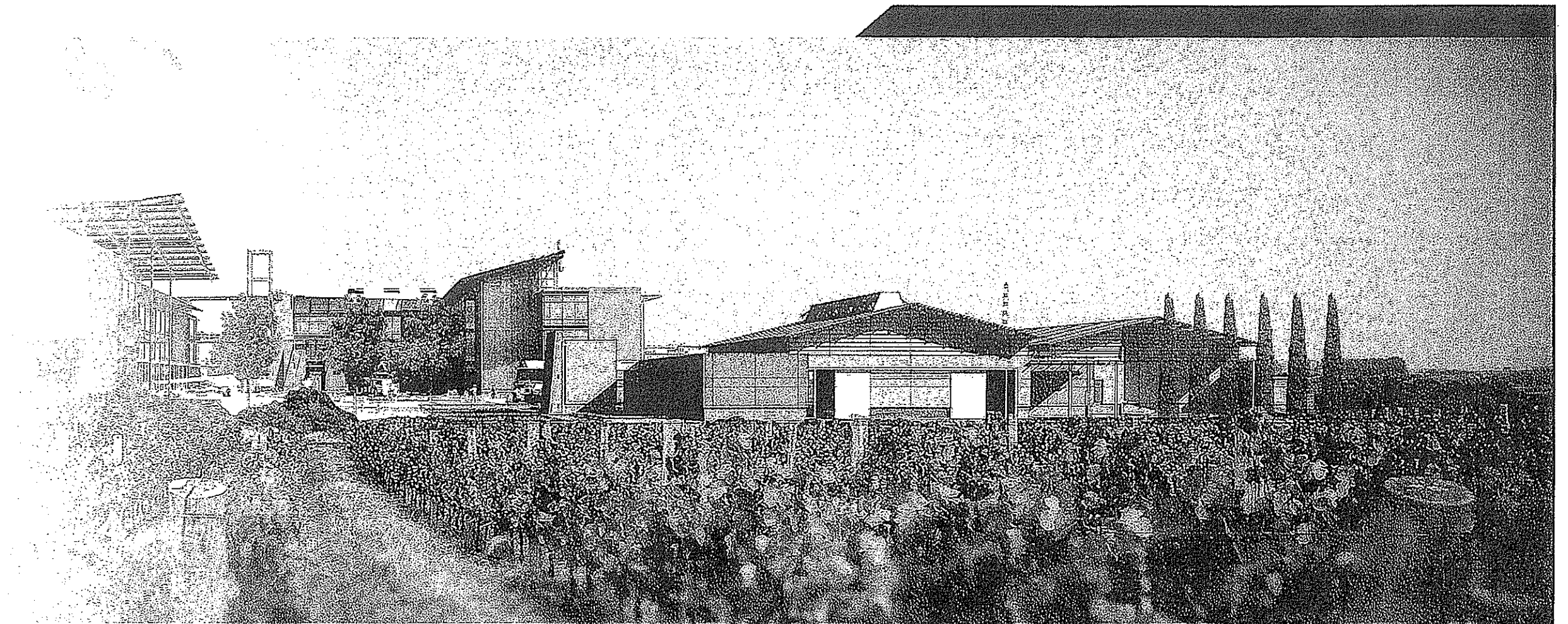
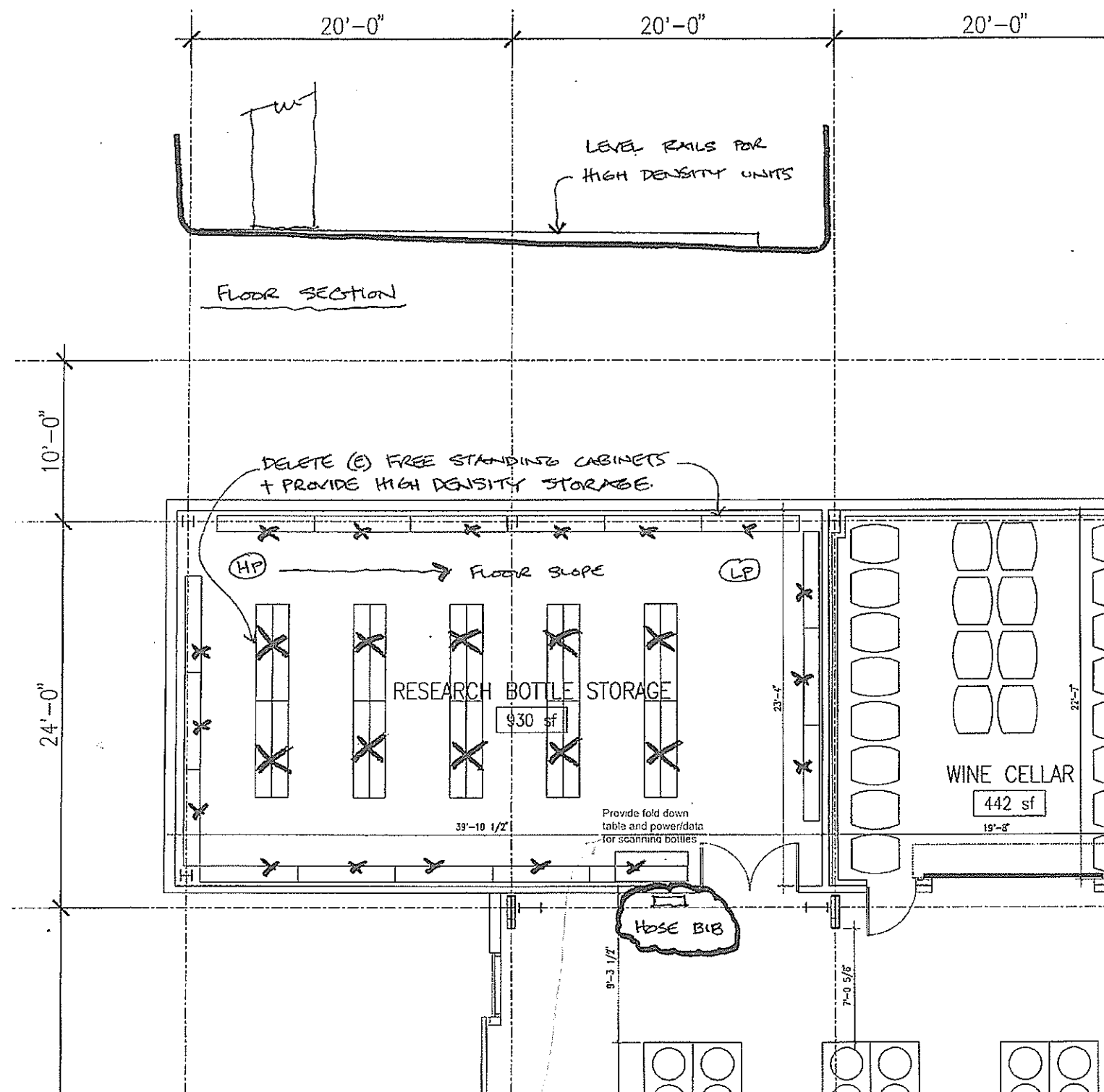


USER MEETING COMMENTS 10.14.08

Items highlighted in red within this document require information from UC Davis

— COST COMMENTS DMB





General Room Requirements

Net sq. ft.: 1,000

Furniture: Work Table, 4' x 8' (1); Desk and chair for computer input; fixed and mobile shelving to provide maximum capacity storage for bottles, cases and jugs.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: As required to provide minimum 4 feet wide main aisles and 3 feet wide secondary aisles.

Doors: Galvanized double door with double-glazed viewing window or sidelights, 72"w x 84"h, from Winery Fermentation Room or Corridor (1).

Casework: None.

Major equipment: None.

Skylights: Not permitted.

Windows: Not permitted.

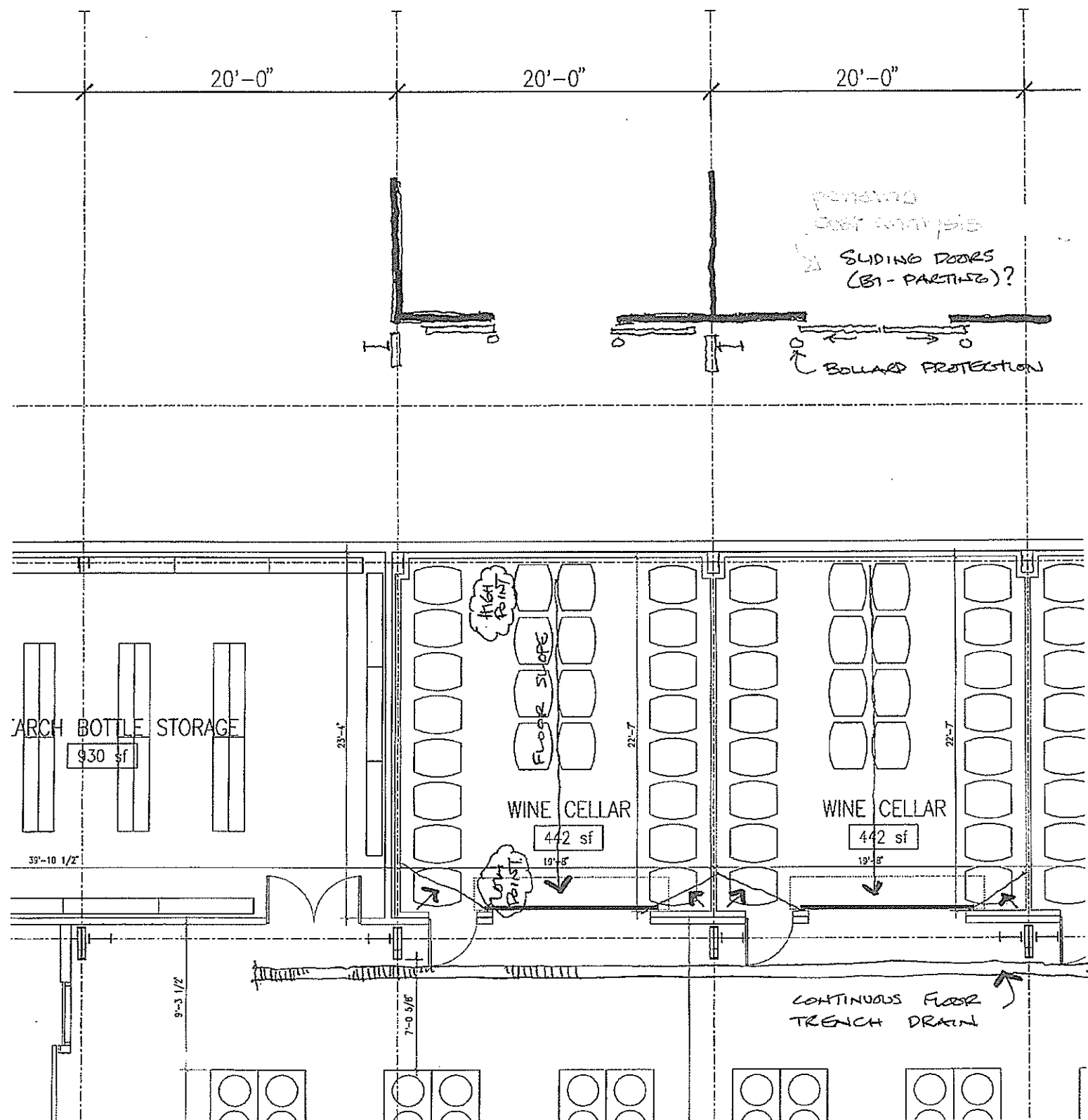
General lighting: 30 footcandles at +36" in high level position. Fluorescent lights not permitted. Good color rendition and ultra-violet filtration required.

