

# ARCHITECTURE RANCH CHARRETTE TEAM B

Architecture Ranch Charette Group 205A Simulate hospital patient or surgery rooms with L/R displays. Compare to physical mock-up rooms nearby. Need reception and waiting room spaces for test participants. Need video monitoring/ surveillance spaces.

Fabricate space frame and tensegrity structures using 3D printers, plasma cutters, NC milling machines. store raw materials, fabricated I parts... Load pieces into a pick-up truck for transport to site. Erect structure on site.

Fabricate full size "Hollywood" sets For erection on site and use in urban design experiments.

Drive cars up and down "Main Street" to simulate City for experiments regarding psychophysiological response to city.

Construct solar test cells and place them on site.

Build a roundtable for studying orientation of solar test cells or residences.

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1. BED students will construct the prototype for “housing for humanities”
2. Undergrad BED students will be constructing full scale wall sections
3. Undergrad COSC students will be constructing “build day” projects within the construction materials course
4. Undergrad BED students will be testing and observing behavior of structural materials
5. Undergrad LAUP students will be constructing landscape structures and environments
6. Graduate LAUP students will be monitoring water quality from landscape construction
7. Graduate Viz students will be constructing and operating large-scale virtual caves with computer graphic control; projection

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1. Undergrad COSC students will be able to unload materials (2x4's , sheet rock, etc)
2. Undergrad COSC students will be able to store materials (above) in appropriate environment (temp/moisture controlled)
3. Undergrad COSC students will be able assemble materials in wood frame construction (house, strip mall, etc)
4. Undergrad COSC students will be able unassembled the material (above) and store for future use
5. grad students able to conduct measurements of energy savings ideas
6. The ranch is a place to keep long term research projects so that more than one cause (group) can work on
7. A display room/hall for competitions/inventions/etc.
8. A space for testing new building systems- modularized/pre-fab components
9. A space for assembling & testing robots
10. A place for discovering new interdisciplinary ideas/research

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1. parking
2. solar test sites, outdoor external monitor area
3. controlled area for painting and material storage
4. Grad COSC students & Richard Burt & Charles Graham will manufacture and construct soil block structures (need soil block machines, protected place to construct)
5. A machine shop providing wood working & metal working tools, storage & work tables (air ventilation, safety equipment, sinks, spray cabinets must be provided)
6. Undergrad BED students & Jill M will be constructing and presenting lighting designs indoors requiring large covered spaces with access to bldg all natural lighting if requires
7. Materials for construction (lumber, plywood, bar stock, plexi glass, glass, masonry, fasteners, soil, sand, aggregate, cement will be stored in a protective secure environment where required
8. materials must be deliverable by truck or semi through use of oversized retractable doors, back hoes or other earth moving equipment. The lift trucks materials may need temporary storage space before being moved to permanent storage. If vehicles are moving into the space, adequate ventilation and noise reduction must be provided

# ARCHITECTURE RANCH CHARRETTE TEAM B

- **BUILDING IDEAS**

- 4,600 SF STORAGE
- 6,000 SF CRANE BAY WITH STRONG FLOOR
- 900 SF LAB CLASSROOM
- 450 SF CONCRETE LAB
- 400 SF TESTING LAB
- 5,000 SF BUILDING SPACE (WOOD, CNC)
- 5,000 SF MACHINE SHOP
- ? SF 2 STUDIOS / COMPUTER WIRED
- ? SF FENCED IN OUTSIDE STORAGE AREA
- MULTI-PURPOSE / PRESENTATION SPACES
- SAFETY AREAS – FIRST AID STATIONS/EYE-WASH, ETC

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 4,600 SF STORAGE
- COMPLETELY OUTSIDE
- PARTIALLY COVERED
- LUMBER & METAL BAR STOCK RACKS
- SCRAP/RECOVERED MATERIALS AREA
- NEW MATERIAL LIBRARY
- TOOL STORAGE (METAL & WOOD)
- AGGREGATE, SAND, CEMENT BINS (IN & OUT)
- FLAMMABLES & COMBUSTIBLES
- EQUIPMENT LAB

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 6,000 SF CRANE BAY WITH STRONG FLOOR
- PARTITIONABLE SPACE
- LIFT TRUCKS MUST HAVE ACCESS
- CRANES, LATERAL AND VERTICAL MOVING
- 30' CLEAR INSIDE VERTICAL HEIGHT
- MULTI SIZE GARAGE DOORS
- LOADING DOCK WITH LEVELER

