STEM BUILDING
NORTH DAKOTA STATE UNIVERSITY

ZERR BERG ARCHITECTS

BWBR

"BASEBALL CARDS"
TYPICAL ROOM INFORMATION

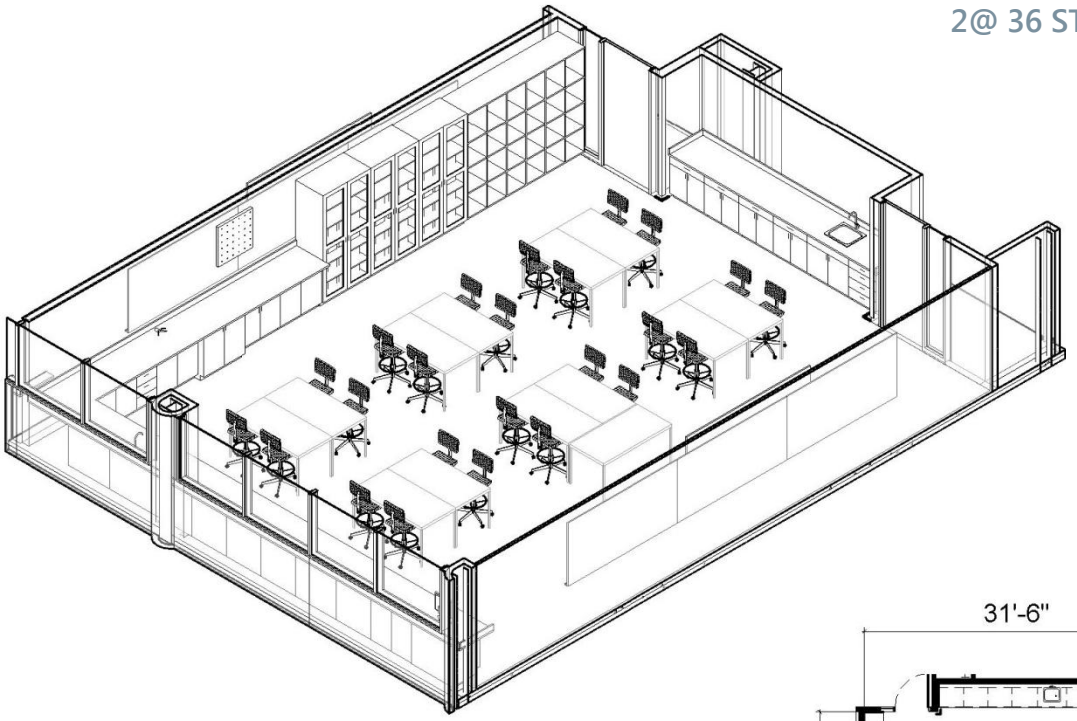
07.15.2014

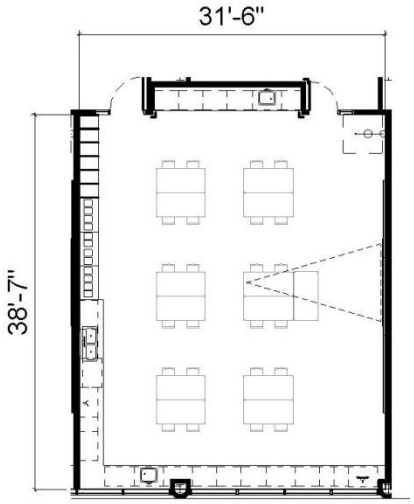
MT MOVEABLE TABLES LAB

QTY: 10

8@ 24 STUDENTS
2@ 36 STUDENTS

Occupants:	24 and 32
Audio/Visual:	Projector, manual screen, and fixed presenter station at perimeter
Fume Hoods:	None
Plumbed Services:	(2) Natural gas ports at perimeter
Sinks:	(3) at perimeter
Student Stations:	Moveable tables
Casework:	(24) storage cubbies, microscope storage, base cabinets
Marker Boards:	24' at front wall
Internet/Data:	Wireless and several data jacks around perimeter
Electrical:	Standard 110v perimeter wiremold, overhead retractable cord reels for tables
Exhaust Air System:	Room Purge
Eyewash/Shower:	Yes
Floor drain:	None
Level:	First and Second
Additional Notes:	(1) MT lab better accommodates electronics-based courses (2) MT labs can accommodate up to 36 students

