



Design Guidelines

Space and Furniture Standards:
Office, Meeting & Teaching Spaces

4 August 2014

Design Guidelines - Space and Furniture Standards

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1.0 Introduction

Background

Rowan University has developed space and furniture planning guidelines to serve as an aid in planning, allocating and managing space on the campus. These guidelines assist the Rowan community in establishing equitable, consistent, and flexible planning parameters. In addition, the guidelines assist the university community in making sound management decisions about space allocations both for new construction and within existing or renovated buildings.

The space planning process is achieved through an evaluation of existing spaces through the use of space needs calculations. These calculations are based on the University's space planning guidelines and general planning assumptions that are reasonable and accepted by the University. These guidelines shall be periodically reviewed and updated as programs, teaching and learning pedagogies, and technological advances continue to evolve and influence the University's physical environment.

The space and furniture planning guidelines are organized into three sections: office spaces, meeting spaces, and learning spaces. Space planning for offices is provided for faculty members as well as for administration and staff. Illustrations are provided with generalized criteria for furniture design. Meeting spaces are included to address a variety of size requirements. Learning space guidelines are divided into three categories: instructional, collaborative and interactive. Illustrations are provided of typical classroom arrangements to demonstrate clear planning principles. These categories reflect current trends in teaching spaces that accommodate the variety of teaching spaces now required in the University environment.

Administration

The Real Estate & Planning Department administers these guidelines and assists the campus community in their implementation and interpretation. The guidelines are updated by the Real Estate & Planning Department on a regular basis. As requests for new, renovated and reallocated spaces are forwarded and approved through the Capital Planning process, the Real Estate & Planning Department implements these guidelines.

Design and Standards for Individuals with Disabilities

Use of these standards and guidelines should be in compliance with the Americans with Disabilities Act of 1990 ("ADA"). Requirements for Rowan University are covered under Title II of the ADA.

The Department of Justice published revised regulations for Titles II and III of the ADA in the Federal Register on September 15, 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design ("2010 Standards" or "Standards"). The 2010 Standards set minimum requirements—both scoping and technical—for newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Acknowledgements

The Real Estate & Planning Department developed the Space Planning guidelines with the assistance of KSS Architects, LLP.

2.0 Definition of Terms

Definition of Terms

Following are the generally accepted definitions of the types of spaces and building areas that are relevant to these guidelines:

Gross Square Feet – gsf (also called bgsf-building gross square feet) - GSF is the total area of all floors of a building. This includes the area within the outside faces of exterior walls and floor penetration areas, however insignificant. GSF also includes all building structural, mechanical and other infrastructure systems, all building circulation space, and all support space such as public toilets, lobbies, etc. Gross area also includes space located above and below grade (basements).

Net Assignable Square Feet – nasf (also called nsf or asf -net square feet or assignable square feet) NASF refers to the space inside a room, as measured from interior wall to interior wall, including “nooks and crannies” which may exist in older buildings. It does not include building circulation, or areas such as restrooms, elevators and stairs. This is the space that is available for assignment to an occupant or for a specific use. The space guidelines are presented in terms of “nasf.”

Net to Gross Efficiency - In the figures below, the efficiency of net to gross square feet is 55%, which is fairly typical for buildings at Rowan and at our peer universities as well. The University continually analyzes building efficiencies on the campus as we develop and plan new and renovated buildings. Our overall goal is to move toward the highest overall building efficiency that we can achieve in the creation of an overall effective learning environment, while also meeting program needs and requirements.

3.1 Space Planning Guidelines: Offices

Introduction

The following guidelines articulate the sizes, utilization, and layouts for the various types of offices at Rowan University.

- Application of a modular planning approach, to preserve flexibility of office use over time. For example, co-locating offices of similar sizes and types can be very useful as we think about future needs and changes in academic and other programs
- Placement of offices in the building core rather than along the windowed side of buildings, in order to create the flexibility noted above as well as to promote air quality and to maximize light penetration for all building occupants. Location of interior windows and transoms will support office quality.
- When possible persons supervising two persons or more should be assigned a private office.
- Provide workspace configurations that optimize functionality and efficiency and foster open communication while still protecting confidentiality
- Provide adequate conference room space, for both smaller and larger gatherings
- Allow for adequate file storage, including compact storage (if deemed desirable and feasible)
- Allow for other common facilities such as: central supply room, restrooms, kitchenette facilities, and central copier facilities etc
- Develop an annual program by which office occupants eliminate excess paper by sorting, purging and archiving their documents. Quite often office occupants feel that their offices are cramped, only to find that the space is adequate once a “clean up day” occurs. This can also help to identify specialized storage needs or furniture solutions that better organize office spaces.
- Undertaking reviews of office spaces to be sure that utilization continues to make sense, to update office rosters, and to make any space reallocations that might be required

Title	nsf	size	occupants
Dean's Office	220 10% +/-		1 - 4 visitors
Associate Dean's / Senior Director's Office	175 10% +/-		1 - 4 visitors
Department Chair's Office	180 10% +/-		1 - 2 visitors
Faculty / Project Manager's Office	120 10% +/-		1 - 1 visitors
Clerical Workstation	70 10% +/-		1
Adjunct Workstation	60 10% +/-		1

3.1.1 Dean's Office

220 nasf 20% +/-

The Dean is assigned a single, private office. Offices are intended to accommodate a workstation, lateral files, and bookcases for the Dean, plus a meeting area for up to an additional 4 people as needed.

Furnishings

- 1 WORKSTATION
- 1 TASK CHAIR ON CASTERS WITH ARMS
- 4 SIDE CHAIRS WITH ARMS
- 1 42." DIA. ROUND TABLE
- 2 BOOKCASES, 36"W X 12"D X 84 "H
- 2 LATERAL FILES, 18"D, 2 DRAWER
- 1 MARKER BOARD, 36"W X 36"H
- 1 TACK BOARD, 36"W X 36"H

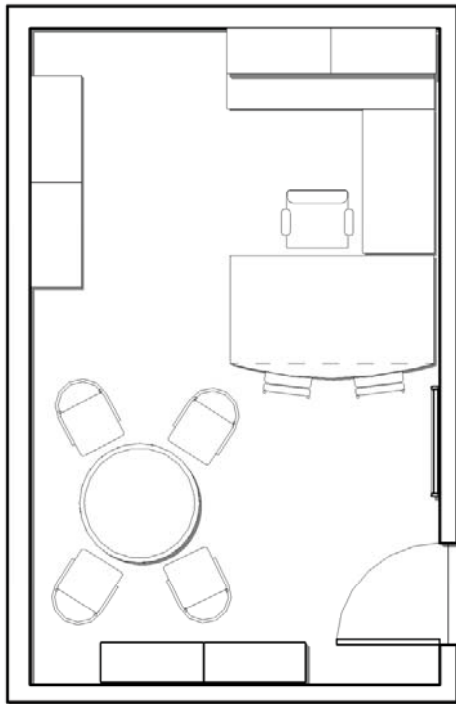


Figure 3.1.1a

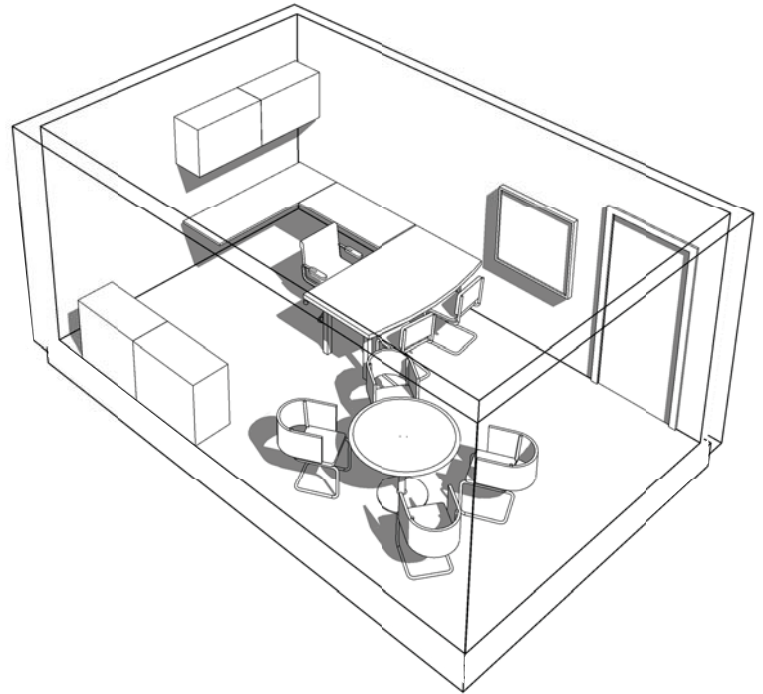


Figure 3.1.1b

3.1.2 Associate Dean / Senior Director's Office

175 nasf 20% +/-

Associate Deans and Directors are assigned a single, private office. Offices are intended to accommodate a workstation, lateral files, and bookcases for the faculty member, plus a meeting area for up to an additional 2 - 3 people as needed.