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 900 SF LAB CLASSROOM
- BENCH TABLES W/ STOOLS AND SEATS
- MOVEABLE WALL
- BUILT IN AND MOVEABLE CABNETS
- SINKS WITH ADEQUATE AGREGATE FILTER
- MATERIALS TESTING MACHING CONNECTED TO COMPUTER EQUIPMENT
- TOOL STORAGE (SMALL TOOLS)
- DIRECT ACCESS TO AGGREGATE, SAND, & CEMENT
- ADJACENT TO CONCRETE & TESTING LAB

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 450 SF CONCRETE LAB
- SPACE FOR FORMWORK
- SINK & DRAIN
- MOISTURE CABINET
- DIRECT ACCESS TO AGGREGATE, SAND, & CEMENT
- ROOM TO MAKE A MESS
- A NOISY ROOM

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 400 SF TESTING LAB
- MATERIALS TESTING MACHINES
- SPACE FOR STUDENTS TO WATCH DEMONSTRATION AND RESEARCHERS TO WORK

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 5000 SF BUILDING SPACE (WOOD & CNC SHOP)
- TABLE & HAND TOOLS
- MILLING MACHINES
- PLEXI GLASS CUTTER
- CNC MACHINES
- STEAM BENDER
- CONTROLLED SPRAY BOOTH

# ARCHITECTURE RANCH CHARRETTE TEAM B

- 5000 SF MACHINE SHOP
- TABLE & HAND TOOLS
- WELDING MACHINES
- FLAMMABLE STORAGE
- LOT AND LOTS OF BINS FOR ALL KINDS OF PARTS
- WORK BENCHES/WELDING SPACE – COUNTER SPACE
- PLASMA CUTTER
- SAND BLASTING AREA
- MILLING MACHINES
- PIPE BENDING MACHINES
- SCULPTURE TYPE STUFF
- SHOWERS & LOCKER ROOMS

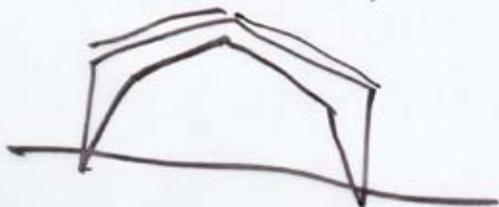
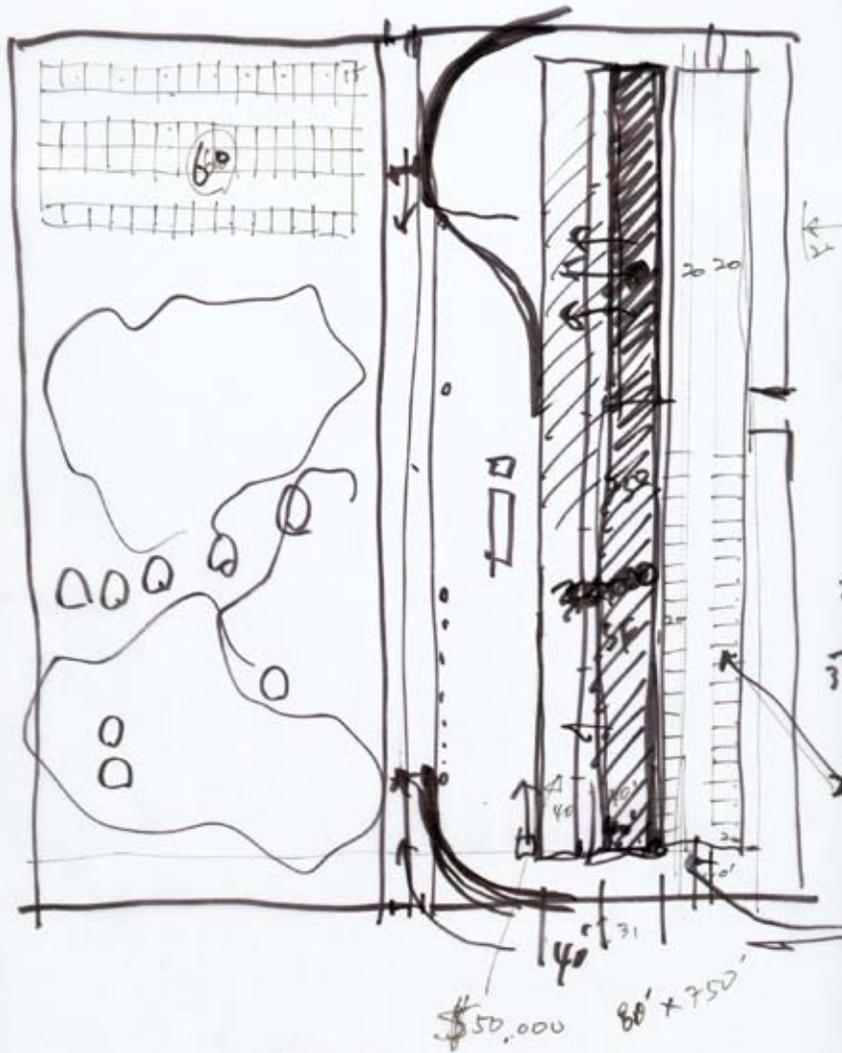
# ARCHITECTURE RANCH CHARRETTE TEAM B