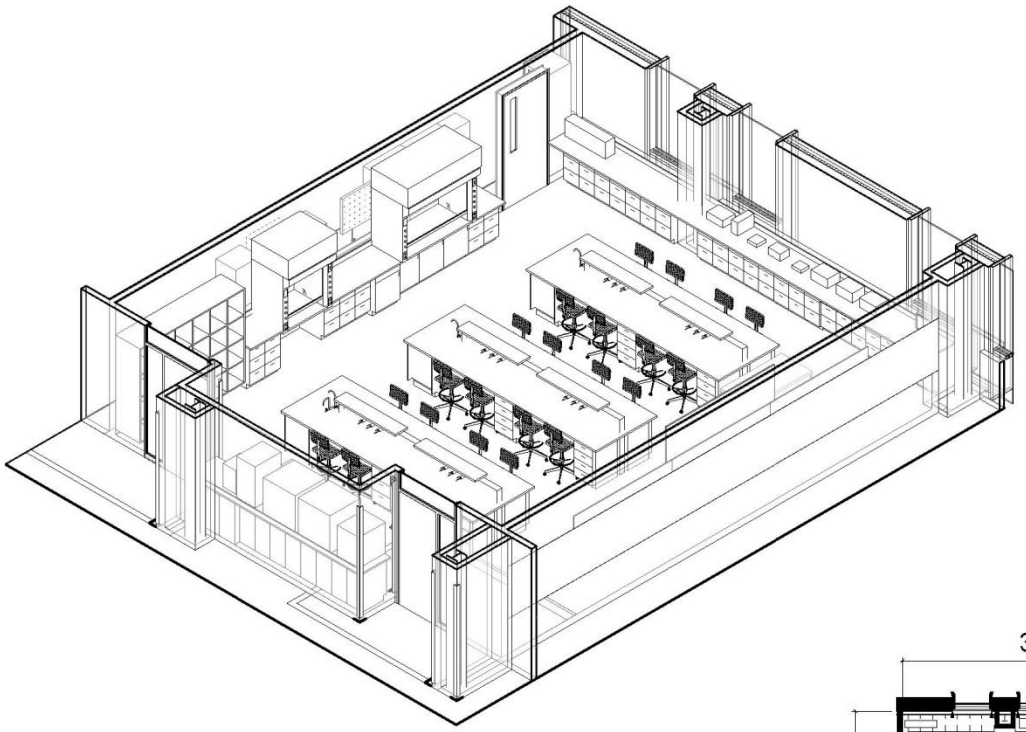


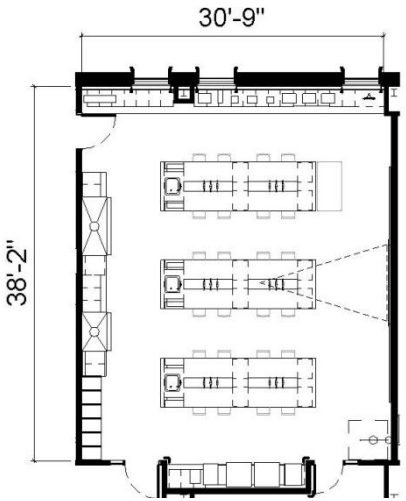


H2 TWO FUME HOOD LAB

QTY: 2

Occupants:	24
Audio/Visual:	Projector, manual screen, and fixed presenter station at perimeter
Fume Hoods:	(1) 4'-0" wide and (1) 6'-0" wide with lab air, natural gas, vacuum, and cupsinks
Plumbed Services:	Natural gas, lab air, vacuum, and pure water at island benches
Sinks:	(3) at island benches
Student Stations:	Fixed island benches
Casework:	(24) storage cubbies, 140 student drawers, base cabinets
Marker Boards:	24' at front wall
Internet/Data:	Wireless and several data jacks around perimeter
Electrical:	Standard 110v perimeter wiremold, and at benches
Exhaust Air System:	Standard
Eyewash/Shower:	Yes
Floor drain:	None
Level:	Third
Additional Notes:	Adjacent H2 lab prep space.

