounges/Breakrooms/Kitchenettes: GFI Outlets on dedicated circuits every 4' on counter top plus dedicated outlets for refrigerator, microwave, dish washer, ice machine and disposal (switched at counter top), plus one outlet for every 10' of other wall space in room.

Counter tops (in general): One outlet every 4'; GFI where within 8' of a sink.

Main Computer/Server/MDF: Several outlets on emergency/UPS power under raised floor and around perimeter or room with circuit density to allow for at least 100 watts per square foot. Coordinate exact quantity required with the User groups and the anticipated equipment, including future provisions as well. Provide a minimum 6-outlet surge/power strip, rack-mounted, in every equipment rack.

Telephone/Data Closets (IDF): At least 6 quad outlets on emergency and UPS power with circuit density to allow for at least 50 watts per square foot. Provide a minimum 6-outlet surge/power strip in every equipment rack. Whether local rack-mounted UPS units are used, or if the central UPS system is used to power these closets shall be evaluated and coordinated with the Use groups during the design.

Electrical Rooms: At least one outlet on emergency power.

Restrooms: One GFI outlet on wall adjacent to sink at counter height, plus one remote from sink at standard height for breast pumps, vacuum cleaner or power scrubber. Confirm final location with UVSC.

Corridors, Lobbies: Provide at least one outlet every 15', on alternating sides of the corridor or lobby.

Stairs: One outlet at each landing and intermediate landing.

Storage Rooms (small), Janitors Closets: One outlet, near light switch.

Building Exterior: One WP/GFI convenience outlet near each entrance, or a minimum of every 120 feet; additional outlets as needed for special events. Coordinate with users during design.

Other Areas: Refer to individual space plan data sheets, and where not defined allow one outlet for each 40 square feet of space and coordinate requirements with user during design.

Grounding

All feeder and branch circuit raceways shall include an insulated equipment grounding conductor. Provide a grounding riser system throughout the telecommunications closets, with grounding bus bars mounted accessibly in each closet. In computer or server rooms with raised access flooring,

provide a signal reference grounding grid in accordance with IEEE standard 1100-1999. All grounding systems shall be bonded together per NEC requirements.

Lightning Protection

Provide a lightning protection system for the new Building. Engage an LPI-certified installer, designer and inspector for the system. Provide a UL Master Label System and comply with NFPA 780.

Emergency Service and Distribution:

Provide an emergency diesel generator for the new building. Generator shall be outdoors in a screened area with weather-protective, sound-attenuating housing and skid-mounted, double-walled tank. Fuel supply shall be minimum 18 hours at full load. Design at least two transfer switches: one for emergency and one for non-emergency ("stand-by") loads. Annunciate alarms adjacent to fire alarm panel. Design generator distribution panel with digital metering. The following shall be provided with emergency power:

Emergency egress and exit lighting

Fire Alarm

Elevators

Smoke control

Communications and Server rooms (including main computer room) – outlets, lights and air conditioning

Electrical rooms – lights and outlets

Security systems

Mechanical systems serving critical collections

Uninterruptible Power Supply (UPS)

Provide a UPS system for the main server/computer room and MDF, sized to provide 100 watts per square foot, minimum. Other critical computers and equipment, as determined during the design, may be provided with UPS power. UPS shall be static, double conversion, on-line type and have an external maintenance bypass. Size batteries for approximately 15 minutes at full load. Evaluate fully-redundant modules and battery strings on a cost vs. benefit basis and present results to the Owner/User groups for a decision during the design.

14.1.4 Lighting

General

Comply with illuminance levels and uniformity criteria of IESNA and its Recommended Practices. Comply with RP1-93 "Office Lighting", RP3-00 "Lighting for Educational Facilities", RP-8-00 "Roadway Lighting", RP-20-98 "Lighting for Parking Facilities", and RP-33-99 "Lighting for Exterior Environments". Ensure that illumination levels are appropriate for task, time and age. For exterior lighting, indirect lighting, and other specialized task lighting provide point-by-point plot of illuminance establishing conformance with the Recommended Practices. Except for specialized applications, design lighting with a minimum efficacy of 75 lumens per watt. Specify

maximum 20% THD electronic ballasts. In addition, design lighting with a CRI exceeding 82, except in storage, mechanical, electrical, and similar nonpublic applications. As much as practical and meets the design intent, specify as few types of lamps as possible to simplify ordering and warehousing. Use 4' T-8 lamps with CRI of 88 or greater wherever possible. T5 lamps may be considered for applications that would benefit from a small-profile lamp, but should not be used to generally replace all T8 lamps. Specify lamps complying with EPA TCLP requirements.

Comply with ASHRAE 90.1 requirements, except that overall energy target requirements should be reduced by 10% min. Cost-effective, energy efficiency measures beyond the minimum standards are strongly encouraged. Design lighting control to harvest daylighting where practical, to control based upon occupancy and daylight availability, to rely on reduced ambient illumination levels supplemented by task lights when possible, and according to programmable scheduling as appropriate to the application.

Parking, Pedestrian, and Street Lighting

Use only campus standard lighting fixtures for walkways, parking and roadways, compatible with the campus surroundings. For walkways, the campus standard is a Moldcast flat, square post-top luminous fixture, 175 watt metal halide lamp on a 14' pole. For roadways and parking lots, the standard is a Moldcast "Contracline" post-top luminous cube, 400 watt metal halide lamp on a 28' pole. To the greatest extent possible, these fixtures should be located on the campus 30' x 30' grid system, or multiples thereof. Control exterior lighting through a programmable lighting relay system that is interfaced with the building automation system. The building automation system shall use photocell inputs and time schedule control to optimize use.

Design parking areas to comply with RP-20-98, except that the minimum illuminance shall exceed 1 footcandle with a 4:1 uniformity. Design pedestrian areas to comply with RP-8 (average to minimum uniformity ratio less than 4 to 1), except that the average horizontal illuminance shall be increased to 1 footcandle and the average vertical illuminance to 1 footcandle. For each of these areas design two level lighting so that from 11:00 PM to dawn the illuminance level reduces to .6 footcandles minimum. Consider "dark sky" principles in application of luminaires.

Design street lighting to comply with RP-8, except that the average illuminance level shall exceed 1.0 footcandles and average to minimum uniformity ratio less than 3 to 1 with special consideration for the entry from the roadways bounding the site to comply with minimum uniformity requirements and veiling luminance ratios.

Interior Lighting

In general, utilize low-glare fluorescent lighting with electronic ballasts. Pendant indirect lighting should be strongly considered where appropriate, but must be carefully coordinated in rooms with projectors so that the fixtures will not interfere with the projected image. Select luminaires for areas where VDTs are planned which are designed to minimize veiling reflections, and provide multilevel lighting control and task lighting to reduce the illuminance on the VDT. Wherever overhead cabinets occur over counters, provide integrated task lights underneath. In rooms with audio visual, design lighting with variable or switched levels as indicated with a separate controlled zone to reduce glare and illuminance on the audio visual display. In origination rooms and distance learning rooms, design dimming system to interface with audio/visual control system. Include in addition, TV studio lighting fixture to focus and highlight on instructor. In rooms with projectors, provide a separate bank of lighting control switches or station near the instructor position for ease of controlling lighting during presentations. Comply with RP-3-00 for classroom lighting and RP-1-93 for office lighting. In areas with lower ambient lighting levels,

provide separately-switched task lighting for all work surfaces. Provide lighting to illuminate art where it occurs, in coordination with furniture plans.

Design lighting fixtures to be accessible by means of ladders or standard lifts. Light fixtures in high-ceiling areas shall be accessible through a lowering device or with a lift that can fit through the doors of the building.

Select occupancy sensors for the appropriate applications and control for daylight harvesting. Specify dual-technology ceiling-mounted directional sensors in private offices and classrooms with manual off switches. Specify ultrasonic sensors in restrooms. Specify programmable lighting control with manual timed overrides in all common areas such as open offices, corridors, lobbies, and similar areas. Interface this lighting control system with the building automation system.

Design exit lighting to comply with IBC. Design emergency lighting for means of egress to 1 fc minimum to comply with IBC. Include emergency lighting in restrooms, electrical rooms, vaults and communication rooms. Where emergency lights are required in rooms with audio/visual, provide emergency transfer ballasts that allow the emergency light to be switched off and then automatically turned on in a power failure.

14.1.5 Fire Alarm

Campus Fire Alarm and Life Safety

Comply with Utah State Fire Marshall's "Rules and Regulations" and UVSC requirements. A variety of manufacturers have installed systems on campus. Coordinate with campus facilities during design to ensure that any new system is acceptable to the campus. Design an addressable system capable of reporting back to central campus security office (soon to be relocated to the Gunther Trades Building). Design strobes visible from all locations except private offices and coordinate with furniture plans, keeping in mind standard stack height is 90" and depth of wall shelving may hinder visibility from below. Based on preliminary code evaluation, a voice evacuation system is required. Verify this requirement during the design. Design speakers to comply with NFPA including for higher ambient noise requirements. Where smoke control systems are required, coordinate the integration of the fire alarm with the smoke control systems. Provide duct detectors and fan shutdown where required by NFPA and the IMC, including detection of smoke at all return air shafts serving multiple floors. Coordinate location of the building annunciator with the Campus fire marshal. All other detectors and functions shall comply with the referenced codes and standards. All fire alarm wiring shall be in conduit. Final programming of system shall be coordinated with the Campus Fire Marshal to ensure that the program will be compatible with existing campus fire alarm programming.

14.1.6 Telecommunication Raceways

Riser Distribution

Provide stacked telecommunications closets to serve each floor of the building. Comply with EIA/TIA and campus IT requirements in the sizing and locating of these rooms. Increase room size for A/V, TV and other systems that may be located in these rooms. Coordinate equipment layout and wall space with the Campus. Locate closets such that when cabling is routed through the raceway system provided, no cable length will exceed 290' regardless of the path. Consideration shall be given to the ease and accessibility of running new and future raceways and cables out of each room, for example, do not landlock the room between stairs, elevators, restrooms, shear walls, etc. that would make future work difficult. Provide large block-outs above the ceiling through any concrete walls. Provide a minimum of four 4" conduits from the

MDF to the stacked IDF locations and four 4" sleeves between floors. If possible, stack the MDF below the IDF's. Provide both normal and emergency circuits to each IDF, 3 each, with one fourplex per circuit. Twenty-four hour HVAC is required in each closet and shall be supplied with stand-by power for the emergency generator.

Horizontal Distribution

Provide a cable tray distribution network throughout each floor and into the IDF closets. Extend the cable tray around inside of the IDF room to allow cables to be routed within the room. Consider ease of access to the tray system when the building is in full operation. Limit cable tray routing to be above corridors, common and similar areas. In all ceiling areas where accessible, provide ladder-type tray to match existing campus standard. Where ceilings are inaccessible, provide an equivalent conduit system bridging cable trays in accessible ceilings. It will be the designer's responsibility to size the cable tray and raceway system for the intended cabling installation. Do not load the cable tray and raceway system to more than 50% of what is allowed by cable fill requirements of NFPA 70. Specify that cable runs take routes that will limit the total cable distance, between termination end points, to 290' or less. Design horizontal pathways such that this is possible, when taking into account the conduit stubs from the outlets to the cable tray system.

Voice/Data Drops

Each voice/data outlet location shall consist of a 4" square box with two gang mud ring and one 1" conduit stubbed to the nearest cable tray. Refer to program space plans for quantities and coordinate exact locations with the users during design. As a minimum, provide one voice/data drop for each workstation, fax machine, copy machine, vending machine, desk, computer terminal and teaching station. Allow one voice/data box per 80 square feet for areas that are not specifically defined. Where wireless networks are designed for student access, still allow sufficient empty raceways for future hardwired connections should the wireless system have insufficient bandwidth for evolving applications.

14.2 TECHNOLOGY SYSTEMS

14.2.1 Technology Codes and Standards

Codes which are applicable to the design of the technology systems are listed below. Comply with each of the latest adopted publications. They are part of this program by reference and are not restated in the program narrative. Obtain clarification for any questions regarding this document from UVSC's Chief Information Officer.

- ADA, Americans with Disabilities Act
- DFCM, Division of Facilities Construction and Management, Design Criteria
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- IBC 2000, International Building Code
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
  - NFPA 70, National Electrical Code
  - NFPA 72, National Fire Alarm Code
- UL, Underwriter's Laboratories
- IEEE Compliance: Comply with applicable requirements of IEEE 208
- Utah Valley State College Infrastructure and Master Cabling Specifications

Utah State Fire Marshal Laws, Rules and Regulations

Standard Broadcast Wiring and Installation Practices", as excerpted from "Recommended Wiring Practices," Sound System Engineering, (2nd Edition), D. Davis

The Basics of Audio and Visual Systems Design, Revised Edition, Ray Wadsworth / International Communications Industries Association, INC.

14.2.2 Structured Cabling Systems

General

Voice/data cabling (structured cabling systems) will include copper station cabling, copper and fiber backbones, all terminations, wall plates, patch panels, copper patch cables, fiber patch cords, cross connects, racks and wire management. All copper cable will be terminated in compliance with the EIA/TIA 568B standard. The installer of the voice and data cabling system will be Siemens CI certified and will provide a warranty for the complete installation through the Siemens warranty program. Every strand of fiber and every conductor of copper will be tested in full compliance with the above identified EIA/TIA standards. All fiber will be tested at both 1310 and 1550 nM. All test results will be documented on 8 ½" x 11" paper and electronically in a Microsoft Excel format for every conductor of copper and fiber cable.

BACKBONE, RISER, AND HORIZONTAL CABLE

Redundant fiber service will originate from both the Liberal Arts building and Computer Sciences and Engineering building. The service cabling connecting each building will consist of a 144 strand single mode plenum rated fiber and a 48 strand multi-mode, plenum rated fiber cable for data. Once in the Digital Learning Center, this cabling will terminate in the main telecommunications room, or main data frame (MDF).

Voice service will originate from the main Physical Education building terminal room 146. The voice service cabling will consist of category 3 600 multipair, riser rated, plenum rated cable for voice. Once in the Digital Learning Center, this cabling will terminate in the main telecommunications room, or main data frame (MDF).

From the MDF, a backbone of 200 pair category 3 copper riser rated, plenum rated cable for voice, and a combination of 24 strand multimode and 24 strand single mode fiber cabling for data will be provided to each subsequent wiring closet, or intermediate data frame (IDF) on each of the floors for voice and data signal distribution. Rooms with data outlets for every seat will be connected to the nearest IDF on the same floor with a 12 strand multimode fiber cable for data. All fiber will be terminated into separate RIC/LIU's at each end with SC connectors. Install all fiber cable inside of plenum rated innerduct. Rack mount all cable termination equipment inside enclosed, three section, minimum 24", steel, 19" equipment racks with locking, smoked plexi-glass front doors.

Design all MDF's and IDF's with ¾" plywood painted with fire retardant paint on all walls. Locate all 110 punch down blocks for termination of voice backbone and riser cable on plywood. Locate RIC/LIU's for termination of all fiber cable, and all patch panels for termination of all horizontal copper cable in 7', 19" open frame equipment racks. Provide cable runway (ladder rack) around the entire perimeter of all rooms at approximately 7' above the finished floor, with lateral runs extending from wall to wall over the top of all equipment racks. Provide 7' high, 6" square vertical wire managers on both sides of every equipment rack, and horizontal wire managers at the top and bottom of each equipment rack, as well as between all equipment and patch panels in equipment racks. Design a minimum of two rack-mounted, 6-outlet TVSS power strips in every equipment rack.

Horizontal cabling will be provided from each voice/data outlet to the nearest IDF on the same building level. With the exception of cable for wireless access point data outlets, all horizontal cable specified for data jacks will be 10 G, augmented category 6 UTP plenum rated cable with a white jacket. All horizontal cable specified for wireless access point data outlets will be 10 G, augmented category 6 UTP plenum rated cable with a purple jacket. All horizontal cable specified for voice jacks will be category 5e UTP plenum rated cable with a blue jacket. All horizontal voice cable will be terminated in 110 punch down blocks at the equipment room (IDF) end, and on workstation outlets at the station end. In offices, split the pairs from the single voice cable to each specified RJ-14 jack. All horizontal data cable will be terminated in patch panels loaded with augmented category 6, RJ-45 connectors in the equipment room (IDF) end, and on workstation outlets at the station end. In all rooms with data outlets for every seat, all data cable will be terminated in patch panels and consolidation points loaded with white, augmented category 6, RJ-45 connectors on each end. Each consolidation point will consist of a 12 port patch panel loaded RJ-45 augmented category 6 jacks for data. Twelve augmented category 6 cables will be provided for termination to each consolidation point. Four consolidation points will be located below the raised floor of each room with data outlets for every seat. The patch panel at the equipment end will be located in an enclosed, 3-section, minimum 24", steel, 19" equipment rack with locking, smoked plexi-glass front doors.

Voice/Data Workstation Outlets/Consolidation Points

A standard voice/data workstation outlet will consist of a two gang wall plate loaded with two category 3 RJ-14c jacks for voice that are black in color, and two angled RJ-45 augmented category 6 jacks for data that are white in color. One category 5e cable will be provided for termination to the two RJ-14c jacks for voice. Two augmented category 6 cables will be provided for termination to the two RJ-45 jacks for data. Design office voice/data workstation outlets for all office areas.

An office voice/data workstation outlet will consist of a two gang wall plate loaded with two category 3 RJ-14c jacks for voice that are black in color, and two angled RJ-45 augmented category 6 jacks for data that are white in color. One category 5e cable will be provided for termination to the two RJ-14c jacks for voice. Two augmented category 6 cables will be provided for termination to the two RJ-45 jacks for data. Design office voice/data workstation outlets for all office areas.

A teaching station lectern workstation outlet will consist of a two gang wall plate loaded with one category 3, RJ-14C jack for voice that is black in color, and six angled RJ-45 augmented category 6 jacks for data that are white in color. One category 5e cable will be provided for termination to the RJ-14c voice jack. Six augmented category 6 cables will be provided for termination to the six RJ-45 jacks for data. Locate the teaching station lectern workstation outlet within 4" of the AV infrastructure floor box.

A media junction box workstation outlet will consist of a two gang wall plate loaded with four angled RJ-45 augmented category 6 jacks for data that are white in color. Four augmented category 6 cables will be provided for termination to the four RJ-45 jacks for data. Locate the media junction box workstation outlet within 10" of the media junction box.

In all rooms with data outlets for every seat, all data cable will be terminated in patch panels and consolidation points loaded with white, augmented category 6, RJ-45 connectors on each end. Each consolidation point will consist of a 12 port patch panel loaded RJ-45 augmented category 6 jacks for data. Twelve augmented category 6 cables will be provided for termination to each

consolidation point. Four consolidation points will be located below the raised floor of each room with data outlets for every seat. The patch panel at the equipment end will be located in an enclosed, 3-section, minimum 24", steel, 19" equipment rack with locking, smoked plexi-glass front doors.

A building-wide display system outlet will consist of a two gang wall plate loaded with one angled RJ-45 augmented category 6 jack for data that is white in color. One augmented category 6 cable will be provided for termination to the RJ-45 jack for data.

Wireless Network

UVSC desires that the building, and all immediately adjacent outdoor areas, be provided with reliable wireless local area network coverage. Provide data outlets at owner designated locations for wireless access points to cover all interior areas as well as to spill-out into all immediately adjacent outdoor areas. Design wireless access point data outlets with two augmented category 6, RJ45 data jacks mounted on a double gang wall plate. Two augmented category 6 cables will be provided for termination to the two RJ-45 jacks for data. Locate all data outlets for wireless access points above the ceiling. At a minimum, without implying limitation, design 6 wireless access point outlets per floor.

Telephone Outlet

Design telephone outlets for pay phones, elevator panels, wall phones and other required uses. Install 4 pair Category 5e cable in a suitable wall plate for the application.

Voice and Data System Active Electronics and Passive Devices

All active voice and data system electronics including, but not limited to, hubs, routers, servers, PBX's, etc... will be provided from a separate building FF&E budget and are not part of the construction budget. All passive devices including, but not limited to cabling, termination devices, wall plates, patch panels, copper patch cables, fiber patch cords, connectors, open frame equipment racks, cable runway, and cable management systems are part of the construction budget.

14.2.3 Security Systems

General

All security systems will comply with established campus standards, will be IP based, and will be simple network management protocol (SNMP) compatible. Systems will annunciate alarm conditions to, and be completely monitored by, UVSC.

Card Access

A complete access control system will be specified to control entry to all perimeter entry/exit points, MDF rooms, IDF rooms, and at select sensitive interior spaces. Card readers will be the proximity type, and will comply with established campus standards. Card readers will report to central door controllers. Coordinate door hardware to minimize the aesthetic impact to the appearance of the building.

Video Surveillance

A complete video surveillance system will be specified to provide for visual monitoring at all building entry/exit points, at select main building thoroughfares, elevator lobbies, all MDF's and

IDF's, and at other select sensitive interior areas. Cameras will be specified for viewing of owner designated subject areas, and installed in appropriately rated enclosures. Signals from cameras will be connected to a central switching/multiplexing system with minimum 20" video monitors for viewing. All camera images will be digitally recorded by DVR's that are local area network accessible. Obtain Lenel licenses compatible with the campus standard. Interface video surveillance system with the campus police department.

Intrusion Detection

A complete intrusion detection system will be specified for electronic monitoring and status reporting of all building entry/exit points, select building thoroughfares, all MDF's and IDF's, and at other select sensitive interior areas. Sensing devices will include door position switches, motion sensors, and where/if appropriate, glass break sensors. All sensing devices will report to a zoned monitoring panel for specific location identification of an alarm condition. The intrusion detection system will be integrated with the video surveillance system for priority viewing of security breach areas.

14.2.4 Audio and Video Systems

General

Audio and video systems will be specified by the A&E team for installation as part of the building construction work, to be completed with all building trades under the general contract. All stages of the audio and video design process will be reviewed and approved by the UVSC Chief Information Officer. Audio and video systems will be specified for designated locations in full compliance with established campus standards. Audio and video systems in all classrooms will be similar in design, function and operation to facilitate user friendly operation by faculty from room to room. Seven classifications of audio and video systems should be specified for the various room types as identified below. In addition, a building-wide display system will be specified. Specify installer requirements to include an on staff, level three, Crestron certified programmer. All control system processors will be networked using the latest version of Crestron Room View software, e-Control, x-Panel. All audio and video systems will be bid as a single, lump sum unit price.

Design all AV equipment with physical security. Physical security will include, but not be limited to, aircraft cable, paddle locks, and IP and RS-232 based monitoring. UVSC owns the programs for all technology packages. If the technology package bids come in too high, UVSC can use the money to bid the equipment itself. Affix security cables to building structure. In addition, affix GPS bugs to all display devices prior to installation.

Class 0 – Archives Classroom (10.2.2), Media Services Conference Rooms (9.3.3), Media Services Work Room (9.3.4)

Rooms will be provided with very basic, integrated audio, video, and control systems. Image display will be provided by a ceiling-mounted projector and manual pull-down projection screen. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1024 x 768, in a 4:3 aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be "washed out" by ambient room lighting. Include all video system calculations in the construction drawings. Provide closed captioning display on the projection screen.

A video switching system will not be provided. Instead, the video switching capability of the room display device will be used to select the appropriate image for display. Input connectivity to the display device will be provided either in a wall or floor box. At a minimum, the input connectivity will include a computer video/audio input, and composite video/audio input. In addition an HD tuner will be provided. No other media source devices will be provided. A small amplifier and appropriate speaker system will be provided for the playback of media audio only. A portable assisted listening system will be specified for shared use between the identified rooms.

A simple control system processor will also be provided. The processor will be networked for enterprise management. The graphical user interface for the control system processor will be a button control panel mounted at electrical switch height on the wall. The user interface will include buttons to power the display device on and off, select the source for display, and control the room volume. Specify control system manufacturers in compliance with established campus standards.

Class I – Extended hours Family Study (1.1.4), 10-Person Study Spaces (7.2.2.c)

Rooms will be provided with very basic, integrated audio, video, and control systems. Image display will be provided by a large HD format flat panel monitor with closed captioning capability. A video switching system will not be provided. Instead, the video switching capability of the room display device will be used to select the appropriate image for display. Input connectivity to the display device will be provided either in a wall or floor box. At a minimum, the input connectivity will include a computer video/audio input, and composite video/audio input. In addition a DVD/VCR and HD tuner will be provided. A small amplifier and appropriate speaker system will be provided for the playback of media audio only. A portable assisted listening system will be specified for shared use between the identified rooms. The DVD/VCR and other associated electronics will be wall mounted utilizing a fold-down type equipment rack.

A simple control system processor will also be provided. The processor will be networked for enterprise management. The graphical user interface for the control system processor will be a button control panel mounted at electrical switch height on the wall. The user interface will include buttons to power the display device on and off, select the source for display, and control the room volume. Specify control system manufacturers in compliance with established campus standards.

Class II – Library Administration Conference Room (13.1.5), IT War Room (12.2.6)

Rooms will be provided with fully integrated audio, video, and control systems. Audio systems will not be provided for the amplification of the spoken word from presenters. However, audio systems will be provided to amplify program audio originating from media source playback devices such as computers and DVD players.

Each room will be provided with media source devices. These devices will include, but not be limited to, one permanent computer, inputs for one portable computer, a DVD player, a VCR, an HD television tuner, a document camera, and audio/video/data sources originating from outside the room. Design all source devices inside room furniture in 19" equipment racks. Audio originating from these source devices will be selected, processed, and amplified to an appropriate speaker system. A portable assisted listening system will be specified for shared use between the identified rooms.

Provide infrared sensors to monitor the position of the folding partition. Program the control system to accept control voltages from the sensors and make the room AV systems and lighting systems operate separately or combined.

Provide video systems for the large screen display of the selected source. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1024 x 768, in a 4:3 aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be "washed out" by ambient room lighting. Include all video system calculations in the construction drawings. Provide closed captioning display on the projection screen.