- STUDIO SPACE – COMPUTER WIRED
- DESKS
- STUDENT WORKSPACE
- PHOTOGRAPHY BACKDROP AREA.



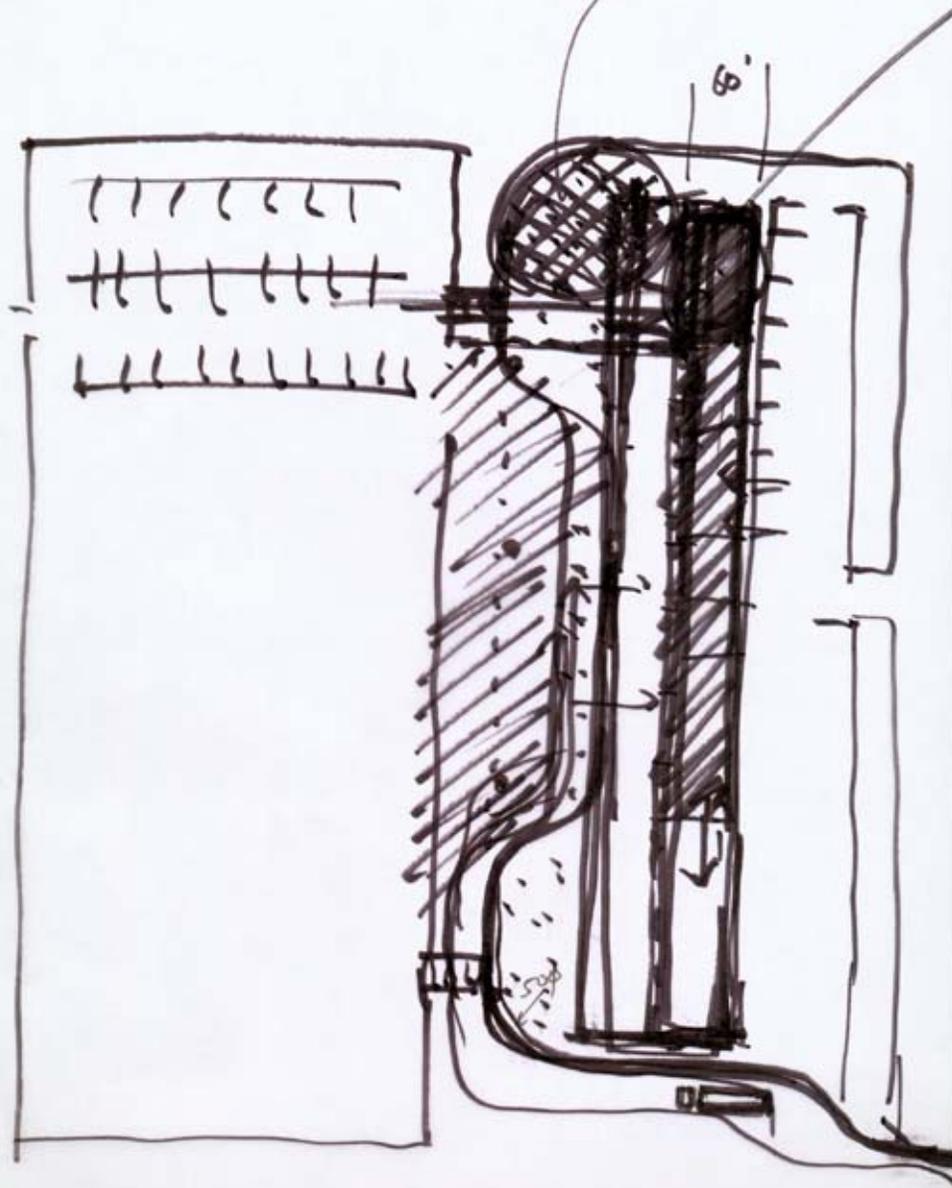
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