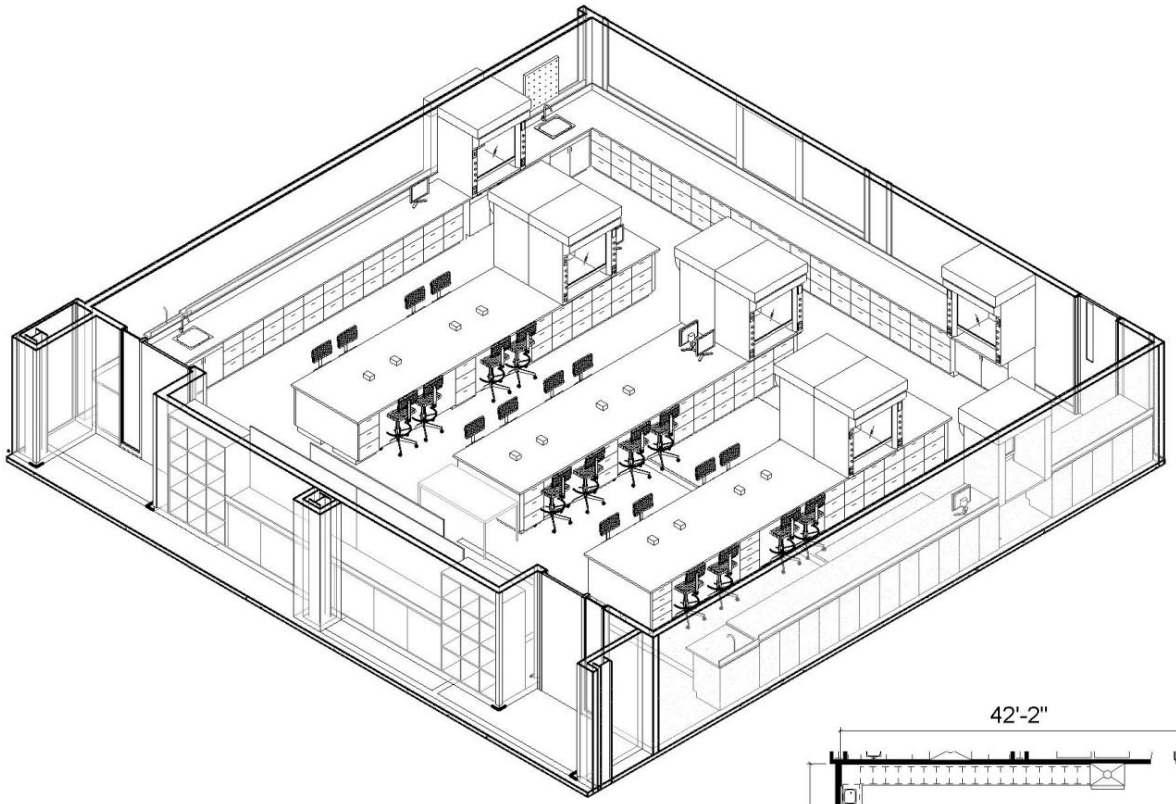


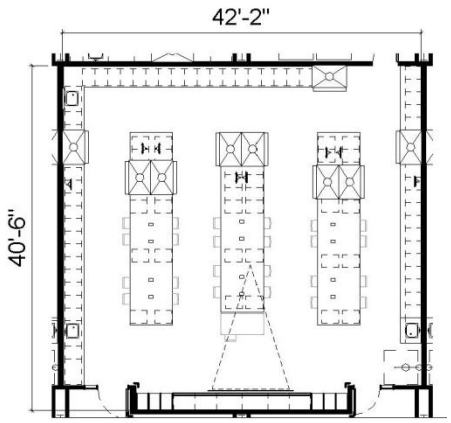


H8 EIGHT FUME HOOD LAB

QTY: 6

Occupants:	24
Audio/Visual:	Projector, manual screen, and fixed presenter station at perimeter
Fume Hoods:	(8) 4'-0" wide with lab air, natural gas, vacuum, and cupsinks. (1) 4'-0" wide hood for waste
Plumbed Services:	Services in fume hoods
Sinks:	(3) at perimeter of room
Student Stations:	Fixed island benches
Casework:	(24) storage cubbies, 300 student drawers, base cabinets. Storage behind marker boards
Marker Boards:	16' at front wall
Internet /Data:	Wireless and several data jacks around perimeter
	Data acquisition system
Electrical:	Standard 110v at perimeter and at islands
Exhaust Air System:	Standard
Eyewash/Shower:	Yes
Floor drain:	None
Level:	Third
Additional Notes:	(1) H8 prep space and chemical storage room adjacent to all H8 labs
	Instrumentation room on the same floor

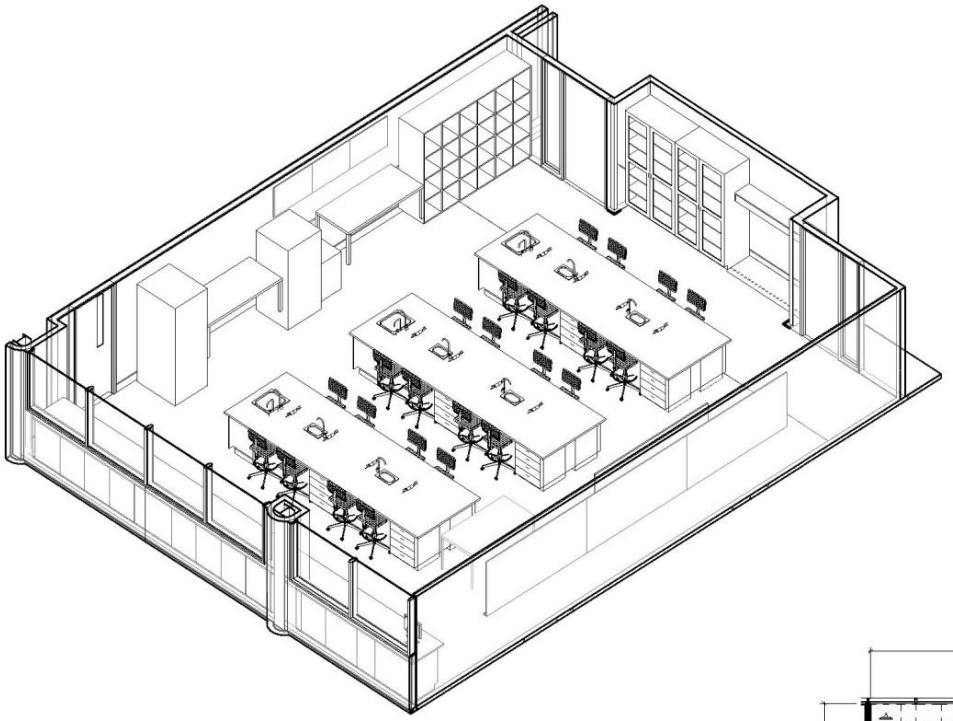


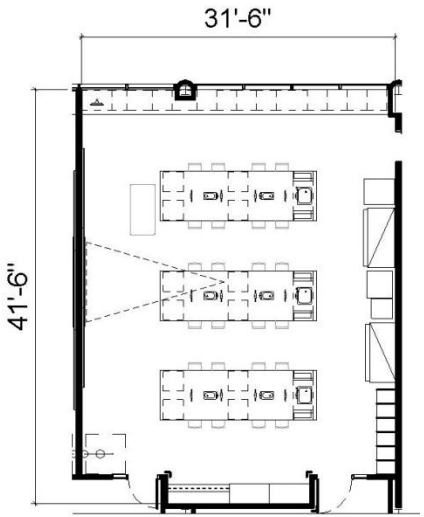


BSL2 BIO SAFETY LEVEL 2 LAB

QTY: 2

Occupants:	24
Audio/Visual:	Projector, manual screen, and fixed presenter station at perimeter
Fume Hoods:	(2) 4'-0" Bio safety cabinets
Plumbed Services:	Natural gas at island benches
Sinks:	3 at island benches
Student Stations:	Fixed island benches
Casework:	(24) storage cubbies, 60 student drawers, microscope storage, base cabinets, lab coat storage
Marker Boards:	24' at front wall
Internet Access:	Wireless and several data jacks around perimeter
Electrical:	Standard 110v perimeter wiremold and at island benches
Exhaust Air System:	Standard
Eyewash/Shower:	Yes
Floor drain:	None
Level:	Second
Additional Notes:	Adjacent BSL2 prep space with walk-in cold rooms, sterilizers, and lab washer.