Furnishings

- 1 WORKSTATION
- 1 TASK CHAIR ON CASTERS WIT ARMS
- 2 SIDE CHAIRS WITH ARMS
- 2 BOOKCASES, 36"W X 12"D X 84"H
- 3 LATERAL FILES, 18"D, 2 DRAWER
- 1 MARKER BOARD, 36"W X 36"H
- 1 TACK BOARD, 36"W X 36"H

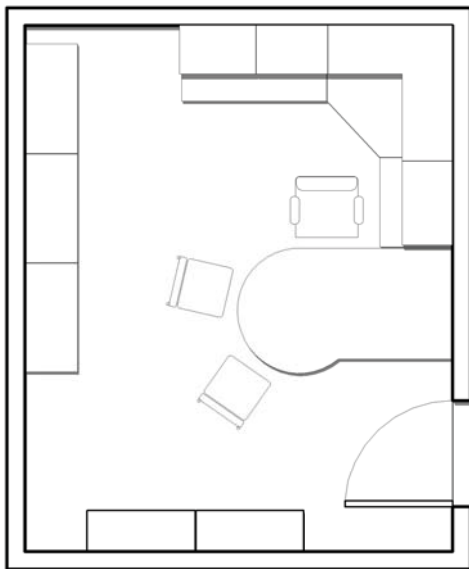


Figure 3.1.2a

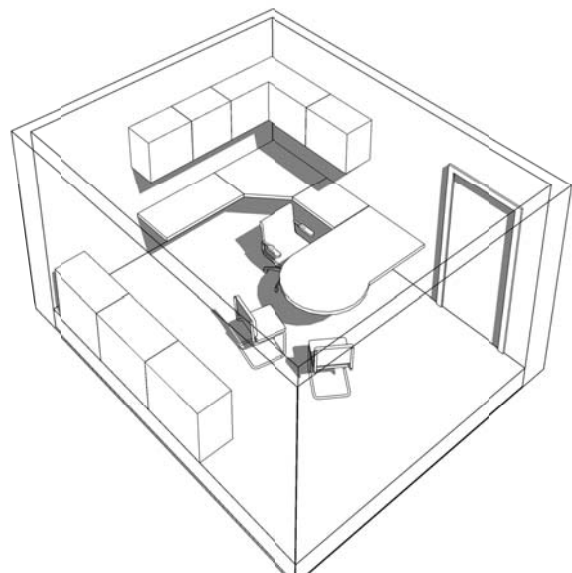


Figure 3.1.2b

3.1.3 Department Chair / Director's Office

180 nasf 20% +/-

Department Chairs are assigned a single, private office. Offices are intended to accommodate a workstation, lateral files and bookcases for the faculty member, plus a meeting area for up to an additional 4 people as needed.

Furnishings

1 WORKSTATION

1 TASK CHAIR ON CASTERS WITH ARMS

4 SIDE CHAIR WITHOUT ARMS, STACKING

1 BOOKCASES, 42"W X 12"D X 84"H

1 MARKER BOARD, 36"W X 36"H

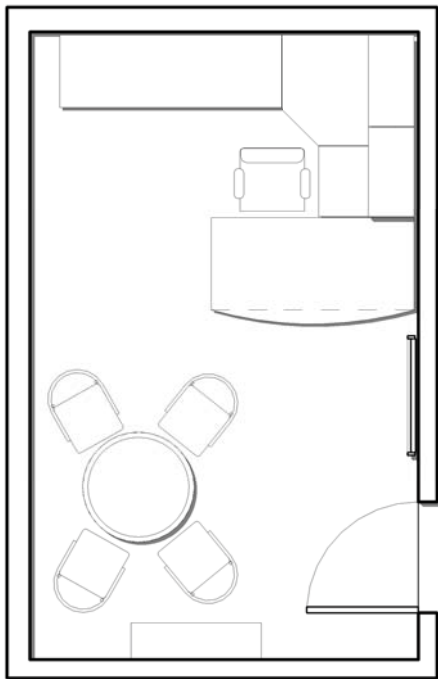


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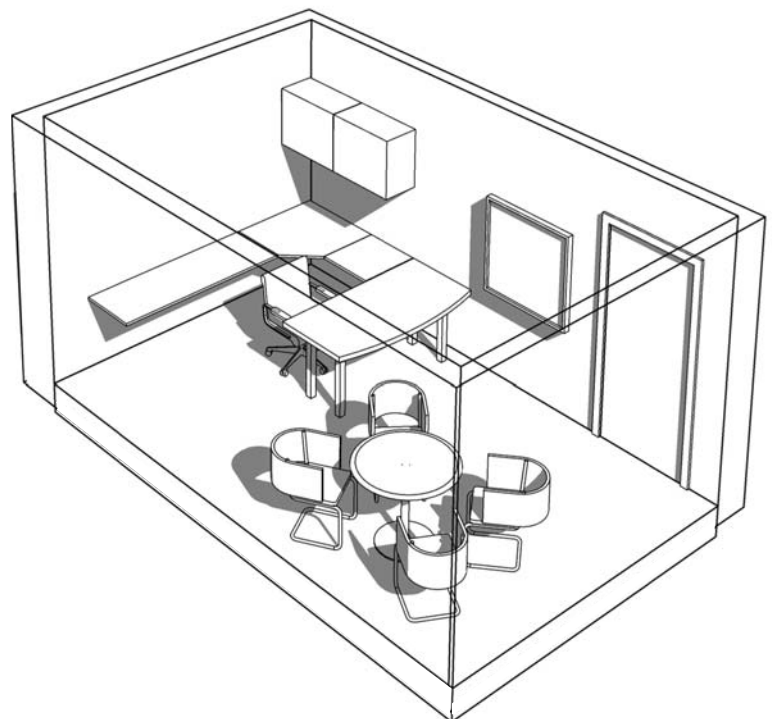


Figure 3.1.3b

3.1.4 Faculty / Project Manager / Senior Manager's Office

120 nasf 20% +/-

Full time tenure track faculty are generally assigned a single, private office. Individual faculty offices are intended to accommodate a workstation, lateral files and bookcases for the faculty member, plus space to accommodate an additional person as needed.

Furnishings

- 1 WORKSTATION
- 1 TASK CHAIR ON CASTERS WITH ARMS
- 1 SIDE CHAIR WITH ARMS, STACKING
- 2 BOOKCASES, 42"W X 12"D X 84"H
- 1 LATERAL FILE, 18"D, 5 DRAWER
- 1 OVERSTORAGE ADD ON, 36"W, 18"H
- 1 MARKER BOARD, 36"W X 36"H
- 1 TACK BOARD, 36"W X 36"H