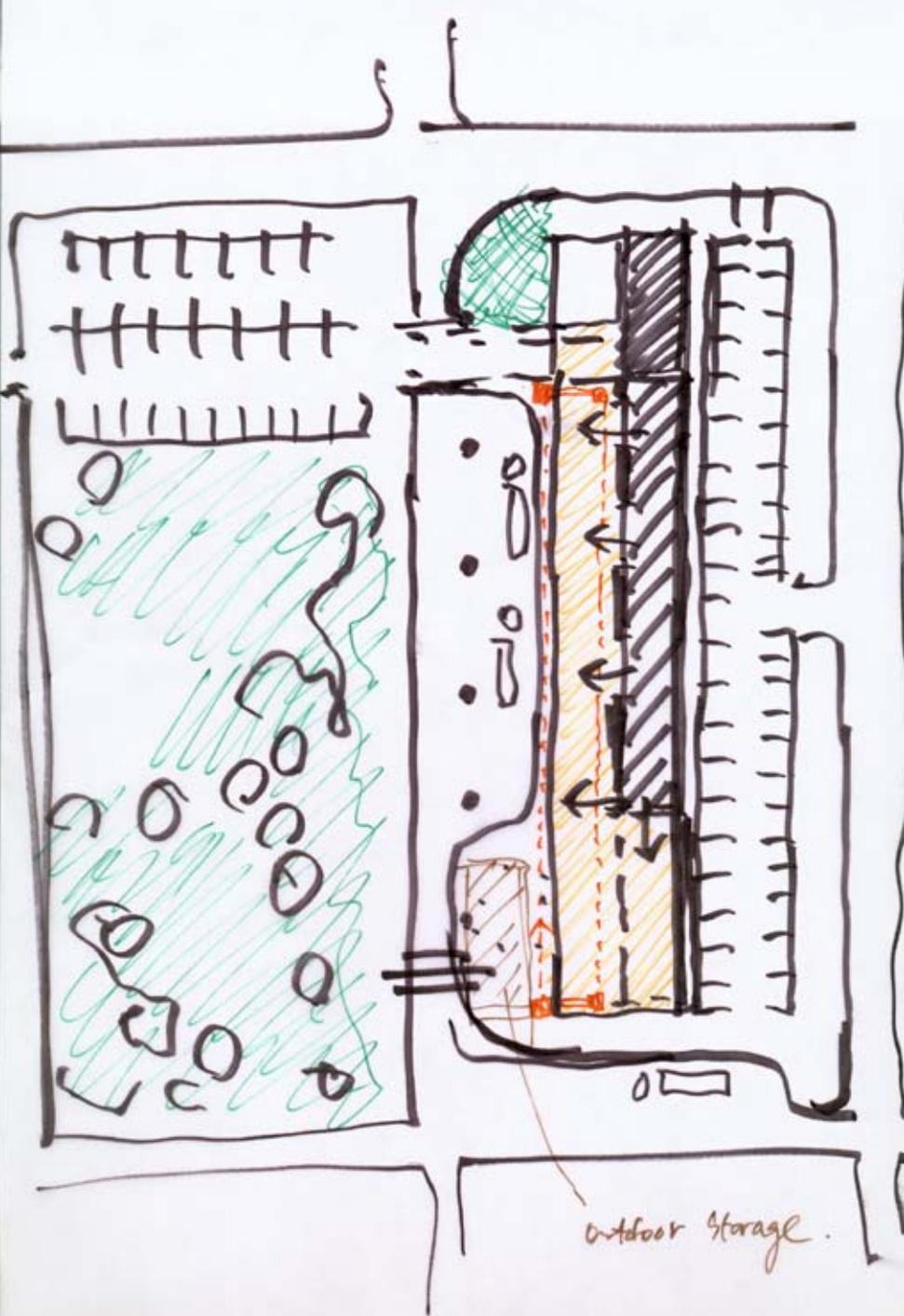
- **FENCED-IN OUTSIDE STORAGE**
- FENCE
- GATE
- LOCKS
- SOME COVERED AREAS / AWNINGS
- NOT COMPLETELY PAVED