Equip each room with a networked, integrated control system for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a small touch screen control panel will be provided. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full compliance with the end user's desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Class III – 6-person Media Viewing Rooms (9.2.4)

Rooms will be provided with fully integrated audio, video and control systems for traditional information presentation, as well as for theater style media playback. Image display will be provided by a large flat panel monitor in a native 16:9 aspect ratio. A video switching system will not be provided. Instead, the video switching capability of the room display device will be used to select the appropriate image for display. Input connectivity to the display device will be provided in either a wall or floor box. At a minimum, the input connectivity will include a computer video/audio input, S-video/audio input, and composite video/audio input. In addition to the input connectivity, a resident DVD player and television tuner will also be provided. Provide closed captioning display on the projection screen.

A full surround sound media playback system will be provided. The surround sound audio system will include a 7.1 multi-channel THX/Dolby certified processor, and multi-channel power amplifier. Speakers will be provided for all audio channels and positioned based on 7.1 surround sound standards. A portable assisted listening system will be specified for shared use between the identified rooms.

A simple control system processor will also be provided. The processor will be networked for enterprise management. The graphical user interface for the control system processor will be a button control panel mounted at electrical switch height on the wall. The user interface will include buttons to power room AV devices on and off, select the source for display, control the room volume, and control the DVD player. Specify control system manufacturers in compliance with established campus standards.

Program the control system to accept control voltages from the sensors and make the room AV systems and lighting systems operate separately or combined.

Class IV – DLC Premier Conference Room (1.4.1)

The room will be provided with fully integrated audio, video presentation, video conferencing, and control systems. Audio systems will be provided for the amplification of the spoken word from meeting participants, as well as for teleconferencing and video conferencing. Microphones will be provided for lecture and video conferencing participants. Provisions for video conference participants will include a presenter, a moderately sized panel, and a minimum of four positions near the isles of the student seating areas. Microphones used for lectures and video

conferencing will be mixed using automatic matrix mixers with individual echo cancellors for each microphone input.

The audio system will amplify program audio originating from media source playback devices such as computers and DVD players, from the teleconferencing system, and video conferencing system. The audio system will include full frequency speaker systems for faithful reproduction of all frequencies between 80 Hz and 17 KHz.

The room will be provided with a building standard teaching station (lectern). Several media source devices will be provided and housed at the lectern. These devices will include, but not be limited to, one permanent computer, inputs for one portable computer, a DVD player, a VCR, a television tuner, a document camera, and audio/video/data sources originating from outside the classroom. A minimum of four pan/tilt/zoom video cameras will be specified for video conferencing along with the associated CODEC. Audio originating from source devices will be selected, processed, and amplified to an appropriate speaker system. A permanently installed wireless assisted listening system will be specified.

The room will be provided with video systems for the large screen display of the selected source. A minimum of two projectors and two screens will be specified. Include high resolution matrix switching capability that allows for two different images to be displayed on the two screens simultaneously. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1024 x 768, in a 4:3 aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings. Provide closed captioning display on the projection screen.

Equip each room with a networked, integrated control system for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a touch screen control panel will be provided. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full compliance with the end user’s desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Class V – Seminar Room (7.2.2.d), Teaching/Learning Center – Teaching Labs (5.1.1)

Rooms will be provided with fully integrated audio, video, and control systems. Audio systems will be provided for the amplification of the spoken word from presenters. In addition, audio systems will be provided to amplify program audio originating from media source playback devices such as computers and DVD players.

Rooms will be provided with media source devices. These devices will include, but not be limited to, one permanent computer, inputs for one portable computer, a DVD player, a VCR, a document camera, and audio/video/data sources originating from outside the classroom. Audio originating from these source devices will be selected, processed, and amplified to an appropriate speaker system. A portable assisted listening system will be specified for shared use between the identified rooms.

Provide video systems for the large screen display of the selected source. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest

viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1024 x 768, in a 4:3 aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be "washed out" by ambient room lighting. Include all video system calculations in the construction drawings. Provide closed captioning display on the projection screen.

Equip each room with a networked, integrated control system for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a small touch screen control panel will be provided. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full compliance with the end user's desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Provide infrared sensors to monitor the position of the folding partition. Program the control system to accept control voltages from the sensors and make the room AV systems and lighting systems operate separately or combined.

Class VI - Media Enhanced Seminar Room (9.2.5)

The room will be provided with fully integrated audio, video presentation, video conferencing, and control systems. Audio systems will be provided for the amplification of the spoken word from meeting participants, as well as for teleconferencing and video conferencing. In addition, audio systems will support simple live performances. Microphones will be provided for meeting/lecture participants and performers. Microphones used for meetings, lectures, and video/teleconferencing will be mixed using automatic matrix mixers with individual echo cancellors for each microphone input. Microphones used for performers will be mixed with the automatic mixing system or a small, portable mixing console with a minimum of 16 inputs. Provide facilities for a temporary mix position approximately 2/3rds back from the front of the room.

The audio system will amplify program audio originating from media source playback devices such as computers and DVD players, from the teleconferencing and video conferencing systems, and from live performers. The audio system will include full frequency speaker systems for faithful reproduction of all frequencies between 80 Hz and 17 KHz. The speaker system will include subwoofers.

In addition, audio systems will be specified for theater style media playback including a full surround sound media playback system. The surround sound audio system will include a 7.1 multi-channel THX/Dolby certified processor, and multi-channel power amplifier. Speakers will be provided for all audio channels and positioned based on 7.1 surround sound standards.

The room will be provided with a building standard teaching station (lectern). Several media source devices will be provided and housed at the lectern. These devices will include, but not be limited to, one permanent computer, inputs for one portable computer, a DVD player, a VCR, a television tuner, a document camera, and audio/video/data sources originating from outside the classroom. A minimum of three pan/tilt/zoom video cameras will be specified for video conferencing along with the associated CODEC. Audio originating from source devices will be selected, processed, and amplified to an appropriate speaker system. A permanently installed wireless assisted listening system will be specified.

Specify video systems for the large screen display of subject matter. Size projection screen using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Specify a high resolution, 4 window video processor which will allow four 1024 x 768 resolution images to be displayed simultaneously on the projection screen. Include high resolution matrix switching capability that allows independent image selection for display in the four video windows. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projector with a minimum native resolution of 1366 X 768 in a 16:9 aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings. Provide closed captioning display on the projection screen.

Equip room with an integrated control panel for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a touch screen control panel will be provided. The touch screen control panel will serve as the control panel, lectern monitor, and the annotation input device. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full compliance with the end user’s desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Building-wide Display System

A digital signage package including a content server, scheduling software, a high resolution computer video distribution and display system, and large screen LCD monitors will be specified. The system will distribute computer video originating from the content server, and up to four centrally located, college furnished CPU's to large screen LCD monitors located throughout the building. The distribution method will be via UTP category cable. All monitors will be controlled from a central location. Additionally, a fully functional digital signage package, including content server, scheduling software, etc., should also be bid as a single lump sum unit.

TV Distribution System

The campus TV distribution system will be extended into the Digital Learning Center. An RF TV distribution system will be provided for distribution of campus audio and video signals throughout the building including all classrooms and all offices. In offices, TV outlets will be located on the voice/data outlet plate, sharing the voice/data conduit. In offices, cable lines should be run in the same conduit. Separate conduit should not be used for cable. In non-office areas, TV outlets will be located in 4" square junction boxes with two gang mud rings. Individual outlets will be served by a main trunk line with appropriately spaced multi-outlet directional couplers (taps) that serve a maximum of six individual outlets. Each and every outlet location will "home run" to the nearest multi-output directional coupler located in the building cable tray with no more than 6 cables to any directional coupler. Maximum distance of any individual home run will not exceed 150'. Label each cable at each directional coupler. The TV distribution system will be provided with cable, amplifiers, splitters, directional couplers, terminators, outlets, and connectors. The system will be the broadband type, for bi-directional distribution of low resolution, modulated audio and video signals onto carrier frequencies. A minimum 750 MHz bandwidth will be specified, and all outlets will be provided with +4 dBu at each building television outlet. Horizontal cable to all TV outlets will be RG6. The complete TV distribution system should be bid as a single lump sum unit price.

14.2.5 Clock System

Provide battery operated clocks throughout the building, and a GPS receiver/transmitter at a central location. Specify clocks to be correctable by the GPS receiver/transmitter via a wireless connection directly to each clock.

UVSC PREFERRED EQUIPMENT LIST		
VOICE AND DATA EQUIPMENT		
DESCRIPTION	**MANUFACTURER & Model**	**COMMENTS**
Category 5e cable - Voice	Mohawk	Blue jacket, plenum rated
10 G, augmented, category 6 - Data	Siemans 10GA or Mohawk Gigland 10	White/Purple jacket, plenum rated
Fiber optic cable	Mohawk or Corning	
Innerduct		Plenum rated
Category 3, RJ-14c jacks	Siemons Max 3 MX3-F-U3-01	
Category 6, RJ-45 jacks	Siemons 10MX-02	Angled down
RIC/LIU Fiber Termination Equipment	Siemons RIC-FSC06-01	
Open frame equipment rack	Siemons RS3	
Vertical wire manager	Siemons RSCNL	
Horizontal wire manager - 1U	Siemons WM143-5	
Horizontal wire manager - 2U	Siemons WM144-5	
Power strip	Siemons RSP04	
Patch panels	Siemons 10GX-48	
Hub Cabinet	Hubbell	
Server Cabinets	Wrightline	
TV DISTRIBUTION SYSTEM EQUIPMENT		
DESCRIPTION	**MANUFACTURER & Model**	**COMMENTS**
TV distribution system trunk cable	Commscope 2312	
TV distribution system horizontal cable - RG6	Commscope 2275V	White jacket, plenum rated
Directional coupler with F-type adaptor	Siemons Maxi coax coupler	
F-type connector	F-Conn Industries FS6-R or Digicon DS6.01-02	For RG6
TV outlet - office, directional coupler with F type adapter	Siemons CT-A-FA-02	
Broadband amplifier, 2-way, 750 MHz	C-Cor FNB99DS-LO8G6C1	
Trunk connectors, 1/2"	Gilbert 500-CH-DU-03	
TV distribution system taps	Regal RTM-XXBCP	

TYPICAL ROOM REQUIREMENTS

ROOM TYPE	INFORMAL STUDY COURT 1.1.1
Power	Duplex outlets for laptop computers, at least one duplex for each group of 2 seats, but no less than one outlet per each 10' of wall space; floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space.
Lighting	30 fc, low-glare fluorescent.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	Two standard type outlets for each group of 4 seats; wireless capability.
Audio/Visual	Building-wide display system.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	EXTENDED HOURS STUDY 1.1.2
Power	Duplex outlets for laptop computers, at least one duplex for each group of 2 seats, but no less than one outlet per each 12' of wall space; floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space.
Lighting	30 fc ambient + task lighting
Lighting Control	Lighting relay system – timed on/off with time schedule; day-lighting control where applicable.
Voice/Data	Two standard type outlets for each group of 4 seats; wireless capability.
Audio/Visual	None.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	EXTENDED HOURS FAMILY STUDY 1.1.4
Power	Duplex outlets for each 10' of wall space; tamper-proof outlets in children's play area.
Lighting	30 fc ambient + task lighting
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	Standard type outlet on four walls.
Audio/Visual	Class I.
Security	Video surveillance, IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	EXTENDED HOURS VENDING 1.1.6
Power	Dedicated GFI duplex outlet for each vending machine and other equipment; one duplex outlet for each 12' of wall space.
Lighting	30 fc, general purpose fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Standard type outlet for each vending machine; standard type outlet on each wall.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	CAFÉ KITCHEN/PREPARATION 1.2.2
Power	Power to kitchen equipment per kitchen equipment plans, in addition provide a minimum (10) 120V/20 amp circuits, (2) 240V/20 amp circuits and (1) 240V/50 amp circuit; convenience outlets on all walls; power to point of sales.
Lighting	50 fc, general purpose, protected fluorescent.
Lighting Control	Manual wall switch.
Voice/Data	Standard type outlet for each work station; wall phone.
Audio/Visual	None.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	CAFÉ SEATING AREA 1.2.3
Power	Power to 25% of user seats for laptop computers, plus convenience power on 12' centers around perimeter.
Lighting	20 fc ambient lighting / 40 fc over tables for informal study; decorative pendant fixtures over tables and booths.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	Two standard type outlets for each group of 4 seats; wireless capability.
Audio/Visual	TV distribution & display panels and building-wide display system.
Security	IP device monitoring.
Clock	Yes.
Other	Standard TV outlet.

ROOM TYPE	COPY CENTER 1.3.1, 1.3.2.a, 1.3.2.b, 1.3.2.c, 1.3.3
Power	Dedicated power to each machine per equipment cut sheets; convenience power to workstations and on all walls and at transaction counter. Duplex outlets to each workstation, printer, and every 10' of wall. Floor outlets for equipment and work surface away from walls.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent. Decorative pendant fixtures at counter.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	Standard type outlet to each copy machine, printer, and fax; voice/data to each workstation.
Audio/Visual	None.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	DLC PREMIER CONFERENCE ROOM 1.4.1
Power	Standard type outlets at approximately 10' intervals around the perimeter of the room. Standard type outlets at a minimum of 14 floor box locations. Teaching station lectern workstation outlet. Media junction box workstation outlet.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent; separately-switched task lighting on front wall; flexible lighting for a variety of functions.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching; interface lighting controls with audio/visual system.
Voice/Data	Standard type outlets at approximately 10' intervals around the perimeter of the room. Standard type outlets at 14 floor box locations. Teaching station lectern workstation outlet. Media junction box workstation outlet.
Audio/Visual	Class IV.
Security	IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	LOBBY, INCLUDING FLOOR LOBBIES 2.11-2.15, 14.8.1
Power	Convenience duplex outlets on all walls, at least 25' on center; power for security sensors, video display(s); floor outlets for 2 possible future workstations
Lighting	30 fc ambient; special lighting for art and displays.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Data for security devices and sensors, standard type outlets for user convenience.
Audio/Visual	Building-wide display system.
Security	IP device monitoring.
Clock	Yes.
Other	Standard TV outlet.

ROOM TYPE	CIRCULATION DESK 3.1.1
Power	Two duplex outlets at each workstation, circuited to allow for plug-in surge power strips; one duplex outlet for each 4' of above-counter space; one outlet for each 10' of wall space on other walls. UPS power for all outlets.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	One standard type outlet per workstation; voice/data for each fax machine, copy machine and printer.
Audio/Visual	Video surveillance monitoring screen.
Security	Video surveillance monitoring location, panic button to notify college police and security.
Clock	Yes.
Other	None.

ROOM TYPE	EXPRESS CHECK 3.1.3
Power	Duplex outlet at each express check; UPS power.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	One standard type outlet for each express check.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	OFFICES: 3.2.1, 3.2.2, 3.2.3, 4.3.2, 4.4.2, 6.1, 6.2, 8.1.1, 8.1.2, 9.1.1, 9.1.2, 10.1.1, 11.1.1, 11.1.2, 11.1.3, 13.1.1, 13.1.2, 13.1.3, 13.1.4
Power	Two duplex outlets at each workstation, plus one outlet for each 10' of wall space; UPS power for Circulation and IT staff computers.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Two office type outlets on opposing walls.
Audio/Visual	None, except 9.1.1 and 9.1.2 which will include at least one TV, DVD, HDD, and VHS recorder/player.
Security	Keyed lock.
Clock	None.
Other	Standard TV outlets at 9.1.1 and 9.1.2.

ROOM TYPE	OFFICE WORKROOMS: 3.2.4, 4.4.3, 8.2.1, 9.3.4, 11.2.1, 12.2.4
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each 10' of wall space on other walls; dedicate outlet/circuit for each copy machine
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Standard type outlet every 8' around room and at each workstation, printer, and equipment. Install outlets for counters above the counter top. Dedicated circuits for copiers.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	MEDIA/AV CHECKOUT AND STORAGE 3.2.4a, 3.2.6
Power	Convenience duplex outlets on all walls, at least 6' on center, sufficient to power 25 lap-top computers.
Lighting	30 fc ambient / 50 fc task; low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Data for security devices and sensors, standard type outlets for user convenience and for simultaneous use of 25 laptop computers.
Audio/Visual	None.
Security	Video surveillance.
Clock	None.
Other	None.

ROOM TYPE	RECYCLING SPACE 3.2.4k
Power	One duplex convenience outlet.
Lighting	20 fc, general-purpose fluorescent.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	None.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	RESEARCH ASSISTANCE DESK 4.1.1, INFOPODS 4.1.3.a, QUICK SEARCH 4.1.2, AND MEDIA WORKSTATIONS 9.2.1
Power	Duplex outlet for each computer terminal, printer, copier, and workstation – no more than 4 computer terminals per circuit; served through access flooring and standard floor.
Lighting	30 fc, low-glare fluorescent (indirect lighting); accent lights for art and transaction counter using low-voltage cable lights and/or fiber optics.
Lighting Control	Multi-zoned and dimmable switching..
Voice/Data	One standard type outlet for each computer terminal, printer, and copier.
Audio/Visual	Building-wide display system.
Security	Video surveillance, IP device monitoring.
Clock	Yes
Other	None.

ROOM TYPE	PUBLIC ACCESS WORKSTATIONS 4.1.3.b and 4.1.3.c
Power	Duplex power for each computer terminal, printer, and workstation. Outlets for each 10' of wall space; outlets in tables for seating (if tables are fixed), or floor outlets (if tables are not fixed). Service through access flooring.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	One standard type outlet for each computer terminal and printer.
Audio/Visual	Building wide display system.
Security	Video surveillance, IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	FACULTY SERVICES CENTER 4.2.1
Power	Duplex outlets for laptop computers, at least one duplex for each group of 4 seats, but no less than one outlet per each 12' of wall space; outlets for copiers, printers and workstations; floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space.
Lighting	30 fc, low-glare fluorescent and task lights at workstations; accent lights for artwork and feature areas.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	Two standard type outlets for each group of 4 seats; wireless capability. UVSC standard voice/data workstation outlets for each copier, printer, and computer work station.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	Standard TV outlet.

ROOM TYPE	ACCESSIBILITY SERVICES – COLLABORATIVE LAB 4.3.1.A, QUIET LAB 4.3.1.B
Power	Duplex outlets for each workstation, at least one duplex for each 10' of wall space; floor outlets (for non-fixed tables).
Lighting	30 fc ambient / 70 fc task, low-glare fluorescent; separately-switched task lighting.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	Two standard type outlets on four walls; standard type outlet at help desk.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	Standard TV outlet.

ROOM TYPE	STORAGE w/ Workroom Counter: 4.3.3, 11.2.3, 13.1.6, 14.5.1
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each 12' of wall space on other walls. Dedicated circuits as required by equipment.
Lighting	30 fc, general-purpose fluorescent/50 fc, task.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	Standard type outlet every 8' around room. Install outlets for counters above the counter top for copiers, printers, and equipment.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	TEACHING LAB 5.1.1
Power	Duplex outlets for each 10' of wall space; floor outlets (for moveable tables); power for lectern and A/V equipment.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent; separately-switched task lighting on front wall; task light at instructor's station.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching; interface lighting controls with audio/visual system; partition control.
Voice/Data	Data ports for each seat on consolidation point; standard type outlets on four walls. Teaching station lectern workstation outlet. Media junction box workstation outlet.
Audio/Visual	Class V.
Security	IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	WRITING LAB - STUDENT STAFF WORKROOM 6.2
Power	Duplex outlet for each workstation, plus duplex outlets for each 10' of wall space.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	One standard type outlet at each workstation, printer, and for every 10' around room.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	WRITING LAB 6.3
Power	Duplex outlets for each workstation - up to 20 (including instructors) no less than one outlet for each 10' of wall space.
Lighting	50 fc, low-glare fluorescent; separately-switched task lighting; decorative pendant lights at lounge seats.
Lighting Control	Multi-zoned and dimmable switching.
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	COLLECTION (including Reference) 7.1.1, 4.4.1
Power	Duplex convenience outlets for each 20' of wall space. Quad outlets on all columns on adjacent faces so that there is at least one exposed outlet group should stacks run against column.
Lighting	Fluorescent stack lighting: Horizontal 55 fc at 30" a.f.f. minimum; vertical 5 – 30 fc (from bottom to top shelf) minimum; allow flexibility for different stack or seating arrangements; accent lighting at feature areas.
Lighting Control	Lighting relay system – timed on/off with occupied mode; wall station override.
Voice/Data	Standard type outlets on all columns near stacks. Standard type outlets every 20' around walls; wireless capability.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	USER SEATS 7.1.1.b, 7.2.1, 9.2.2
Power	Duplex outlets for laptop computers, at least one duplex for each group of 2 seats, but no less than one outlet per each 10' of wall space; floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space.
Lighting	30 fc, low-glare fluorescent; separately switched accent lights for artwork and display at low stacks; low voltage cable lighting and or fiber optic lighing.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	Two standard type outlets for each group of 4 seats; wireless capability.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	MAP CASES/GIS STATION 7.1.2a
Power	One duplex outlet for each computer terminal, workstationm and printer; power to large monitors.
Lighting	30 fc, ambient / 50 fc task low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	One standard type outlet for workstation
Audio/Visual	None.
Security	Video surveillance.
Clock	None.
Other	None.

ROOM TYPE	FOUR-PERSON STUDY SPACE 7.2.2a
Power	Duplex outlets for each 10' of wall space.
Lighting	50 fc, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	Standard type outlet on one wall.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	SIX-PERSON STUDY SPACE 7.2.2.b
Power	Duplex outlets for each 10' of wall space, at least one per individual.
Lighting	50 fc, low-glare fluorescent.
Lighting Control	Occupancy sensor, manual wall switch, and dimmable switching.
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	TEN-PERSON STUDY SPACE 7.2.2c
Power	Duplex outlets for each 10' of wall space, plus floor outlet; verify at least one outlet per individual.
Lighting	50 fc, low-glare fluorescent; separately-switched task lighting on front wall.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	Class I.
Security	IP device notification.
Clock	Yes.
Other	None.

ROOM TYPE	SEMINAR ROOM 7.2.2d
Power	Duplex outlets for each 10' of wall space; outlets in tables for seating (if tables are fixed), or floor outlets (if tables are not fixed); power for lectern and A/V equipment.
Lighting	50 fc, low-glare fluorescent; separately-switched task lighting on front wall; separately-switched accent lights for art.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching; interface lighting controls with audio/visual system.
Voice/Data	Data ports for each seat on consolidation point; standard type outlets on four walls. Teaching station lectern workstation outlet. Media junction box workstation outlet.
Audio/Visual	Class V.
Security	IP device notification.
Clock	Yes.
Other	None.

ROOM TYPE	BOUND PERIODICALS 8.3.1
Power	Duplex convenience outlets for each 20' of wall space.
Lighting	Fluorescent stack lighting: Horizontal 55 fc at 30" a.f.f. minimum; vertical 5 – 30 fc (from bottom to top shelf) minimum.
Lighting Control	Lighting relay system – timed on/off with occupied mode; wall station override.
Voice/Data	
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	CURRENT PERIODICALS 8.3.2
Power	Duplex convenience outlets for each 20' of wall space. Quad outlets on all columns on adjacent faces so that there is at least one exposed outlet group should stacks run against column.
Lighting	Fluorescent stack lighting: Horizontal 55 fc at 30" a.f.f. minimum; vertical 5 – 30 fc (from bottom to top shelf) minimum; allow flexibility for different stack or seating arrangements; accent lighting at feature areas.
Lighting Control	Lighting relay system – timed on/off with occupied mode; wall station override.
Voice/Data	Standard type outlets on all columns near stacks. Standard type outlets every 20' around walls; wireless capability.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	SIX-PERSON MEDIA VIEWING ROOM 9.2.4
Power	Duplex outlets for each 10' of wall space, plus floor outlet.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent; separately-switched task lighting on front wall.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	Class III.
Security	IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	MEDIA ENHANCED SEMINAR ROOM 9.2.5
Power	Duplex outlets for each 10' of wall space, plus floor outlet.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent; separately-switched task lighting on front wall.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	Class VI.
Security	IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	MEDIA SERVICES 9.3.1
Power	Two quad outlets at each workstation, plus four duplex outlets for each wall.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Four active ports on each wall.
Audio/Visual	None.
Security	Card access.
Clock	None.
Other	Standard TV outlet.

ROOM TYPE	MEDIA SERVICES – OPEN OFFICE 9.3.2a, 9.3.2b, 9.3.2c, 9.3.2d
Power	Three duplex outlets at each workstation, plus one outlet for each 8' of wall space; dedicated outlets for copiers and printers
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Telephone plus 3 active data ports for each workstation; standard type outlet for each copier and printer, and for each 8' of wall space.
Audio/Visual	None.
Security	Video surveillance at storage room access, corridor, and office reception entrance; card access on storage doors, workroom doors and entrance into office suite.
Clock	Yes.
Other	Standard TV outlet.

ROOM TYPE	MEDIA SERVICES WORKROOM 9.3.4
Power	Three duplex above and two duplex outlets below each work bench; plus one quad outlet every 6' of wall space on other walls; two quad outlets to center bench; dedicated circuit for copier/printer (although not mentioned).
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Standard type outlet every 4' around room. Install outlets for counters above the counter top for every 2' of counter space, including center bench; five data ports above and below each workbench plus seven additional for a total of 72.
Audio/Visual	Class O.
Security	Video surveillance at storage room door, card access at storage room doors and workroom.
Clock	None.
Other	None.

ROOM TYPE	MEDIA SERVICES CONFERENCE ROOM 9.3.3
Power	Two quad outlets at each workstation, plus four duplex outlets for each wall.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Four active ports on each wall.
Audio/Visual	Class O.
Security	Card access and IP device monitoring.
Clock	None.
Other	Standard TV outlet.