Sinks & fixtures: None.

- DELETE FREE STANDING SHELVES
- PLAN FOR HIGH DENSITY /MOBILE STORAGE UNITS, RUNNING EAST - WEST.
- QUANTITY OF RACKS TO BE BASED ON BUDGET ALLOWANCE
- SLOPE FLOOR FROM WEST (HIGH POINT) TO EAST (LOWER POINT)
- COVE FLOORING /WALL CONNECTION TO FACILITATE WASH DOWN
- DESIGN STRUCTURAL SLAB TO ACCOMMODATE 40,000 BOTTLES

Research Bottle Storage

Scale: 1/8" = 1'-0"



General Room Requirements

Net sq. ft.: 430


Major equipment: Barrels and barrel racks, pump (occasional use), power wash (occasional use) and mobile bottling line (occasional use). See "Equipment List Sorted by Room" for complete list of research equipment.

Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: Minimum 20 feet nominal width and as required for four rows of barrels.

Casework: None.

Windows:  Small vision panel required in door. Exterior windows not permitted.

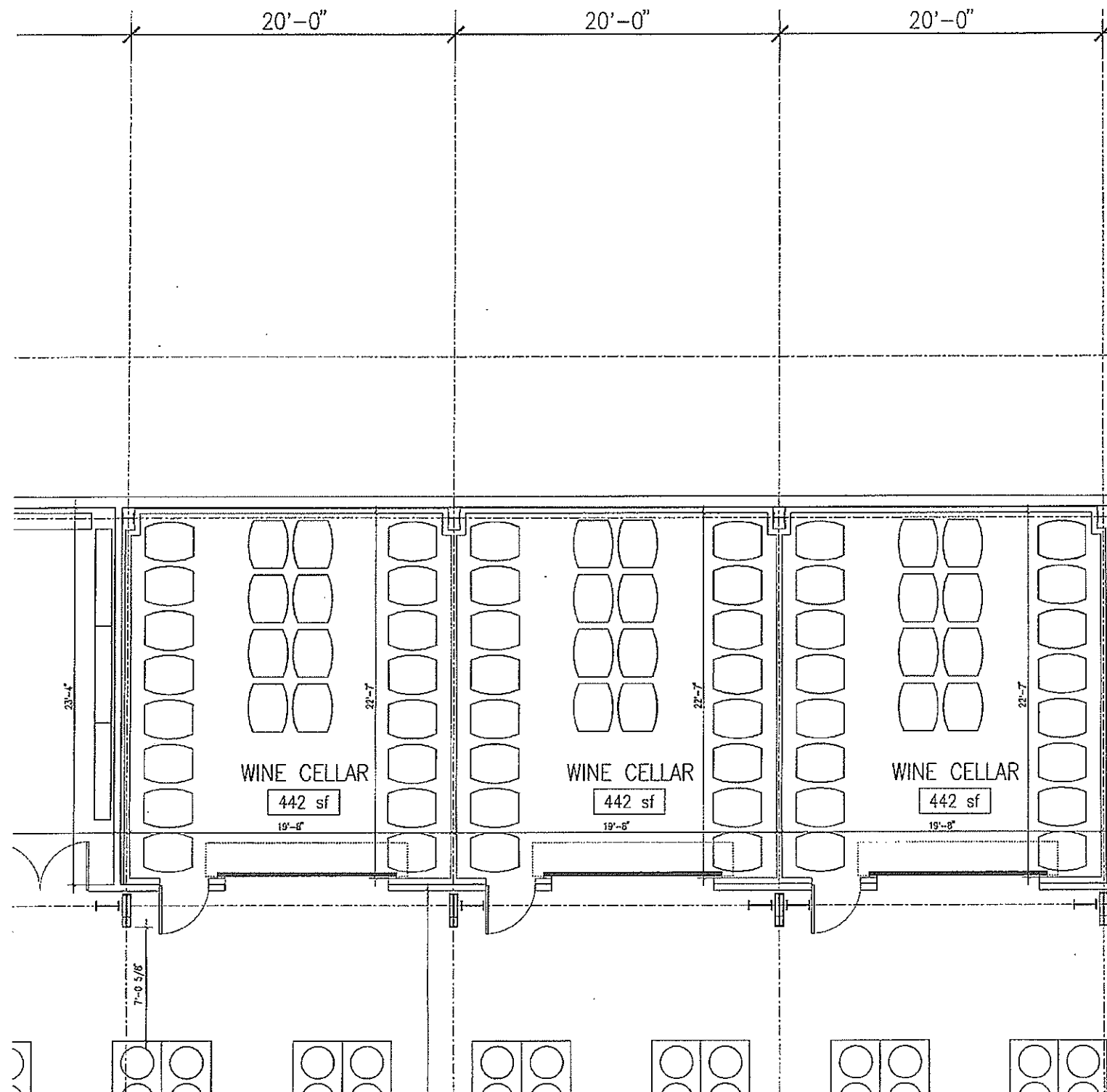
Window treatment: None.

~~Sinks & fixtures:~~ (1) hose bib. (LOCATED OUTSIDE OF ROOM)

- REVIEW CODE REQUIREMENT FOR MAIN DOOR - NOT REQUIRED BY USERS.
- REVIEW ALTERNATE OVERHEAD DOOR - POSSIBLY COULD BE BI-PARTING SLIDING DOOR.
- INTERIOR ROOM HEIGHT / DOOR CLEARANCE DICTATED BY FORKLIFT SPECS - UCD TO VERIFY.
- INSURE UTILITY INTEGRATION INTO INSULATED PANELS PER PROGRAM DOCUMENT.
- PROVIDE SLOPE FLOOR. HIGH POINT @ BACK OF ROOM - DRAIN TO OUTSIDE OF ROOM. 1/4" : 1'-0" MAX.
- REVIEW OPTION TO DELETE CMU WALL PROTECTION AND PROVIDE BOLLARDS @ DOORS.

Wine Cellars No. 1

Scale: 1/8" = 1'-0"



General Room Requirements

Net sq. ft.: 430

Major equipment: Barrels and barrel racks, pump (occasional use), power wash (occasional use) and mobile bottling line (occasional use). See "Equipment List Sorted by Room" for complete list of research equipment.

Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: Minimum 20 feet nominal width and as required for four rows of barrels.

Casework: None.

Windows: Small vision panel required in door. Exterior windows not permitted.

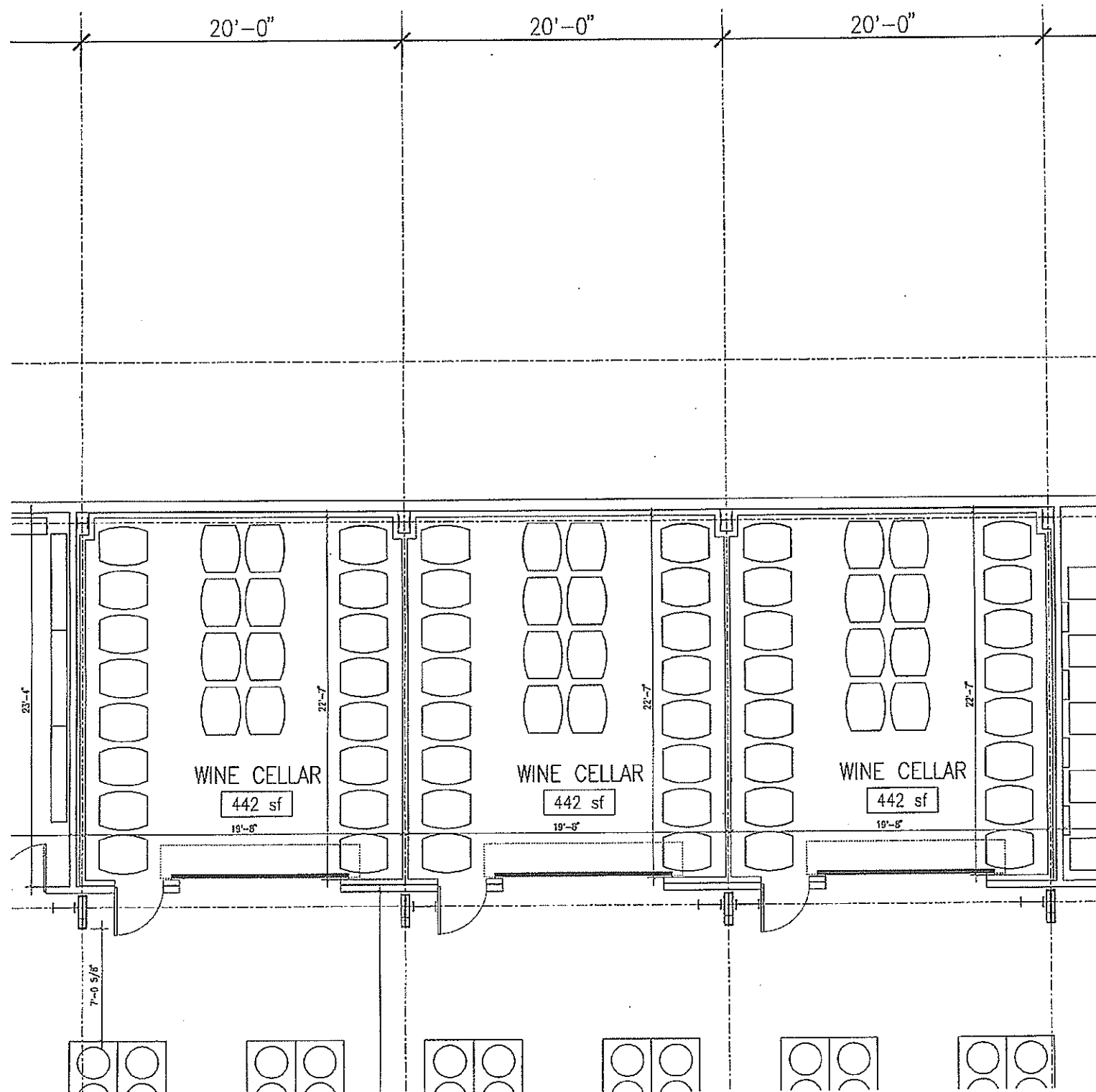
Window treatment: None.