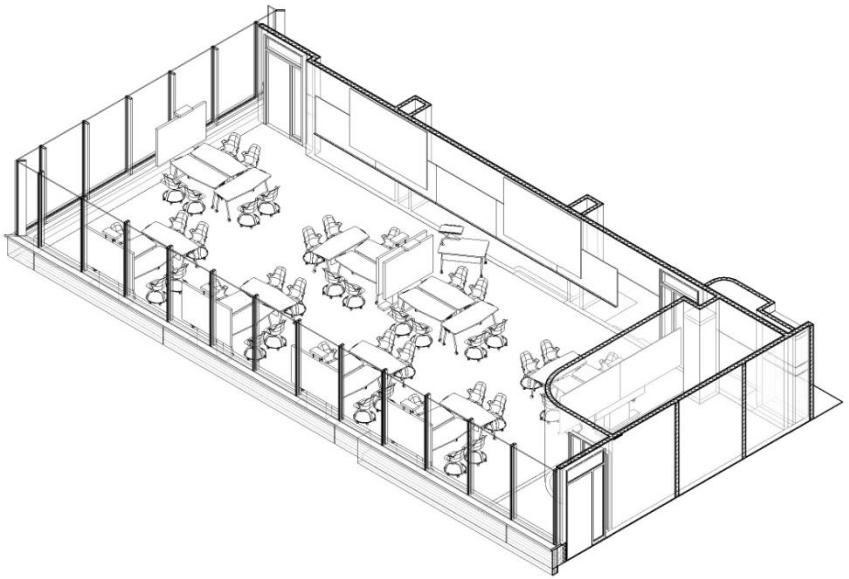


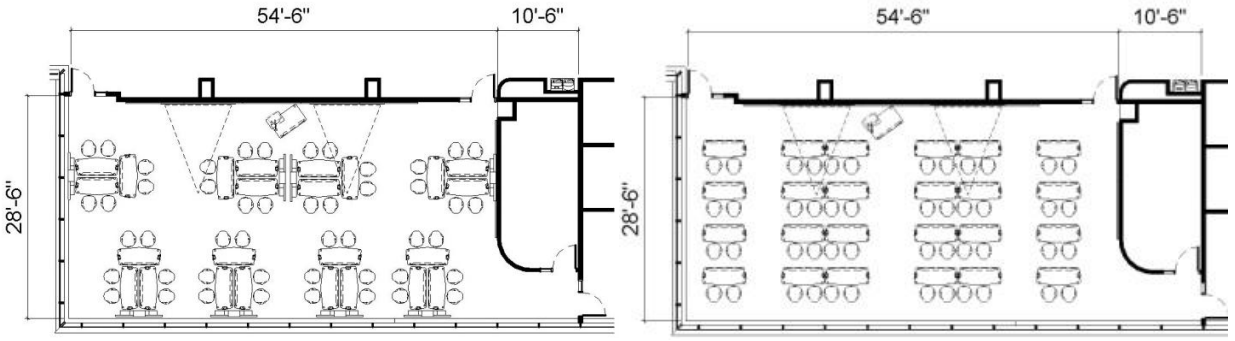


PBL PROJECT BASED LEARNING

QTY: 1

Occupants:	48
Audio/Visual:	(2) Projectors, manual screens, and presenter table
Marker Boards:	40′ at front wall, 16′ at side wall
Best Use:	Group Work, Discussion, Collaboration, Lecture
SF/person:	39
Internet Access:	Wireless and data jacks around perimeter
Level:	First
Additional Notes:	Adjacent storage room. Plans (below) show alternate furniture layouts.

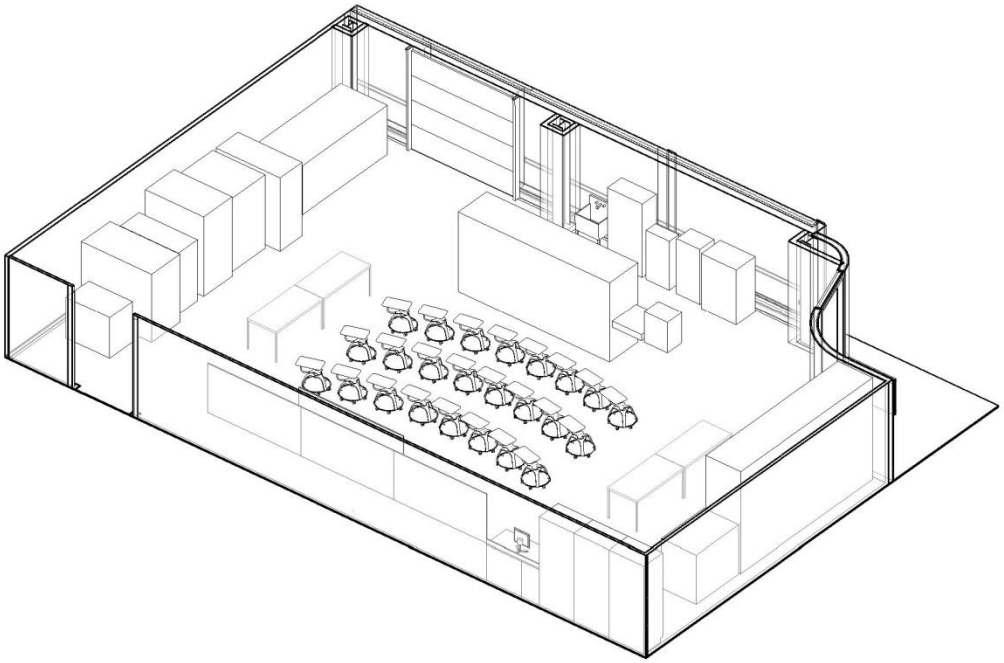


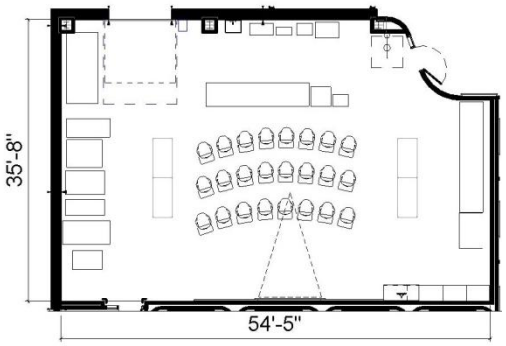


FLUIDS LAB

QTY: 1

Occupants:	24
Audio/Visual:	Projector, manual screen, and fixed presenter station at perimeter
Fume Hoods:	None
Plumbed Services:	Compressed air
Sinks:	(1) wall mounted hand wash sink and (1) laundry tub, ceiling hose reel
Student Stations:	Mobile chairs, moveable tables for equipment
Casework:	Lockable tall storage cabinets
Marker Boards:	24' at front wall
Exhaust Air System :	Room Purge
Floor drain:	Trench drain at rear of room
Eyewash/Shower:	Yes
Electrical:	Standard 110v ceiling cord reels, specialty power at perimeter
Internet/Data:	Wireless and data jacks
Level:	First
Additional Notes:	No ceiling, exposed to structure above
	8'-0" wide overhead door to exterior