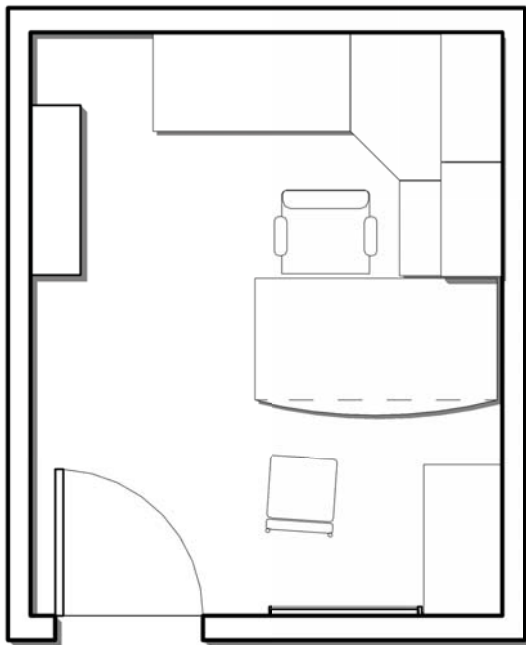


Figure 3.1.4a

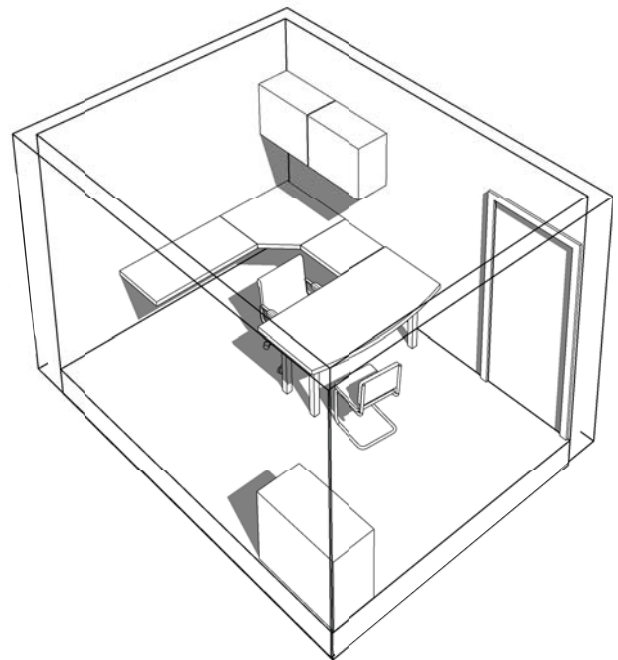


Figure 3.1.4b

3.1.5 Staff / Administration

Service Spaces

Typical office service space needs (areas for files, non-staffed waiting areas, copy machines, supply storage, etc.) are based on a percent of the total calculated office space required for a department, college or unit. For most academic departments and administrative units ten percent (10%) is used whereas for some larger administrative units such as colleges or senior administrative offices 20 percent (20%) is used. For other administrative departments, fifteen percent (15%) should be used. Certain office functions also have special service needs that are supplemental to the above guidelines. These additional needs are specific to certain units and include waiting rooms, processing rooms and departmental storage.

- A waiting room module of 120 ASF for most administrative offices should be used, while needs for student service operations are based on a factor of .02 ASF/Student FTE plus a 150 ASF minimum. Departments which have high daily client traffic (i.e., senior administrative offices, student services operations) may require an expanded waiting room area.
- Other units may need special processing areas for assembling and distributing materials.
- A module of 500 ASF is recommended for processing rooms. A third special need is departmental storage for operations required to maintain and store records or files for extended periods such as human resources or the controller's office. A factor of 15 ASF per department FTE staff is recommended.

Cubicle Spaces

Staff may be accommodated in cubicle environments ranging from 64-80 nasf per person, depending on the type of work. In general, the 70 square foot cubicle is the preferred size; cubicles reach the 80 square foot range only for particular and specialized workrelated reasons. Cubicles are successfully used in a range of office environments. Cubicle environments can have the benefit of being more open, airy and light, and can make more efficient use of space. Such environments are particularly conducive to team-oriented office groupings. Cubicle environments work best when they contain adequate numbers of conference and small group meeting spaces, for confidential conversations and/or group tasks. Additional storage is sometimes required for file intensive office groups. Sample layouts are shown below:

3.1.6 Staff / Clerical Workstation

70 nasf 20% +/-

Furnishings

- 1 WORKSTATION
- 1 KEYBOARD AND MOUSE PLATIFORM
- 1 TASK CHAIR ON CASTERS WITH ARMS
- 1 SIDE CHAIR WITH ARMS, STACKING

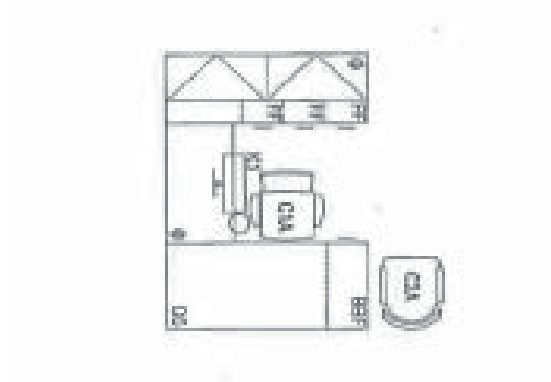


Figure 3.1.5

3.1.7 Adjunct Workstation

60 nasf 20% +/-

Furnishings

- 1 WORKSTATION
- 1 KEYBOARD AND MOUSE PLATIFORM
- 1 TASK CHAIR ON CASTERS WITH ARMS

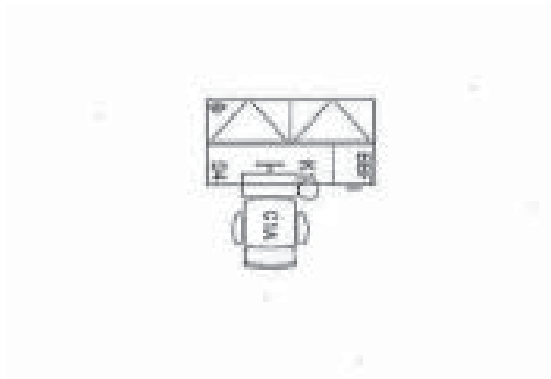


Figure 3.1.5

3.2 Meeting Spaces and Conference Rooms

Introduction

The following guidelines articulate the sizes, utilization, and layouts for the various types of conference and meeting spaces at Rowan.

- Application of a modular planning approach, to preserve flexibility of meeting space over time. For example, using modular furniture such as tables can be useful for multiple settings.
- Undertaking reviews of meeting spaces to be sure that utilization continues to make sense, to update office rosters, and to make any space reallocations that might be required.

Title	nsf	size	occupants
Department Chair Conference Room	300 10% +/-		8 - 10
Small Conference Room	430 10% +/-		18 - 24
Medium Conference Room	430 10% +/-		20 - 25

3.2.1 Department Chair Conference Room

300 nasf 20% +/-

8 - 10 people

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, locate screen to prime marker board space when screen is down.
- Portable Table top lectern, desk and chair

Furnishings

- 12 TASK CHAIR ON CASTERS WITH ARMS
- 4 TABLES, 30"D X 60"W
- 1 CONFERENCE CREDENZA, 22"D X 60"W
- 3 BOOKCASES, 36"W X 12"D X 84"H
- 1 MARKER BOARD, 120"W X 48"H

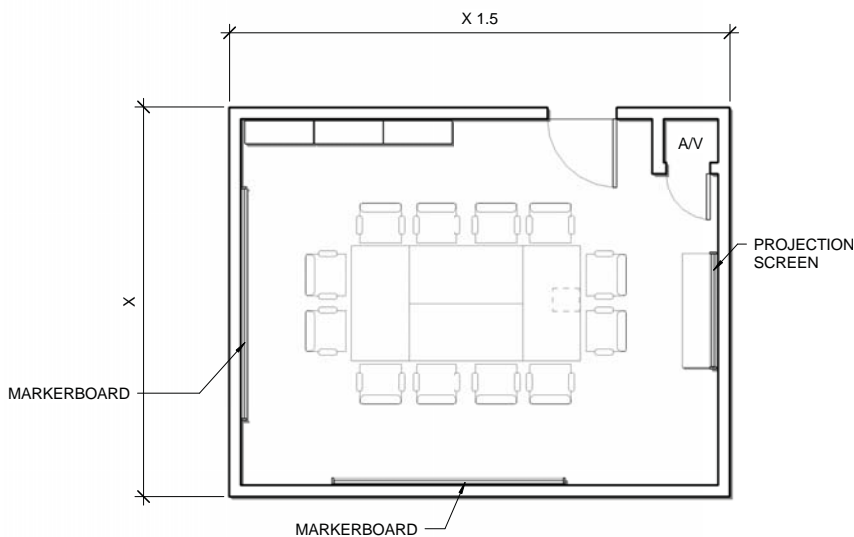


Figure 3.2.1a

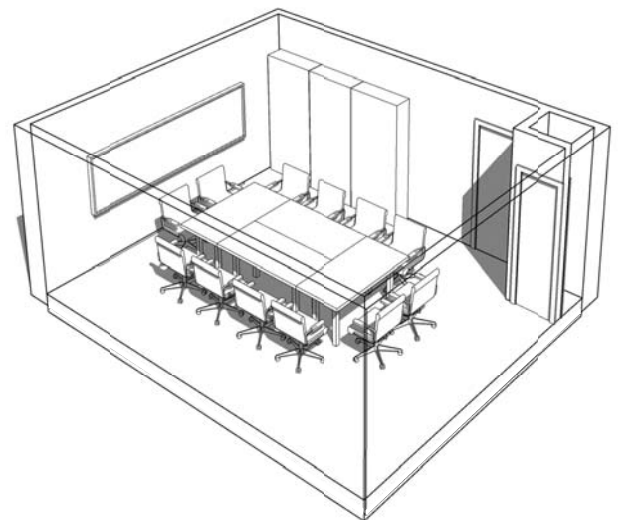


Figure 3.2.1b

3.2.2 Small Conference Room

500 nasf 20% +/-

20 - 25 people

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, Locate screen to provide marker board space when screen is down.
- Portable Table top lectern, desk and chair