Sinks & fixtures: (1) hose bib.

SEE COMMENTS FOR CELLAR 1

Wine Cellars No. 2

Scale: 1/8" = 1'-0"



General Room Requirements

Net sq. ft.: 430

Major equipment: Barrels and barrel racks, pump (occasional use), power wash (occasional use) and mobile bottling line (occasional use). See "Equipment List Sorted by Room" for complete list of research equipment.

Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: Minimum 20 feet nominal width and as required for four rows of barrels.

Casework: None.

Windows: Small vision panel required in door. Exterior windows not permitted.

Window treatment: None.

Sinks & fixtures: (1) hose bib.

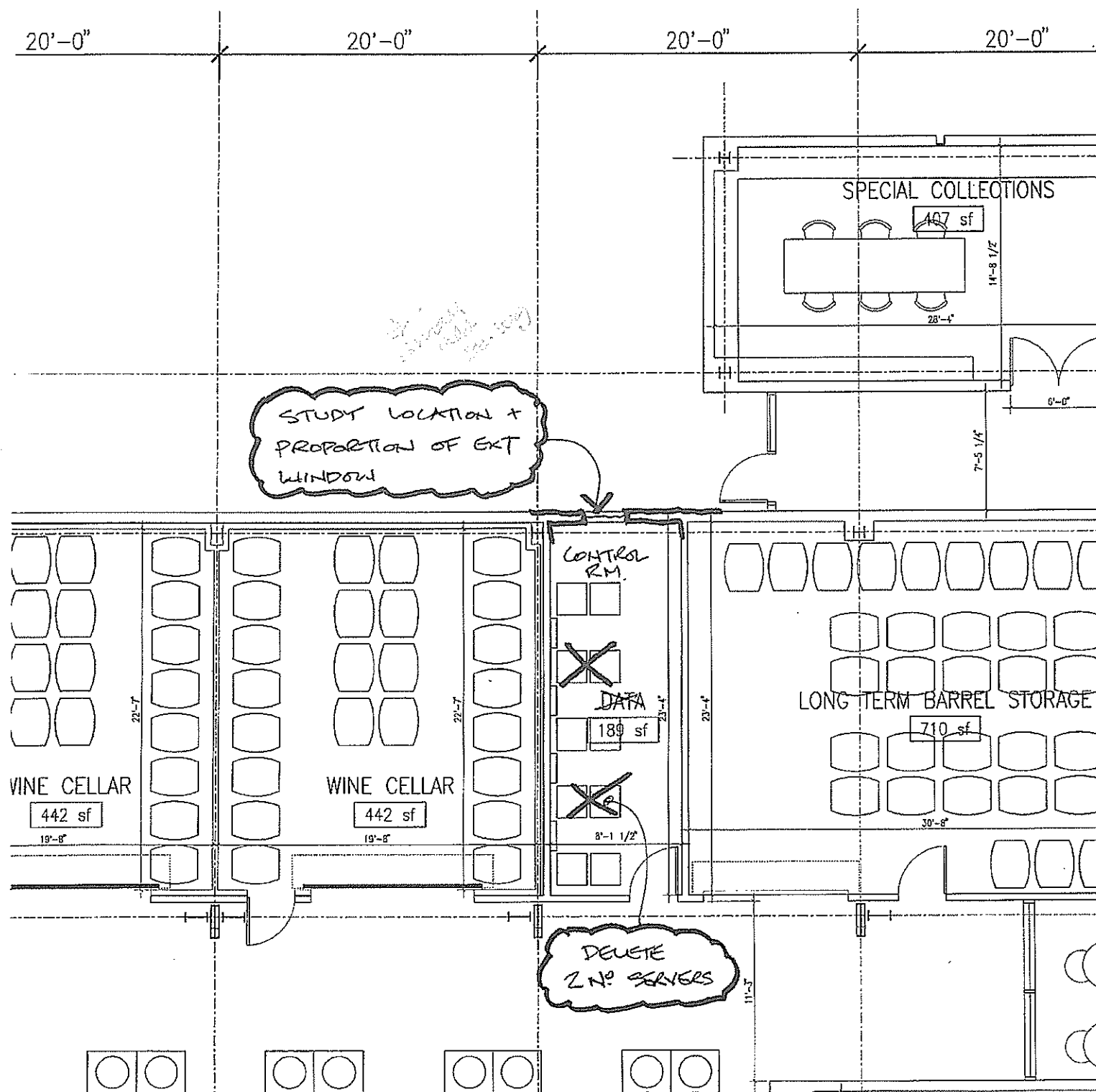
Wine Cellars No. 3

Scale: 1/8" = 1'-0"

Brewery, **Winery**, & Food Process **Facility**

UC DAVIS

10.14.2008



General Room Requirements

Net sq. ft.: 150

Major equipment: Custom fermentation control and monitoring system. Computers, monitors and printers. See "Equipment List Sorted by Room" for complete list of research equipment.

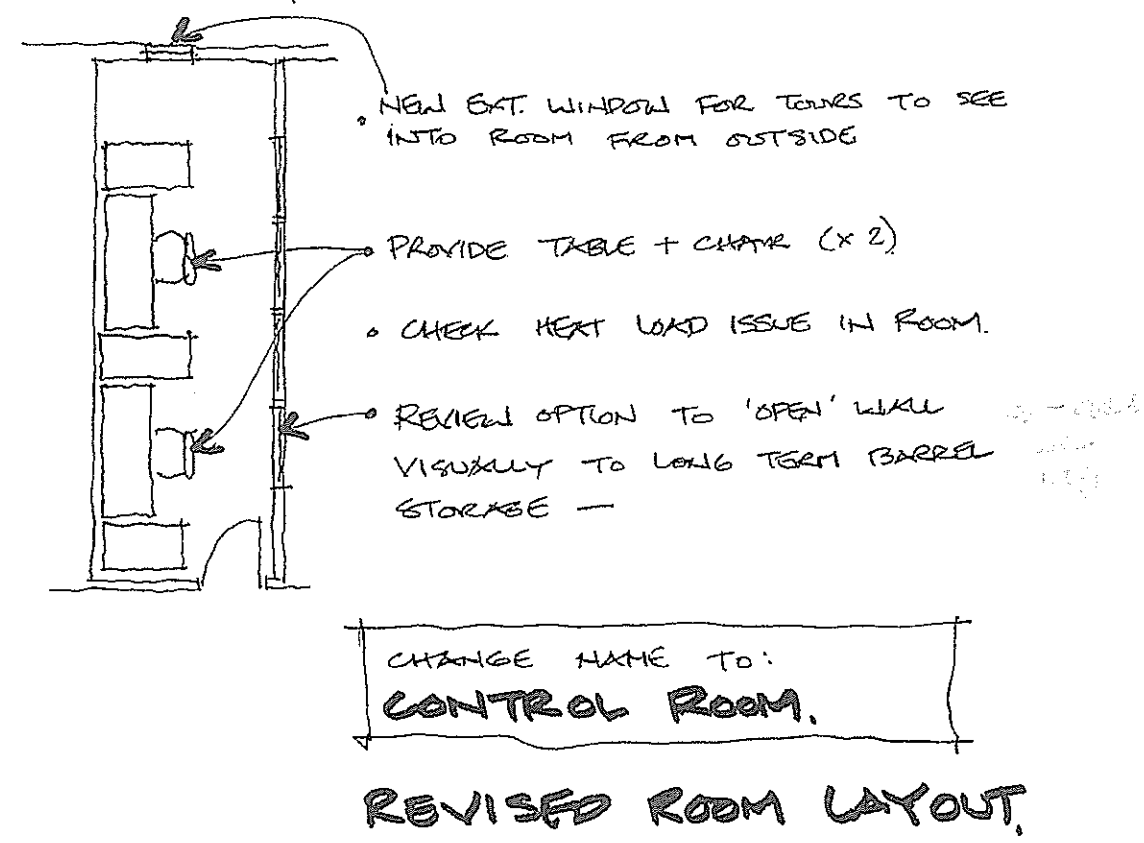
Audio/visual equipment: Marker Board, 4' x 4' (1).

Furniture: Desk chair (2); Desk (2).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

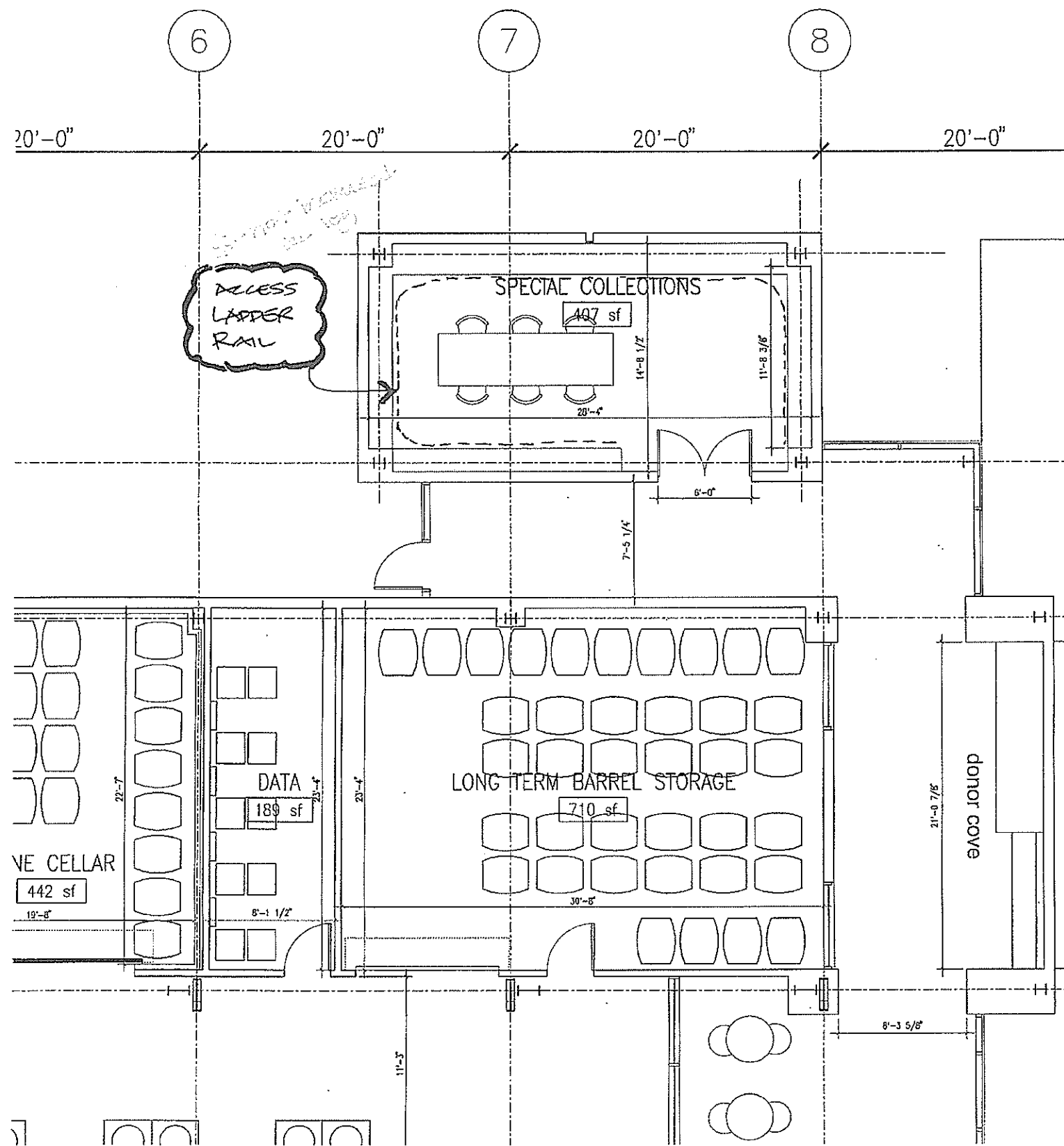
Floor plan dimensions: Minimum 10 feet nominal width.