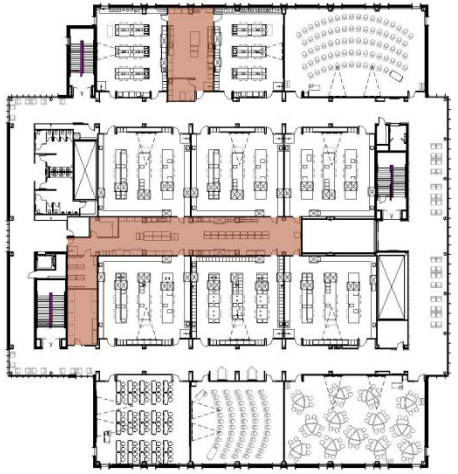




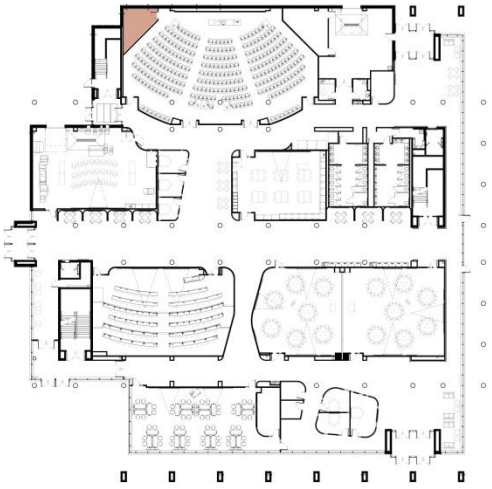
LAB PREP AND STORAGE

Occupants:	1-8+ (varies)
Quantity:	Storage at Auditorium, (2) MT prep and storage, H8 prep and storage, H8 Instrumentation, Chemical storage, H2 prep and storage, BSL2 prep and storage, and BSL2 Equipment.
Audio/Visual:	None
Fume Hoods:	Size varies. One or more hoods in MT preps, H8 prep, H2 prep. Services include Lab air, Natural gas, vacuum and cupsinks.
Plumbed Services:	Varies. Pure water, other services in hoods.
Exhaust Air System :	Room Purge typically
Floor drain:	None
Eyewash/Shower:	Yes
Electrical:	Standard 110v
Internet/Data:	Wireless and data jacks
Level:	Varies, see plans
Additional Notes:	Walk-in coolers and lab washers in main MT prep space and BSL2 prep, sterilizers in BSL2 prep.