Furnishings

- 20 TASK CHAIR ON CASTERS WITH ARMS
- 8 WORK TABLES, 30" X 60"
- 1 COATSTAND
- 1 SIDE TABLE
- 2 MARKER BOARD, 120"W(min) X 48"H

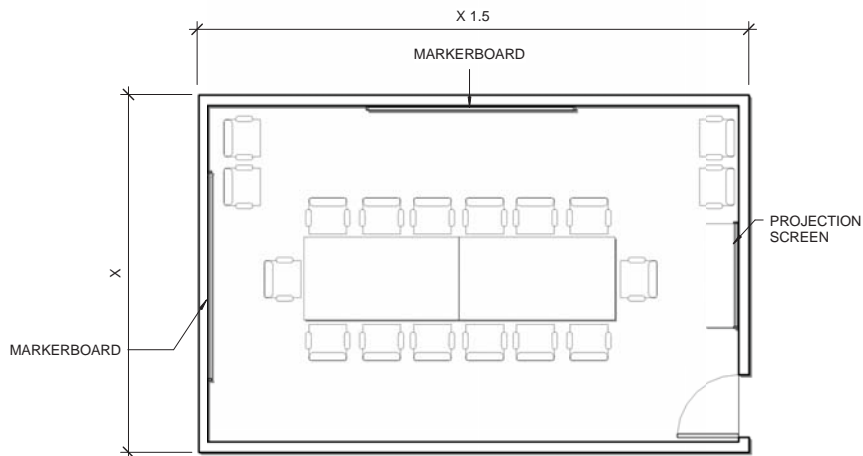


Figure 3.2.2a

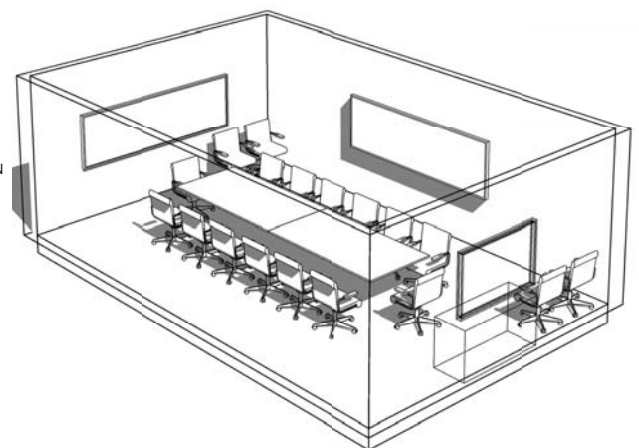


Figure 3.2.2b

3.2.3 Small Conference Room

430 nasf 20% +/-

18 - 24 people

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

18 TASK CHAIR ON CASTERS WITH ARMS

1 CONFERENCE TABLE, 48" X 180", WOOD VENEER

1 CONFERENCE CREDENZA. 22" X 60", WOOD VENEER

1 MARKER BOARD, 120"W(min) X 48"H

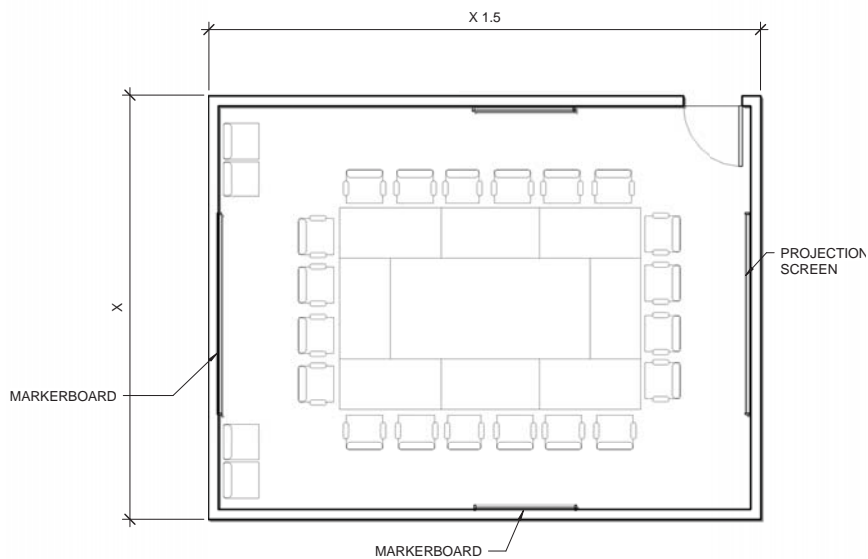


Figure 3.1.4a

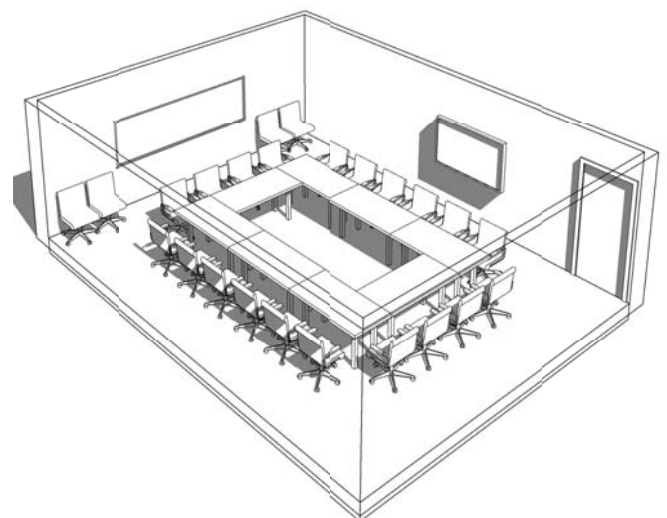


Figure 3.1.4b

3.3 Learning Spaces - Instructional, Collaborative, Interactive

Introduction

The Classroom Design Guidelines are overarching principles to create functional, flexible and aesthetically pleasing classrooms.

Layout

Instructive: generally designed with seating facing a podium, lecturn or instructor's desk;

Collaborative: laid out in an open and circular, elliptical, rectangular or U-shaped arrangement

Interactive: laid out in a variety of shapes, with groupings of two or more seats at a common workstation

Acoustics

Design walls and ceilings to evenly distribute sound through the classroom. Voices must be heard easily and accurately. Design must prevent unwanted background or outside noise. The room must be designed to foster effective sound transmission not only from a speaker at room front to an audience, but to allow student comments to be easily heard as well. Classroom acoustics must meet the standards recommended by the Acoustical Society of America (ASA). Figures given below reflect the 2002 ASA standards.

- All walls must extend to the floor above or to the roof construction, and not stop at ceiling. Top and bottom track joints must be sealed.
- Select system components (fans, ductwork and diffusers) that will meet the acoustical criteria for classrooms.
- Walls between classrooms must have a Sound Transmission Class (STC) rating of at least 50.
- Walls separating classrooms from common spaces or restrooms must have an STC of at least 53.
- Walls separating classrooms from mechanical spaces or other areas with high noise levels must have at least an STC of 60.
- Ambient noise level should not exceed 35 decibels when measured with the A-scale of a sound level meter.
- Reverberation time in rooms with under 10,000 cubic feet of space should not exceed .5 seconds.
- Spaces larger than 10,000 cubic feet should be designed for maximum reverberation time of .7 seconds.
- Walls and ceilings may require angling and/or applied acoustical treatment.
- Materials at room front should be reflective to project sound to the back of the room

Flexibility

Flexibility of use is important in this time of flux, which may continue for decades to come. We need to build spaces that aren't locked into one orientation or which make difficult future adjustments to opportunities afforded us by technology.