Windows: Not permitted.



~~Wine Data Room~~
CONTROL

Scale: 1/4" = 1'-0"



Special Collections Cellar

Scale: 1/4" = 1'-0"

General Room Requirements

Net sq. ft.: 400

Major equipment: None.

Furniture: Chairs (6); Pouring Table (1). **OFOL**

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: As required to provide minimum 4 feet wide main aisles and 3 feet wide secondary aisles.

Casework: Wood shelving for 5,000 bottles. Storage cabinet for tasting glasses.

General lighting: 20 footcandles at +36" in high level position.. Fluorescent lights not permitted. Good color rendition and ultra-violet filtration required.

Special lighting: UV filtration required. Provide special architectural accent lighting.

No SINK

- PROVIDE VISION PANEL IN DOOR
- DOORS TO BE 'ROBUST & SECURE, BUT PERMIT PEOPLE TO LOOK IN'
- BOTTLE STORAGE FOR 5,000 BOTTLES.
FUTURE EXPANSION TO BE ACCOMMODATED BY ADDITIONAL RACKS IN CENTER OF ROOM IN USE OF TASTING TABLE.
- ACCESS TO UPPER BOTTLE STORAGE TO BE BY MOBILE LADDER ON A RAIL - SIMILAR TO LIBRARY.
- REFER TO BROOK UHI. CANADA FOR EXAMPLE.
- INTER SPERSE ALT. BOTTLE SIZE + GLASS STORAGE INTO RACK SHELVING TO BREAK-UP MONOLITHIC APPEARANCE

General Room Requirements

Net sq. ft.: 600

Major equipment: Barrels and barrel racks; pump (occasional use); power wash (occasional use). See "Equipment List Sorted by Room" for complete list of research equipment.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: Minimum 20 feet nominal width as required for four rows of barrels.

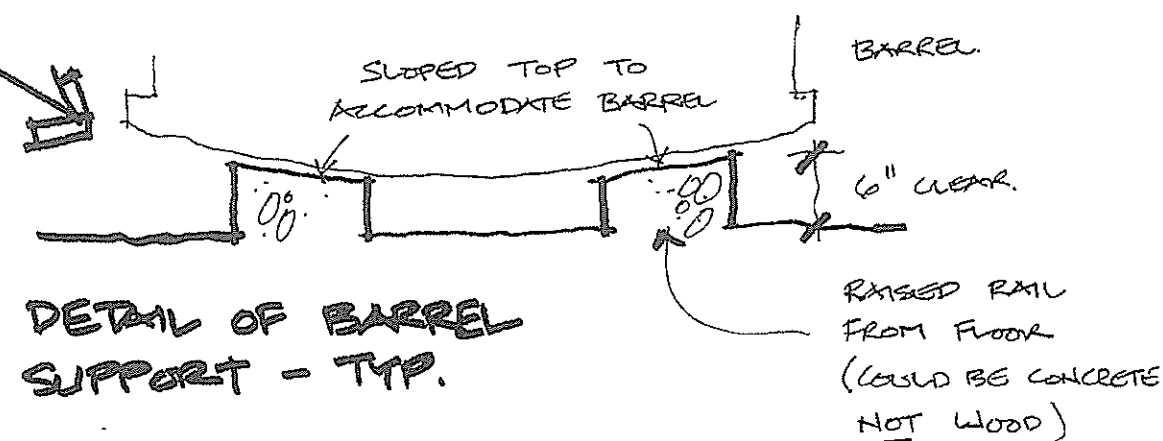
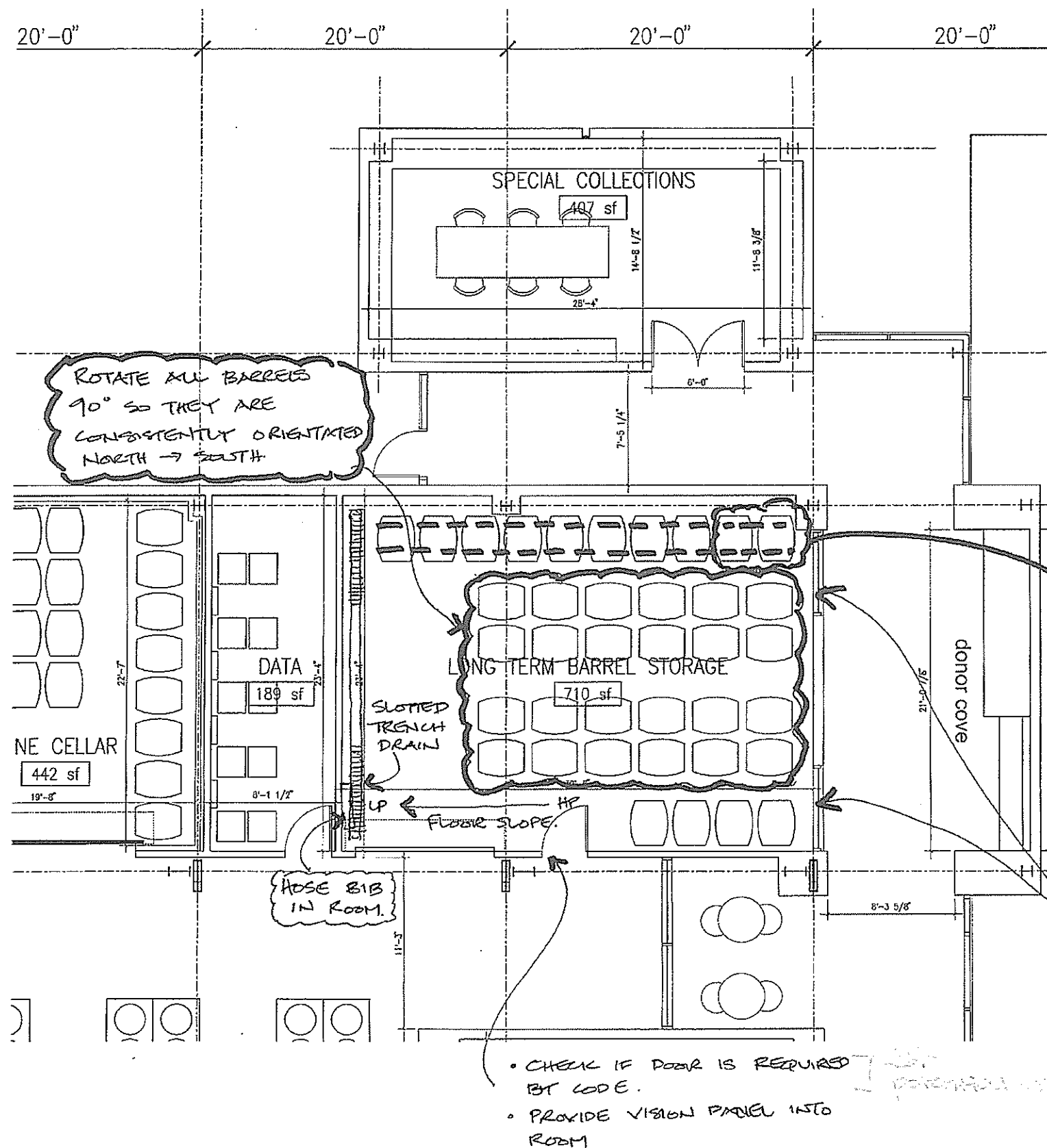
Doors: Insulated, sealed galvanized steel rollup or sliding door, 120"w x 144"h, from Winery Fermentation Room (1); galvanized steel door with viewing window or sidelight, 36"w x 84"h, from Winery Fermentation Room (1).

Casework: None.

Windows: Interior viewing window from Corridor required. Small vision panel required in door to Fermentation Room.

Sinks & fixtures: (1) hose bib.

Floor drains: Trench drain, see Winery Fermentation Room for specifications.



Long-Term Barrel Storage

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 800

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 20' (1); Projection Screen, motorized, 8' x 12' (1).

Furniture: Class Room Table, 30"d x 72"w (9); Stacking Chairs (35),

Signage: Campus standard room sign. Donor recognition plaque.

Floor plan dimensions: Minimum 30 feet nominal width.

Doors: Wood door with viewing windows or sidelights, 36"w x 84"h, from Corridor; galvanized steel door with viewing window or sidelights, 36"w x 84"h, from Winery Fermentation Room (3).

Casework: Counter and undercounter storage (approx. 20 lineal feet). Open cubicle storage for student backpacks (20 cubicles).

Windows: Extensive interior viewing windows to the Fermentation Room teaching tank area and to the public Corridor required. Exterior windows preferred but sun, glare and light must be controlled for audio-visual presentations. Exterior views to vineyard desirable if possible but not required.