SECOND LEVEL



THIRD LEVEL

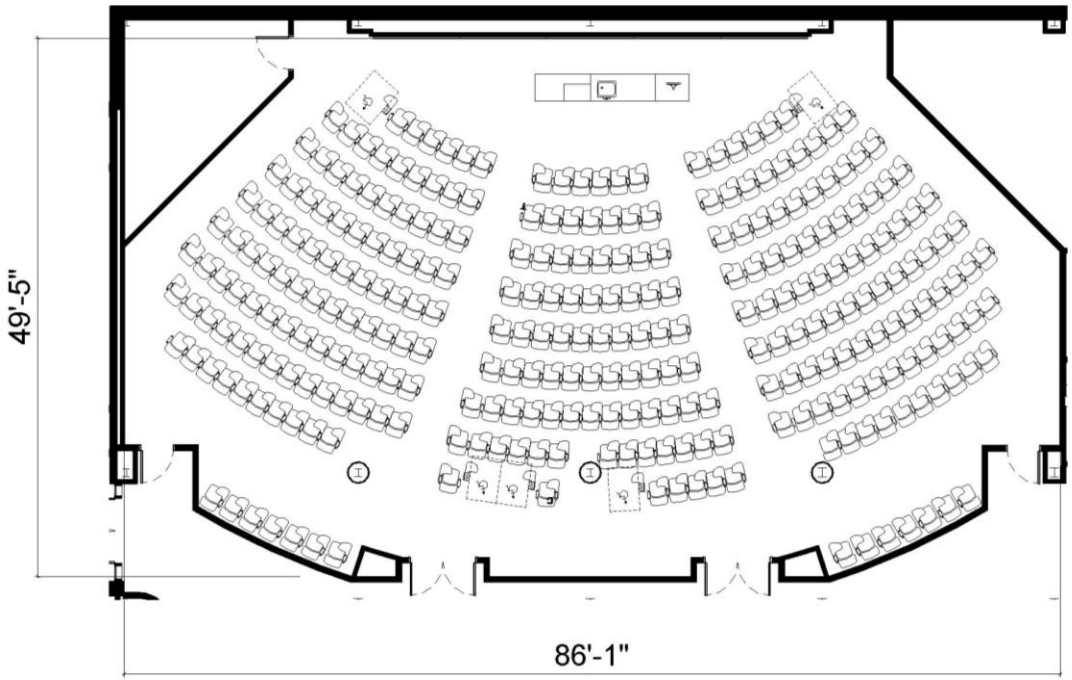


FIRST LEVEL

AUDITORIUM

QTY: 1

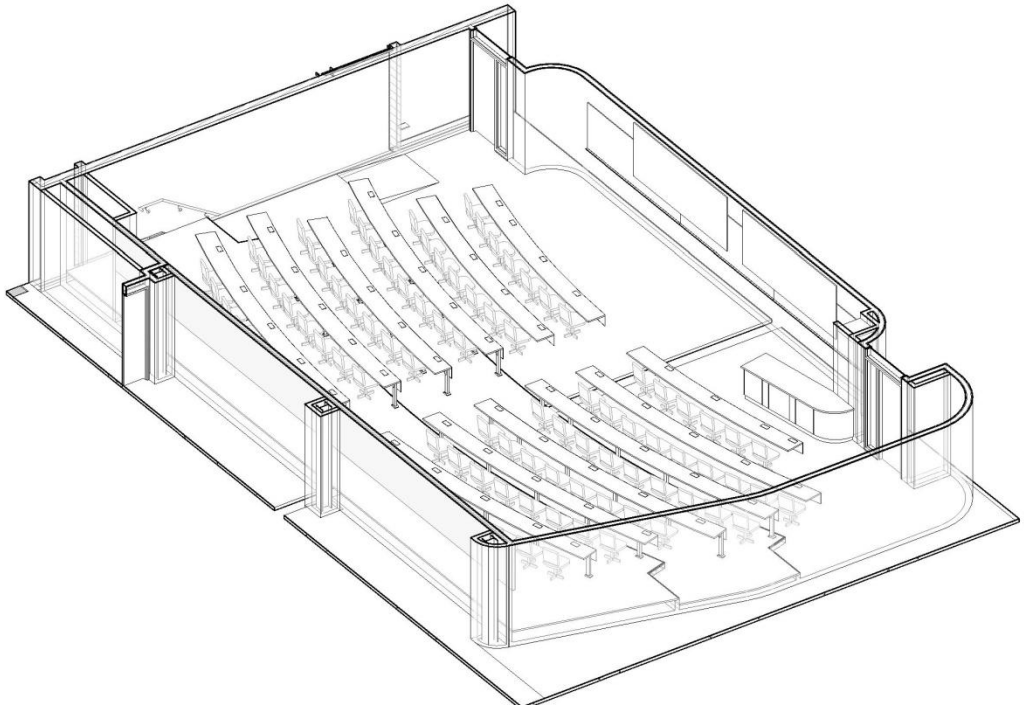
Occupants:	295
Audio/Visual:	(2) Projectors, fixed screens, and fixed presenter station at front
Fume Hoods:	Downdraft hood at demonstration station
Plumbed Services:	Lab air, natural gas, vacuum at demonstration station
Sinks:	(1) at demonstration station
Marker Boards:	40′ at front wall
Best Use:	Lecture Demonstration
SF/person:	13
Internet/Data:	Wireless and several data jacks around perimeter
Electrical:	Power available at 1/3 of seats
Level:	First
Additional Notes:	(5) Accessible areas
	Room slopes to front
	Storage at front left
	Ceiling height: 10′ – 17′
	Acoustical panels at back and side walls

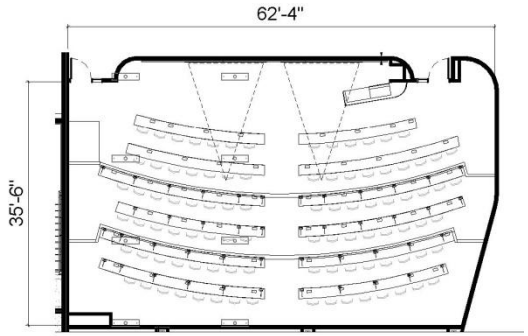


LECTURE HALL

QTY: 1

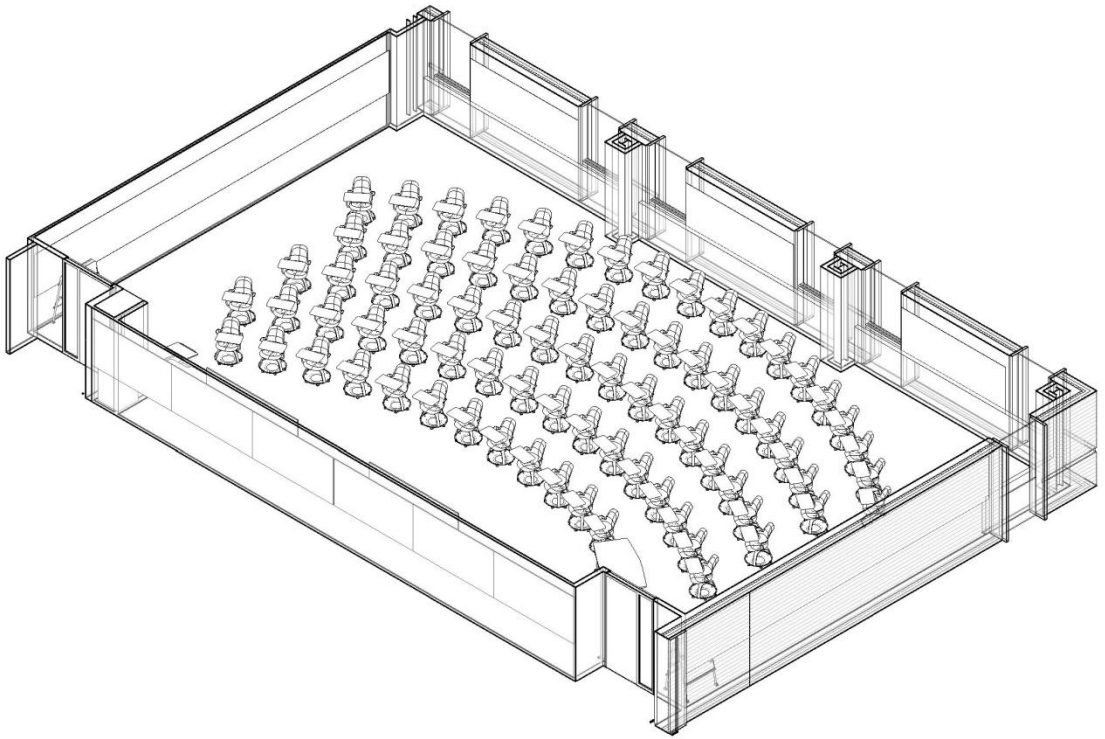
Occupants:	**95**
Audio/Visual:	(2) **Projectors, manual screens, and fixed presenter station at front**
Marker Boards:	**36' at front wall**
Best Use:	**Lecture, Group Work**
SF/person:	**25**
Internet/Data:	**Wireless and several data jacks around perimeter**
Level:	**First**
Additional Notes:	**Two rows per floor landing allows students to turn around for group work**
	Acoustical panels at back and side walls