Sightlines

Sight-lines are as important as "acoustical lines" in the new media-rich classroom: knowledge can be displayed, can be visualized and simulated, so visual considerations are every bit as important as acoustic in URI classrooms.

Technology

Technology allows real-time construction of knowledge (visualization and simulation as just mentioned, or realtime group communication, or information from the Web), so built space should anticipate this possibility. The classroom is a working studio with the technology resources we have available. To accommodate real time knowledge processing that can be readily shared among the whole class. Classrooms must provide the space and furniture mobility for easy transition from working with computers back to wholegroup interaction.

3.3 Learning Spaces - Classrooms, Seminar Rooms, Lecture Halls

Program Guideline Summary

The table presented below provides a range of guidelines for different types of classroom spaces. Actual space per station, or per seat, in a classroom may vary depending on existing room configuration as well as type of furniture and seating used (fixed versus movable, tablet arms of varying sizes, tables, or theater-type seating). Also, as classrooms are increasingly outfitted to accommodate sophisticated audiovisual equipment, streaming video, rear projection capacity, etc., the size of the rooms may need to be increased. In general, basic technology needs include a projector, white board, Ethernet connection, and video capacity.

All classrooms should be proportioned to be more square than rectangular. All classrooms must be designed for 20 sf or larger per person including instructor.

Title	nsf	occupants
Small Classroom	480 min.	24
Medium Classroom	800 min.	40
Large Classroom	1000 min.	50
Multi-purpose Learning Space (movable furniture)	1200 min.	50 - 60
Multi-purpose Learning Space (fixed table and seating)	2800 min.	61 +
Seminar Room	525 min.	20
Deepwell Classroom Arrangement One	1750 10% +/-	80
Deepwell Classroom Arrangement Two	1500 10% +/-	60
Group Project Classroom Arrangement One	1200 10% +/-	25-35
Group Project Classroom Arrangement Two	1750 10% +/-	40-50

3.3.1 Small Classroom

480 nsf min.

24 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen: Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

- 1 TASK CHAIR ON CASTERS WITH ARMS
- 26 SIDE CHAIR WITHOUT ARMS, STACKING
- 24"x72" DESKS
- 2 MARKER BOARD, 120"W(min) X 48"H

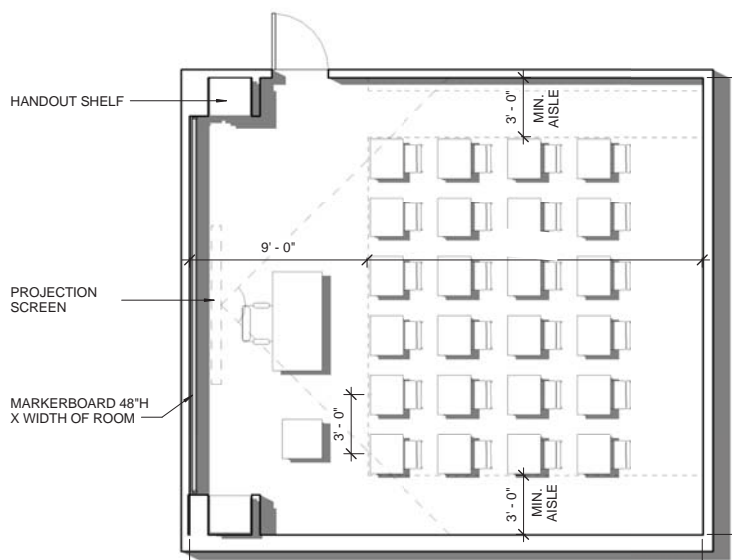


Figure 3.3.1a

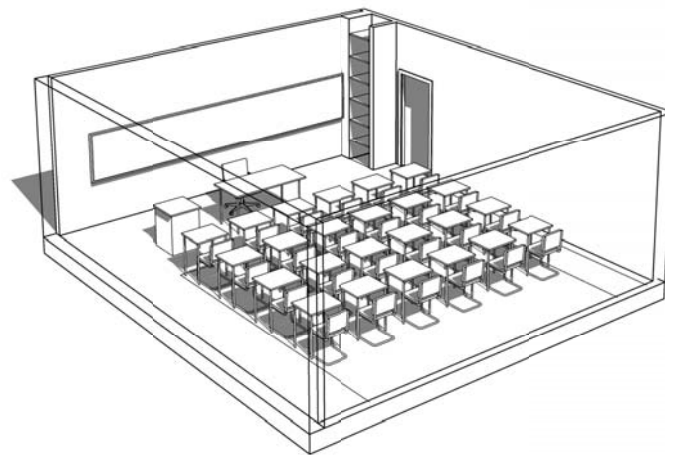


Figure 3.3.1b

3.3.1a Medium Classroom

800 nasf 20% +/-

40 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen: Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

- 1 TASK CHAIR ON CASTERS WITH ARMS
- 42 SIDE CHAIR WITHOUT ARMS, STACKING
- 24 x 72 DESKS
- 2 MARKER BOARD, 120"W(min) X 48"H

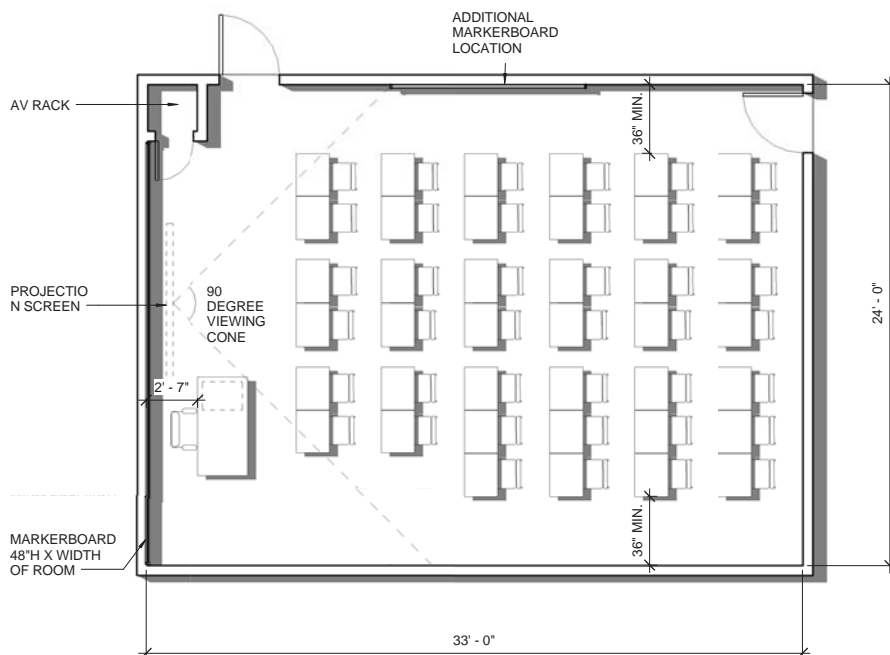


Figure 3.3.1a

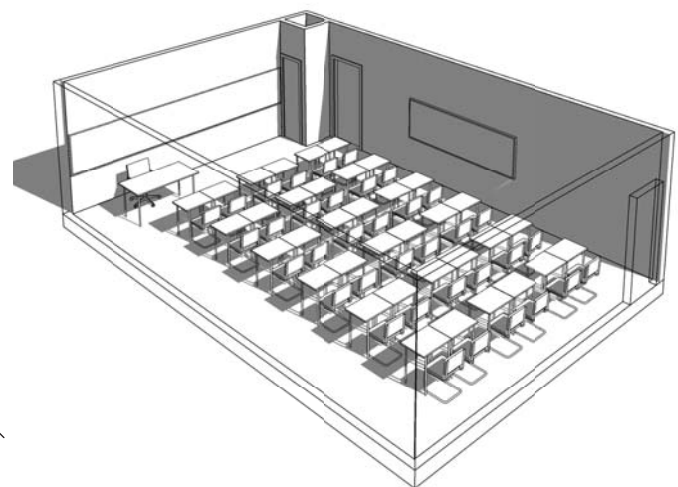


Figure 3.3.1b

3.3.2 Large Classroom

1000 nasf min.