ROOM TYPE	ARCHIVES WORKROOM 10.2.1
Power	Duplex outlets for each 10' of wall space; one duplex outlet for each 4' of above-counter space outlets in tables for seating (if tables are fixed), or floor outlets (if tables are not fixed).
Lighting	UV Free, dimmable, 70 fc, separately-switched task lighting.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	Standard type outlet for each seat; standard type outlets on four walls.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	ARCHIVES CLASSROOM 10.2.2
Power	Duplex outlets for each 10' of wall space; outlets in tables for seating (if tables are fixed), or floor outlets (if tables are not fixed); power for lectern and A/V equipment.
Lighting	UV Free; dimmable 70 fc ambient, low-glare fluorescent; separately-switched task lighting on front wall.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching; interface lighting controls with audio/visual system.
Voice/Data	Standard type outlet for each seat; standard type outlets on four walls.
Audio/Visual	Class 0.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	DIGITIZATION/FILM ROOM 10.2.3
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each 10' of wall space on other walls; dedicate outlet/circuit for each copy machine/scanners.
Lighting	30 fc UV-free ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and dimmable switching
Voice/Data	Standard type outlet every 8' around room. Install outlets for counters above the counter top.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	ARCHIVES CONSULTATION ROOM (500 sf) 10.3.1a
Power	Duplex outlets for each 10' of wall space; outlets in tables for seating (if tables are fixed), or floor outlets (if tables are not fixed); verify one outlet per individual.
Lighting	30 fc, low-glare UV-free fluorescent plus task lighting; accent lights for artwork or special collections using low-voltage cable lights and/or fiber optics.
Lighting Control	Occupancy sensor and multi-zoned and dimmable switching.
Voice/Data	Data ports for each seat on consolidation point; standard type outlets on four walls.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	None.

ROOM TYPE	ARCHIVES RECEPTION/EXHIBIT SPACE 10.3.1b
Power	Two duplex outlets at workstation; duplex outlets for each 12' of wall space; floor outlets where stations or exhibits cannot be served directly from the wall without crossing aisle space.
Lighting	30 fc, UV-free, low-glare fluorescent; accent lights for artwork and special collection; low-voltage cable lighting and/or fiber optic lighting.
Lighting Control	Lighting relay system – timed on/off with occupied mode; day-lighting control where applicable.
Voice/Data	One standard type outlet at workstation; spare empty conduit stubs for each 20' of wall space; wireless capability.
Audio/Visual	Building-wide display system.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	ARCHIVE STACKS 10.4.1
Power	Duplex convenience outlets for each 20' of wall space. Quad outlets on columns on adjacent faces so that there is at least one exposed outlet group should stacks run against column.
Lighting	Fluorescent stack lighting, UV-free: Horizontal 55 fc at 30" a.f.f.minimum; vertical 5 – 30 fc (from bottom to top shelf) minimum.
Lighting Control	Lighting relay system – timed on/off with occupied mode; wall station override.
Voice/Data	Standard type outlets at work surface.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	TECHNICAL SERVICES WORKROOM 11.2.1
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each 10' of wall space on other walls; dedicate outlet/circuit for each copy machine, specialized equipment or appliance. Two duplex outlets at each workstation.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Standard type outlet at each workstation, printer, and every 8' around room. Install outlets for counters above the counter top.
Audio/Visual	None.
Security	Video surveillance.
Clock	Yes.
Other	None.

ROOM TYPE	TECHNICAL SERVICES - COPY/FAX/SCAN/PRINTER STATION AREA 11.2.3
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each 10' of wall space on other walls; dedicate outlet/circuit for each copy machine.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	One voice/data drop of each 8' of counter space; voice/data for each copy machine, scanner printer and fax machine.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	SYSTEMS WORK STUDY 12.1.2
Power	Two duplex outlets for each 4' of above-counter space and at each workstation, plus one outlet for each 10' of wall space on other walls; dedicate outlet/circuit for each copy machine.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Two voice/data drop of each 8' of counter space; voice/data for each copy machine, scanner, printer, and fax machine – 3 standard data drops for each occupant.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	SYSTEMS- STAFF WORK ROOM 12.1.3
Power	One duplex outlet for each 4' of above-counter space, plus one outlet for each workstation, printer, and 10' of wall space on other walls; dedicate outlet/circuit for each copy machine.
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	One voice/data drop of each workstation, printer, and 8' of counter space; voice/data for each copy machine, scanner, printer and fax machine.
Audio/Visual	Minimum 40" LCD flat panel display
Security	Card access, intrusion detection, IP device monitoring.
Clock	Yes.
Other	None.

ROOM TYPE	IT WAR ROOM 12.2.6
Power	Capacity for 50 watts/square foot on generator and UPS power; outlets under raised floor to be cast aluminum boxes on LFMC whips; minimum #10 AWG wire for all outlets; generator power for independent HVAC equipment; EPO button per NEC;
Lighting	30 fc ambient / 50 fc task, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Wire management above racks and beneath raised floor; terminations for horizontal and riser distribution.
Audio/Visual	Class II
Security	Card reader; intrusion detection; and video surveillance at IT suite entrance, secure printing, server room, tape vault, and UPS.
Clock	Yes.
Other	Water detection system under raised floor; smoke detection under floor and on ceiling – interlocked with pre-action or suppression system; grounding and signal reference per IEEE Standard 1100-1999. Standard TV outlet.

ROOM TYPE	IT STORAGE 12.2.7
Power	One duplex outlet for each 12' of wall space.
Lighting	30 fc, general-purpose fluorescent.
Lighting Control	Occupancy sensor and manual wall switch.
Voice/Data	Standard type outlet on 2 walls.
Audio/Visual	None.
Security	None.
Clock	None.
Other	None.

ROOM TYPE	SERVER ROOM 12.2.8 (MAIN COMPUTER ROOM, TAPE VAULT 12.2.9, UPS 12.2.10 AND MDF 14.4.2)
Power	Capacity for 100 watts/square foot on generator and UPS power; several duplex outlets for racks and computer equipment; outlets under raised floor to be cast aluminum boxes on LFMC whips; minimum #10 AWG wire for all outlets; generator power for independent HVAC equipment; EPO button per NEC; convenience outlets every 10' on walls.
Lighting	50 fc, low-glare fluorescent.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	Wire management above racks and beneath raised floor; terminations for horizontal and riser distribution; standard type voice/data outlets for each work station; one UVSC standard voice/data workstation outlet per wall.
Audio/Visual	None.
Security	Card reader, intrusion detection, video surveillance.
Clock	Yes.
Other	Water detection system under raised floor; smoke detection under floor and on ceiling – interlocked with clean agent suppression system; grounding and signal reference per IEEE Standard 1100-1999.

ROOM TYPE	BREAKROOM 13.2.1
Power	One GFI duplex outlet on dedicated circuit for each 4' of above- counter space; GFI dedicated outlet/circuit for each vending machine; dedicated outlet/circuit for each fixed appliance (verify voltage requirements); plus one outlet for each 10' of wall space on other walls.
Lighting	10/20/40 fc stepped or dimmed; fluorescent; accent lighting for art.
Lighting Control	Occupancy sensor and manual wall switch
Voice/Data	One standard type outlet for every 10' around room.
Audio/Visual	None.
Security	None.
Clock	Yes.
Other	Standard TV outlet.

15.0 FOOD SERVICES/ELEVATORS/ACOUSTICS

15.1 FOOD SERVICES

The program for the UVSC Digital Learning Center includes a café with a food preparation and serving area as described in the individual space outlines. UVSC has requested that the design team include a food services consultant to design kitchen/food preparation/serving areas with input from campus food services. Furnishing and installing food services equipment would be included in the contract for construction.

15.2 ELEVATORS

During schematic design the project team, including the construction manager, should evaluate whether to obtain the services of an independent elevator consultant or to include the elevators in the initial bid package. In order to minimize coordination difficulties, it will be important to have an independent consultant or the selected vendor on board as part of the project team prior to the beginning of construction documents for the main bid package. See section 8.14.8 for programmatic elevator requirements.

15.3 ACOUSTICS

In order to validate and achieve the goals outlined in this section, an acoustical engineer should be made part of the project team. The engineer may be hired either by the owner or the design team, as negotiated.

To become the hub of student life on the UVSC campus, the Digital Learning Center must successfully balance the need for the social and interactive aspects of the student experience with the quiet, contemplative needs of student life. In order to accommodate numerous types of public and private space with differing acoustical needs in a single building, the UVSC Digital Learning Center must take into account the appropriate sound absorption, acoustical separation, and background noise control measures needed to maintain quiet study spaces while allowing comfortable group study and gathering to occur in the entry and other designated areas of the building.

In order to ensure that the acoustics in each space are optimal for their use, and to ensure the acoustical separation of differing spaces within the Digital Learning Center, designers must consider three essential components of sound transmission: the source of sounds, the path of sound waves, and the perception of the receiver. The perception of the receiver can be influenced, and unwanted noise eliminated, by carefully planning the source and path of sound waves. This planning involves a delicate balance of space considerations, background noise, acoustical absorption and acoustical isolation.

Acoustical separation can be accomplished to a great extent through effective space planning. For example, the DLC program zoning diagram positions many of the noisiest areas of the building, such as the café, circulation desk, and extended hours study court, together in the entry area of the building. Because plans for the design of the Digital Learning Center include a move toward more interactive spaces, and because meeting rooms are interspersed throughout the collection areas, each subdivision of space must also be considered individually.

The amount of background noise in a space can have significant impact on the comfort level of its users; too much background noise can be distracting, while too little will only accentuate the

noises of conversation, book re-shelving, computer keys clicking, and other sounds created through general use. Recommended *Noise Criteria* (*NC*) for library spaces are as follows:

Space Type	NC Rating
Open Public Areas (Circulation, Reference)	35-40
Children's Room (Family Study)	35-40
Computer Work Areas	40
Private Offices	30-35
Open Staff Work Areas	35-40
Copy Rooms	40
Conference Rooms	max 25
Reading Rooms	25-30
Classrooms, Training Rooms	25-30
Assistive Devices Lab	30-35

Salter, Charles M. "Acoustics for Libraries." Libris Design Project, <http://www.librisdesign.org/>

Designers may need to consider both sound absorption and sound isolation in the design process to achieve their NC targets. Interior finish materials are the principal contributors to sound absorption. Typically, suspended acoustical ceiling tiles are programmed to prevent sound reflection off the ceiling. The sound absorption properties of typical finish materials, expressed in terms of *Noise Reduction Coefficient* (*NRC*), are listed in the following table:

Sound Absorption (Common Building and Furnishing Materials)	NRC
Walls	
Unglazed Brick	0.00
Gypsum Board, ½ inch	0.05
Coarse concrete block	0.35
Shredded wood fiberboard (2 inches on concrete)	0.75
Floors	
Wood	0.10
Carpet on concrete (no underlay)	0.30
Carpet on foam rubber	0.55
Ceilings	
Plaster on lath	0.05
Suspended acoustical tile, ¾ inch thick	0.95

Cohen, Aaron and Elaine. Designing and Space Planning for Libraries. R.R. Bowker Co: New York, 1979.

While sound absorption helps control the noise level within a space, sound isolation helps control the transmission of sound from one space to another. As with sound absorption, STC-rated walls should be used to reduce sound transmission into some spaces and out of others. We recommend STC-rated partitions surrounding or separating programmed spaces in accordance with the following table:

Space Type	STC
Open Public Areas (Public Services, Research Assistance)	40-45
Children's Room (Family Study)	50-55
Computer Work Areas	40-45
Private Offices	45-50
Open Staff Work Areas	45-50
Copy Rooms	50-55
Teleconference Rooms	45-50
Reading Rooms	45-50
Instruction Rooms, Training Rooms	40-45
Lab for Assistive Devices	40-45
Mechanical Rooms	55-65
Elevator Rooms	55-65
Restrooms	55-65

Impact noise or structure-borne vibration can contribute as much to poor acoustics as airborne sound. Such concerns within the Digital Learning Center include the sounds of footstep on hard surfaces and vibrations created by mechanical equipment. Impact and vibration are expressed in terms of *Impact Isolation Class* (*IIC*). We recommend using floor/ceiling assemblies above and/or below the listed spaces having the following IIC ratings:

Space Type	IIC
Open Public Areas (Circulation, Reference)	50
Computer Work Areas	50
Private Offices	50
Open Staff Work Areas	50
Copy Rooms	55
Teleconference Rooms	50
Reading Rooms	50
Instruction Rooms, Training Rooms	50
Lab for Assistive Devices	55
Mechanical Rooms/Penthouse	65*
Elevator Rooms	65*

Restrooms	55

* If this IIC cannot be achieved, design to minimum IIC of 55 and isolate all vibration producing equipment.

Certain areas within the Digital Learning Center will be more acoustically problematic, particularly if they are located near the quiet collection areas. The most common areas of acoustic disturbance within libraries are typically service desks. These service areas, which often contain copiers and noise generating computer equipment accompanied by hard surfaces, will require more acoustic absorption. Lobby spaces will also need a special degree of absorption to combat the noises generated by copiers, hard reflective surfaces, and conversing groups of people. Special consideration will need to be taken in selecting not only ceiling tiles, but also floor and wall surfaces. The door-free restrooms included in the Digital Learning Center design will also be acoustically problematic. This can be solved in part by space planning, isolating restrooms away from the quiet collection areas and locating restroom entrances in sound absorbing maze-like hallways. Low background noise and masking noise generated by fans may also be necessary, however. Staff breakrooms will also tend to be noisy and, because staff will constantly entering and exiting the room, will need to absorb sound even while the door is open. This will require careful attention to the materials used to finish and furnish the room.

16.0 SCHEDULE AND PHASING

16.1 SUMMARY

In order to evaluate when the construction of the Digital Learning Center might begin and how soon the building would be ready for use, during programming we have developed the following schedule of design and construction. This schedule is based on the CM/GC design-assist method of delivering the building that has been most often used by the State of Utah for recent projects. Following the schedule discussion in terms of this method, we have also included a review of possible other delivery methods along with their potential effect on schedule.

16.1.1 Design

Based on funding this coming legislative session, selection of the A/E team should be completed by the middle of May 2006. Concurrent with CM/GC selection, the design team will begin the schematic design phase. With a CM/GC on board by early July 2006 at the latest, the contractor will be able to provide cost and schedule input during the owner review of the initial schematic design submittal in the middle of July. Final revisions to the schematic design should be completed in early August.

The initial submittal for the design development phase would begin immediately following the completion of schematic design in early August, concurrent with development of Work Package I. An owner review and final revisions to the design development phase would then take place in December and January, while Work Package I will finish in early February 2007. Production of Work Package II, the main Construction Document phase, should begin immediately following the completion of Design Development Document in late January. Work Package II should be submitted for review by the middle of May 2007, and final revisions should be completed by early July 2007.

16.1.2 Construction

The phasing and scheduling of the design process described above will allow construction to begin in March 2007 at the earliest, or as soon as the contractor can get in the ground that spring. This approach allows completion by May 2009. The date for occupancy will be late June 2009 or in plenty of time to allow move in prior to fall semester. One of the first tasks of the CM/GC will be to provide further refinement and development of the construction schedule. The CM/GC will also assist the project team in evaluating which of portions of the project should be included in Work Package I: site work, perhaps steel, other long-lead items such as mechanical units, and sub-trades such as elevators where a subcontractor's design assistance is needed during design work.

16.1.3 Alternative Delivery Methods

We have been told that the state will likely choose to accelerate the schedule by allowing construction to begin as early as possible based on early work packages while design work is still underway. Getting contractors, subcontractors, and suppliers under contract sooner and completing the project faster would lessen overall escalation costs. The desired schedule acceleration can be achieved either through fast-tracking the project with the CM/GC in the design-assist role or through design-build delivery. Either case would require that construction proceed on the basis of multiple packages describing portions of the work with design proceeding as quickly as possible and in the contractor's priority order. The overall design process would last about the same length of time, however, the design team's construction administration work

would overlap design work significantly, requiring careful coordination of the design team's work processes.

In terms of the construction schedule, the goal of this approach would be to get in the ground, and possibly begin the building superstructure ahead of winter conditions in 2006. Such an approach would require careful planning, and a commitment on everyone's part to give the project ongoing, careful attention and to make firm decisions expeditiously. In this scenario, the beginning date could possibly be advanced by approximately four months; careful coordination of work packages and contractor sequencing thereafter could lead to additional time savings. This may be necessary in order to provide the maximum benefit to the college. Based on UVSC's academic calendar, delivering the building so occupancy is achieved prior to the start of Fall Semester 2009 does not offer an advantage unless occupancy is moved at least seven and a half months earlier—far enough to allow the use of the building for Spring Semester 2009, which begins in early January.

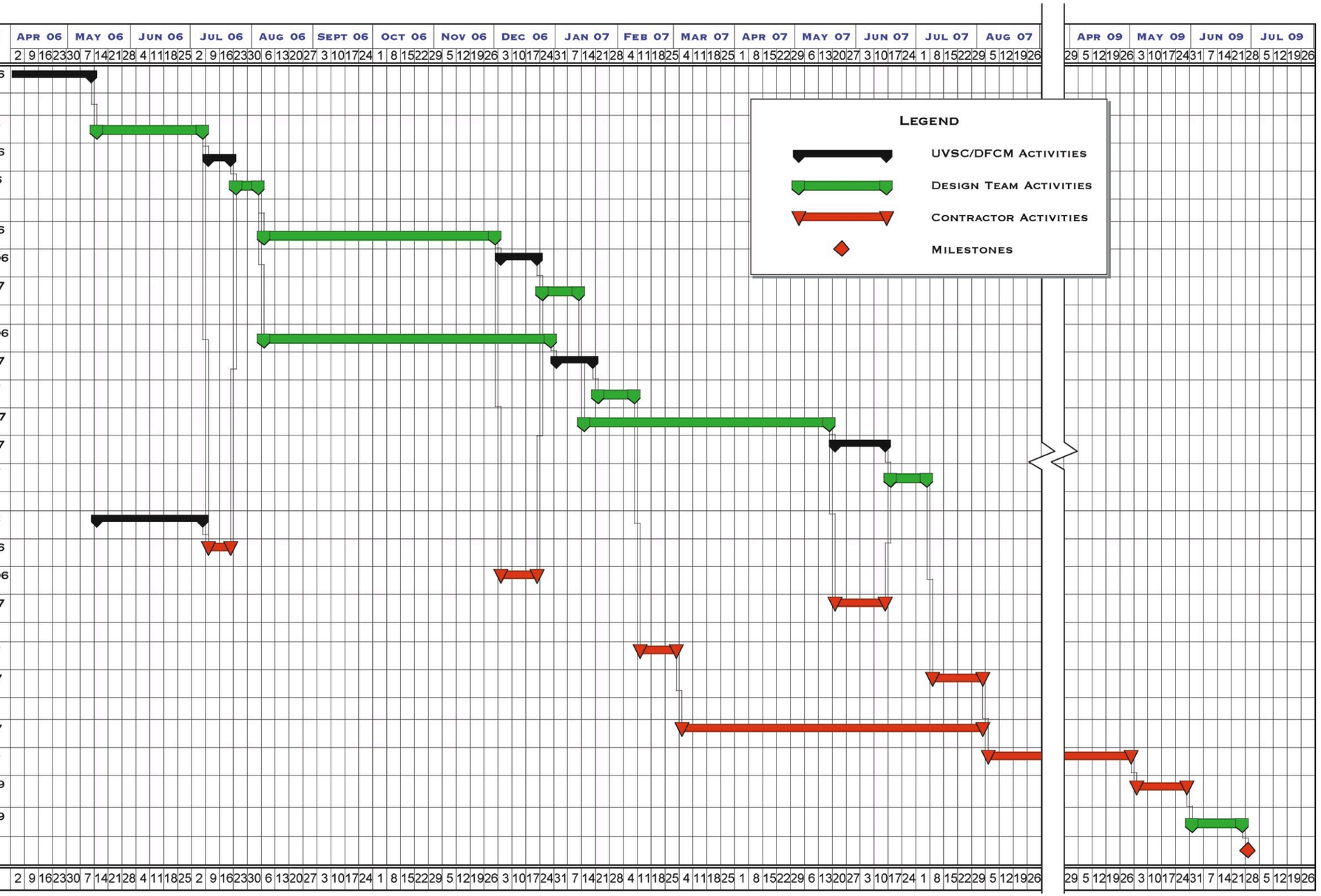
16.2 DETAILED SCHEDULE FOR DESIGN AND CONSTRUCTION

For a graphic representation of design and construction activities included in the CM/GC design/assist laid out at the beginning of this section, see the detailed schedule on the following page. The scheduled for an accelerated delivery system as discussed above would look similar except that it would include several additional work packages with the first packages being issued much sooner. Construction activities would be accelerated and compressed accordingly.

Utah Valley State College
Digital Learning Center
Facilities Program

Suggested Schedule for
Design and Construction

Activity Name	Start Date	Finish Date
A/E Selection	3/20/06	5/12/06
Schematic Design		
Initial Submittal	5/15/06	7/7/06
UVSC/DFCM Review	7/10/06	7/21/06
Final Revisions	7/24/06	8/4/06
Design Development		
Initial Submittal	8/7/06	12/1/06
UVSC/DFCM Review	12/4/06	12/22/06
Final Revisions	12/25/06	1/12/07
Construction Documents		
Work Package 1--Site+	8/7/06	12/29/06
UVSC/DFCM Review	1/1/07	1/19/07
Final Revisions	1/22/07	2/9/07
Work Package 2--Main	1/15/07	5/18/07
UVSC/DFCM Review	5/21/07	6/15/07
Final Revisions	6/18/07	7/6/07
CM/GC Preconstruction		
CM/GC Selection	5/15/06	7/7/06
CM/GC SD Review	7/10/06	7/21/06
CM/GC DD Review	12/4/06	12/22/06
CM/GC CD Review	5/21/07	6/15/07
Biddding		
Bid Work Package 1	2/12/07	3/2/07
Bid Work Package 2	7/9/07	8/3/07
Construction		
Work Package 1	3/5/07	8/3/07
Work Package 2	8/6/07	5/1/09
Commission Bldg. Systems	5/4/09	5/29/09
Move In	6/1/09	6/26/09
Occupancy	6/29/09	



17.0 EXPANSION

During the design of the UVSC Digital Learning Center, consideration should be given to the possibilities for future expansion. This expansion will likely include an Automated Storage and Retrieval System in order to allow the collection to increase without dramatically increasing the square footage of the building. As we considered the proposed site for the Digital Learning Site, we evaluated the possibilities for northern and southern expansion within the context of the campus masterplan.

17.1 SOUTH

Expansion of the Digital Learning Center to the south is discouraged for three major reasons. First, The Student Union Center is slated to expand to its north, which will dramatically reduce available parking between it and the Digital Learning Center. Expansion of the Digital Learning Center that direction would reduce the available parking to an unacceptable degree. Second, the Pioneer House, located on the southern side of the DLC site, represents a heritage that UVSC would prefer to preserve. Expansion that direction might encroach on that structure. Third, the south face of the Digital Learning Center is the most logical for a distinctive entry façade. It will likely become a part of the building's identity that should be maintained as the front door of the Digital Learning Center after expansion.

17.2 NORTH

When expansion to the Digital Learning Center does occur, expansion to the north is recommended. This is in keeping with the location of future construction shown in the UVSC master plan. Also, an Automated Storage and Retrieval System on the north could be accommodated either through a horizontal conveyance system or through a secondary service desk, as is used at the new USU Merrill Library.

17.3 CONCOURSE

When the DLC expansion and/or the future General Academics Building are constructed to the north, these structures will begin defining the academic quad shown on the master plan north of the Liberal Arts Building. During programming, we discussed on several occasions whether the DLC's connecting concourse should become a through street (as it were) along the west edge of the DLC building envelope (but outside security) connecting to these buildings to the north, or whether we should envision it as a dead end, terminating at the entry of the DLC.

Our recommendation is that the concourse <u>not</u> be planned as a thoroughfare. The primary reason for this recommendation is to conserve area for program functions in the library. The concourse, if it continued through, would eat up a 20- to 30-foot swath along the entire length of the building, taking away from as much as 8,000 GSF of important program spaces.

Some suggested that the DLC's connecting concourse could tie in to the north end of the Liberal Arts Building. Indeed, the master plan is laid out this way. Such an arrangement would minimize the distance the concourse would have to travel through the DLC in order to continue the passageway to future buildings to the north. For this approach to work, our discussions led us to believe that the public front of the digital learning center would have to be designed to face north (toward a planned future building just feet away), northwest onto the corner of the future quad, or even west toward the Liberal Arts Building.

One intriguing possibility associated with this approach was to attach the connecting concourse together with library entry functions such as the Café and extended hours study areas to the north end of the Liberal Arts Building, with seamless connections from there to the main lobby at the library's northeast corner. The effect would be to make the front door of the library face directly north onto what will one day be a significant collegiate quad. The difficulty with this vision is the question of when that *one day* will come. In the many years until that time, the front door of the library would face a sea of asphalt parking, and it would turn its back on the Student Center and the current heart of campus.

Our recommendation is that future construction to the north of the DLC be connected to the concourse at the north end of the Liberal Arts Building and that that connection be made independent from the Digital Learning Center.

18.0 COST ESTIMATE

18.1 CONSTRUCTION COST

The cost model used in this facilities program is based on the conceptual building design prepared by and reflected in the preliminary visualization sketches by Jacob Alspector. These sketches and the resulting rendering were done at the request and under the direction of President Sederburg. See Appendix 19.5 for more information on this preliminary visualization process.

The preliminary visualization process occurred separately from this facilities program, but with Jacob Alspector serving as a member of the programming team, we were able to use the knowledge about the campus and the president's priorities gleaned during that effort to inform and improve the program.

With respect to construction cost, the rendering and its underlying design concepts represent a reasonable indicator of the quality of building sought by UVSC for the new Digital Learning Center.

During the course of the programming effort, the uncertainties of the current construction market in Utah were a recurring topic of discussion. We are aware that in the past twelve months the State of Utah has revised its assumptions regarding escalation from 4% per annum to around 10% per annum currently. This action has been taken in response to double-digit cost increases that occurred quite suddenly around mid-year 2005. In response to these changes in anticipated construction cost increases, the total project funding request was increased to $48 million, in consultation with DFCM and UVSC administration, particularly President Sederburg.