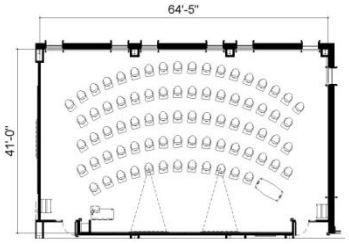


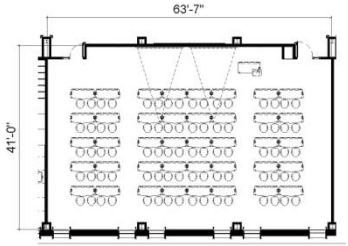


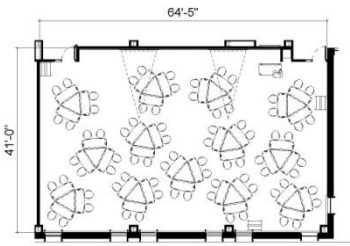
ALC ACTIVE LEARNING CLASSROOM (med) QTY: 5

Occupants:	55-80
Audio/Visual:	(2) Projectors, manual screens, and fixed presenter station at perimeter
Marker Boards:	42’ at front wall, additional at side and back walls
Best Use:	Group Work, Discussion, Lecture
	Collaboration
SF/person:	29-32
Internet Access:	Wireless and several data jacks around perimeter
Level:	Second and Third
Additional Notes:	Marker board on walls around room.
	Multiple options for furniture layout



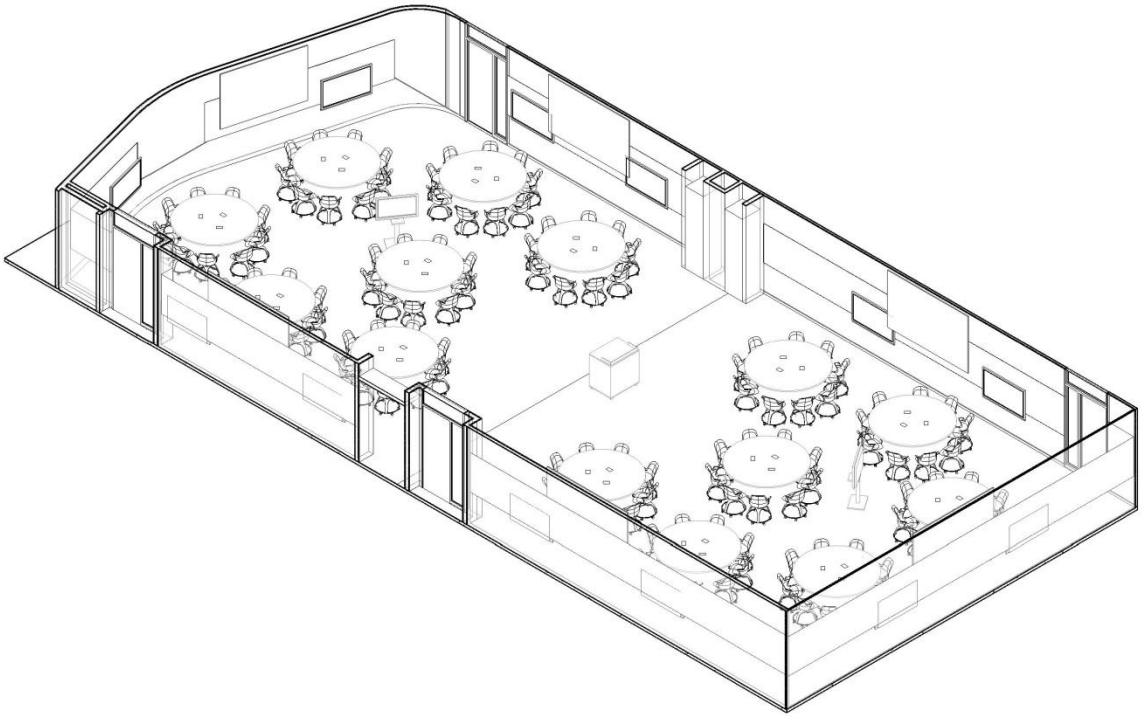


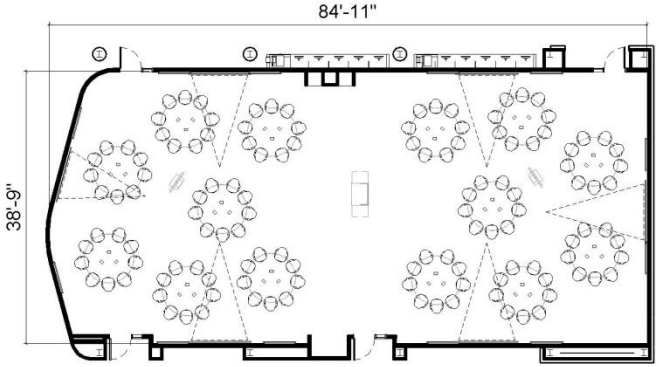




ALC ACTIVE LEARNING CLASSROOM (large) QTY: 1

Occupants:	126
Audio/Visual:	(6) Projectors, manual screens, typically fixed presenter station at center. Monitor per table
Best Use:	Group Work, Discussion, Lecture, Collaboration
SF/person:	25
Internet/Data	Wireless and several data jacks at tables and around perimeter
Level:	First
Additional Notes:	Fixed tables with power and data are each connected to a monitor, and each table could push content to the large screens