50 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located between 12'-0" and 18'-0" from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

- 1 TASK CHAIR ON CASTERS WITH ARMS
- 54 SIDE CHAIR WITHOUT ARMS, STACKING
- 24 x 72 DESKS
- 3 MARKER BOARD, 36'W(min) X 36'H

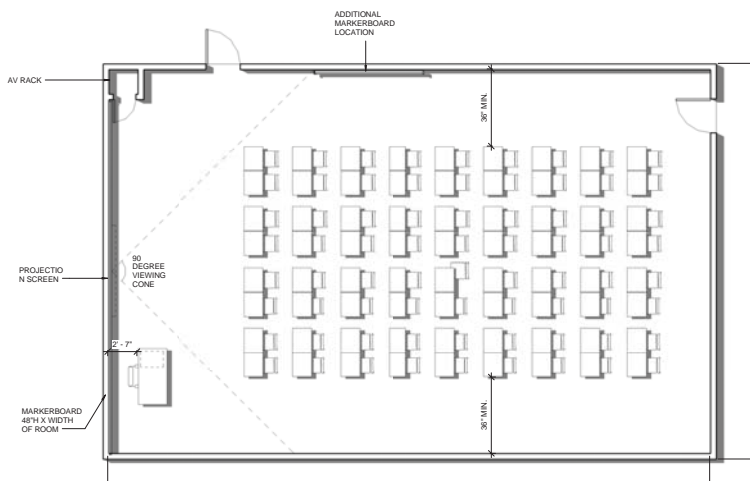


Figure 3.3.2a

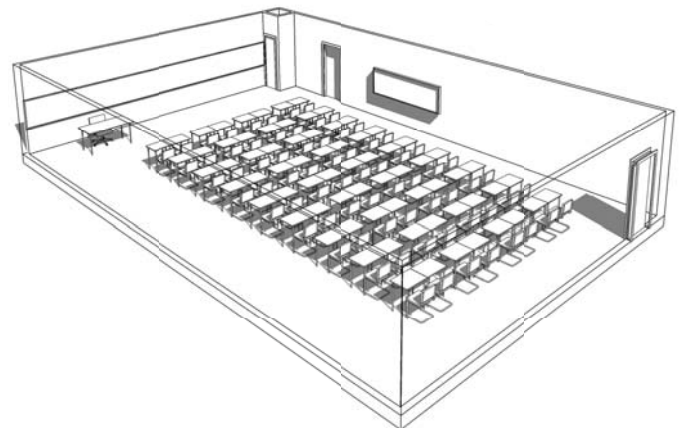


Figure 3.3.2b

3.3.2a Multi-purpose Learning Space

1200 nasf

50-60 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located between 12'-0" and 18'-0" from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

1 TASK CHAIR ON CASTERS WITH ARMS
60+/- SIDE CHAIR WITHOUT ARMS, STACKING
24 x 72 DESKS
3 MARKER BOARD, 36"W(min) X 36"H

50-60 STUDENTS (MOVABLE FURNITURE)
61+ STUDENTS (FIXED TABLES AND CHAIRS)

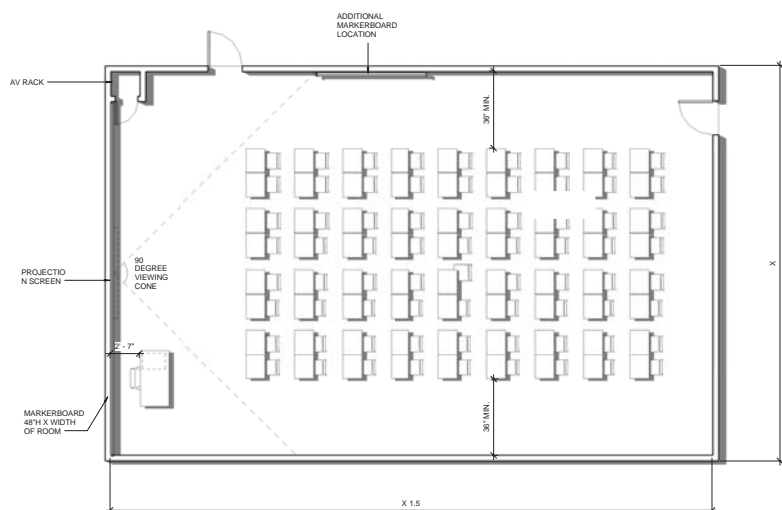


Figure 3.3.2a

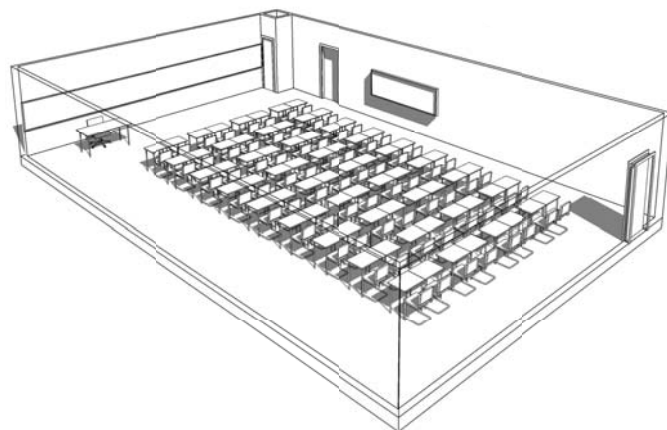


Figure 3.3.2b

3.3.3 Lecture Hall

2800 nasf

260 students, 1-2 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen: Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- AV wall plate mounted on side wall closest to instructor console with inputs for female computer connection (VGA), computer audio connection (female mini), video connection (female BNC) and 2 audio connections (female RCA) for stereo audio.
- Portable Table top lectern, desk and chair