This programming effort has moved in parallel with the cost estimating and total funding request determination. While funding-related decisions that could be made at this point have been made, significant uncertainty remains because of two factors that will remain unknown until after this program is completed:

- The level of funding ultimately appropriated by the Utah State Legislature.
- The actual construction cost increases that occur between now and the time of bidding.

By the time the design team is selected, the amount of State funds available will have been determined. In addition, several more months of construction cost increases will be history before final decisions about project scope must be made by the design team, with assistance from the construction manager/general contractor. At that point, the amount of remaining escalation will likely need to be re-evaluated.

For all of these reasons, in the programming process, we have looked at multiple scenarios for total square footage of the Digital Learning Center. As shown previously, the space list includes columns totaling approximately 180,000 gross square feet, 165,000 gross square feet, and 150,000 gross square feet. We have done this in an effort to describe to the design team how the program could be adapted to varying possible funding outcomes.

The following pages present three cost estimates. The first is based on 180,000 GSF, the original square footage request. It is presented in summary and detail form. This estimate includes the connecting concourse within the 180,000 GSF. The second two programmatic cost estimates are presented in summary form only. They are based on the 165,000 and 150,000 GSF columns

mentioned above. In each of these two cases, the connecting concourse is considered separately; including the concourse means that these two options effectively total 170,000 GSF and 155,000 GSF respectively.

Additionally, for all three building sizes, cost estimates have been added for all voice and data systems required to support the building. This equipment would be located in the IDF and MDF rooms, except for the main UPS which would be located in the server room.

18.2 TOTAL PROJECT COST – 180,000 GSF BUILDING

Digital Learning Center (building, link, site)	$ 31,153,000
General Conditions	$ 2,181,000
Bonding	$ 312,000
Contractor Overhead and Profit	$ 1,558,000
Design Contingency	$ 3,115,000
	$ 38,319,000
Voice and Data Systems	$ 769,000
Escalation	$ 7,335,000
Digital Learning Center (Construction)	$ 46,423,000
Soft Costs	$ 10,162,000
Total Project Cost	**$56,585,000**

18.3 DETAILED PROGRAMMATIC CONSTRUCTION COST ESTIMATE – 180,000 GSF BUILDING

The attached construction cost estimate breaks down the $38.3 million shown above into its component parts. This estimate and the summaries that follow are all stated in terms of today's dollars.

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

S U M M A R Y

Program Construction Cost Estimate
January 31, 2006

SECTION		AREA		COST/SF	COST
SUMMARY:					
SITE IMPROVEMENTS		125,000	SF	9.00	$1,114,000
CONNECTION LINK				Included in Building	
BUILDING (5 Stories)		180,000	GSF	167.00	$30,039,000
SUB-TOTAL (Construction)		180,000	GSF	173.00	$31,153,000
GENERAL CONDITIONS	7.0%			12.00	$2,181,000
BONDING	1.0%			1.75	$312,000
OVERHEAD AND PROFIT	5.0%			8.75	$1,558,000
DESIGN CONTINGENCY	10.0%			17.25	$3,115,000
TOTAL (Construction)		180,000	GSF	213.00	$38,319,000

NOTES: Costs are for Construction only.
Costs are Based on a Traditional Open Competitive Bid Basis.
Costs are Current Costs and Do Not Included Inflation.

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UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

Program Construction Cost Estimate
January 31, 2006

SECTION	UNIT	UOM	UNIT COST	COST
SITE IMPROVEMENTS				
Site Paving and Landscaping	125,000	SF	6.00	$750,000
Wet Utilities	2,550	LF	100.00	$255,000
Dry Utilities	400	LF	185.00	$74,000
Site Lighting, Minimal	1	LS	35,000	$35,000
				$1,114,000
CONNECTION LINK				
Connection Link to Existing Building				**Included in Building**

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

Program Construction Cost Estimate
January 31, 2006

SECTION	UNIT	UOM	UNIT COST	COST
BUILDING (5 Stories)				
ARCHITECTURAL				
EXTERIOR CLOSURE				
Precast Concrete (15%)	9,900	SF	35.00	$347,000
Curtainwall (85%)	57,700	SF	70.00	$4,039,000
Light Shelves - East, South & West	16,200	SF	100.00	$1,620,000
				$6,006,000
ROOFING				
Membrane Roofing System	36,000	SF	9.00	$324,000
Skylight / Clerestory System	7,200	SF	65.00	$468,000
				$792,000
INTERIOR CONSTRUCTION				
Metal Stud and Gypsum Board Partitions / Interior Glazing	126,000	SF	11.00	$1,386,000
Man Doors with Hardware	360	LEAF	1,400	$504,000
Floor, Wall and Ceiling Finishes	180,000	SF	12.50	$2,250,000
Specialties - Cabinets and Millwork, Bath Accessories, Corner Guards, Graphics, Etc.	180,000	SF	6.00	$1,080,000
Access Flooring - IT Areas	6,800	SF	10.00	$68,000
Misc Equipment - Minimal	180,000	SF	1.50	$270,000
				$5,558,000
CONVEYING SYSTEM				
Elevators	15	STOP	33,000	$495,000
				$495,000
TOTAL - ARCHITECTURAL				**$12,851,000**

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

Program Construction Cost Estimate
January 31, 2006

SECTION	UNIT	UOM	UNIT COST	COST
BUILDING (5 Stories)				
STRUCTURAL				
FOUNDATION				
Concrete Footings and Foundation Walls, Reinf	1,780	CY	485.00	$863,000
Structural Fill, Excavation and Backfill	5,340	CY	33.00	$176,000
				$1,039,000
FLOORS				
Concrete Slab on Grade, Reinf	36,000	SF	6.00	$216,000
Steel Structure, Decking, Fireproofing and Concrete Slab on Deck	144,000	SF	31.00	$4,464,000
Steel Pan Stairs w/ Railings	20	FLT	18,000	$360,000
				$5,040,000
COLUMNS				
Steel Columns w/ Fireproofing	180,000	SF	3.50	$630,000
				$630,000
ROOF				
Steel Structure, Decking and Fireproofing	36,000	SF	19.00	$684,000
				$684,000
INTERIOR WALLS				
CMU Interior Walls	18,900	SF	12.00	$227,000
				$227,000
TOTAL - STRUCTURAL				**$7,620,000**

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UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

Program Construction Cost Estimate
January 31, 2006

SECTION	UNIT	UOM	UNIT COST	COST
BUILDING (5 Stories)				
MECHANICAL				
FIRE PROTECTION				
Fire Sprinkler System	180,000	SF	2.25	$405,000
				$405,000
PLUMBING				
Plumbing Fixtures with Piping	255	EA	2,500	$638,000
Plumbing Equipment and Specialties	180,000	SF	1.50	$270,000
				$908,000
HVAC				
HVAC Ductwork and Insulation	171,000	LBS	6.00	$1,026,000
HVAC Grilles, Registers and Diffusers	1,990	EA	135.00	$269,000
HVAC Equipment	180,000	SF	8.00	$1,440,000
HVAC Piping and Specialties	180,000	SF	3.00	$540,000
HVAC Control System	180,000	SF	3.50	$630,000
HVAC Test and Balance	1,320	HRS	75.00	$99,000
				$4,004,000
TOTAL - MECHANICAL				**$5,317,000**

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(180,000 GSF BUILDING)

Program Construction Cost Estimate
January 31, 2006

SECTION		UNIT	UOM	UNIT COST	COST
BUILDING (5 Stories)					
ELECTRICAL					
ELECTRICAL					
Light Fixtures		2,990	EA	285.00	$852,000
Devices - Outlets and Switches		3,980	EA	75.00	$299,000
Gear - Panels and Transformers		180,000	SF	2.50	$450,000
Emergency Generator		1	EA	175,000	$175,000
Feeder and Branch Circuitry		180,000	SF	5.00	$900,000
Fire Alarm System		180,000	SF	1.75	$315,000
Phone / Data System		180,000	SF	2.50	$450,000
Security / Misc Systems		180,000	SF	2.50	$450,000
Electrical Specialties		180,000	SF	2.00	$360,000
Technology System					In Soft Costs
					$4,251,000
TOTAL - ELECTRICAL					**$4,251,000**
TOTAL BUILDING (5 Stories)					**$30,039,000**
SUB-TOTAL (Construction)		**180,000**	**SF**	**173.00**	**$31,153,000**
GENERAL CONDITIONS	**7.0%**			**12.00**	**$2,181,000**
BONDING	**1.0%**			**1.75**	**$312,000**
OVERHEAD AND PROFIT	**5.0%**			**8.75**	**$1,558,000**
DESIGN CONTINGENCY	**10.0%**			**17.25**	**$3,115,000**
TOTAL (Construction)		**180,000**	**SF**	**213.00**	**$38,319,000**

NOTES: Costs are for Construction only.
Costs are Based on a Traditional Open Competitive Bid Basis.
Costs are Current Costs and Do Not Included Inflation.

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18.4 TOTAL PROJECT COST – 165,000 GSF BUILDING + LINK

Digital Learning Center (building, link, site)	$ 29,472,000
General Conditions	$ 2,063,000
Bonding	$ 295,000
Contractor Overhead and Profit	$ 1,474,000
Design Contingency	$ 2,947,000
Digital Learning Center (building, link, site) Subtotal	$ 36,251,000
Voice and Data Systems	$ 769,000
Escalation	$ 6,947,000
	$ 43,967,000
Soft Costs	$ 10,161,667
Total Project Cost	**$54,129,000**

18.5 SUMMARY PROGRAMMATIC CONSTRUCTION COST ESTIMATE – 165,000 GSF BUILDING

Parametrix, Inc has prepared the attached summary showing in general how the $36,251,000 is allocated.

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(165,000 GSF BUILDING)

S U M M A R Y

Program Construction Cost Estimate
January 31, 2006

SECTION		AREA		COST/SF	COST
SUMMARY:					
SITE IMPROVEMENTS		125,000	SF	9.00	$1,114,000
CONNECTION LINK		4,500	GSF	175.00	$788,000
BUILDING (5 Stories)		165,000	GSF	167.00	$27,570,000
SUB-TOTAL (Construction)		169,500	GSF	174.00	$29,472,000
GENERAL CONDITIONS	7.0%			12.25	$2,063,000
BONDING	1.0%			1.75	$295,000
OVERHEAD AND PROFIT	5.0%			8.75	$1,474,000
DESIGN CONTINGENCY	10.0%			17.50	$2,947,000
TOTAL (Construction)		169,500	GSF	213.75	$36,251,000

NOTES: Costs are for Construction only.
Costs are Based on a Traditional Open Competitive Bid Basis.
Costs are Current Costs and Do Not Included Inflation.

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18.6 TOTAL PROJECT COST – 150,000 GSF BUILDING + LINK

Digital Learning Center (building, link, site)	$ 27,252,000
General Conditions	$ 1,908,000
Bonding	$ 273,000
Contractor Overhead and Profit	$ 1,363,000
Design Contingency	$ 2,725,000
	$ 33,521,000
Voice and Data Systems	$ 769,000
Escalation	$ 6,434,000
Digital Learning Center (Construction)	$ 40,724,000
Soft Costs	$ 10,161,667
Total Project Cost	**$ 50,886,000**

18.7 SUMMARY PROGRAMMATIC CONSTRUCTION COST ESTIMATE – 150,000 GSF BUILDING

Parametrix, Inc has prepared the attached summary showing in general how the $33,521,000 is allocated.

UTAH VALLEY STATE COLLEGE

DIGITAL LEARNING CENTER
(150,000 GSF BUILDING)

S U M M A R Y

Program Construction Cost Estimate
January 31, 2006

SECTION		AREA		COST/SF	COST
SUMMARY:					
SITE IMPROVEMENTS		125,000	SF	9.00	$1,114,000
CONNECTION LINK		4,500	GSF	175.00	$788,000
BUILDING (5 Stories)		150,000	GSF	169.00	$25,350,000
SUB-TOTAL (Construction)		154,500	GSF	176.50	$27,252,000
GENERAL CONDITIONS	7.0%			12.25	$1,908,000
BONDING	1.0%			1.75	$273,000
OVERHEAD AND PROFIT	5.0%			8.75	$1,363,000
DESIGN CONTINGENCY	10.0%			17.75	$2,725,000
TOTAL (Construction)		154,500	GSF	217.00	$33,521,000

NOTES: Costs are for Construction only.
Costs are Based on a Traditional Open Competitive Bid Basis.
Costs are Current Costs and Do Not Included Inflation.

19.0 APPENDICES

19.1 RECOMMENDED ZONING AND STACKING DIAGRAMS
19.2 PROGRAMMING PROCESS
19.3 DETAILED CODE ANALYSIS
19.4 UVSC MASTERPLAN
19.5 PRELIMINARY VISUALIZATION SKETCHES
19.6 GLOSSARY

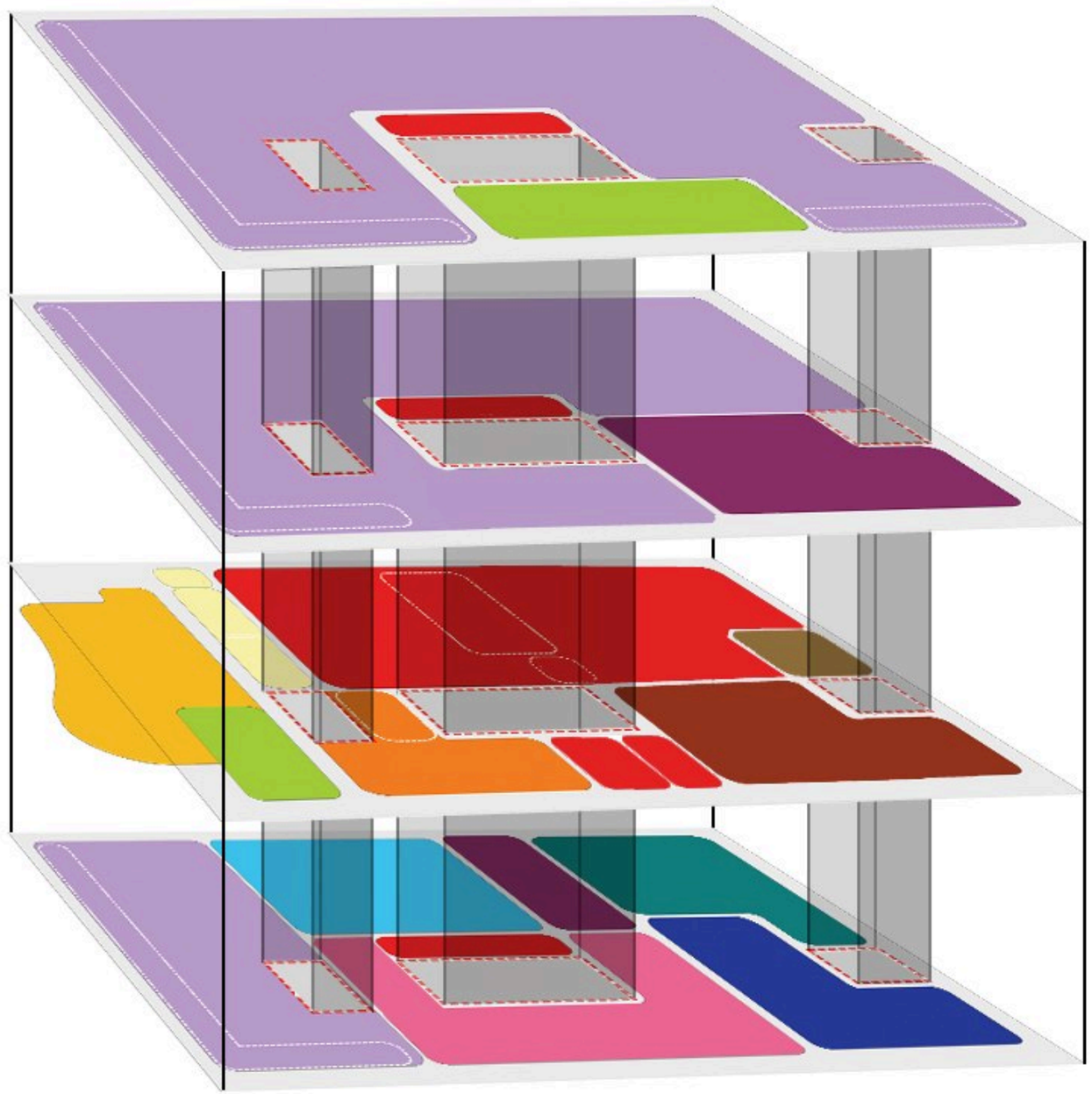
19.1 RECOMMENDED ZONING AND STACKING DIAGRAMS

As we analyzed different options for organizing the Digital Learning Center, we considered different scenarios for zoning and stacking the building. The following diagrams lay out one approach to the overall building organization. Information about the process we used to develop these diagrams is included in appendix 19.2, which follows. After this first set of diagrams are two additional scenarios, one four story and one five story. The five-story scenario represents the concept plan upon which Jacob Alspector's rendering is based. See appendix 19.5 for a discussion of the development of that rendering.

These diagrams were not intended to suggest a floor plan for the Digital Learning Center, but rather they were created to test and develop the program further. The core area, for example, has been inserted as a placeholder for necessary building common areas, but no design decisions should be implied regarding its most logical and efficient placement.

It is hoped that these diagrams will inform the design process and stimulate the design team to find the best possible stacking and zoning solution, given the building needs expressed in this program.

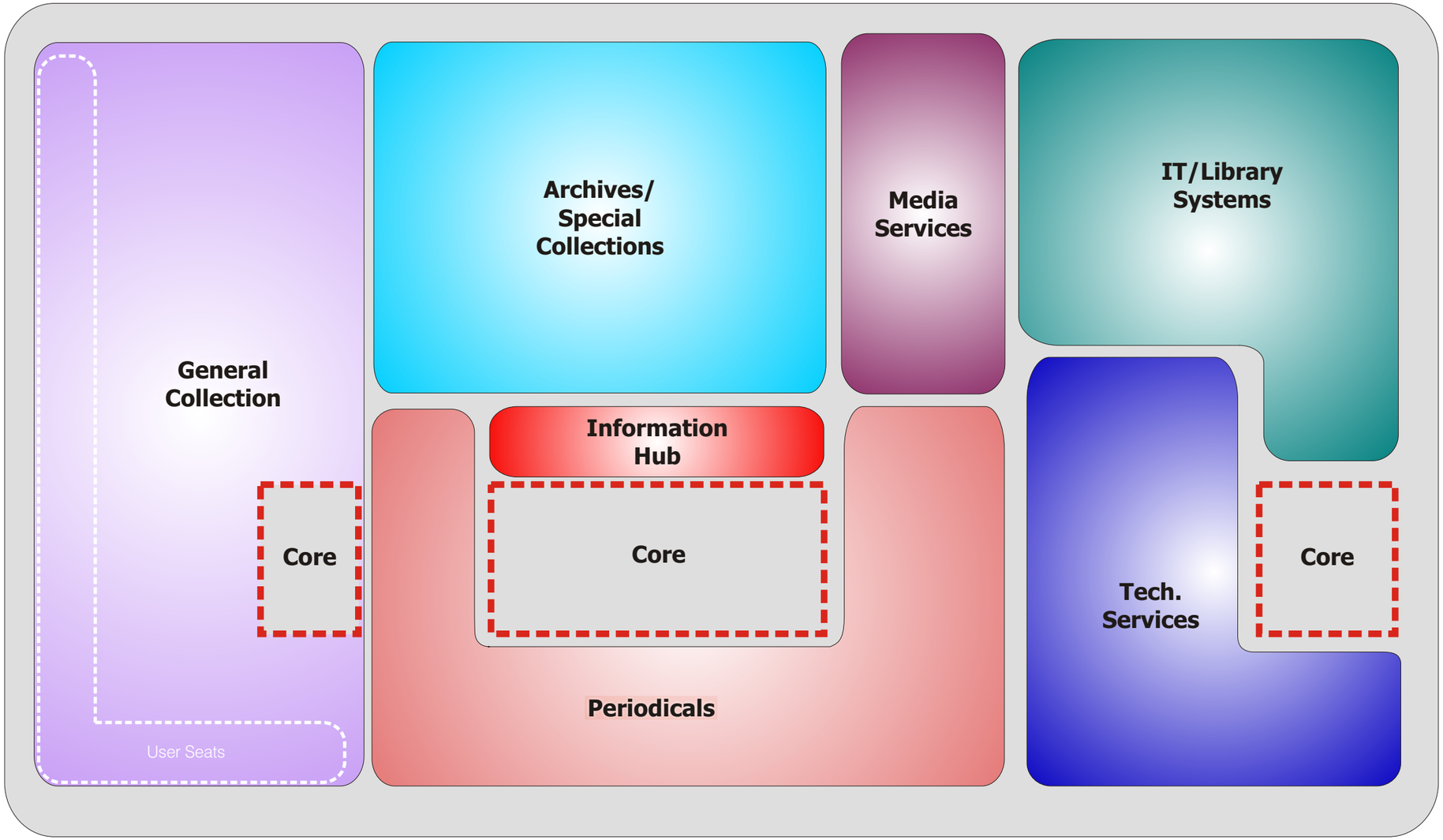
STACKING DIAGRAM



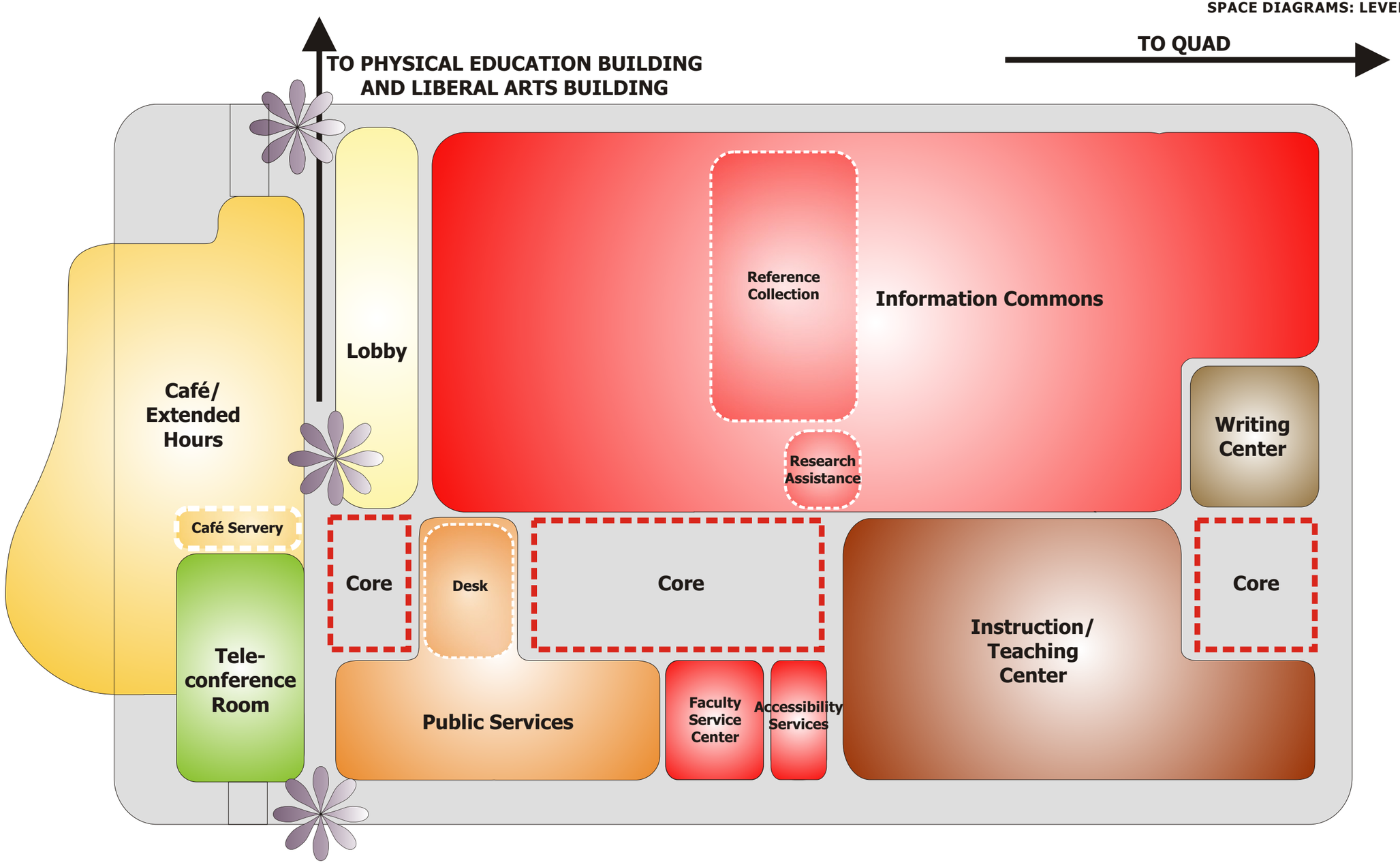
LEGEND

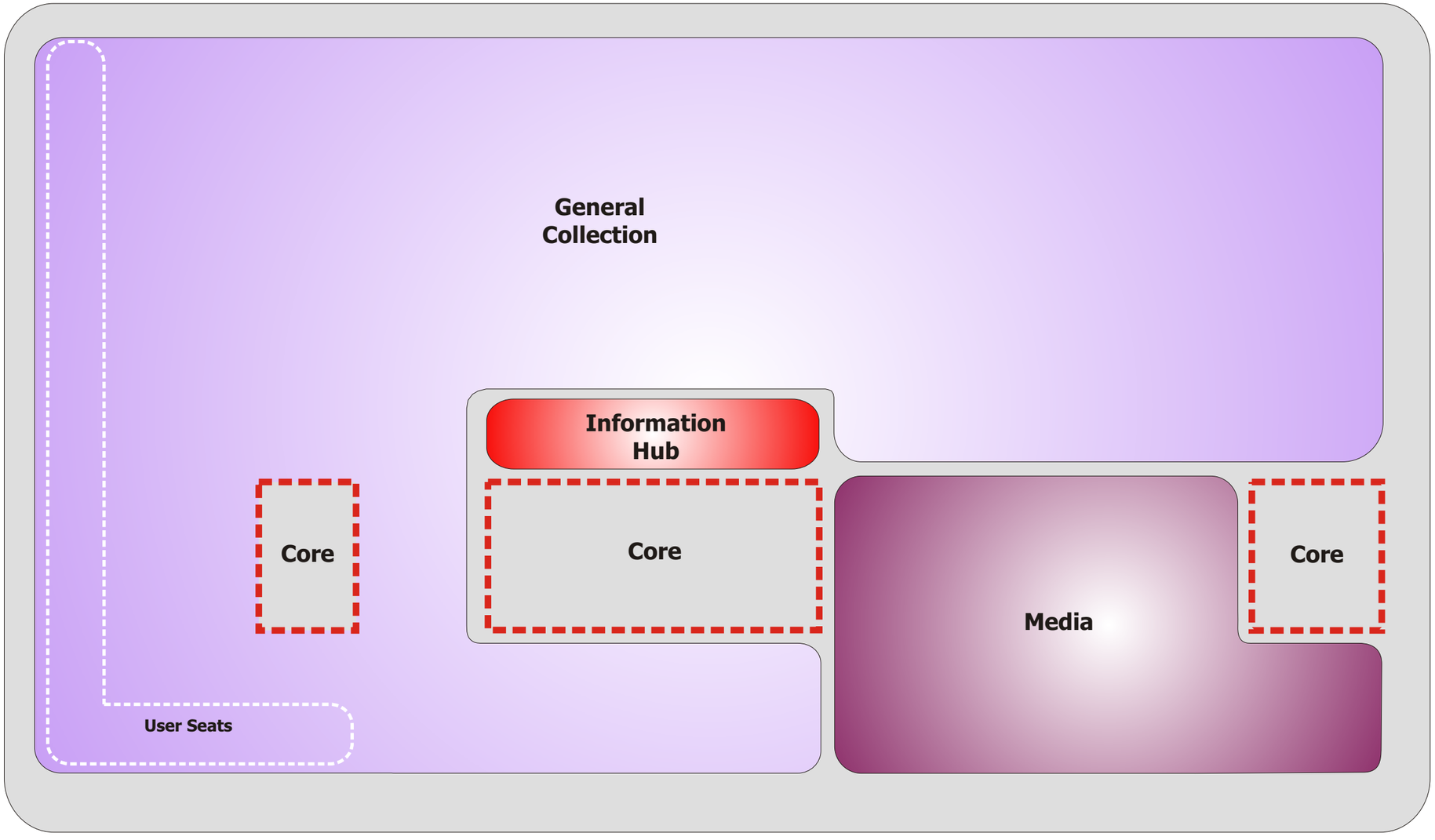
- Lobby
- Entry
- Public Services
- Information Commons
- Teaching/Learning
- Writing Lab
- General Collection
- Periodicals
- Media
- Special Collections/ Archives
- Technical Services
- Systems and I.T. Services
- Library Administration
- Core