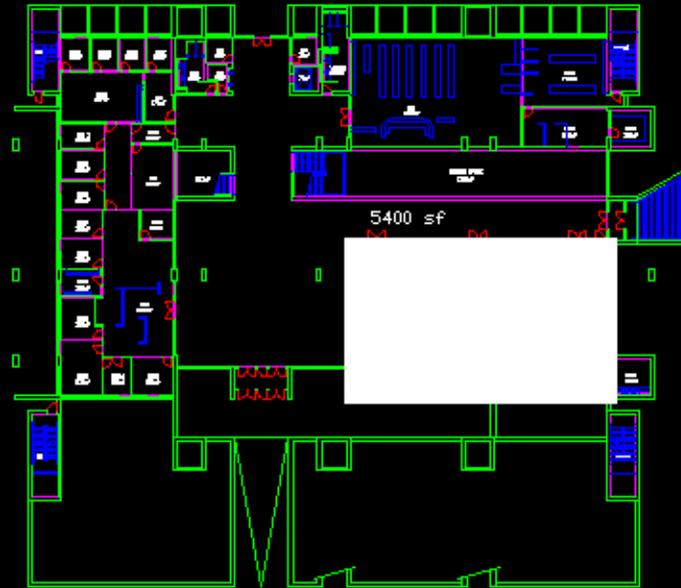


166

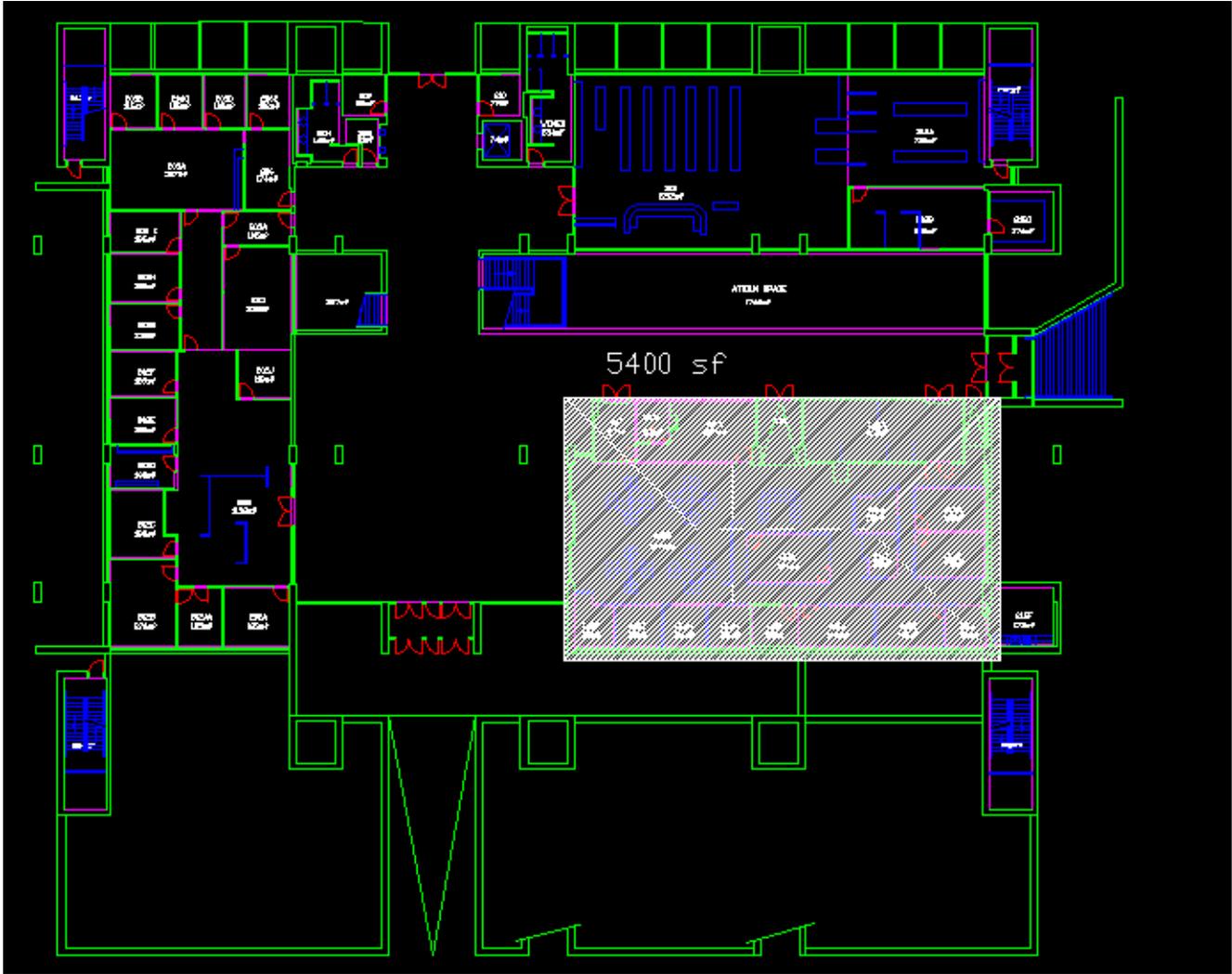
Ind. Part