Furnishings

1 TASK CHAIR ON CASTERS WITH ARMS

260 Fixed tables and seats - seats with arms must be no smaller than 22" wide

2 MARKER BOARD, 120"W(min) X 48"H

1 AV CLOSET

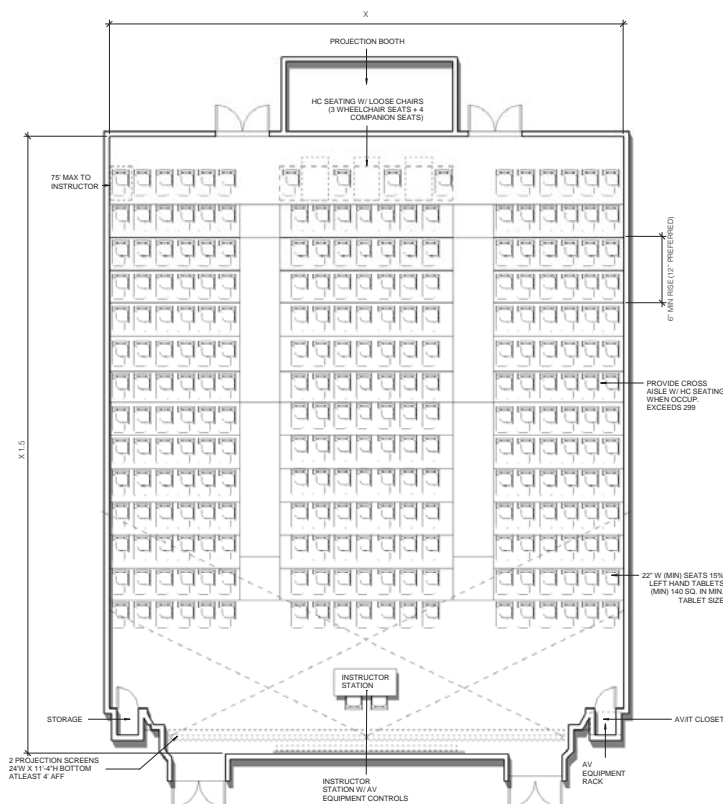


Figure 3.3.3a

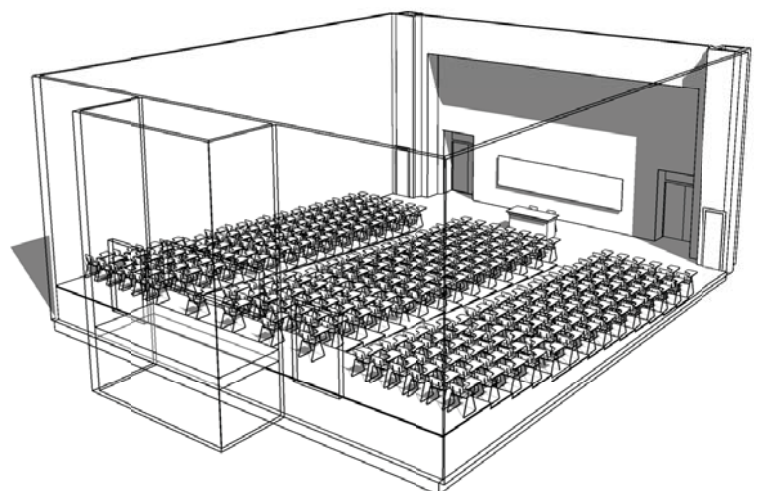


Figure 3.3.3b

3.3.4 Seminar Room

525 nasf 20% +/-
20 People

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located between 12'-0" and 18'-0" from the center of the bracket to the face of the projection screen, depending on the size of the projected image.

Furnishings

20 SIDE CHAIR WITHOUT ARMS, STACKING
8 SEMINAR TABLES, RECTANGULAR
2 MARKER BOARD, 120"W(min) X 48"H

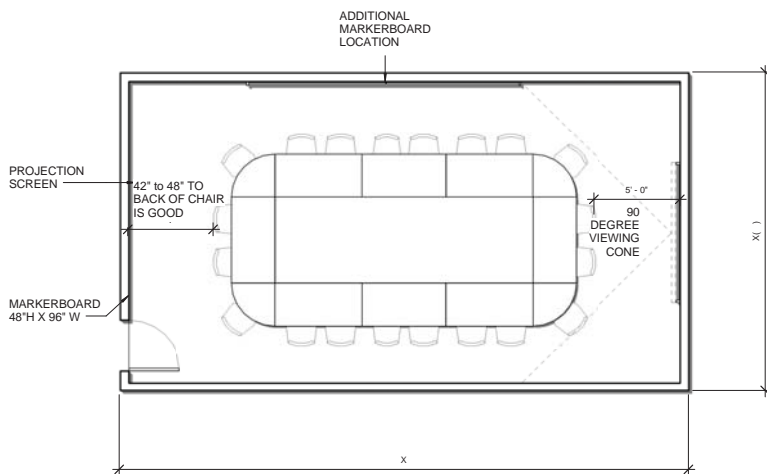


Figure 3.3.4a

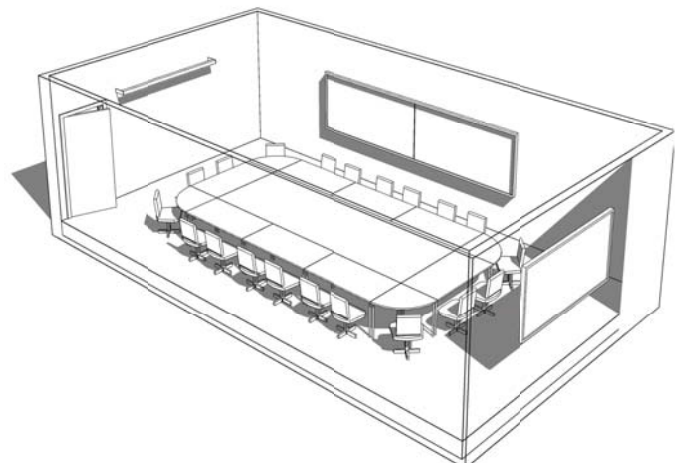


Figure 3.3.4b

3.3.5 Deep Well Classroom Arrangement One

1750 nasf 20% +/-

80 students, 1-2 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen: Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

2 TASK CHAIR ON CASTERS WITH ARMS

FIXED SEATS

12 FIXED LECTURE TABLES

2 MARKER BOARD, 120"W(min) X 48"H

1 AV CLOSET

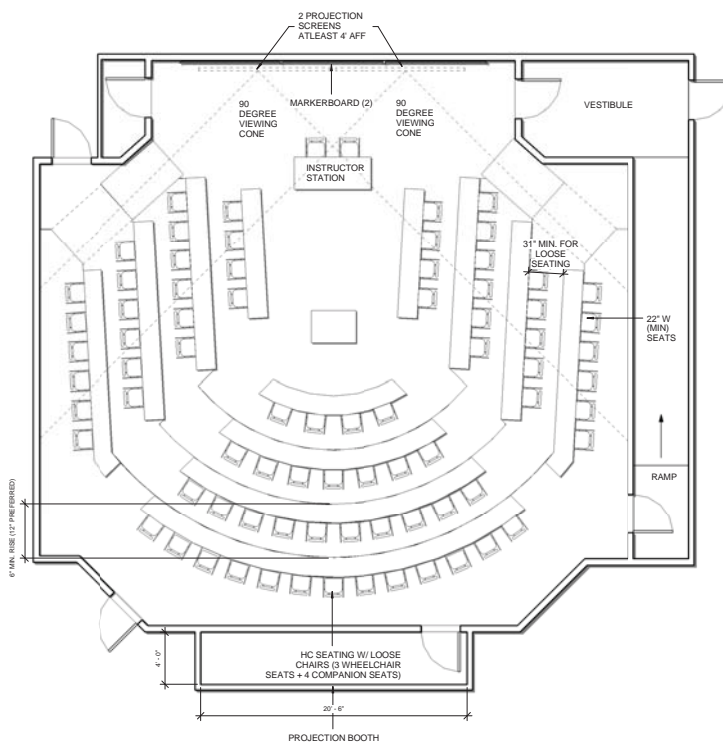


Figure 3.3.5a

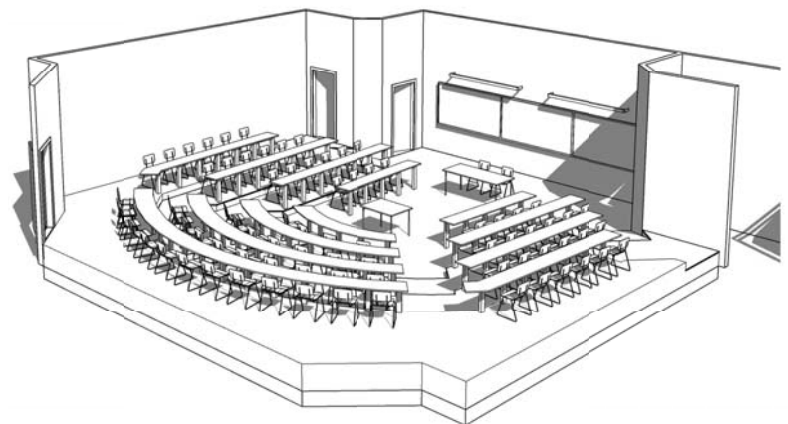


Figure 3.3.5b

3.3.6 Deep Well Classroom Arrangement Two

1500 nasf 20% +/-

60 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located between 12'-0" and 18'-0" from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