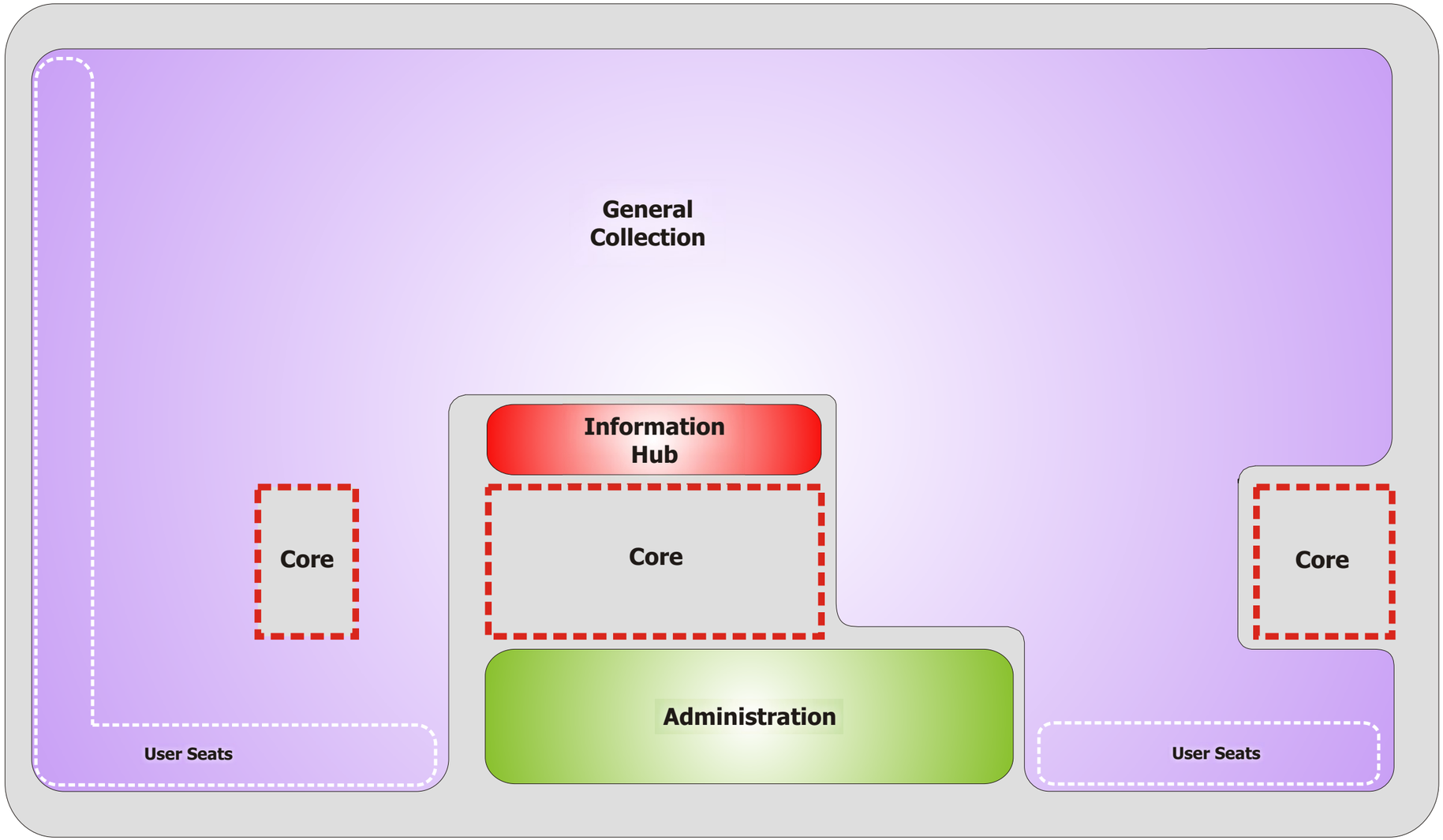
SPACE DIAGRAMS: GARDEN LEVEL



SPACE DIAGRAMS: LEVEL 1

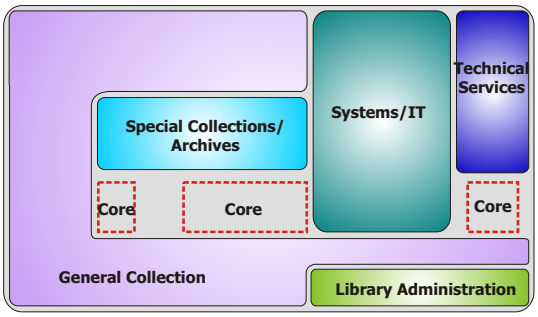



General
Collection
Information
Hub
Core
Core
Media
Core
User Seats

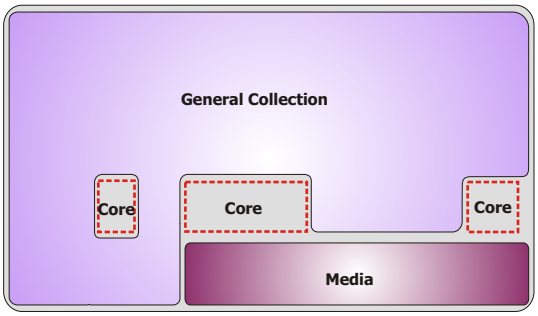

General
Collection
Information
Hub
Core
Core
Core
Administration
User Seats
User Seats

Scheme Two
4-Story Alternative

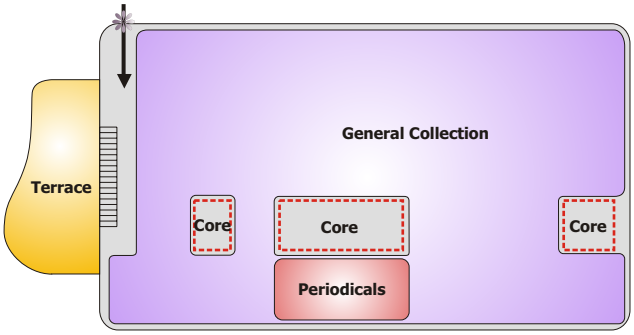
LEVEL THREE



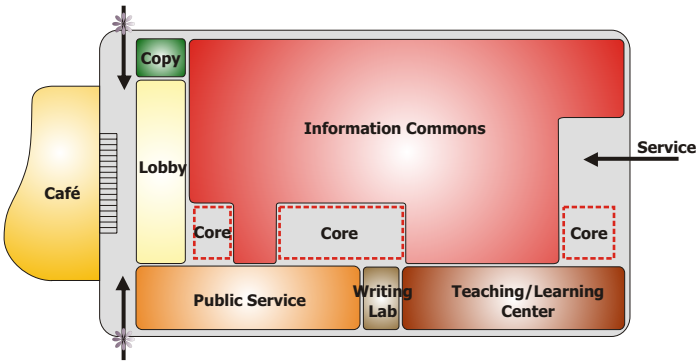
LEVEL TWO



LEVEL ONE

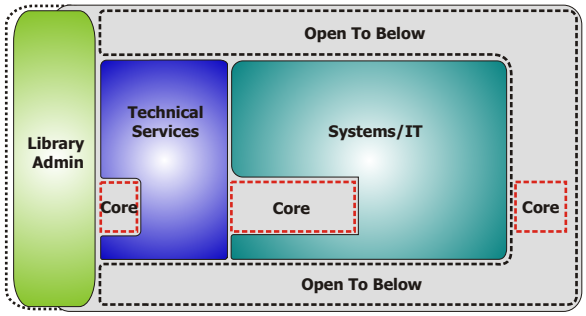


GARDEN LEVEL

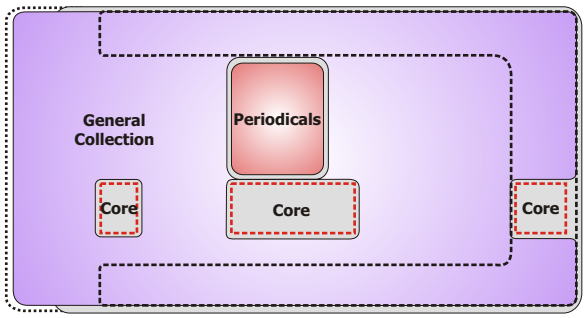


Scheme Three
5-Story Alternative

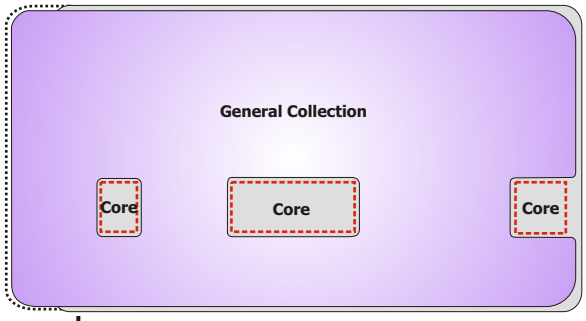
LEVEL FOUR



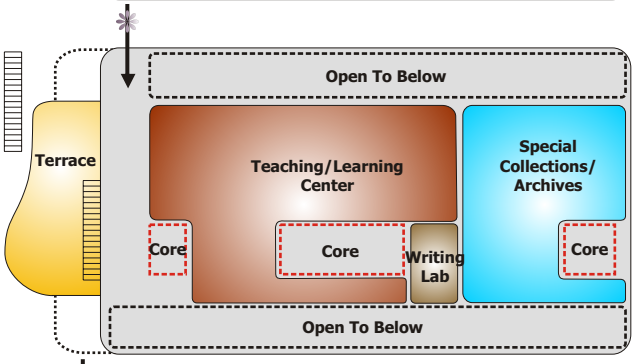
LEVEL THREE



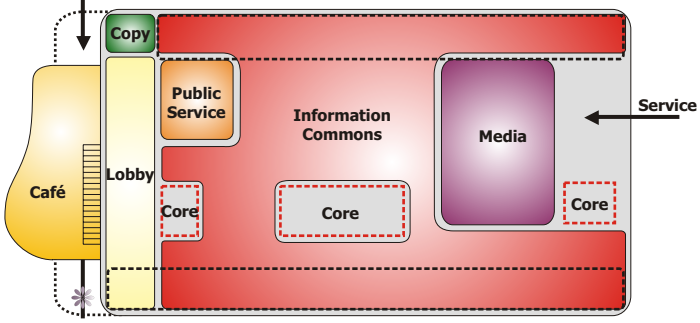
LEVEL TWO



LEVEL ONE



GARDEN LEVEL



19.2 PROGRAMMING PROCESS

The goal of this effort was to create a facilities program that captures the vision of Utah Valley State College's new Digital Learning Center. As noted earlier, in his White Paper on Campus Organizational Thoughts, President Sederburg listed the new Digital Learning Center as his top priority for new construction:

> First, we need great improvement in our present library. I am suggesting that we push for a digital learning center that will expand our library's capacity significantly. A new digital learning center will consolidate digital production facilities, enhance group learning activities, expand database access, and connect the community into the campus. A digital learning center can make a strong statement that learning and scholarship is at the heart of the UVSC experience.
>
> – President Bill Sederburg, December 1, 2003

Recognizing the need this proposed facility, the Utah Division of Facilities Construction and Management funded the development of a Facilities Program for the new Digital Learning Center in mid 2005. Through a qualifications-based selection process, Cooper Roberts Simonsen Associates (CRSA) was selected to conduct the programming process for the new facility. CRSA was joined by library programming consultant, Michaels Associates Design Consultants (MADC), and consulting design architect, Alspector-Anderson Architects, to form a team specifically tailored to meet the programming needs of UVSC's new Digital Learning Center. The programming process was divided into three rounds.

19.2.1 First Round

The first round of the programming process began in late August, and included initial research and analysis, a kickoff meeting, stakeholder interviews and small group meetings, development of an initial space list, a first conceptual cost estimate, and a UVSC review and comment period.

Before meeting with UVSC administration, the programming team gathered and analyzed as much data and information about the project as possible. The team reviewed all existing studies on the facility, the methodology used to determine the project square footage, and CAD files for the floorplans of the existing library. A list of questions and data gathering forms were prepared to help establish baseline statistics and philosophical goals. After gathering and reviewing this information, the team was able to hit the ground running when work with the College began on August 10, 2005.

Over the course of two days, August 10 and 11, 2005, the programming team facilitated an intense series of workshops at the UVSC campus as the official kickoff for the programming process. The purpose of these meetings was for the team to meet the administration and staff of UVSC, to identify the College's needs, and explore ideas of how those needs might be met with the new Digital Learning Center. The meeting began with a presentation by President Sederburg on the vision for the Digital Learning Center. Following the President, the programming team introduced themselves and the programming process. Presentations by the Dean of General Academics, the UVSC Library Administration, Campus Facilities, and the Utah Division of Facilities and Construction and Management (DFCM) outlined each of their perspectives on the Digital Learning Center.

The programming team then held separate meetings with UVSC faculty and staff representatives, with student representatives, Library department heads, and with other potential occupants and users of the new Digital Learning Center. These meetings were used to present information and answer questions about the programming process, to gather input from these groups on their needs for the new Digital Learning Center, and to identify issues we would need to be addressed during programming.

Following these meetings, the programming team evaluated the information gathered from the stakeholders and developed a preliminary list of spaces which could be included in the new library. This space list included preliminary square footage allocations and served as the framework for the remainder of the programming process. A second set of meetings was held on August 22 and 23, 2005 with UVSC administration, faculty and staff, student representatives, and DFCM to discuss and prioritize this initial space request list. With feedback from all of these interested parties, the core working group refined the space list and started generating preliminary space allocations for the different areas of the Digital Learning Center. Requests for space from all potential building occupants were far higher than the new building could accommodate; a number of requests had to be eliminated or scaled down in order to bring the space list within the total project area. Another meeting was held on September 8-9 to further refine the space list and to make further adjustments to the program in light of a preliminary cost estimate.

19.2.2 Second Round

The second round of the programming process began in mid-September. This round included: budget and progress review; additional interviews, research, and analysis; development of a 50% Draft Facilities Program; project meetings with the core group; a preliminary cost estimate for the Legislature; and a UVSC review and comment period.

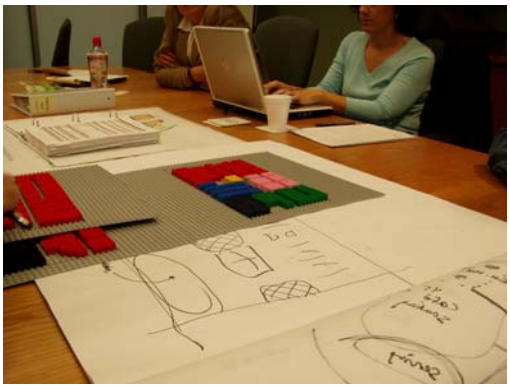
In our meetings with the core group and with one-on-one interviews with users during this round, we began developing adjacency requirements and detailed outlines of individual space requirements. We included our first set of bubble diagrams and room data sheets in the 50% draft. These showed our initial transcription of physical needs and adjacency requirements for the majority of the spaces on our space list, as described to us by building users.

We also began developing a glossary of the naming conventions we would use to describe the various spaces within the new DLC. At the same time, we diagrammed the basic layout of the building as a whole and established adjacency requirements between the major programmatic elements at a macro level.

During this round we developed a preliminary code analysis for the building and began the process of developing engineering design criteria for civil, structural, mechanical, plumbing, electrical, and technology design of the DLC. Our analysis led to the determination that the building should be designed for Type I-B construction with non-separated uses. We included this preliminary code review, along with draft narratives by our consulting engineers in the 50% document delivered at the completion of the second round.

19.2.3 Final Round

We held meetings with the core working group to kick off the final round on October 19-20, 2005. These meetings included a tour of the Merrill Library at Utah State University. This tour provided an example of a recent academic library project and the types of trends and amenities that are being included in libraries in the region. As part of this round, we worked on preliminary zoning and stacking and zoning layouts of the building. We used Lego™ blocks to set up adjacencies and floor areas to scale. From this we developed preliminary floor layouts and stacking



concepts for the different elements of the building. This process allowed a number of options to be explored easily and freely. The Lego™ models were revised a number of times throughout the programming process, and were eventually incorporated into a graphical representation of the recommended stacking of the Digital Learning Center building levels. Those diagrams are included in Appendix 19.1.

Throughout the second and final rounds, the programming team met with each department and group which would occupy the new Digital Learning Center to go over their individual needs. Discussions included everything from area required to furnishings, lighting, wall and floor finishes. A database was developed which allowed for detailed recording of specific details about each room or space within the Digital Learning Center. The information gathered during these meetings was used to generate the room data sheets included in Section 8.0 of this Program. In addition to these room data sheets, the rooms were grouped and organized according to adjacency requirements into room suites. These suites were then graphically illustrated in color-coded bubble diagrams that show the relationships between each of the rooms and any required adjacencies. The bubble diagrams, also in section 8.0, were discussed with each of the different departments and occupants of the new Digital Learning Center, to ensure that they accurately represented the relationships and required proximity of the various spaces.

The final round of the programming process also included: a review of the project budget; review of required space adjacencies and stacking; additional data gathering; development of a 95% Draft Facilities Program; development of a final conceptual cost estimate; a UVSC review and comment period; revisions to the Draft Facilities Program; and final approval.

In addition to documenting programming decision, the final document also discusses items and issues that have been discussed during programming yet deferred for resolution during early design phases.

19.2.4 Drawing Students and Faculty into the Digital Learning Center

During the entire programming process, one concept surfaced repeatedly – the desire to create an experience within the new Digital Learning Center similar to that of a bookstore. The name Barnes & Noble came up repeatedly. It was striking how frequently this comment was heard through out the programming process.

When describing what the UVSC library administration and staff liked about Barnes & Noble bookstores, a few key characteristics were mentioned repeatedly. Barnes and Noble has a relaxed and comfortable atmosphere, with soft seating and warm interior finishes. The books are clearly organized, it is easy to see the individual book titles; wide aisles allow freedom of movement; and simple signage clearly helps customers browse and find what they are looking for. In addition to the physical design and organization of the bookstore, the UVSC administration and staff also appreciated that Barnes & Noble associates are friendly, approachable, knowledgeable, and easy to find. One element that sets Barnes & Noble apart from other bookstores is that people are deliberately encouraged to linger and spend time there. Each store includes a café that primarily serves coffee and snacks, and people are allowed to look through a book or magazine while in the cafe. People feel comfortable leafing through a book

or magazine in the store, without feeling obligated to purchase anything. Students, faculty, and administration at UVSC want the new Digital Learning Center to provide a comfortable place for the students and faculty of the college to spend an afternoon socializing, browsing, researching, or just grabbing a bite at the library café.

In a recent article (November 20, 2005) in the Deseret Morning News titled, "Ways to Lure Repeat Buyers," Eric Farr discusses the astounding success of Barnes & Noble and how other companies can recreate the Barnes & Noble experience in their own stores. While the article targets retail businesses, many of the same principles can be applied to enhancing the user experience at institutions like UVSC. Farr argues that the key to Barnes & Noble's huge success is its positive customer experience; the stores provide a comfortable environment for people to shop or simply hang out. Consequently, thousands of people go their stores a day, which translates into phenomenal book sales.

The UVSC Digital Learning Center can capture this *Barnes & Noble Factor* by considering a few basic questions about the user experience. Farr recommends that retailers ask themselves the following:

- Is it easy to find what I need? Think store (library) layout or online navigation
- Is the actual buying (check-out/check-in and general use) process painless, and enjoyable?
- Are the employees (librarians, work study students, administration, and staff) knowledgeable, sincere, and friendly?
- Does the product (online catalogue, workstation, reference help, etc.) work as expected, and if it doesn't, what will be done about it?
- Would I rather buy (research, browse, or study) here than at Store X (at home, or at another library)?

Considering these key questions when designing, furnishing, and operating the new Digital Learning Center will ensure that the most efficient, effective, and enjoyable experience is provided for the users of the new facility. Farr suggests that once these basics are mastered, businesses can begin to be creative in how they enhance the experience for their customers. He cautions that particular attention should be paid to implementing tactics that can help a business bond emotionally with its customers. Perhaps the new Digital Learning Center already has this suggestion nailed – after all, the future users of the new library are already proud to call themselves UVSC Wolverines.

19.3 DETAILED CODE ANALYSIS

Cooper Roberts Simonsen Architecture
700 North 200 West
Salt Lake City, Utah 84103
Phone: (801) 355-5915, Fax: (801) 355-9885

Plan analysis based on
the 2003 International Building Code

Project Number: B05-055 Date: January 9, 2006
Project Name: UVSC Digital Learning Center
Address: 800 West University Parkway

Occupancy: A-3,B,A-2
Construction: I-B

Contractor:
Architect: CRSA
Engineer: CRC
Report By: Jim Nielson

NOTE: The code items listed in this report are not intended to be a complete listing of all possible code requirements in the 2003 IBC. It is a guide to selected sections of the code.