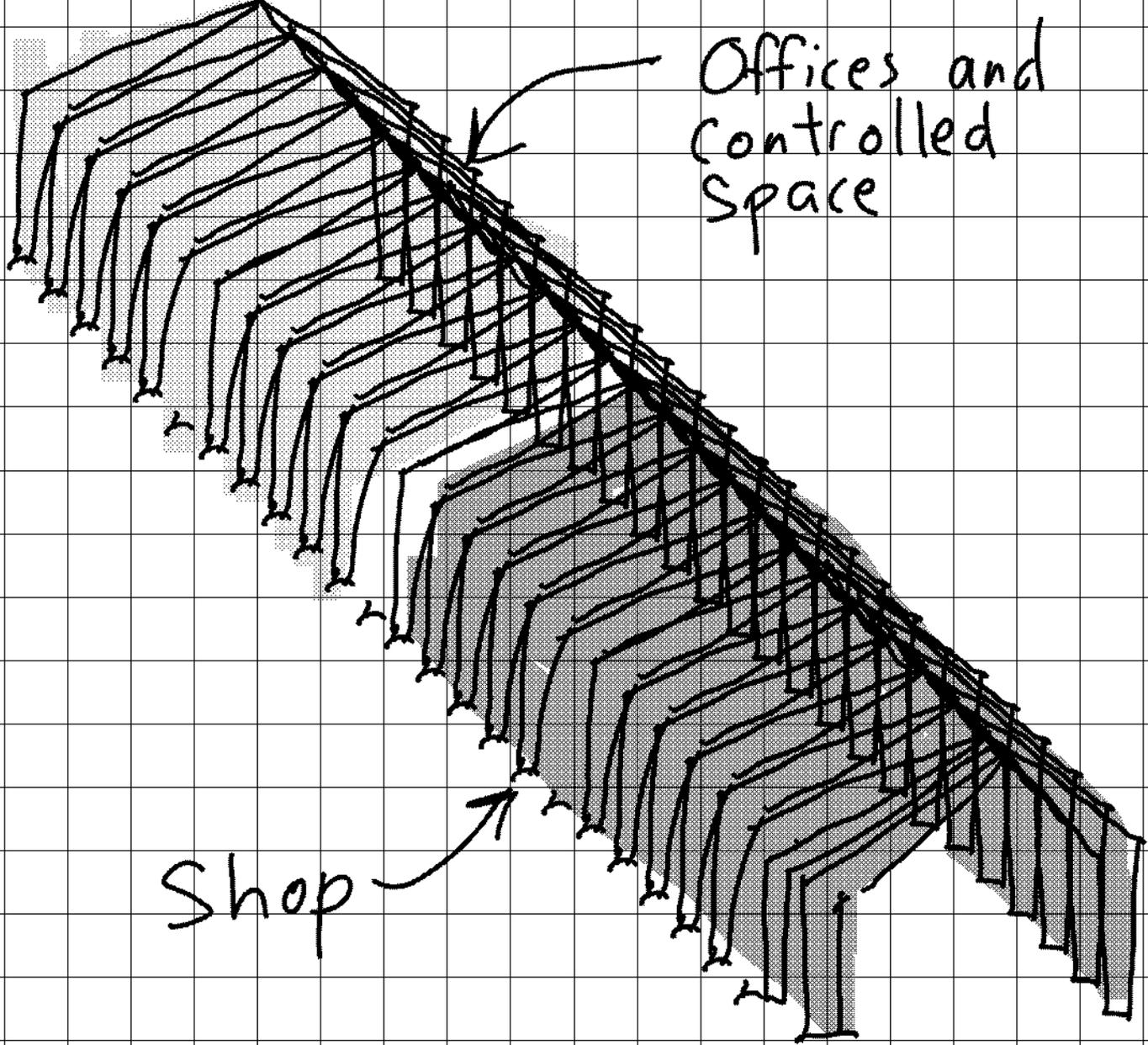






26,000 sf  
60' x 433'





Offices and  
controlled  
space

Shop