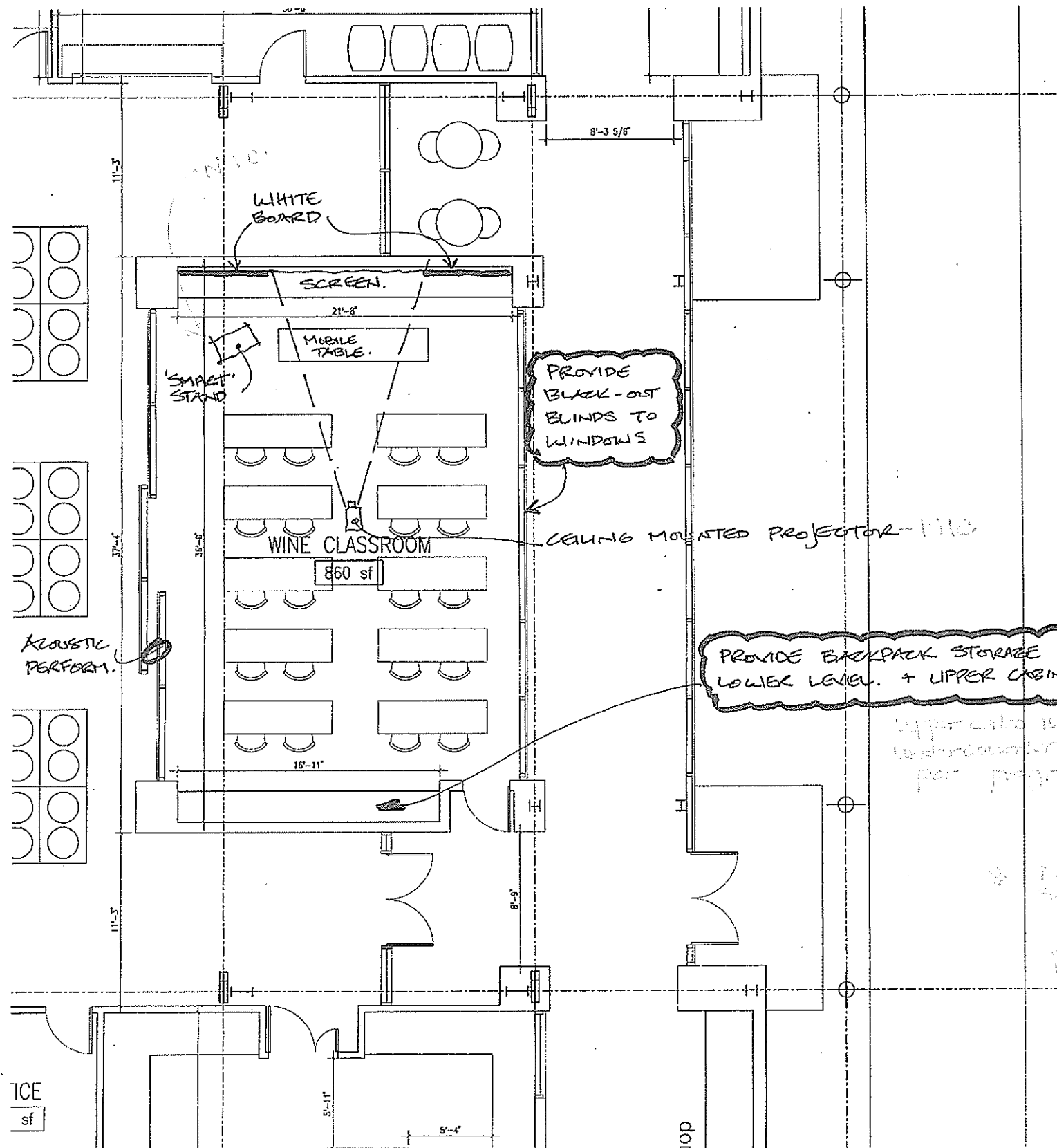
Window treatment: Shading for sun control as appropriate and for complete room darkening for audiovisual presentations.

Telephone outlets: (1) outlet at rear wall.

Sinks & fixtures: (1) Stainless steel bar sink.

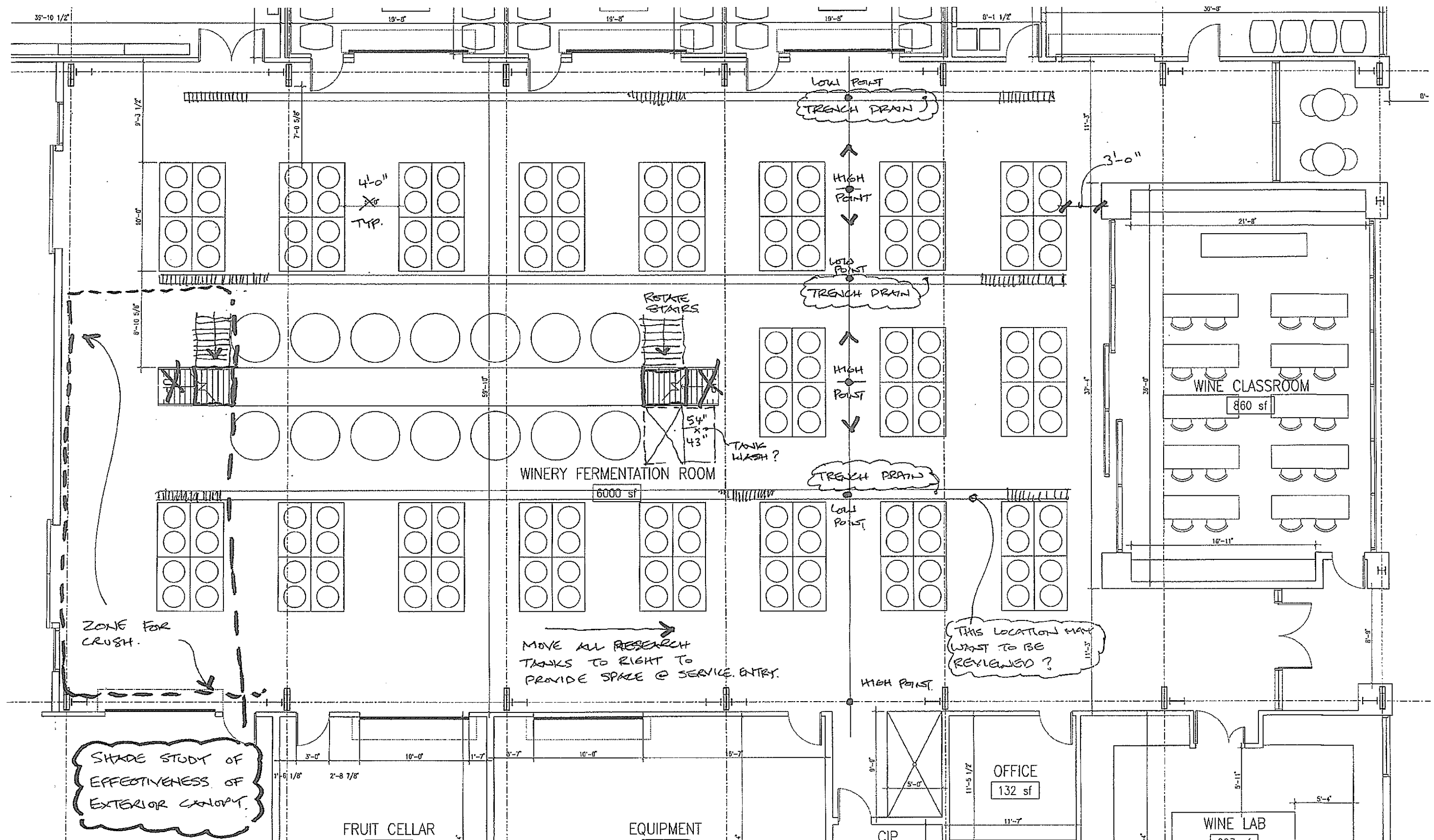
NOT REQUIRED.

- CONSIDER STORAGE OF TABLES + CHAIRS WHEN ROOM IS 'OPEN' FORMAT
- UCD TO PROVIDE DETAILS OF 'SMART' STAND @ FRONT OF ROOM.
- VERIFY ACOUSTIC PERFORMANCE OF SLIDING DOORS - NEEDS TO BE 'QUIET' FOR TEACHING.



Wine Classroom

Scale: 1/8" = 1'-0"



Wine Fermentation Hall

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10.14.2008

Equipment

Barrel Washer

Mounting location: Floor

Basket Press

Mounting location: Floor - rolling

Bottle Machine

Mounting location: Floor - rolling

Cross Flow Filter

De-stemmer / Sorter

Mounting location: Floor - rolling

Fork Lift

Clearances: 12 foot minimum height clearance.
Exhaust requirements: Gas fumes generated while in operation.

Grape Press

Width: 140 Depth: 86 Height: 60
Mounting location: Floor - moveable

Membrane Press

Mounting location: Floor - rolling

Mobile Belt Elevator

Mounting location: Floor - rolling

Mobile Bottle Plant

Mounting location: Floor - rolling

Portable Steam Generator & Power Wash

Mounting location: Floor - rolling

Research Fermentation Tanks

Clearances: 5 feet clear between rows of tanks.
CO2 capture: CO2 capture system.
Mounting location: Floor

Tank data and control

Teaching Fermentation Tank - Close Top

Width: 54 Depth: 54 Height: 114
Clearances: Two access doors on side plus large opening at the top.
Mounting location: Floor - fixed but detachable CO2 capture: CO2 capture system.
Water cooling: Dedicated winery fermentation tank cooling water system with supply & return.
Water heating: Dedicated winery fermentation tank heating water system with supply & return.

Teaching Fermentation Tank - Open Top

Mounting location: Floor - fixed but detachable
CO2 capture: CO2 capture system.

Teaching Fermentation Tank Catwalk

Clearances: Walking surface should be 36 inches below the rim of the teaching tank; provide 96 inch minimum clear height above the walking surface.
Mounting location: Floor - moveable
CO2 capture: CO2 capture system.

Vibrating Sorting Table

Mounting location: Floor - moveable

General Room Requirements

Net sq. ft.: 6000

Major equipment: Major equipment includes fourteen 2,000 liter teaching tanks, 150 fifty gallon research tanks, sorting and destemming equipment, crush equipment, barrel wash, portable power wash, pumps and bottling line. See "Equipment List Sorted by Room" for complete list of research equipment.

Audio/visual equipment: Marker Board, 4' x 6' (1). Public address system with cordless microphones (2).

Furniture: Moveable work bench (3 x 20 feet).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor plan dimensions: Minimum 60 foot nominal width, preferably column-free. Provide adequate clearance (12 feet or more) for forklift access to all adjoining rooms and major equipment. Provide 5 foot minimum aisle clearance between research tanks.