Report created using Plan Analyst software by IHS Global 800-854-7179

SPRINKLER SYSTEM:
NFPA 13 sprinkler system throughout the building
Sprinkler system used to increase the allowable area and height.
-- Sec. 504.2 and 506.3

FRONTAGE INCREASE:
Perimeter of the entire building = 900 feet.
Perimeter which fronts a public way or accessible open space = 850 feet.
Minimum width of public way or accessible open space = 30
Allowable area increased 69.44% for frontage increase.
-- Sec. 506.2

Code review for:
Project Id.:
Address:

FL	NAME	OCC	MAX FLR	AREA	ALLOWED RATIO	STATUS
4	Collection	A-3	ok	40000	UNLIMITED AREA	OK
4	Teleconference Rm	B	ok	1800	UNLIMITED AREA	OK
4	Office Areas	B	ok	3200	UNLIMITED AREA	OK
TOTAL FOR FLOOR				45000	UNLIMITED AREA	OK
3	Collection	A-3	ok	40700	UNLIMITED AREA	OK
3	Seminar/Group Study	B	ok	3000	UNLIMITED AREA	OK
3	Office Areas	B	ok	1300	UNLIMITED AREA	OK
TOTAL FOR FLOOR				45000	UNLIMITED AREA	OK
2	Cafe	A-2	ok	3800	UNLIMITED AREA	OK
2	Kitchen	B	ok	1700	UNLIMITED AREA	OK
2	Reference Collection	A-3	ok	6000	UNLIMITED AREA	OK
2	Info Commons	A-3	ok	7000	UNLIMITED AREA	OK
2	Classrm/Group Study	B	ok	9000	UNLIMITED AREA	OK
2	Office Areas	B	ok	17500	UNLIMITED AREA	OK
TOTAL FOR FLOOR				45000	UNLIMITED AREA	OK
1	Collection	A-3	ok	19300	UNLIMITED AREA	OK
1	Office Areas	B	ok	16500	UNLIMITED AREA	OK
1	Misc. Bldg. Common	B	ok	9200	UNLIMITED AREA	OK
TOTAL FOR FLOOR				45000	UNLIMITED AREA	OK
BUILDING TOTAL				180000	UNLIMITED AREA	OK

-- Sec. 503, 504, 506 and Table 503

Allowable area and height calculations are based on the most restrictive use. Different uses are not separated by fire barriers.
-- Sec. 302.3.1

The actual height of this building is 60.0 feet.
The maximum height of this building is 180.0 feet. -- Table 503 and Sec. 504.2

PROPERTY DESCRIPTION:
North Side has a public way. - Distance to public way = 60.0 ,width = 500.0
Exterior wall rating based on distance to center line of public way.
-- Sec. 702.1 FIRE SEPARATION DISTANCE
East Side has a public way. - Distance to public way = 60.0 ,width = 150.0
Exterior wall rating based on distance to center line of public way.
-- Sec. 702.1 FIRE SEPARATION DISTANCE
South Side has building. - To building = 150.0 ,assumed property line 75.0
Exterior wall rating based on distance to assumed property line.
-- Sec. 704.3 and 702.1 FIRE SEPARATION DISTANCE
West Side has building. - To building = 60.0 ,assumed property line 30.0
Exterior wall rating based on distance to assumed property line.
-- Sec. 704.3 and 702.1 FIRE SEPARATION DISTANCE

Code review for:
Project Id.:
Address:

EXTERIOR WALL FIRE RATINGS AND OPENING PROTECTION
Sec. 602, Tables 601 and 602, and Sec. 704

	NORTH	EAST	SOUTH	WEST
OCC	BRG WALL NON BRG OPNG% UP/PR	BRG WALL NON BRG OPNG% UP/PR	BRG WALL NON BRG OPNG% UP/PR	BRG WALL NON BRG OPNG% UP/PR
A-3	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL
B	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL
A-2	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL	2-hr*0-hr*NL/NL

The exterior walls are required to be of NONCOMBUSTIBLE material.
-- Sec. 602.2
Projections from exterior walls shall be of noncombustible material.
-- Sec. 704.2.1
Exterior walls are required to be fire-rated for exposure to fire:
1. From Both sides when fire separation is 5 feet or less.
2. On the interior side only when separation is greater than 5 feet.
-- Sec. 704.5

Then maximum percent of area of unprotected opening has been adjusted for an automatic sprinkler system. -- Sec. 704.8.1

up/pr = Maximum percent of openings in the exterior wall.
-- Table 704.8
up - The maximum percent if all openings are unprotected.
pr - The maximum percent if all openings are protected.
If some are protected and some are not, then use formula in Sec. 704.8
Openings in 1hr walls are required to be protected with 3/4 hour assemblies. -- Sec. 704.12 and Sec. 715.4
Openings in walls required to be greater than 1hr are required protected with 1 1/2 hour assemblies. -- Sec. 715.4

NL = No fire protection requirements for openings.
NP = Openings are not permitted in this wall.

* = These walls may be required to have a parapet wall 30 inches above the roofing. The parapet wall is required to have the same fire rating as the wall and shall have noncombustible faces for the uppermost 18 inches. -- Sec. 704.11
Exception 1: A parapet wall is not required when the wall is not required to be fire-resistive.
Exception 3: If roof construction is 2-hour fire-resistive and of noncombustible construction, a parapet wall is not required.

Code review for:
Project Id.:
Address:

FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS -- Table 601

ELEMENT	MATERIAL	RATING	NOTES
Structural Frame	Noncombustible	2 hr	Note 2
Interior Bearing wall	Noncombustible	2 hr	
Interior nonbrg wall	Noncombustible	0 hr	Note 5
Shaft Enclosure	Noncombustible	2 hour	Note 1
Floor/Ceiling Assembly	Noncombustible	2 hr	
Roof/Ceiling Assembly	Noncombustible	1 hr	Note 8, 4, 13
Stairs	Noncombustible	None	

NOTES:

1. Fire resistance rating for shafts based on Section 707.4
   NOTE: See Section 707.2 for shaft enclosure exceptions.
2. Roof Supports: Fire resistance rating of structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only. -- Table 601, b.
4. Heavy timber shall be permitted where a 1 hour or less fire rating is required. -- Table 601, c.2.
5. Fire-retardant treated wood shall be permitted in:
   A. Nonbearing partitions where the required fire-resistance rating is two hours or less. -- Sec. 603.1, 1.1

   Partitions dividing portions of stores, offices or similar places occupied by one tenant only and do not establish a corridor or serve an occupant load of 30 or more may be:
   A. constructed of fire retardant treated wood
   B. one hour fire resistive construction
   C. wood panels or similar up to six feet in height.

   -- Sec. 603.1, Exception 8
8. Except in F1, H, M, and S1 uses, fire protection is not required for structural members including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire retardant treated wood members are permitted to be used for unprotected members. -- Table 601, c.1.
13. When the vertical distance from the upper floor to the roof is 20 feet or more, fire-retardant-treated wood shall be allowed in buildings including girders and trusses as part of the roof construction. -- Table 601, c.3.

Code review for:
Project Id.:
Address:

SHAFT REQUIREMENTS:
Openings other than those necessary for the purpose of the shaft shall not be permitted. -- Sec. 707.7.1
Penetrations other than those necessary for the purpose of the shaft shall not be permitted. -- Sec. 707.8.1
Shafts that do not extend to the bottom of the building shall:

1. Be enclosed at the lowest level with the same fire-resistance rating as the lowest floor but not less than the rating of the shaft enclosure; or
2. Terminate in a room having a use related to the purpose of the shaft. The room and openings shall have a fire-resistance rating at least equal to the shaft enclosure; or
3. Be protected by approved fire dampers installed at the lowest floor level within the shaft enclosure.

-- Sec. 707.11

PENETRATIONS OF FIRE RESISTIVE ASSEMBLIES -- Sec. 712

WALLS ASSEMBLIES -- Sec. 712.3
Through penetrations of walls:

1. Penetrations shall be installed as tested in the fire resistance rated assembly. -- Sec. 712.3.1.1
2. Penetrations shall be protected by an approved penetration firestop system with a minimum positive pressure differential of 0.01 inch of water and shall have an F rating of not less than the required rating of the wall penetrated. -- Sec. 712.3.1.2
   Exception: Where penetrating items are steel, ferrous or copper pipes or steel conduits, the annular space between the and the penetrating item and the fire resistance rated wall shall be permitted to be protected as follows:
   1. In concrete or masonry walls where the penetrating item is a maximum of 6 inches nominal diameter and the openings is a maximum 144 square inches, concrete, grout or mortar shall be permitted.
   2. The material used to fill the annular space shall prevent the passage of flame and hot gasses sufficient to ignite cotton.

Code review for:
Project Id.:
Address:

Membrane penetrations of walls:
The requirements are the same as for through penetrations.
-- Sec. 712.3.2
Exceptions:
1. Steel electrical outlet boxes that do not exceed 16 square inches provided that the area of such openings does not exceed 100 square inches for any 100 square feet of wall area. Boxes on opposite sides of the assembly shall be separated by a horizontal distance of not less than 24 inches.
2. Sprinklers with metal escutcheon plates.

FLOOR/CEILING AND ROOF/CEILING ASSEMBLIES -- Sec. 712.4
Through penetrations of fire-resistive horizontal assemblies:
1. Through penetrations shall be installed as tested in an approved fire resistance rated assembly. -- Sec. 712.4.1.1
2. Penetrations shall be protected by an approved penetration firestop system with a minimum positive pressure differential of 0.01 inch of water and shall have an F rating and a T rating of not less than 1 hour but not less than the required rating of the floor penetrated. -- Sec. 712.4.1.2
   Exceptions:
   1. When penetrating items are steel, ferrous or copper conduits, pipes, tubes and vents through a single concrete floor, the annular space shall be permitted to be grout or mortar. The minimum thickness is the thickness required to maintain the fire rating. The maximum size of the penetrating items is equivalent to a 6-inch diameter and the opening is a maximum of 144 square inches.
   2. Electrical outlet boxes that have been tested for use in fire -assemblies.

Membrane penetrations of fire-resistive horizontal assemblies:
The requirements are the same as for through penetrations.
-- Sec. 712.4.2
Exceptions:
1. When penetrating items are steel, ferrous or copper conduits, electrical outlet boxes, pipes, tubes and vents through concrete or masonry and the annular space is protected by an approved penetration firestop assembly or protected to prevent the free passage of flame and products of combustion. Such penetrations shall not exceed an aggregate area of 144 square inches in any 100 square feet of ceiling area in assemblies without penetrations.
2. Electrical outlet boxes that have been tested for use in fire-assemblies.
3. Sprinklers with metal escutcheon plates.

Code review for:
Project Id.:
Address:

DUCTS AND AIR TRANSFER OPENINGS -- Sec. 716
Dampers shall be accessible for inspection and servicing. 716.4
Where required. -- Sec. 716.5
1. Fire walls. -- Sec. 716.5.1
2. Fire barriers -- Sec. 716.5.2 See exceptions
3. Shaft enclosures -- Sec. 716.5.3 See exceptions
4. Fire partitions -- Sec. 715.5.4 See exceptions
5. Smoke barriers -- Sec. 715.5.5 (smoke damper) See exceptions

OCCUPANCY SEPARATIONS -- Sec. 302.3.2 and Table 302.3.2
Uses are not separated by fire barriers. The construction of the building is based on the most restrictive use. -- Sec. 302.3.1

SEPARATION OF INCIDENTAL USE AREAS -- Table 302.1.1
Furnace rooms where any piece of equipment is over 400,000 BTU per hour input -- Smoke barrier -- Sec. 302.1.1.1
Rooms with any boiler over 15 psi and 10 horsepower -- Smoke barrier -- Sec. 302.1.1.1
Refrigerant machinery rooms -- Smoke barrier -- Sec. 302.1.1.1
Incinerator rooms -- 2 hours and an automatic sprinkler system
Storage rooms over 100 square feet -- Smoke barrier -- Sec. 302.1.1.1
Note: This list covers only the most common uses. See Table 302.1.1 for a complete list.

EXIT REQUIREMENTS:

FL	NAME	NUMB OCC	MIN EXITS	MIN WIDTH	PANIC HDWR	CORRIDOR RATING	DOOR SWING	NOTES
4	Collection	400	2	60.0	Yes	N/A	Out	1 2 12
4	Teleconference Rm	90	2	13.5	No	N/A	Out	1
4	Office Areas	32	1	4.8	No	N/A	N/R	
TOTAL FOR FLOOR		522	3	104.4	Yes	N/A	Out	3 12
3	Collection	407	2	61.1	Yes	N/A	Out	1 2 12
3	Seminar/Group Study	150	2	22.5	No	N/A	Out	1
3	Office Areas	13	1	2.0	No	N/A	N/R	
TOTAL FOR FLOOR		570	3	114.0	Yes	N/A	Out	3 12

Code review for:
Project Id.:
Address:

2	Cafe	253	2	38.0	Yes	N/A	Out	1 2 12
2	Kitchen	8	1	1.2	No	N/A	N/R	
2	Reference Collection	60	2	9.0	No	N/A	Out	1
2	Info Commons	140	2	21.0	Yes	N/A	Out	1 12
2	Classrm/Group Study	450	2	67.5	No	None	Out	1
2	Office Areas	175	2	26.3	No	N/A	Out	1
TOTAL FOR FLOOR		1086	4	217.2	Yes	N/A	Out	3 3 12
1	Collection	193	2	29.0	Yes	N/A	Out	1 2 12
1	Office Areas	165	2	24.8	No	None	Out	1
1	Misc. Bldg. Common	31	1	4.7	No	None	N/R	
TOTAL FOR FLOOR		1086	2	162.9	Yes	N/A	Out	14 12

FOOTNOTES:
1. Two exits are required from this area since the occupant load exceeds allowable in Table 1014.1
2. Two exits are required from this area since the common path of egress limits in Section 1013.3
3. Number of exits in this area is based on Table 1018.1
12. Panic hardware is required when the occupant load is 100 or more. -- Sec. 1008.1.9
14. Occupant load and exit width have been adjusted to maintain the required capacity from floor above. -- Sec. 1005.1

NOTES FOR EXIT TABLE
Door swing is based on Section 1008.1.2
Occupant load is based on Section 1004 and Table 1004.1.2
Exit width is in inches and based on Section 1005.1 & Table 1005.1
Width shown for all areas is based on other egress components.
Width shown for 1st floor is based on other egress components.
Width shown for other floors & basements is based on stairways.
For the minimum width of doors, see Section 1008.1.1.
For the minimum width of corridors, see Section 1016.2.
For the minimum width of stairways, see Section 1009.1.
Exits shall be continuous from the point of entry into the exit to the exit discharge. -- Sec. 1003.6

If 'CORRIDOR RATING' = N/A
There is no corridor in this area.

Code review for:
Project Id.:
Address:

If 'CORRIDOR RATING' = None
Walls and ceilings of corridors are not required to be fire-resistive unless they are required to be fire-resistive based construction type. -- Table 1016.1
There is no restriction as to the amount and type of openings unless protection of openings is required by some other code provision.

If 'CORRIDOR RATING = 1 hour or 1/2 hr
Walls shall be fire-resistive -- Table 1016.1 Walls shall extend to the underside of the floor/roof slab or deck or to the fire-resistance rated floor/ceiling or roof/ceiling assembly above. -- Sec. 708.4
Exception 2: Where the room-side membrane is carried through to the underside of a fire resistance rated floor or roof, the ceiling of the corridor shall be permitted to be protected by the use of ceiling materials as required for a 1-hour rated system or the ceiling shall be constructed as required for the corridor walls.
Door openings are required to be protected with 20 minute (1/3 hour) fire assemblies. -- Sec. 715.3.3 & Table 715.3
Doors shall be self-closing or automatic-closing. -- Sec. 715.3.7
Doors shall have an active latch bolt that will secure the door when closed. -- Sec. 715.3.7.1

Window openings are required to be protected with labeled 45 minute (3/4-fire-hour) fire-assemblies. -- Sec. 715.4 & Table 715.4
Exception: Glazing in 0.5-hour walls is permitted to have an 0.33-hour rating.
The total area of windows shall not exceed 25 percent of the area of a common wall with any room. -- Sec. 715.4.7.2
Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts or plenums. -- Sec. 1016.4 See Exceptions
Fire resistant corridors shall not be interrupted by intervening rooms. -- Sec. 1016.5
Exception: Foyers, lobbies or reception rooms constructed as required for corridors.
When more than one exit is required, exit access shall be arranged such that there are no dead ends in corridors more than 20 feet. -- Sec. 1016.3

Code review for:
Project Id.:
Address:

EXIT SEPARATION
In areas where 2 exits are required, the minimum separation is 1/3 of the maximum diagonal of the area or floor measured in a straight line between exits or exit access doorways.-- Sec. 1014.2.1, Exception 2
Note: In areas with more than 2 exits, at least 2 exits must be 1/3 of the maximum diagonal of the area or floor measured in a straight line between exits or exit access doorways. Additional doorways shall be arranged so that if one becomes blocked, the others will be available. -- Sec. 1014.2.2
Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity by more than 50 percent. -- Sec. 1005.1

EXIT SIGNS
Exits and exit access doors shall be marked by an approved exit sign. Signs shall be placed where the exit or the path of egress travel is not immediately visible. No point to be more than 100 feet from an exit sign. -- Sec. 1011.1
Exception 1: Exit signs are not required in rooms or areas which require only one exit.
Exception 2: Main exterior exit doors which obviously and clearly are identifiable as exits need not be signed when approved.
Exit signs shall be internally or externally illuminated. -- Sec. 1011.2
Exit sign shall be illuminated at all times including during loss of primary power. -- Sec. 1011.4 & Sec. 1011.5.3

NOTE: A required exit from the dining area may not pass through the kitchen. -- Sec. 1013.2

BOLT LOCKS:
Manually operated flush bolts and surface bolts are not permitted. -- Sec. 1008.1.8.4
Exception 2: Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.

LOCKS AND LATCHES:
Egress doors shall be readily openable from the egress side without the use of a key or any special knowledge or effort. -- Sec. 1008.1.8

Code review for:
Project Id.:
Address:

Locks and latches shall be permitted to prevent operation where any of the following exists:

Exception 2: The main door or doors in Group A areas with an occupant load of 300 or less are permitted to be equipped with key operating locking devices from the egress side provided:

2.1 The locking device is readily distinguishable as locked.

2.2 A readily visible durable sign is posted on the egress side stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED

Exception 3: Where egress doors are used in pairs, automatic flush bolts shall be permitted to be used, provided the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.

ADDITIONAL DOORS:
Where additional doors are provided for egress purposes, they shall conform to the requirements in Section 1008.1

LANDINGS AT DOORS:

1. There shall be a floor or landing on each side of a door. -- Sec. 1008.1.4
2. Such floor or landing shall be at the same elevation on each side of the door. -- Sec. 1008.1.4
3. The floor or landing shall not be more than 1/2 inch lower than the threshold. -- Sec. 1008.1.6
4. Landings shall have a width not less than the width of the stairway or width of the doorway, whichever is the greater. Where a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing dimension to less than one half it required width. The minimum length in the direction of exit travel is 44 inches. -- Sec. 1008.1.5
5. The space between two doors in series shall be 48 inches plus the width of door swinging into the space. -- Sec. 1008.1.7

Code review for:
Project Id.:
Address:

STAIR REQUIREMENTS:
Stairways:

1. The riser heights shall not be less than 4 inches or greater than 7 inches. The minimum tread depth is 11 inches. -- Sec. 1009.3 The maximum variation is 3/8 inch between the largest and the smallest in a stairway flight. -- Sec. 1009.3
2. The minimum width of a stairway is 36 inches, 44 inches if the occupant load is greater than 50. -- Sec. 1009.1
   Also, check exit table above to see if minimum width is greater than 44 inches.
3. Provide a handrail on each side of stairways. -- Sec. 1009.11
   Handrail height, measured above stair tread nosing, shall be not less than 34 inches and not more than 38 inches. -- Sec. 1009.11.1
   Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches and not greater than 2 inches or shall provide equivalent graspability. -- Sec. 1009.11.3
   Handrail-gripping surfaces shall be continuous without interruption by newel post or other obstructions. -- Sec. 1009.11.4
   Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight. Where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser top riser and continue to slope for the depth of one tread beyond the bottom riser. -- Sec. 1009.11.5
4. Open sides of walking surfaces which are located more than 30 inches above the floor or grade below are required to have a guard. -- Sec. 1012.1
5. The minimum height of guard is 42 inches. -- Sec. 1012.2
6. Open guards shall have balusters or ornamental pattern such that a 4-inches diameter sphere cannot pass through any opening up to a height of 34 inches. From a height of 34 inches above the adjacent walking surface to 42 inches above the walking surface, a sphere 8 inches in diameter shall not pass. -- Sec. 1012.3
   Exception 1. The triangular opening formed at the riser, tread and guardrail may be 6 inches.
7. The minimum headroom clearance is 80 inches (6 ft.- 8 inches.) measured vertically from a line connecting the edge of the nosing. Headroom shall be continuous to the point where the line intersects the landing below. The minimum clearance shall be maintained the full width of the stairway and landing. -- Sec. 1009.2
8. Enclosed usable space under the stairs is required to be protected by 1-hour fire-resistive construction or the fire-resistance rating of the stairway enclosure, whichever is greater. -- Sec. 1019.1.5
9. A flight of stairs shall not have a vertical rise greater than 12 feet between floor levels or landings. -- Sec. 1009.6

Code review for:
Project Id.:
Address:

STAIRWAY ENCLOSURES:

1. Stairways are required to be in 2 hour fire resistive exit enclosures. -- Sec. 1019.1
   Exception 4: Stairways that are not a required means of egress element only need to comply with shaft enclosure requirements in Section 707.2
   See Exception 2 to shaft enclosures in Section 707.2
   Exception 7 in Section 707.2, Not required if:
   7.1 Does not connect more than two stories.
   7.3 Is not concealed.
   7.6 Is separated from openings to other floors by construction complying with shaft requirements.

2. The openings into the exit enclosure are required to be 1 1/2 hour fire assemblies. -- Table 715.3
   Openings into enclosure are limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. -- Sec. 1019.1.1
   Doors shall be self-closing or automatic closing. -- Sec. 715.3.7

3. Exit enclosure must discharge directly to the exterior of the building. -- Sec. 1023.1
   Exception 1: 50 percent of the number and capacity may exit through areas on the level of discharge provided all of the following are met:
   1.1 There is a free and unobstructed way to the exterior that is readily visible and identifiable form the exit enclosure.
   Exception 2: 50 percent of the number and capacity may exit through a vestibule provided all of the following are met:
   2.2 The depth from the exterior of the building is not greater than 10 feet and the length is not greater than 30 feet.
   2.3 The vestibule is separated from the remainder of the level of exit discharge by construction providing at least the equivalent of approved wired glass in steel frames.
   2.4 The vestibule is used only for means of egress and exits directly to the outside.

4. The walls and soffits within enclosed usable spaces under stairways shall be protected by 2 hour fire resistant construction. Access to the enclosed usable space shall not be directly from within the stair enclosure. -- Sec. 1019.1.5

5. A sign shall be provided at each floor landing designating the floor level, the terminus of the top and bottom of the stair enclosure, and the identification of the stair. -- Sec. 1019.1.7

Code review for:
Project Id.:
Address:

STAIRWAY TO THE ROOF:
One stairway shall extend to the roof surface unless the roof has a slope steeper than 4 units vertical in 12 units horizontal. In buildings without an occupied roof, access to the roof from the top story shall be permitted to be by an alternating tread device.
-- Sec. 1009.12
Access to roof shall be provided through a penthouse complying with Section 1509.2
Exception: Access to an unoccupied roof may be a roof hatch or trap door not less than 16 square feet in area and having a minimum dimension of 2 feet.

ELEVATOR REQUIREMENTS:
1. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of fire. -- Sec. 3002.3
2. In all structures four or more stories in height, at least one elevator shall be provided that can accommodate an ambulance-type stretcher 76 inches by 24 inches in the horizontal position. -- Sec. 3002.4
3. Hoistways of elevators penetrating more than three stories shall be provided with a means for venting smoke and hot gases to the outer air in case of fire. -- Sec. 3004.1

Code review for:
Project Id.:
Address:

RAMP REQUIREMENTS:

1. The minimum width is 44 inches. If a ramp serves an occupant load of 50 or less, it may be 36 inches wide. If the ramp is serving a high occupant load, check exit table above for required width. -- Sec. 1010.5.1 & 1016.2, Exception 2
2. If the ramp is part of the means of egress, the maximum slope is 1:12. All other ramps may have a slope of 1:8 or less. -- Sec. 1010.2
3. The rise for any ramp shall be 30 inches maximum. -- Sec. 1010.4
4. Landings shall be provided at the top, bottom, points of turning and at doors. -- Sec. 1010.6
   Landings shall have a length of at least 5 feet in the direction of travel. -- Sec. 1010.6.3
   Where changes in direction of travel occur at landings, the landing shall be 60 inches by 60 inches minimum. -- Sec. 1010.6.4
5. The surface shall of slip-resistant materials that are securely attached. -- Sec. 1010.7.1
6. Handrails shall be per stair requirements. -- Sec. 1010.8
   A rail shall be mounted below the handrail 17 to 19 inches above the ramp or landing surface. -- Sec. 1010.9.1
7. A curb or barrier shall be provided that prevents the passage of a 4-inch diameter sphere, where any portion of the sphere is within 4 inches of the floor or ground surface. -- Sec. 1010.9.2

EXIT ACCESS TRAVEL DISTANCE:

The maximum travel distance in Group A is 250 feet. -- Table 1015.1
The maximum travel distance in Group B is 300 feet. -- Table 1015.1
The maximum travel distance in Group A is 250 feet. -- Table 1015.1

BUILDING ACCESSIBILITY

1. In addition to accessible entrances required by Sections 1105.1.1 through 1105.1.6, at least 50 percent of all public entrances shall be accessible. -- Sec. 1105.1
2. At least one accessible entrance shall be provided to each tenant, dwelling unit and sleeping unit in a facility. -- Sec. 1105.1.6
3. Where parking is provided, accessible parking spaces hall be provided in compliance with Table 1106.1 -- Sec. 1106.1
4. At least one accessible route shall connect each accessible level. -- Sec. 1104.4 See exceptions.
5. Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall also be interior. -- Sec. 1104.5
6. On floors where drinking fountains are provided, at least 50 percent, but not less than one fountain shall be accessible. -- Sec. 1109.5

Code review for:
Project Id.:
Address:

In dining areas, the total floor area allotted for seating and tables shall be accessible. -- Sec. 1108.2.9, see exceptions
At least 5 percent, but not less than one, of the seating and standing spaces at the dining surfaces shall be accessible and be distributed throughout the facility. -- Sec. 1108.2.9.1
Food service lines shall be accessible. -- Sec. 1109.12.4
Queue and waiting line shall be accessible. -- Sec. 1109.12.5

ROOFING REQUIREMENTS:
1. The roofing on this building is required to be Class B or better.
   -- Table 1505.1

STANDPIPE AND HOSE SYSTEMS -- Sec. 905
Class III standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet above the lowest level of fire department vehicle access.
-- Sec. 905.3.1
Exception: Class I standpipes are allowed in buildings with an automatic sprinkler system.

See sections 905.4 and 905.6 for required locations.
See section 905.7 for cabinet requirements.