2 TASK CHAIR ON CASTERS WITH ARMS

FIXED SEATS

15 FIXED LECTURE TABLES

2 MARKER BOARD, 120"W(min) X 48"H

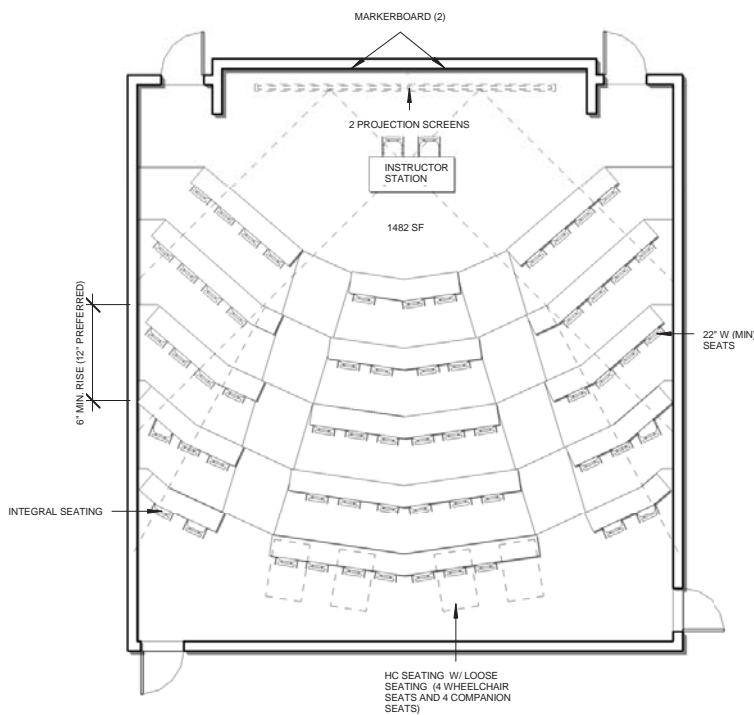


Figure 3.3.6a

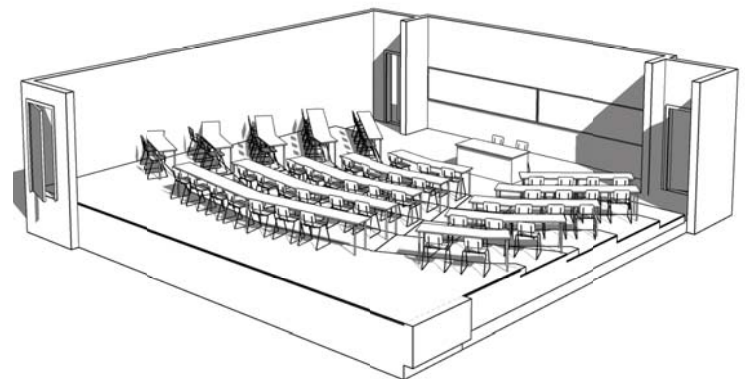


Figure 3.3.6b

3.3.7 Group Projects Classrooms

1200 nasf 20% +/-

25-35 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen: Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located a distance 1.5 times the screen width from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

- 1 TASK CHAIR ON CASTERS WITH ARMS
- 28 SIDE CHAIR WITHOUT ARMS, STACKING
- 7 CLASSROOM TABLE, CIRCULAR 84" DIA.
- 1 MARKER BOARD, 120"W(min) X 48"H

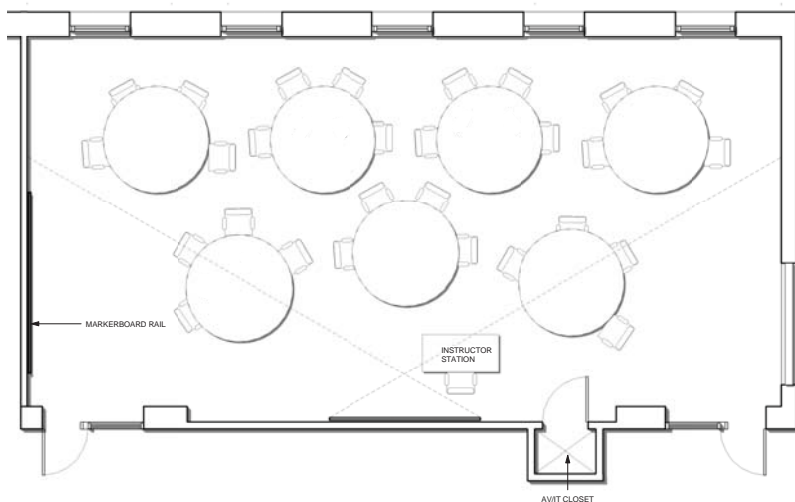


Figure 3.3.7a

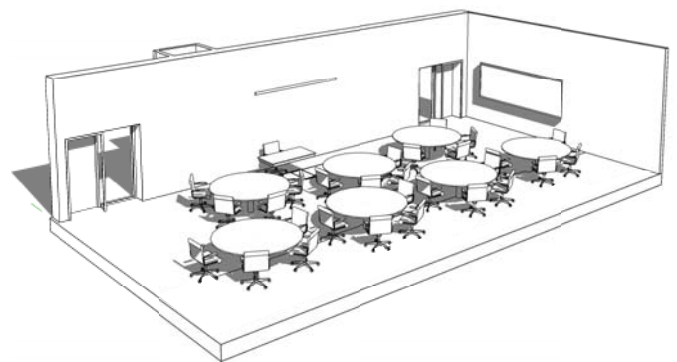


Figure 3.3.7b

3.3.8 Group Projects Classrooms

1750 nasf 20% +/-

40-50 students, 1 instructor

Instructional Furniture and Equipment:

- Projection Screen: Electric, vinyl screen, 70"W x 70"H; Draper Signature series 5, recessed mounting when capable, mounted on front wall of classroom. Switch is to be located adjacent to the instructor console.
- LCD Projector: A ceiling-suspended LCD projector bracket centered on the projection screen and located between 12'-0" and 18'-0" from the center of the bracket to the face of the projection screen, depending on the size of the projected image.
- Portable Table top lectern, desk and chair

Furnishings

- 1 TASK CHAIR ON CASTERS WITH ARMS
- 36 SIDE CHAIR WITHOUT ARMS, STACKING
- 6 CLASSROOM TABLE, SEMI CIRCULAR
- 1 MARKER BOARD, 120"W(min) X 48"H

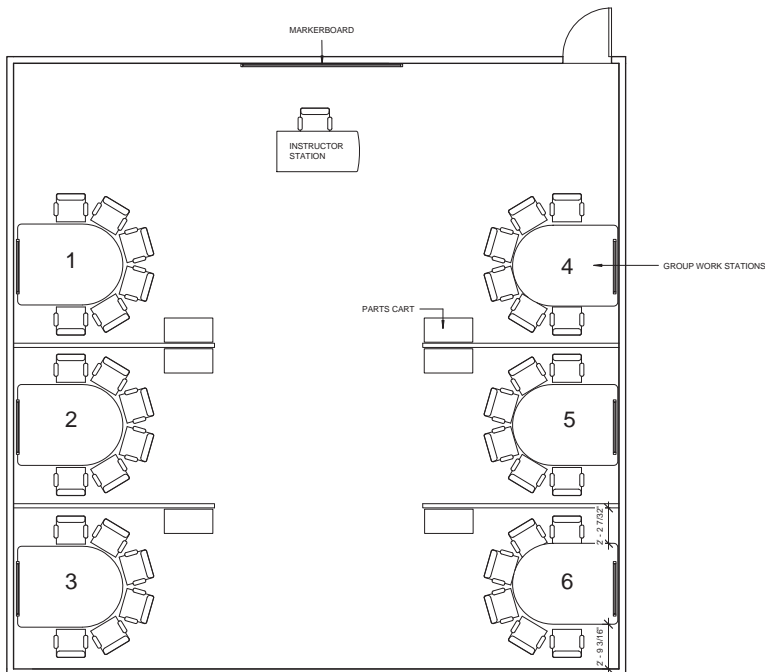


Figure 3.3.8a

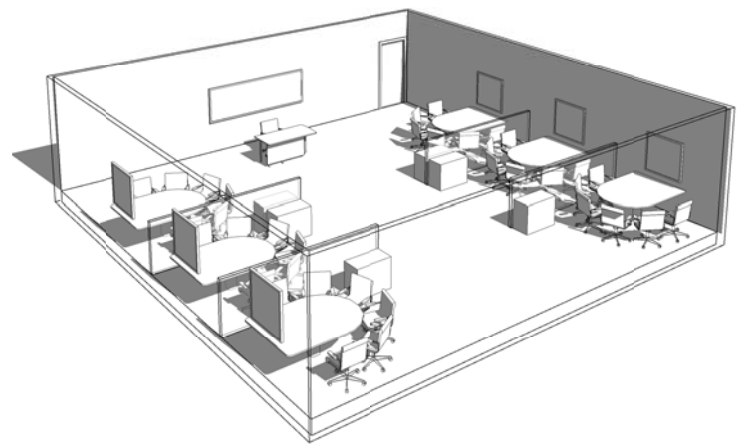


Figure 3.3.8b