Windows: Interior viewing window from Corridor required. High exterior windows permitted but not required; low exterior windows not permitted. Direct sun not permitted.

Sinks & fixtures: (1) hand wash sink near main entry door; (4) hose stations.

Eyewashes/showers: One; may be shared by the Winery Clean-In-Place Room and the Winery Analytical Laboratory if all are within 100 feet of the emergency eyewash/shower.

Floor drains: Provide continuous 8 inch wide trench drains capable of withstanding caustics and acids described in the flooring requirements. Coordinate layout of trench drains with layout of fermentation tanks, equipment and forklift access. Trench drains shall be spaced no farther than 20 feet on center and the floor shall be sloped at 1/4 inch per foot with no ponding tolerated. Drains shall be flushable and easily accessed for cleaning. Grates shall be rated for heavy traffic and shall be in small sections that can be removed by one person. The catch basins should drain completely, be trapped and primed, and contain custom fitted, stainless steel baskets with 3/8" holes top and sides. Drains from all winery rooms shall be manifolded separately from all other drains in building and shall not connect to the building sanitary sewer main until outside of the building perimeter. Drain lines shall be directed to exit the building into the Winery Service Yard for possible future capture, treatment and re-use. Finishes for the grates, grate rails, drain liners, catch basins and piping must withstand the anticipated cleaning agents and the caustic substances that are byproducts of fermentation.

Wine Fermentation Hall

General Room Requirements

Net sq. ft.: 430

Major equipment: Major equipment includes grape bins. See "Equipment List Sorted by Room" for complete list of research equipment.

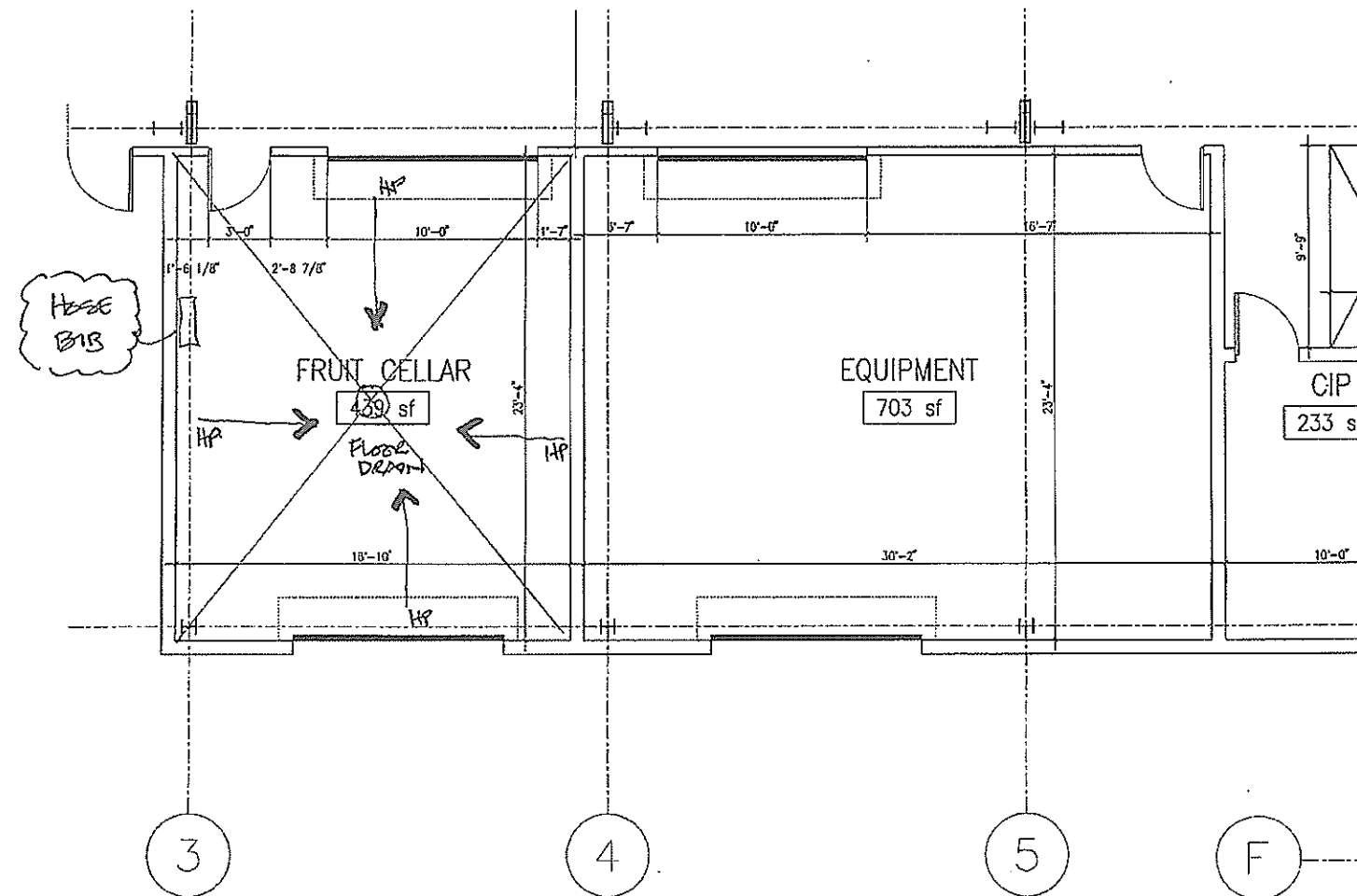
Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Windows: Small vision panel in interior door only.

Sinks & fixtures: (1) hose bib.

Floor drains: Trench drain, see Winery Fermentation Room for specifications.

Nitrogen: One outlet with quick connection.



Wine Fruit Cellar

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 300

Major equipment: Winery clean-in-place system and load cell. See "Equipment List Sorted by Room" for complete list of research equipment.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floors base: Integral cove base.

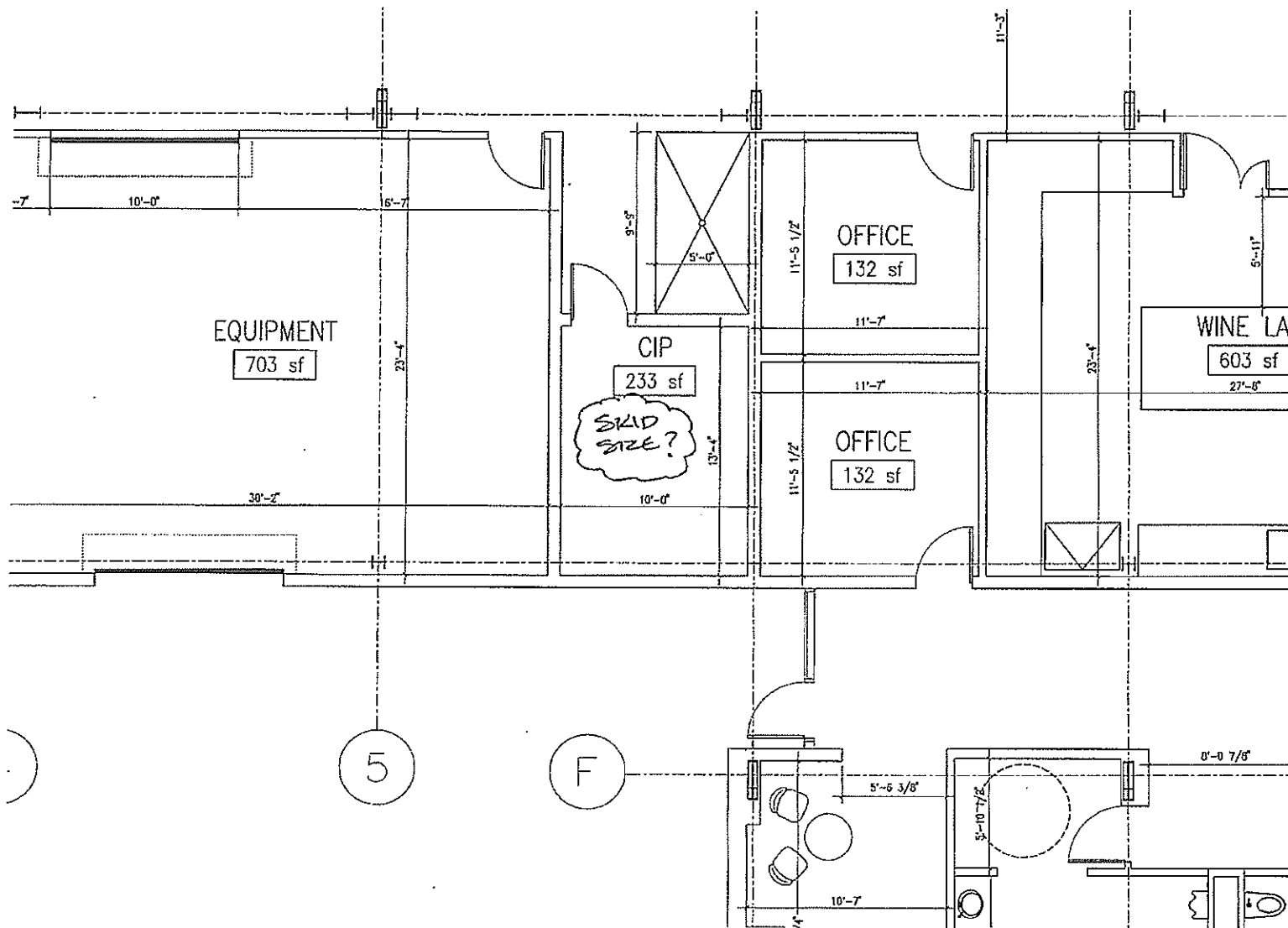
Doors: Galvanized steel double door with viewing windows or sidelights, 72"w x 84"h (1).

Sinks & fixtures: See equipment requirements; (1) hose bib.

Eyewashes/showers: Emergency shower and eyewash combination within 100 feet of any point in the room. May be in corridor. Provide a separate sink eyewash if the emergency shower and eyewash combination is not provided within the room.

Floor drains: NONE? FLOOR DYKED FOR LEAKS?

Clean in Place: Approximately 2 inch diameter stainless steel supply and return piping to the Winery Fermentation Room. Capacity approximately 30 gallons per minute at 130 degrees F (55 degrees C). Supply and return pumps. Supply consists of 3 pipes for a KHSO₄ solution, a KOH solution and deionized & reverse osmosis filtered rinse water. Single pipe return. Tanks. 2.5 gallons required per 1.0 foot of circumference of large fermentation tanks. Gallo Livingston is the only known CIP system in the wine industry at the present time.



USED TO VERIFY CIP DIMENSIONS, PLATFORM REQUIREMENTS.