FIRE ALARM SYSTEM -- Sec. 907
A manual fire alarm system is required. -- Sec. 907.2.1
Exception: Manual alarm boxes are not required if the notification appliances will activate upon sprinkler waterflow.
Activation of the fire alarm shall immediately initiate an approved prerecorded message announcement. -- Sec. 907.2.1.1
If the automatic sprinkler system is connected to building fire alarm system, automatic heat detection is not required. -- Sec. 907.2

Code review for:
Project Id.:
Address:

LIGHT AND VENTILATION

1. Every space intended for human occupancy shall be provided with natural light. The minimum net glazed area shall not be less than 8% of the floor area. -- Sec. 1205.1 and 1205.2
   Any room is permitted to be considered as a portion of an adjoining room where one half of the area of the common wall is open and unobstructed and provided not less than one tenth of the floor area or 25 square feet, whichever is greater. -- Sec. 1205.2.1
   Artificial light shall be provided that is adequate to provide an average illumination of 10 foot candles over the area of the room at a height of 30 inches above the floor. -- Sec. 1205.3
2. Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. -- Sec. 1203.4
   The minimum openable area to the outdoors shall be 4 percent of the floor area. -- Sec. 1203.4.1
   Any room is permitted to be considered as a portion of an adjoining room where unobstructed openings are provided that have an area not less than 8% of the floor area of the interior room but no less than 25 square feet. -- Sec. 1202.3.1.1
   When openings are below grade, clear space measured perpendicular to the opening shall be one and one half times the depth of the opening. -- Sec. 1203.4.1.2
3. Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be mechanically ventilated. -- Sec. 1203.4.2.1

CEILING HEIGHTS:

Occupiable spaces, habitable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches. Bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms shall be permitted to have a ceiling height of not less than 7 feet. -- Sec. 1208.2

Code review for:
Project Id.:
Address:

WALL AND CEILING FINISH:

1. Wall and ceiling finish materials are required to comply with Sec. 803.5 and Table 803.5.
2. Textile wall coverings shall have Class A flame spread index and shall be protected by automatic sprinklers or meet the criteria in Section 803.6.1.1 or 803.6.1.2. -- Sec. 803.6.1
3. Carpet and similar textile materials used as a ceiling shall have a Class A flame spread index and be protected by automatic sprinklers. -- Sec. 803.6.2
4. Expanded vinyl wall coverings shall comply with the requirements for textile wall and ceiling materials. -- Sec. 803.7
5. Toilet room floors shall have a smooth, hard nonabsorbent surface that extends upward onto the walls at least 6 inches. -- Sec. 1210.1
6. Walls within 2 feet of urinals and water closets shall have a smooth, hard nonabsorbent surface, to a height of 4 feet above the floor. -- Sec. 1210.2

INSULATION NOTES:

1. Insulating materials shall have a flame-spread rating of no more than 25 and a smoke developed index of not more than 450. -- Sec. 719.2 (concealed installation) and Sec. 719.3 (exposed installation)

   Foam plastic insulations are required to be protected. -- Sec. 2603

Code review for:
Project Id.:
Address:

ADDITIONAL REQUIREMENTS:
For A-3 occupancy
For B occupancy
For A-2 occupancy
Floor-1st Occupancy-Collection
The capacity of this area is required to be posted at 193 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3
Floor-2nd Occupancy-Reference Collection
The capacity of this area is required to be posted at 60 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3
Floor-2nd Occupancy-Info Commons
The capacity of this area is required to be posted at 140 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3
Floor-3rd Occupancy-Collection
1. The main exit shall be of sufficient width to accommodate not less than one half of the occupant load, but shall not be less than the total required width of all means of egress leading to the exit. -- Sec. 1024.2
2. Additional exits shall provide an egress capacity for at least one half of the total occupant load. -- Sec. 1024.3

The capacity of this area is required to be posted at 407 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3
Floor- 4th Occupancy-Collection
1. The main exit shall be of sufficient width to accommodate not less than one half of the occupant load, but shall not be less than the total required width of all means of egress leading to the exit. -- Sec. 1024.2
2. Additional exits shall provide an egress capacity for at least one half of the total occupant load. -- Sec. 1024.3

The capacity of this area is required to be posted at 400 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3

Floor-2nd Occupancy-Cafe
The capacity of this area is required to be posted at 253 occupants occupants in a conspicuous place near the main exit or exit access doorway on an approved sign. -- Sec. 1004.3

Code review for:
Project Id.:
Address:

ACCESSIBLE FACILITIES:

NOTE: Except as noted, section numbers listed below are from ICC/ANSI A117.1-1998

WATER FOUNTAINS AND WATER COOLERS:

Accessible units must comply with the following:

1. Spout is to be within 36 inches of the floor. -- Sec. 602.4
2. Spout arranged for parallel approach shall be located 3 1/2 inches maximum from the front edge. Units with a forward approach shall have the spout 15 inches minimum from the vertical support and 5 inches maximum from the front edge of the unit. -- Sec. 602.5
3. Spouts shall provide a flow of water 4 inches height minimum. -- Sec. 602.6

TOILET FACILITIES:

1. A 60 inch diameter turning space or T-shaped space is required in the toilet room. -- Sec. 603.2.1 and 304.3
   Doors shall not swing into the clear floor space for any fixture. 603.2.3 See exception for rooms used for individual use.
2. Water closet shall be mounted adjacent to a side wall or partition. The distance from the side wall or partition to the centerline of the water closet shall be 16 to 18 in. Sec. 604.2
3. When the accessible water closet is not in a compartment:
   Clearance around the water closet shall be 60 inches minimum, measured perpendicular to the side wall, and 56 inches minimum, measured perpendicular to the rear wall. -- Sec. 604.3.1
4. When the accessible water closet is in a compartment:
   Wheelchair accessible compartments shall be 60 inches wide minimum measured perpendicular to the side wall, and 56 inches deep minimum for wall hung water closets and 59 inches deep for floor mounted water closets, measured perpendicular to the rear wall. -- Sec. 604.8.1.1
   Compartment doors shall not swing into the minimum required compartment area. -- Sec. 604.8.1.2

Code review for:
Project Id.:
Address:

5. Grab bars shall have a circular cross section with a diameter of 1 1/4 inch minimum and 2 inches maximum, or shall provide equivalent graspability. -- Sec. 609.2
   The space between the wall and the grab bar shall be 1 1/2 inches. Sec. 609.3
   Grab bars shall be mounted in a horizontal position 33 inches minimum and 36 inches maximum above the floor. -- Sec. 609.4
   a. Side wall grab bars are required to start within 12 inches of the backwall and extend to 54 inches from the back wall. (The minimum length of the bar is 42 in) -- Sec. 604.5.1
   b. The rear bar shall be 24 in long minimum, centered on the water closet. Where space permits, the bar shall be 36 in long minimum, with the additional length provided on the transfer side. -- Sec. 604.5.2
6. The top of the water closet seats shall be 17 to 19 inches above the floor. -- Sec. 604.4
7. Accessible urinals shall be of the stall type or wall hung with the rim at 17 inches maximum above the floor. -- Sec. 605.2
8. Accessible lavatories shall be mounted with the rim 34 inches maximum above the floor. -- Sec. 606.3
9. Sinks shall be 6 1/2 inches deep maximum. -- Sec. 606.5
10. Water supply and drain pipes under lavatories shall be insulated or otherwise treated to protect against contact. -- Sec. 606.6
11. Mirrors shall be mounted with the bottom edge of the reflecting surface 40 inches maximum above the floor. -- Sec. 603.3

FIXTURE COUNT TABLE:

NAME	NUMBER OCC	RATIO M/F	WATER CLOSETS MALE	FEMALE	LAVS M	F	TUB SHOWER	DRINKING FOUNTAIN
4th. floor								
Collection	400	50/50	4	4	3	3	0	4
Ratio = 1 per ____			50	50	80	80	--	100
Teleconference Rm	90	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	50	50	--	100
Office Areas	32	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	80	80	--	100
TOTAL FOR FLOOR	250		6	6	4	4	0	6

Code review for:
Project Id.:
Address:

3rd. floor								
Collection	407	50/50	5	5	3	3	0	5
Ratio = 1 per ____			50	50	80	80	--	100
Seminar/Group Study	150	50/50	2	2	2	2	0	2
Ratio = 1 per ____			50	50	50	50	--	100
Office Areas	13	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	80	80	--	100
TOTAL FOR FLOOR	250		6	6	5	5	0	6
2nd. floor								
Cafe	253	50/50	2	2	1	1	0	1
Ratio = 1 per ____			75	75	200	200	--	500
Kitchen	8	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	80	80	--	100
Reference Collection	60	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	80	80	--	100
Info Commons	140	50/50	2	2	1	1	0	2
Ratio = 1 per ____			50	50	80	80	--	100
Classrm/Group Study	450	50/50	5	5	5	5	0	5
Ratio = 1 per ____			50	50	50	50	--	100
Office Areas	175	50/50	2	2	2	2	0	2
Ratio = 1 per ____			50	50	80	80	--	100
TOTAL FOR FLOOR			11	11	8	8	0	9
1st. floor								
Collection	193	50/50	2	2	2	2	0	2
Ratio = 1 per ____			50	50	80	80	--	100
Office Areas	165	50/50	2	2	2	2	0	2
Ratio = 1 per ____			50	50	80	80	--	100
Misc. Bldg. Common	31	50/50	1	1	1	1	0	1
Ratio = 1 per ____			50	50	80	80	--	100
TOTAL FOR FLOOR	60		4	4	3	3	0	4
BUILDING TOTAL			25	25	18	18	0	24

International Plumbing Code Section 403 and Table 403.1

In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets. -- IPC Sec. 419.2

Code review for:
Project Id.:
Address:

NOTE: The number of fixtures for a floor may not match total number of fixtures per area. The number of fixtures for the building may not match the total for the floors. The number of fixtures for each area and floor are rounded up to the next whole number. Totals are not rounded up until the total is obtained. If the fixtures only serve an area, use number shown for each area. If the fixtures serve an entire floor or building, use number shown for totals.

PEDESTRIAN WALKWAY: -- Sec. 3104

1. The pedestrian walkway shall be of noncombustible construction. -- Sec. 3104.3
   Exception: Combustible construction is permitted when buildings are combustible construction.
2. Walkway shall be separated from the interior of buildings by fire barrier walls with a fire-resistive rating of not less than 2 hours. -- Sec. 3104.5
   Exceptions:
   1. The distance between buildings is greater than 10 feet and the walkway and both buildings have an automatic sprinkler system per NFPA 13. See exception for glass requirements.
   2. The distance between buildings is greater than 10 feet and the sidewalls of the walkway is at least 50% open.
   3. Walkway is not required to be separated when buildings are on the same lot are treated as one building per Section 503.1.3.
3. The unobstructed width of pedestrian walkways shall not be less than 36 inches. The total width shall not exceed 30 feet. -- Sec. 3104.8
4. The length of exit access travel shall not exceed 200 feet. -- Sec. 3104.9
   Exceptions:
   1. If walkway has an automatic sprinkler system, length shall not exceed 250 feet.
   2. If both sides are at least 50 percent open, length shall not exceed 300 feet.
   3. If walkway has an automatic sprinkler system and both sides are open 50 percent or more, length shall not exceed 400 feet.
5. Smoke and heat venting shall be provided for enclosed walkways. -- Sec. 3104.11

Code review for:
Project Id.:
Address:

GLAZING REQUIREMENTS
All glazing in hazardous locations is required to be of safety glazing material. -- Sec. 2406.1
Locations: -- Sec. 2406.3

1. Glazing in swinging doors except jalousies.
2. Glazing in fixed and sliding panels of sliding patio door assemblies and panels in sliding and bifold closet door assemblies.
3. Glazing in storm doors.
4. Glazing in all unframed swinging doors.
5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any portion of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches above a standing surface.
6. Glazing in fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24-inch arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches above the walking surface.
   Exception: Panels where there is an intervening wall or other permanent barrier between the door and glazing.
7. Glazing in an individual fixed or operable panel, other than those locations described in items 5 and 6 above, than meets all of the following conditions:
   7.1 Exposed area of an individual pane greater than 9 square feet.
   7.2 Exposed bottom edge less than 18 inches above the floor.
   7.3 Exposed top edge greater than 36 inches above the floor.
   7.4 One or more walking surfaces within 36 inches horizontally of the plane of the glazing.
   See Exceptions.
8. Glazing in guards and railings regardless of the area or height above a walking surface.
9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas where all of the following are present:
   9.1 The bottom edges of the glazing on the pool or spa side is less than 60 inches above the walking surface.
   9.2 The glazing is within 60 inches of the water's edge.
10. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the glass is less than 60 inches above the plane of the walking surface.
11. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed glass is less than 60 inches above the nose of the tread.
    See Exceptions.

Code review for:
Project Id.:
Address:

PENTHOUSE REQUIREMENTS:

1. If construction type is not Type I, a penthouse shall not exceed 28 feet above the roof deck. Where used as an enclosure for tanks or for elevators that run to the roof and all other cases, the height shall not exceed 18 feet. -- Sec. 1509.2
2. The aggregate area of all penthouses and other roof structures shall not exceed 33 1/3 percent of the area of the supporting roof. -- Sec. 1509.2
3. Penthouse may only be used to shelter mechanical equipment and vertical shaft openings in the roof. -- Sec. 1509.2
4. Penthouse shall be constructed as required for the main portion of the Building. -- Sec. 1509.2.1 See Exceptions

19.4 UVSC MASTERPLAN

The UVSC Campus Masterplan, prepared by GouldEvans, provided the Digital Learning Center programming team with a context for campus planning and design, as well as the direction for future development. The master plan identifies primary issues for the UVSC campus in terms of the "needs for occupational training; providing developmental, general, and transfer education; meeting the needs for continuing education for personal enrichment and career enhancement; and providing diverse social, cultural, and international opportunities, and student support services[i]." The need for a Digital Learning Center is one of the primary components among the extensive list of primary issues for the development of the UVSC campus.

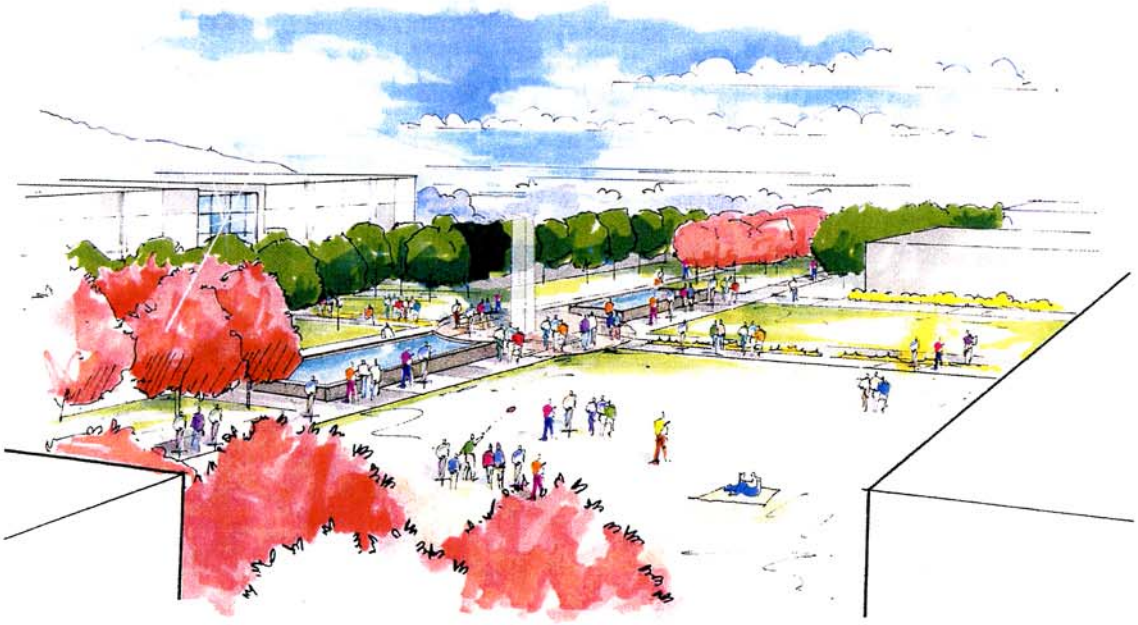
The Digital Learning Center is intended to become a new extended hours hub of the campus for student and faculty. The title "Digital Learning Center" will identify the new library as a resource for electronic media resources in addition to print.

Considerations regarding the site for the Digital Learning Center focused on the need for ample parking, necessity of a site able to accommodate the large footprint of the building, connection to a pedestrian walkway, and providing proper public exposure for the new monumental structure. With these issues in mind, many potential sites were considered. Ultimately, the site that was chosen, east of the Liberal Arts Building, fulfilled all the key site issues: the building would be near parking lot L and the interior pedestrian walkway, making the building easily accessible to students, faculty, and visitors; the site is large enough to accommodate the initial building footprint and possible future expansion. Further considerations for this site include ensuring a pedestrian walkway to the building that would not interfere with security for the Digital Learning Center.

In addition, the masterplan specified that the Digital Learning Center should incorporate "signature design," have a single main entry, consider the possibilities for automatic retrieval systems, and create a connection between the building and an exterior student hub. The "signature design" requested for the Digital Learning Center expresses UVSC's desire for the building to become one of the campus signature "icon" buildings. Consequently, the design should deviate in some way from campus standards while still remaining compatible with the existing modernist architectural expression.

The Executive Summary and Masterplan Drawing are reprinted on the following pages. Enlarged views of the Digital Learning Center site are also included.

[i] UVSC Campus Master Plan, prepared by GouldEvans, page 2.



executive summary

Utah Valley State College has experienced tremendous growth in the last several years and is projected to be the fastest growing higher education facility in the Utah state system. Total headcount enrollment for 2003 was 23,803. Enrollment projections show a total headcount enrollment growing to more than 30,000 within the next decade. UVSC is a strong presence in the community as the top employer in Orem and serving 17,000 Utah County residents as students on campus.

UVSC Mission Statement

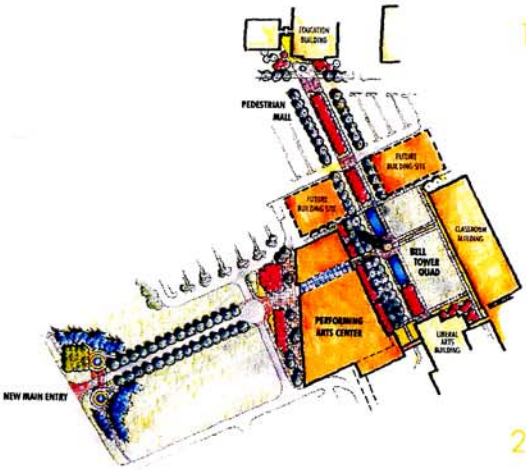
Utah Valley State College is a state college comprised of two interdependent divisions. The lower division embraces and preserves the philosophy and mission of a comprehensive community college, while the upper division consists of programs leading to baccalaureate degrees in areas of high community demand and interest. Utah Valley State College is dedicated to providing a broad range of quality academic, vocational, technical, cultural, and social opportunities designed to encourage students in attaining their goals and realizing their talents and potential, personally and professionally.

The College is committed to meeting student and community lower division and upper division needs for occupational training; providing developmental, general, and transfer education; meeting the needs for continuing education for personal enrichment and career enhancement; and providing diverse social, cultural, and international opportunities, and student support services.

Primary Issues

As the campus population continues to grow, and with the recent acquisition of the adjacent 27 acres of property at Vineyard Elementary, UVSC is faced with many challenges as it continues to fulfill the college's mission statement. For these reasons, it became essential to develop a master plan to help guide key decisions impacting the future of the campus.

A master plan process was engaged to address a number of primary issues including:

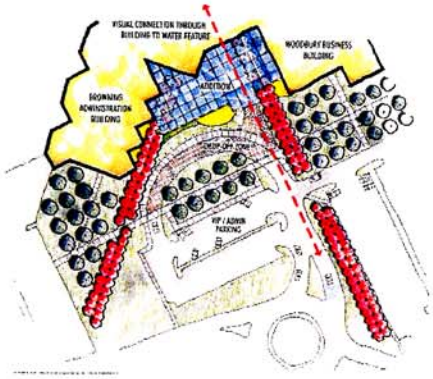


1. Future Buildings and Locations including:

Digital Learning Center
Performing Arts Center
Classroom Building
Athletics Complex
Potential Parking Structures
Expansion to Science Building
Expansion to Business Building
Expansion to Student Center

2. Campus Entry(s) & Identity including:

New "Prominent" Public Entry on West Side of Campus
Business Entry at Existing Roundabout Campus Entry
Enhancements to the Retention Pond Area



3. Vehicular Circulation including:

Expansion of Perimeter Loop Road
Overpass Connection to West Campus
Associated Parking

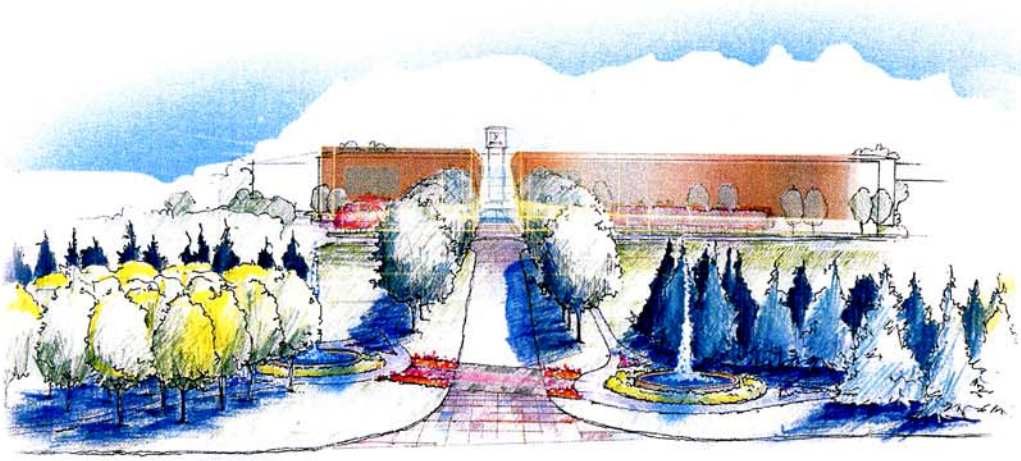
4. Pedestrian Circulation & Courtyards including:

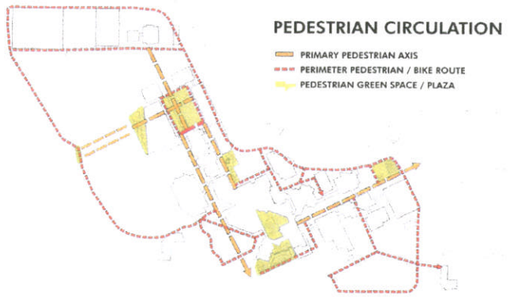
Continuation of the internal pedestrian spine walkway
Upgrade of Sidewalk System as part of future building
Improvements to Adjacent Landscaping
Potential for Bicycle Pathways
Enhancements & expansion of Green Space & Courtyards

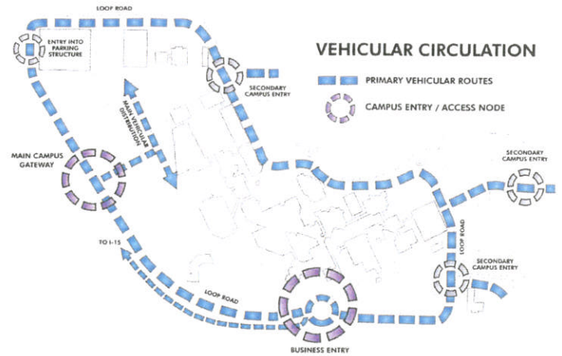
5. Campus Capacity

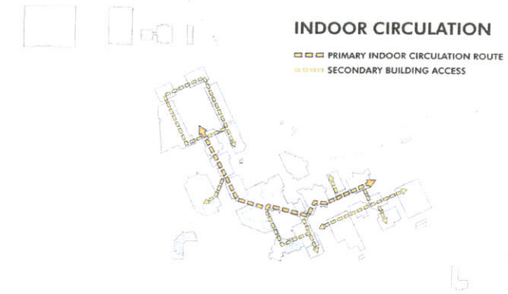
A Vision for the Future

The new master plan provides the trustees and administration a framework for future campus development that will support the College's continuing role as a key provider of education in the State of Utah. It is intended to be a working document that is continuously reviewed and updated to meet the constantly changing needs of the community. It documents the people and processes used to identify and resolve these issues and goals. It also explains and illustrates the many alternatives that were considered. This master plan has been fully reviewed by the Master Planning Team and is presented to Utah Valley State College and the community at large as a planning tool to guide decisions as UVSC looks to the future.