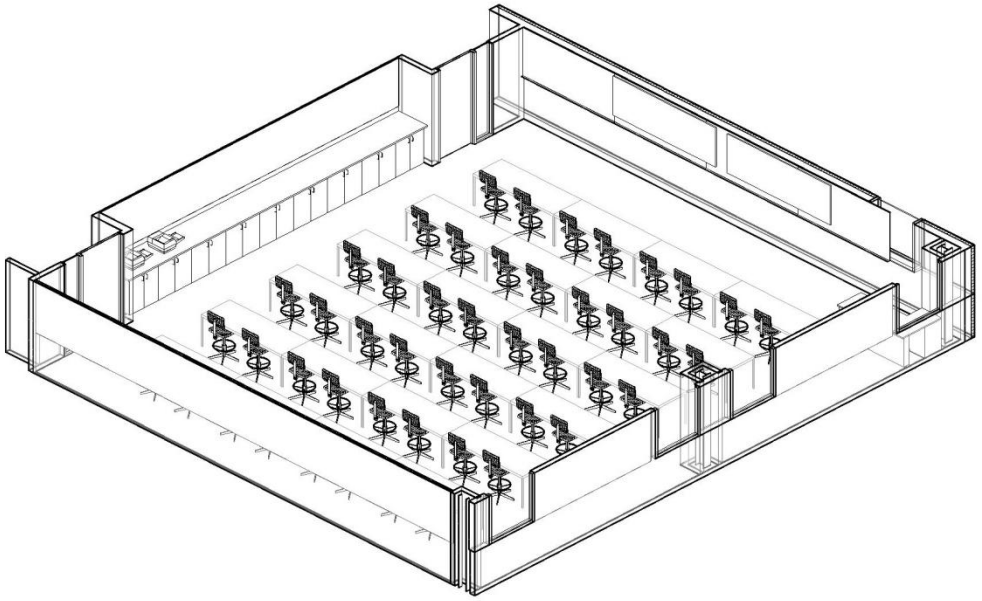


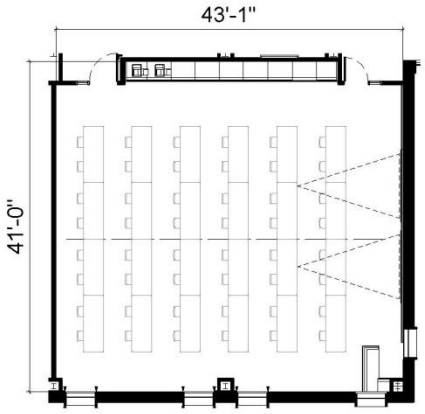


COMPUTER CLUSTER

QTY: 1

Occupants:	48
Audio/Visual:	(2) **Projectors, manual screen, and fixed presenter station at front**
Marker Boards:	**24' at front wall**
Student Stations:	**Moveable tables**
Casework:	**Printers on countertop with paper storage below.**
Best Use:	**Hands on training**
SF/person:	**34**
Internet/Data:	**Wireless, data jacks in furniture at tables, data jacks at printer stations and around perimeter**
Level:	**Second**
Additional Notes:	**Computer at each chair**

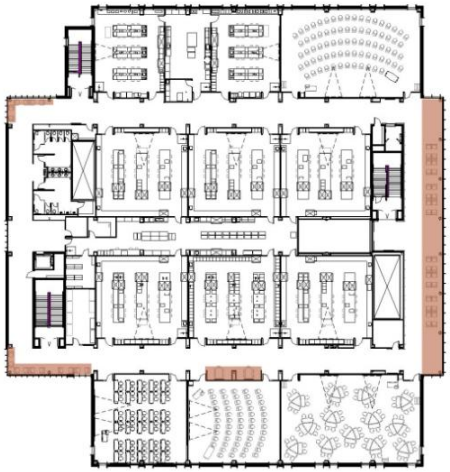




INFORMAL LEARNING

Occupants:	1-8+ (varies)
Quantity:	(6) rooms, (7) nooks, and several seating areas in the building
Audio/Visual:	Monitors in enclosed spaces and nooks
Best Use:	Individual Study Group Work, Discussion, Collaboration
SF/person:	Varies
Internet/Data:	Wireless and data jacks
Level:	Varies, see plans
Additional Notes:	Variety of seating areas throughout the building provide comfortable, safe, well-lit spaces that encourage choice whether studying, lounging, gathering, or collaborating. Churchill Field will be preserved and improved, to the east between STEM and University Avenue.

SECOND LEVEL



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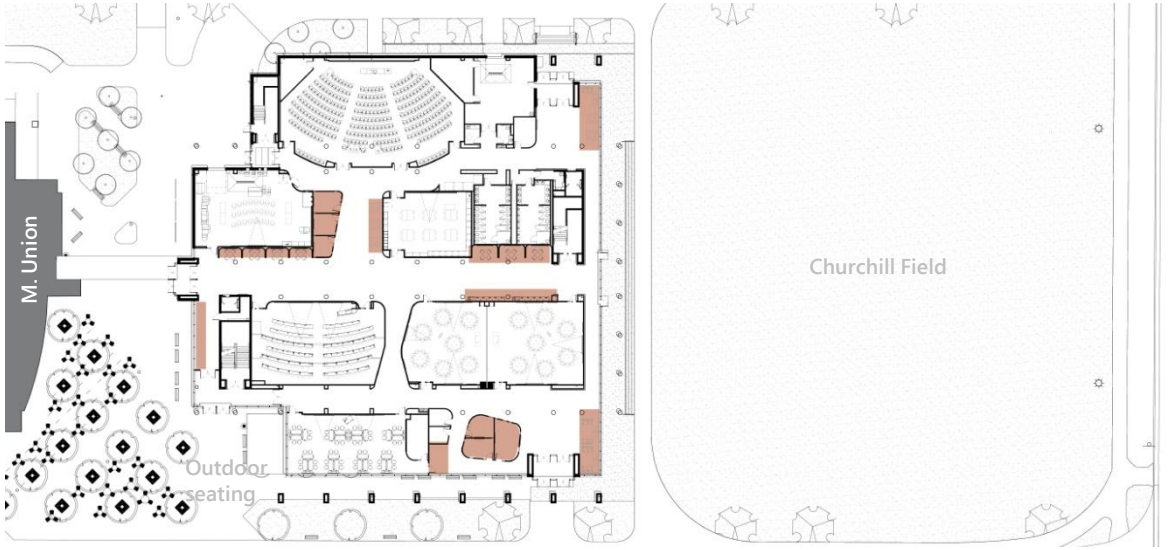

FIRST LEVEL