NOTE: THIS AREA MAY BE TOO SMALL TO ACCOMMODATE CIP SKID, PLATFORM + ALL ACCESS REQUIREMENTS... PLAN VERIFICATION PENDING

Wine Clean-In-Place

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 130

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 4' (1).

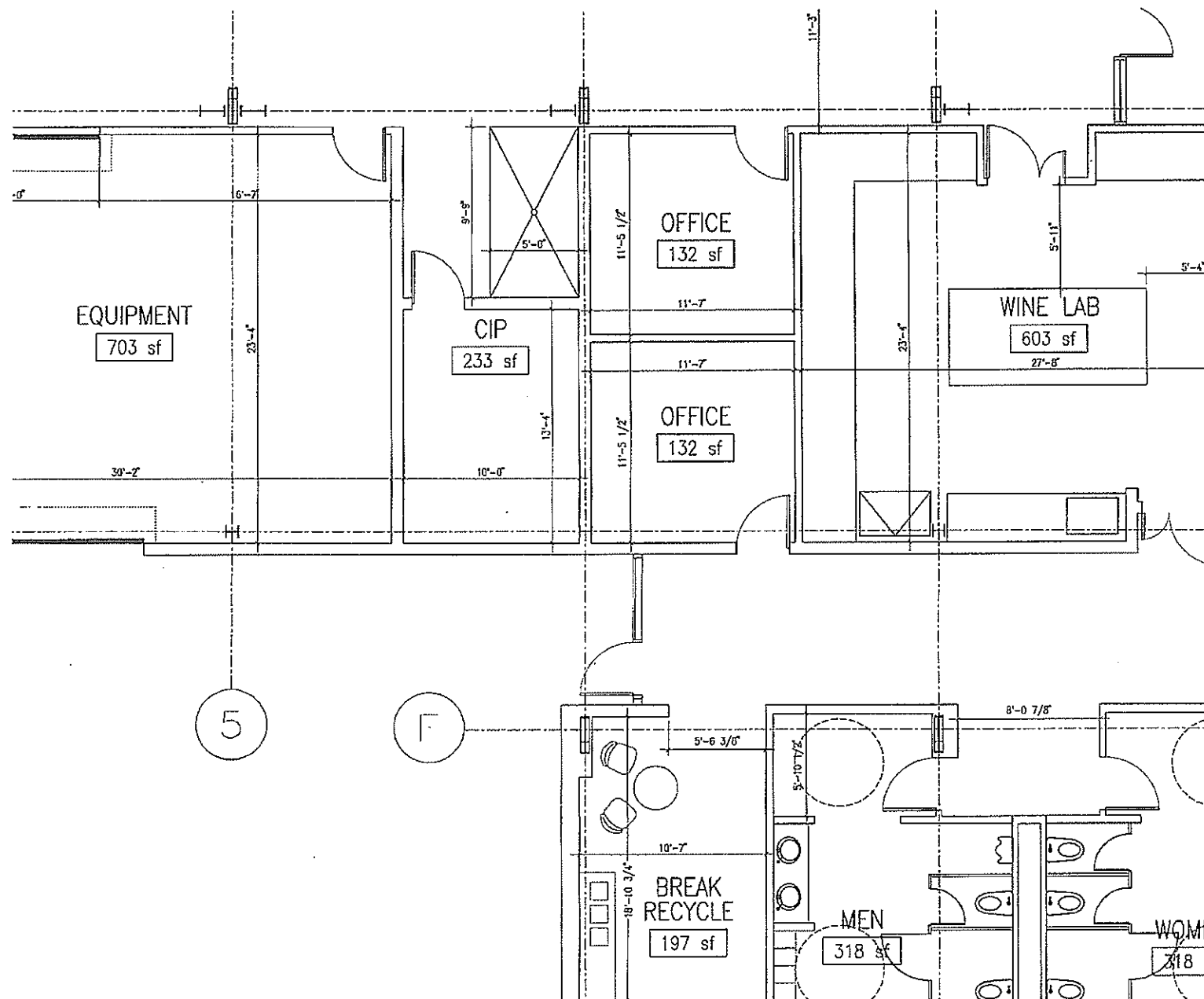
Furniture: Desk with Return (1), Desk Chair (1), Stacking Chair (2), File Cabinet (2), Bookshelf (144"long x 72"h).

Signage: Campus standard room sign. Donor recognition plaque.

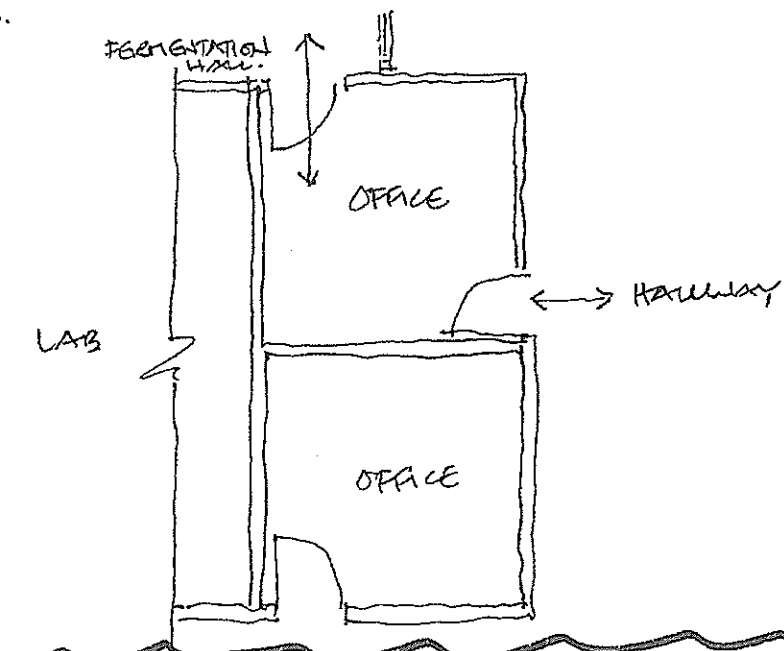
Floor plan dimensions: Minimum 10 feet nominal width.

Doors: Wood door with viewing window or sidelight, 36"w x 84"h, from Corridor (1).

Casework: None.



- LOCATION OF OFFICES AND WINE LAB TO BE HANDLED SO OFFICES HAVE A PROXIMITY TO MAIN ENTRY.
- REVIEW DESIGN OPTION OF PROVIDING DIRECT ACCESS FROM OFFICE TO ENTRY & FERMENTATION HALL.



Wine Office No. 1

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UCDAVIS

10.14.2008

General Room Requirements

Net sq. ft.: 130

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 4' (1).

Furniture: Desk with Return (1), Desk Chair (1), Stacking Chair (2), File Cabinet (2), Bookshelf (144"long x 72"h).

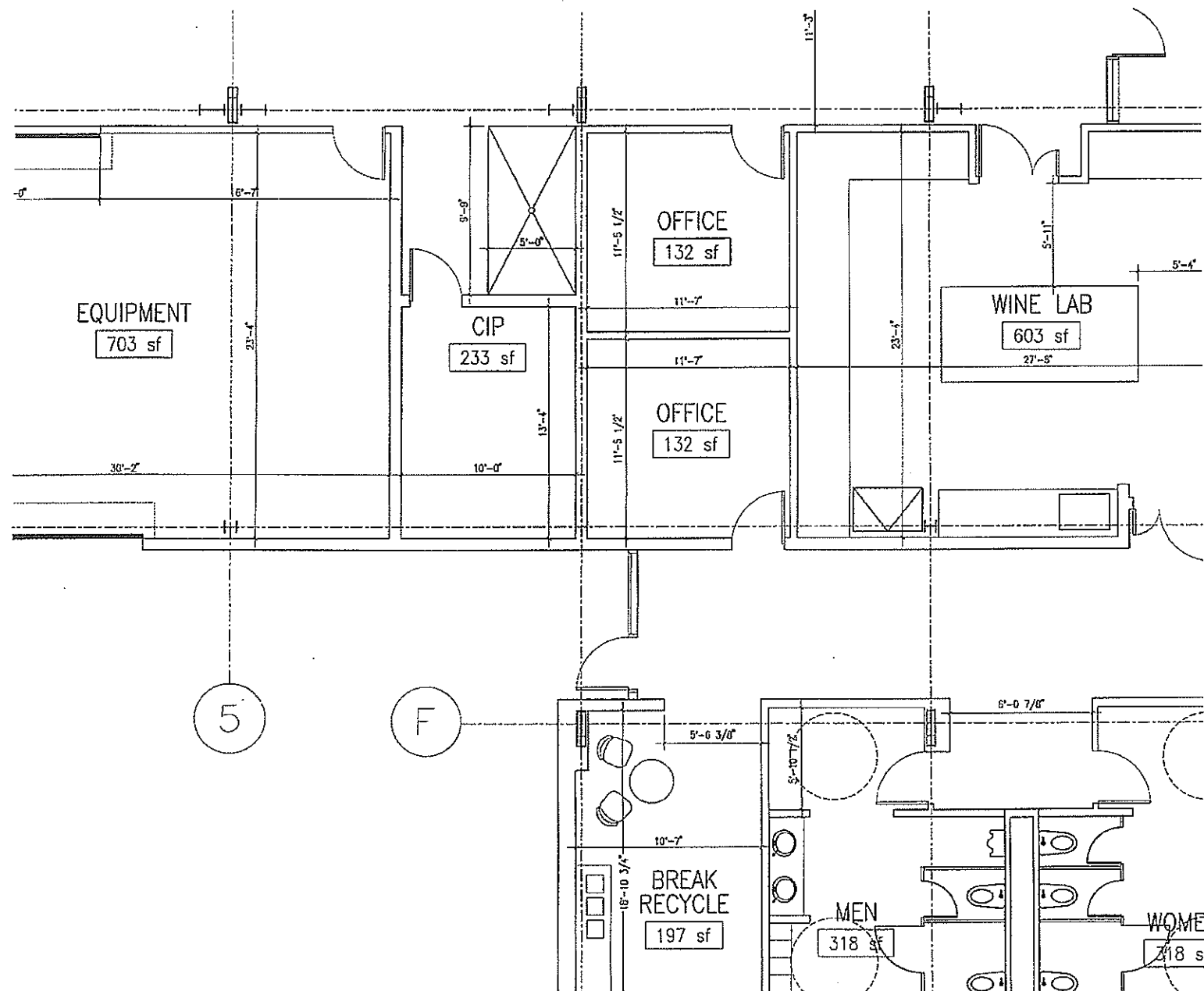
Signage: Campus standard room sign. Donor recognition plaque.

Floor plan dimensions: Minimum 10 feet nominal width.