N

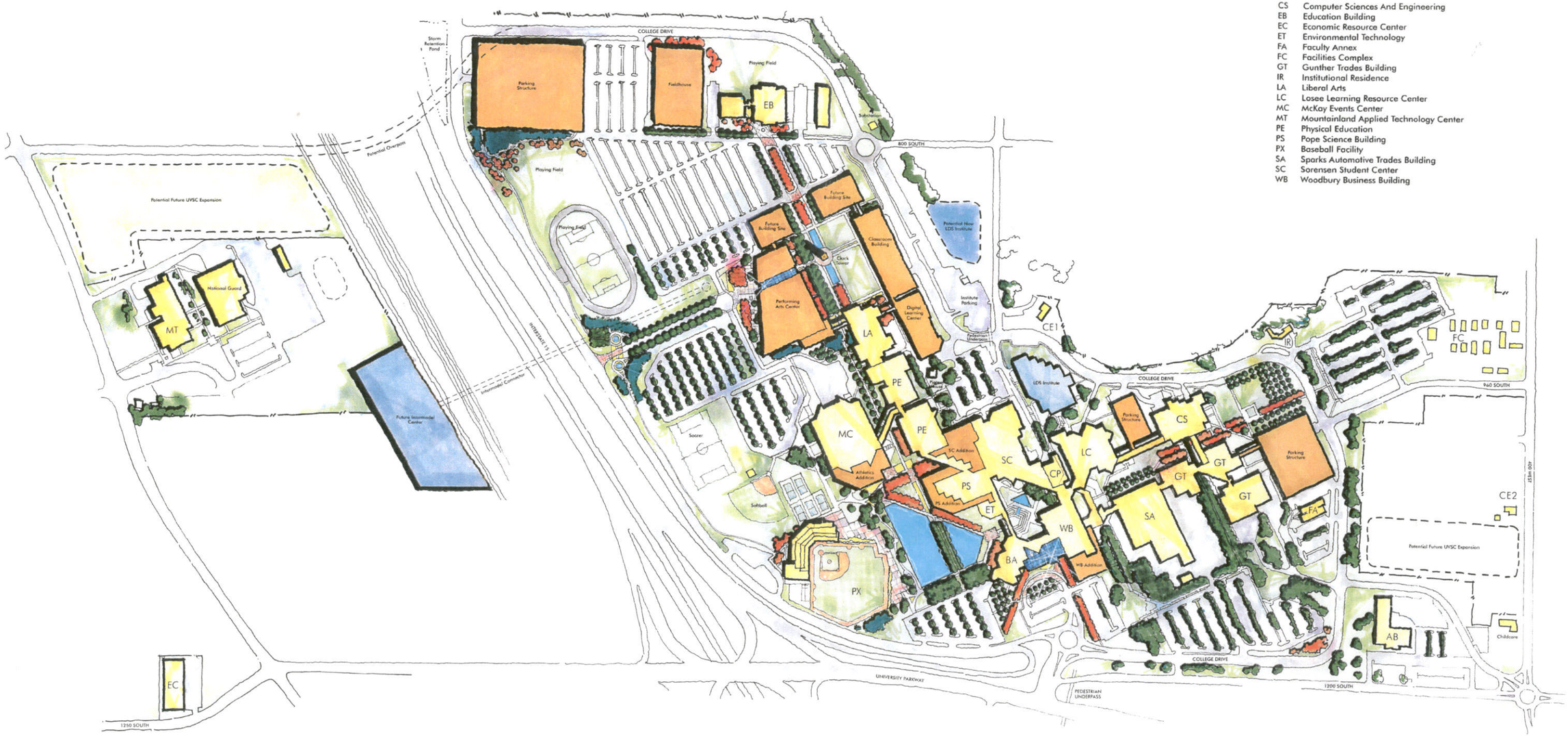
EXISTING FACILITIES

NEW CONSTRUCTION

NON-UVSC FEATURE

WATER FEATURE

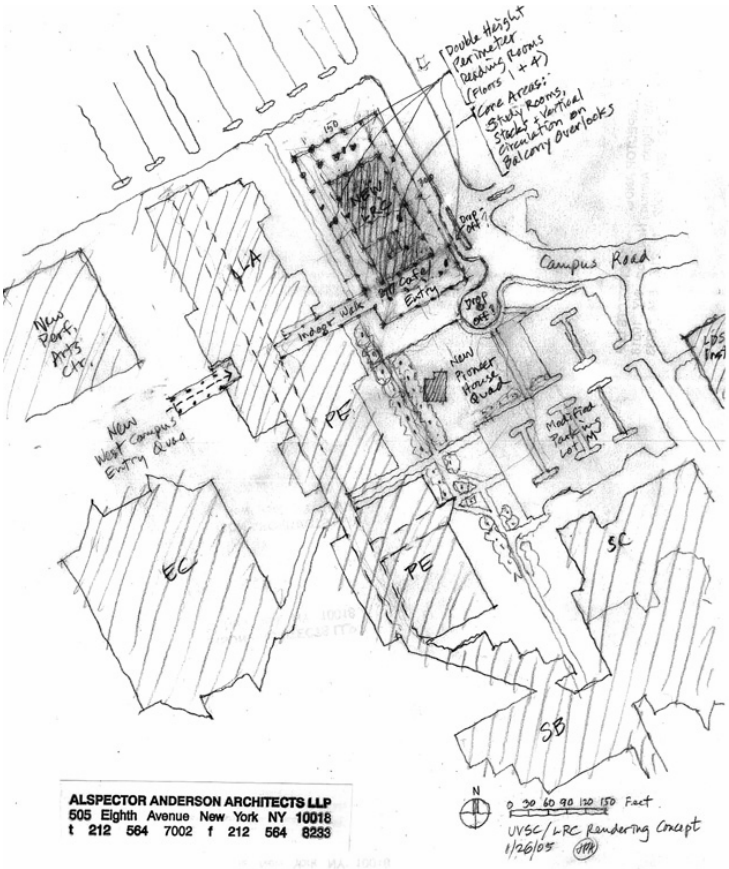
AB	Advancement Building
BA	Browning Administration
CE1	Continuing Education
CE2	Continuing Education
CP	Central Plant
CS	Computer Sciences And Engineering
EB	Education Building
EC	Economic Resource Center
ET	Environmental Technology
FA	Faculty Annex
FC	Facilities Complex
GT	Gunther Trades Building
IR	Institutional Residence
LA	Liberal Arts
LC	Losee Learning Resource Center
MC	McKay Events Center
MT	Mountainland Applied Technology Center
PE	Physical Education
PS	Pope Science Building
PX	Baseball Facility
SA	Sparks Automotive Trades Building
SC	Sorensen Student Center
WB	Woodbury Business Building



19.5 PRELIMINARY VISUALIZATION SKETCHES

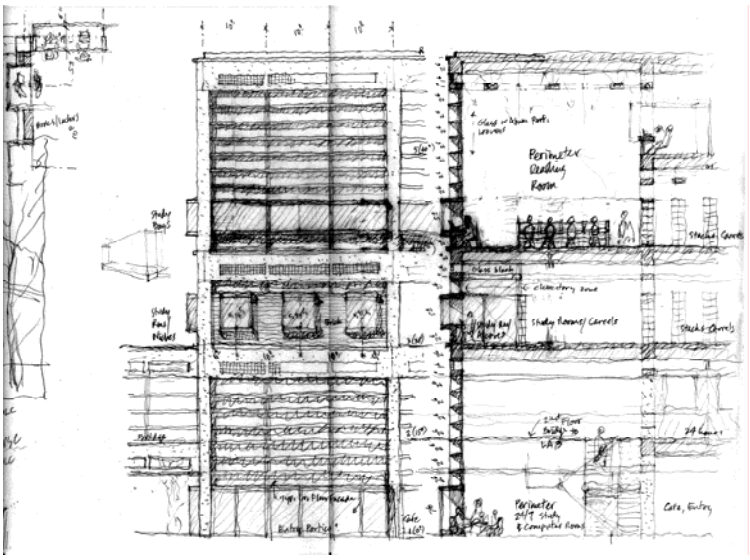
UVSC hired Jacob Alspector, a New-York based architect with extensive library design experience, to create a design concept and to prepare preliminary sketches along with a rendering of the Digital Learning Center for promotional purposes. Jacob worked directly with President Sederburg and his colleagues to synthesize the vision for the building with an appropriate and compelling architectural image. Subsequently, as a member of the programming team, Jacob's understanding of the site, context and project scope, provided the programming process with the specificity necessary to make this document relevant and useful for the future design task.

The initial sketches developed by Jacob Alspector utilized the basic UVSC campus-wide structural module of a 30 foot square bay, and sought to distill this building unit to its simplest and most abstract form. Transformation of the half-cube, 15 feet high, into a platonic 30 foot high full cube distinguishes this most important campus facility.

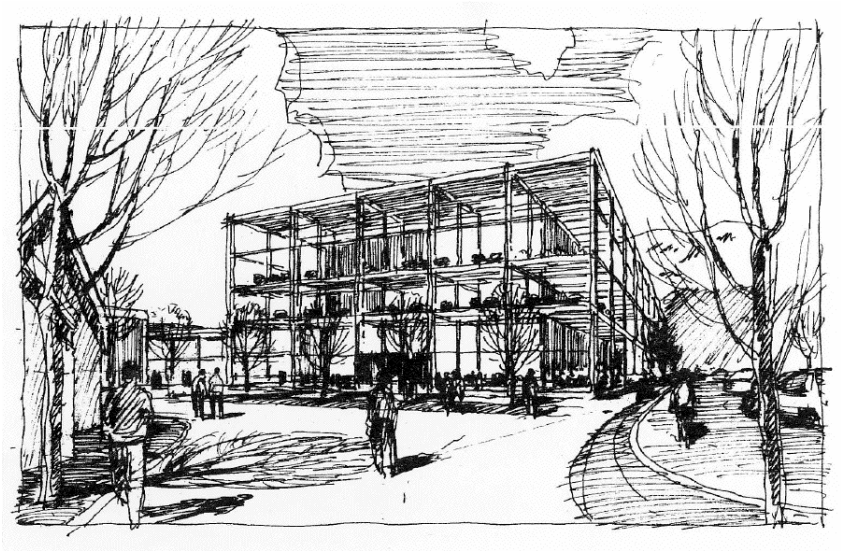


PRELIMINARY VISUALIZATION SKETCHES

The library design strategy proposes to create a contextual, yet clearly distinctive, monumental building. The classically proportioned dimensions would be 75 feet high by 150 feet wide by 300 feet long, creating a building of approximately one hundred and eighty thousand square feet. The perimeters of the first and fourth floors are formed from the pure 30 foot cubic bays. These facilitate open, spacious public service areas, reading rooms and an information commons, with adjoining second and fifth floor mezzanines.



The double-height, glass enclosed areas at the base and top of the building create a significant spatial connection to the external environment, allowing panoramic views out to the surrounding campus and landscape of mountains and lake. The inviting, public aspects of the building include the café and entry facing the Library Quad, the walkway to the Liberal Arts building, and the double height ground floor perimeter of the building, all allowing passers-by and campus road traffic views of the extensive activities within.



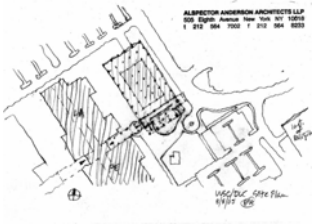
PRELIMINARY VISUALIZATION SKETCHES

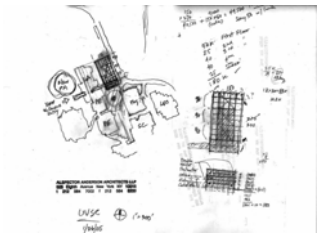
As the conceptual design progressed, fundamental concepts were maintained, such as the monumental size and proportion of the structure as well as the double height first and fourth floors, while other design details evolved. The connection to the Liberal Arts Building, for example, became an elevated study bridge that allows uninhibited pedestrian traffic on the north side of the building.

Opposing recessed corner entrances were developed, one at the bridge and one on the road-side of the building. An exterior skin of refined glass and horizontal solar control louvers propose an effective façade treatment for the lower and uppermost stories, maximizing views and natural daylight. Minimizing solar heat gain will provide the UVSC campus with a precedent for a 21st Century green alternative to the more traditional campus window systems. Creating a sympathetic yet distinguished presence, the material palette utilizes the campus standard brick punctuated by small bay windows in the intermediate story. These bay windows also facilitate intimate, comfortable areas for small group and individual study. In addition to the brick on the building facade, brick-paved paths surrounding the Digital Learning Center establish continuity between the Digital Learning Center, the surrounding area, and the other campus buildings and walkways.

The images on the following page represent the development and final vision of the facility as approved by UVSC. It is anticipated and expected that future development of the Digital Learning Center design will seek to maintain an overall clarity, sensitivity and scale appropriate to a building which is envisioned as the heart of the campus and the embodiment of all the aspirations of the UVSC community.

PRELIMINARY VISUALIZATION SKETCHES





19.6 GLOSSARY

ADA (Americans with Disabilities Act):
The *Americans with Disabilities Act* is a federal regulation with specific requirements for library buildings that ensure that the facility will be accommodating and accessible for all employees and patrons.

Aisle Spacing:
The ADA mandates specific clearance between shelving: 36" clear floor space is required, 42”-44" is preferred. A 48" wide end aisle between the end of a range and nearest obstruction or wall perpendicular to that range is also required.

Articulating Keyboard Tray:
An *articulating keyboard tray* is an arm attached to the underside of a work surface to hold a computer keyboard and mouse pad. Ergonomic articulating arms allow for vertical and horizontal motion as well as forward and backward tilt in order to reduce the number of repetitive stress injuries.

Audio Visual, A/V:
A collection or department featuring audio and video materials in non-print and digital formats, technological hardware and software which includes both audio and video formats, and multi-media collections are often designated by the title *Audio Visual (A/V)*.

Bistro Chair:
Bistro chairs are lightweight, narrow-scale chairs, often stackable, that are used at small diameter tables in cafés or staff lounges.

Book Cart:
Book carts are mobile storage units consisting of two or three shelves. They are used to transport materials from workstation to workstation or from work areas to shelving. Book carts may also be referred to as book trucks.

Carrel:
Carrels are small places for study. These areas consist of a workstation for one or two individuals with a work surface and contiguous side panels to provide a modicum of privacy. Carrels may or may not have an upper shelf with auxiliary lighting (task light) and come in a variety of configurations and materials.
Wet carrels provide wire management and outlets for the use of electrical and computer equipment at the work surface.

Check-in:
Check-in is the part of the materials circulation process that concerns the return of library materials. During check-in materials are re-entered into the computer system. This process may be assisted at a service desk or self-service or express check at an ATM-like machine with a receipt printer.

Check-out:
Check-out is the part of the circulation of library materials process that concerns the selecting and charging out of materials to a registered library borrower. Check-out may be assisted at a service desk or at an express check or self-service ATM-like machine with a receipt printer.

Circulation:
The *Circulation* Desk is a staffed service point that handles the flow of clients and materials into and out of the building. The desk design should respond to circulation needs, where it is located, the equipment per station, and queuing space.

Compact Shelving:
Compact shelving eliminates the typical aisles between each range. In libraries, compact shelving is often attached to moveable carriages located on steel tracks and arranged in ranges of several sections with one or a few aisles. Ranges can then be moved horizontally along the tracks to create an aisle when needed to access materials. Compact shelving is typically used when space is limited, for archival storage, and for storage of less-frequently retrieved materials. Compact shelving is operated with a manual-assist device, wheel or equivalent, or by pushing a button (if electrified version is used). It requires a structural capacity of 220-300 pounds per square foot, live load.

Café:
The *Café* is the area where refreshments are sold and where computer terminals and/or wireless access to the Internet is available to the public, primarily for an e-mail or recreational function. Seating may include small tables, counters, and booths. Vending machines may be provided for additional refreshment options if counter service is not always available when the space is open.

Depressible Book Cart:
Depressible book carts consist of a book bin on casters and are characterized by a depressible platform mounted on a spring mechanism that lowers the platform as weight is applied. These are often used at book return areas at the check in desk or staff work room and reduce the shock of materials falling into the cart as well as reducing the reach for the staff unloading them. Smart Bins (Tech Logic) are electronically adjustable depressible book platforms with precise and automatic adjustments. They are available in two heights for use under circulation counters or as a component of an automated materials handling system.

Desensitizer:
A *desensitizer* is a collection security device used during the check-out process which permits clients to remove a material from the secured area of the building.

Dining chair:
Dining chairs are armless, often upholstered and stackable, with a posture that is comfortable for dining. These should be specified with dollies for easy transport.

Disaster Closet:
The *disaster closet* is an area where the equipment, manuals, and supplies are located in the event of a variety of library disasters. Such incidents may include water leaks, floods, fires, smoke, chemicals, electrical failure, etc. Fans, visquine, tape, shop-vacuums, walkie-talkies, buckets, yellow hazard tape, megaphone, boots, flashlights, dollies, and incident report forms etc. may be stored inside the disaster closet.

Double-face:
Double-face is a unit of shelving typically 36” wide with shelves on each side. Steel cantilever shelving has metal uprights from which the shelves may be suspended from both sides.

Drawer pedestal:
A *drawer pedestal* consists of two or more drawers, usually occurring under a work surface. The unit may be attached to the surface, free-standing, or mobile (with casters). Mobile units have reduced capacity because of the height of the casters. Drawer pedestals may also be called file pedestals.

Elevation:
Elevation describes the height of ground from sea level indicated on a site plan. It may also refer to an architectural drawing that depicts a view that is straight-on and referenced on the floor plan.

FTE:
FTE is an abbreviation for a full-time employee or full-time student.

Enhanced Instructional Space:
Enhanced instructional space is a space for teaching and learning that includes high-end multi-media and broadcast capability. Sophisticated lighting to suit a wide variety of presentation formats is recommended for these instructional spaces.

Gates:
Gates refer to the physical restraint devices used at security sensing screens, which lock if triggered by the sensing strip placed in library materials. This exit control device may also include a counter used to record the number of patrons.

Group Studies:
Group studies are enclosed areas with acoustical separation from other areas of the library designed to accommodate a specific number of people. Typically these rooms are furnished with round or rectangular tables that facilitate discussion, although small rooms for one or two persons working together may just include a counter with a shelf above it. Larger spaces may include electronic white boards, wall-mounted monitors for computers, computer projections equipment, data and electrical connections for computer use, etc. Appropriate HVAC, lighting, and acoustics in these areas are essential.

Information:
Information can be defined as a body of knowledge. Information areas of the library, such as service or information desks, may also be areas designated to respond to non-technical questions, i.e. hours of operation, location of materials or services within the building.

Information Resources:
Information resources are the portions of the library collection that are available in print or digital format.

Information Services:
I*nformation Services* handles professional reference services for clients. This department of library is also often referred to as “Reference” or “Research Assistance.”

Information Technology:
Information Technology refers to the computer services for the library, usually handled by the campus computing department or library services. Information Technology can consist of Internet, World Wide Web, CD-ROM or other on-line information that permits access to a wide array of electronic resources in addition to hardware that provides access to a wide array of electronic resources.

Lateral File:
Lateral files are file drawer cabinets measuring approximately 36” wide and 18” deep. They may be a shelf or drawer file. Shelf files are the most space efficient means of storing traditional files folders but they require end tabs on file folders.

Laser Scanner:
A *laser scanner* is a laser device that reads barcodes on library materials or equipment as part of the acquisition or circulation process in conjunction with the RFID system and is usually integrated into the work surface for ergonomically appropriate use. Another model is the hand held laser scanner: see Wand.

LCD:
An abbreviation for liquid crystal display, a display used in computer and television monitors.

Lounge Chair:
Lounge chairs are upholstered chairs, recommended with un-upholstered arms, used for casual reading or studying. The typical seat height of a lounge chair is 16"-17" and they may include casters and/or tablet arms.

Linear Feet:
Linear feet are a unit of measurement typically used to describe the running length of counter tops, work surfaces, cabinetry or shelving. For example, one 36" wide section of single face shelving with six openings would be described as being three linear feet of shelving with 18 shelf feet of materials.

Media:
Non-print information in library collection is referred to as the *media* collection; this may include audio and video tapes, audio and video disks, LP records, motion picture film and filmstrips, photographs and slides, CDs, DVDs, microfilm, microfiche, microcards, software or hardware associated with the use of non-print information in the library's collection.

Multi-media:
Technological hardware and software that includes both audio and video formats is referred to as *multi-media*. Multi-media can also refer to a type of computer terminal set-up, usually with integral speakers or headset, which includes audio and video capabilities.

Meeting Room Chair:
Meeting room chairs are stackable, typically armless, with a posture comfortable for meeting room activities or multi-hour seminar participation. These should be available with dollies for easy transport and may be upholstered or un-upholstered.

Merchandise (verb):
To *merchandise*, or market, is to ensure that library users are aware of new materials or services available within or without the library.

Microforms:
Microforms are library materials that have been condensed into a photographic format. This includes microfilm, microfiche, and microcards. Using this format requires specific equipment such as a microform reader or microform reader-printer. A reader-printer should be supplied near Inter Library Loan. Microform materials are typically housed in microform cabinets for the specific type of material.

NSF:
NSF is an abbreviation for net square foot.

OPAC or **PAC:**
OPAC or *PAC* is an abbreviation for the on-line public access catalog that provides visual electronic access to the library's holdings. PAC may be accessed in the library at a computer terminal, or quick search station, that limits access to everything except the catalog database(s). This is usually recommended to permit sufficient access to the catalog when there is a high demand for multi-purpose terminals.

Periodicals:
The term *periodicals* refers to magazines, professional journals and newspapers that are part of a series and are published on a regular basis in a soft-cover format. These may also be referred to as serials.

PTE:
PTE is an abbreviation for part-time employees or part-time students.

Quick Search Station:
A *quick search station* is a computer terminal that includes access solely to the library catalog and is intended for short-term stand-up or wheel-in use.

Range:
Range refers to the portion of the library shelving comprised of individual sections of shelving, usually finished with an end panel, and ending in an ADA mandated 48" wide end aisle.

Reading Chair:
Reading chairs are arm or armless chairs, typically possessing 4-legs or a sled base and a flat seat and posture that permits the user to lean forward to read materials on a work surface or to take notes without cutting off circulation at the knees. These chairs may be upholstered or un-upholstered.

Reference:
Reference refers to the library's collection of non-circulating materials, primarily non-fiction. Assistance from an information service professional should be available in the reference area to handle technical questions. This department is also referred to a Information Services.

Safety:
Safety regards considerations that maintain a library environment free of harm and assist in the prevention of and response to emergency situations.

Section:
Section refers to a 36" wide unit of shelving (usually steel, cantilever type with adjustable shelves) which is grouped to form ranges in single or double-face units. Shelving sections come in standard heights of 42", 48", 54", 66", 78", 84" and 90", with 66" and 90" being the most common, and 45" a frequent custom height. Section can also refer to an architectural drawing that describes how something looks from the side, used for walls, to describe vertical elements in a space.

Security:
Security provides a system that offers freedom from fear of harm or loss: for example, collection security, building security, client security, staff security, and equipment security. Security may include a variety of locking and proximity access devices, personnel, and monitors, etc. integrated into a cohesive plan.

Seminar Room:
Seminar rooms provide space to accommodate an instructional situation in a variety of configurations. Typically a seminar room will hold 20-30 people at narrow tables, approximately 18" deep x 48"-60" long and 28" high, in rows or along the perimeter of the room,. Space for an instructor and a lectern at the front of the room is typically included. A variety of lighting types and control options, an electronic white board, traditional marker boards, and other accessories to accommodate presentations are recommended.

Sensing Screens:
Sensing screens are devices through which exiting clients pass and which trigger an alarm if materials are not properly check out to a registered library user. The alarm may also trigger a closed circuit TV (CCTV) camera to assist in identifying client who set off the system.

Sensitizer:
The *sensitizer* is a component of collection security system which magnetizes sensing strip and thus triggers alarm at security sensing screens.

Serials:
Serials are magazines and professional journals, also described as periodicals.

Service Desk:
Service desk describes the desks at service points such as the circulation desk, reference or information desk, customer service desk, or children's service desk. These service points may also be referred to as help desks.

Services:
The term services refers to the functional areas or activities of the library, including Access or Circulation Services, Reference or Information Services, Computer or Information Technology Services, Replication or Copying Services. It also refers to support for clients either by function or staff.

Shelf Feet
Shelf feet are a unit of measurement used to describe the library collection. For example, one 36" wide section (3 linear feet) of single face shelving with six openings holds 18 shelf feet of materials.

Shelf File:
A shelf file is a file unit which is approximately 36" wide and 12-18" deep with dividers that hold file folders or materials upright and typically used with a color-coded labeling system, as for medical records. Shelf files may or may not have lockable, hinged door(s) for the openings.

Signage:
Good library signage, essential for wayfinding, includes a variety of sign types such as wall or ceiling hung area indicators, door plaques, emergency egress signage and end panel signs on each range of shelving. Other signage needs to include hours of operation signs at entries, equipment operation instructions, and exterior signage.

Single-face:
Single-face is a unit of shelving that is typically 36" wide with shelves on one side, usually located against a wall. Steel cantilever shelving has metal uprights from which the shelves may be suspended from both sides.

Solutions desk:
The solutions desk is a staffed, public service desk with limited functions, typically used by those with special needs, for problems with over dues, fines, registration, etc. that cannot be handled via a computer terminal or an express station.

Stacks:
Stacks are the shelving structures that contain the hard-copy elements of the library collection in many formats.

Tablet Armchair:
Tablet armchairs are meeting room-type chairs with the addition of an attached writing tablet for use in instructional or classroom settings. The tablet arm option is often offered in left and right-handed versions but usually precludes the chair from being stackable.

Task Chair:
A task chair is an ergonomic chair or secretarial chair with or without arms and adjustable on five-spoke base with casters. They are often used for intensive work in staff offices, work areas and public area computer terminals. For staff use the adjustable features should include at least seat height, arm width and height adjustment and may include back height adjustment, reclining back, seat depth adjustment, and forward seat tilt with tilt lock. For public use, adjustable features should only include seat height adjustment, and only armless chairs are recommended. The seat height range of task chairs is approximately 16" - 24", to fit a broad range of people.

Task Light:
A *task light* is a single light fixture used to augment the ambient or overall lighting in a building used for a specific task such as reading or working. Task lights are often incorporated into the furniture at a staff workstation by securing into the shelving unit above the desk surface, or at a study carrel by being attached to or incorporated under the upper shelf. Task lights may also include an arm attachment for precise positioning.

Task Stool:
Task stools employ the same features as task chairs but possess a higher seat height for use at counter-height (36" - 42") work surfaces. These stools also include an adjustable height foot ring near base for use as a footrest. The seat height of task stools ranges from approximately 26" - 32".

Traffic:
The term *traffic* refers to the vehicular traffic around and to the building, vehicular and pedestrian activity on the library site, and the circulation of people within the building, particularly at service desks or in areas of high concentration of activities.

Vertical file:
Vertical files are file drawer cabinets that are approximately 15"-18" wide and 22"-28" deep. The height of vertical files varies with the number of drawers. Vertical files are often used in libraries to store information culled by librarians from newspapers and photographs on subjects of interest to clients of a particular library or in a particular course of study.

Wand:
A *wand* is a hand-held laser device that reads barcodes on library materials or equipment as part of the acquisition or circulation process.

Workstation:
The term *workstation* refers to a desk or multi-surface work area. As used in libraries, the term does not necessitate the existence of a computer terminal, but rather a space reserved for one person to work. For example a program might require 6 workstations for full-time employees and 4 shared workstations for use by 6-8 part-time employees. An "L" workstation includes a primary work surface or desk and one side surface or a return. A "U" workstation is an "L" workstation with a rear work surface or "credenza."