Doors: Wood door with viewing window or sidelight, 36"w x 84"h, from Corridor (1).

Casework: None.

SEE OFFICE #01 NOTES



Wine Office No. 2

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10/14/2008

General Room Requirements

Net sq. ft.: 600

Major equipment: Refrigerator and miscellaneous benchtop analytical equipment. See "Equipment List Sorted by Room" for complete list of research equipment.

Audio/visual equipment: Marker Board, 4' x 4' (1).

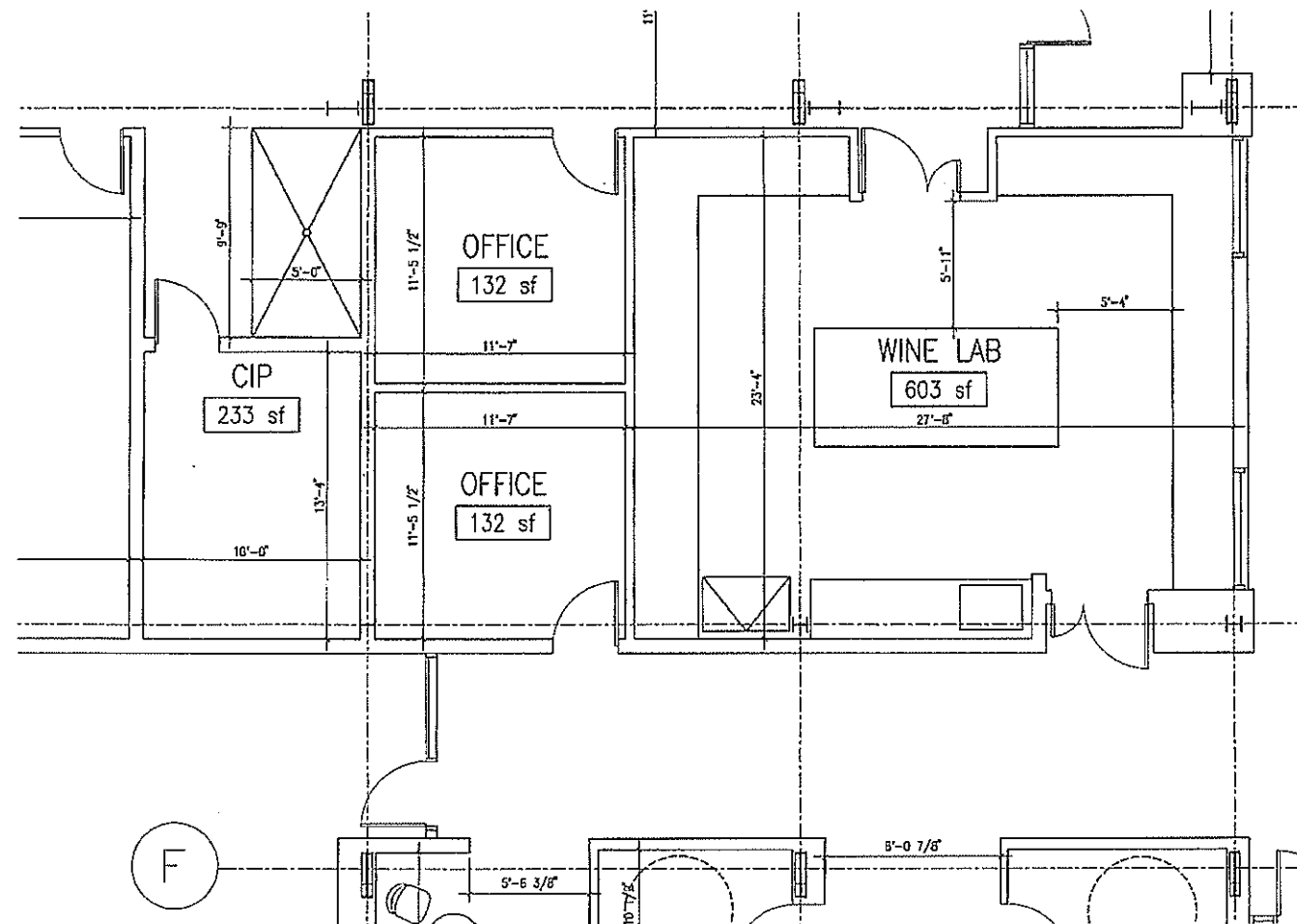
Furniture: Lab Stool (3); full height storage cabinets (12 linear feet x 24 inches deep).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Casework: Epoxy countertop, undercounter drawers and cabinets, overhead reagent shelving and closed cabinets (approx. 65 lineal feet). Materials and construction per Campus Standards & Design Guide.

Sinks & fixtures: (1) Lab sink (epoxy); (1) cupsink in fume hood (epoxy); (5) cupsinks at lab bench at locations to be determined by user.

Eyewashes/showers: Emergency shower and eyewash combination near lab entry door. May be in corridor. Provide a separate sink eyewash if the emergency shower and eyewash combination is not provided within the room.



Equipment

Alcolyzer
Mounting location: Bench

Analytical Balance
Mounting location: Bench

Auto-chem Analyzer
Mounting location: Bench

Auto-chem Analyzer Computer/Printer
Mounting location: Bench

Auto-titrator
Mounting location: Bench

Auto-titrator Computer & Printer
Mounting location: Bench

Benchtop Chiller
Mounting location: Bench

Cash Still

Centrifuge
Mounting location: Bench

Chemical Fume Hood
Width: 48
Mounting location: Floor - fixed
Clearances: Provide 60 inch minimum front clearance.

Chemical Storage Cabinets
Adjacencies: Adjacent or under Chemical Fume Hood.

Densitometer
Mounting location: Bench

Dissolved Oxygen Meter
Mounting location: Bench

Drying Oven

Gas Chromatograph Computer & Printer
Mounting location: Bench

Gas Chromatograph
Mounting location: Bench

HPLC
Mounting location: Bench

HPLC Computer/Printer
Mounting location: Bench

Microcentrifuge
Mounting location: Bench

Laboratory Shaker
Mounting location: Bench

Sample Changer for Alcolyzer/Densitometer
Mounting location: Bench

Sample Changer for Auto-titrator

Sonicator

Spectrophotometer
Mounting location: Bench

Stir Plates / Heating Plates
Mounting location: Bench

NOT REVIEWED - PENDING INPUT

Wine Laboratory

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10-14-2008

General Room Requirements

Net sq. ft.: 300

Furniture: Bench (1) in shower changing area. Half-height metal changing lockers (12).

Signage: Campus standard room sign.

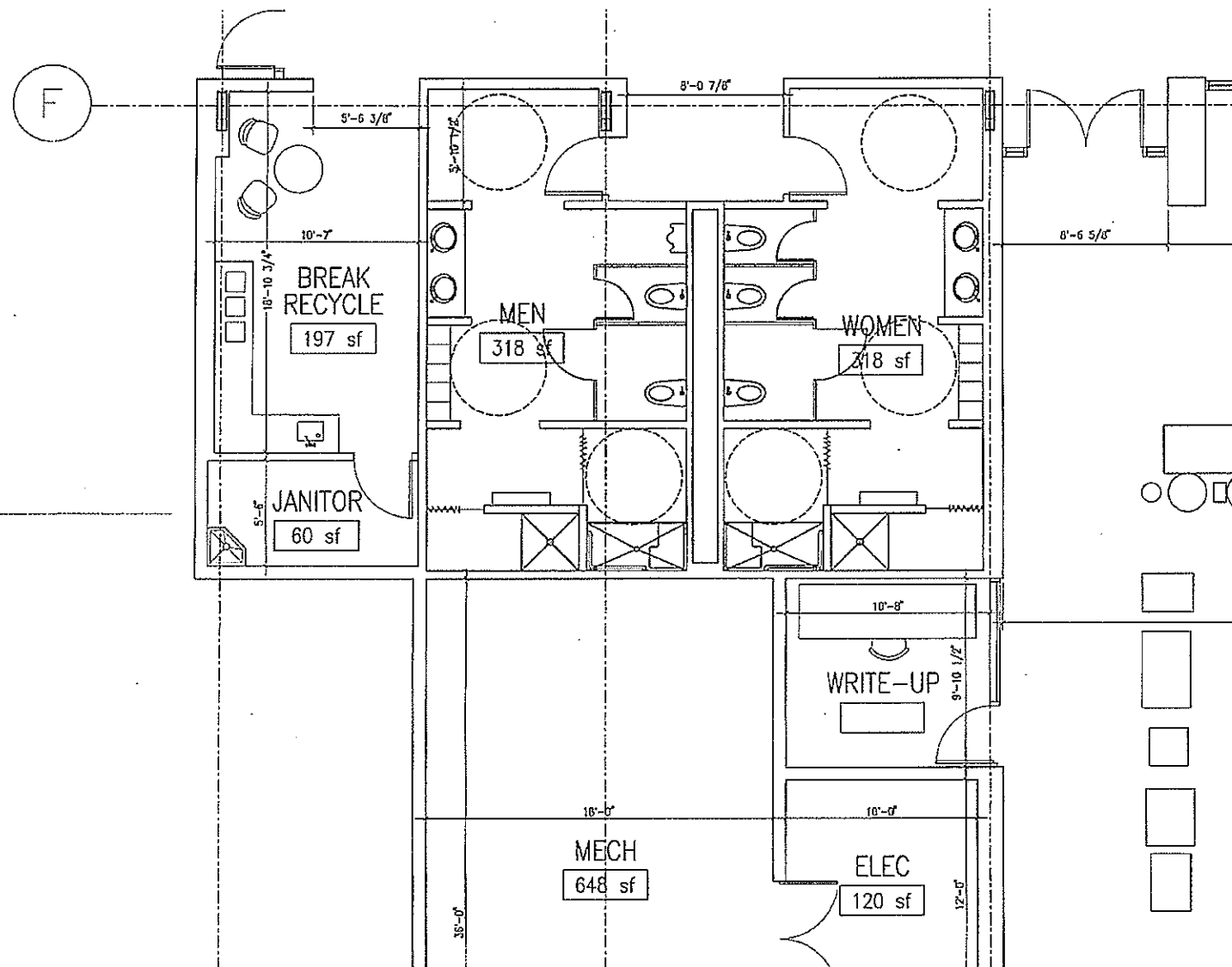
Casework: Clothes hooks (12).

Sinks & fixtures: (2) Sinks. (1) Waterless Urinal. (2) Toilets. (2) Showers.

Grey water systems: Greywater to toilets.

Domestic water: Hot and cold to sinks and showers.

NOT REVIEWED



Men's Bathroom

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 300

Furniture: Bench (1) in shower changing area. Half-height metal changing lockers (12).

Signage: Campus standard room sign.

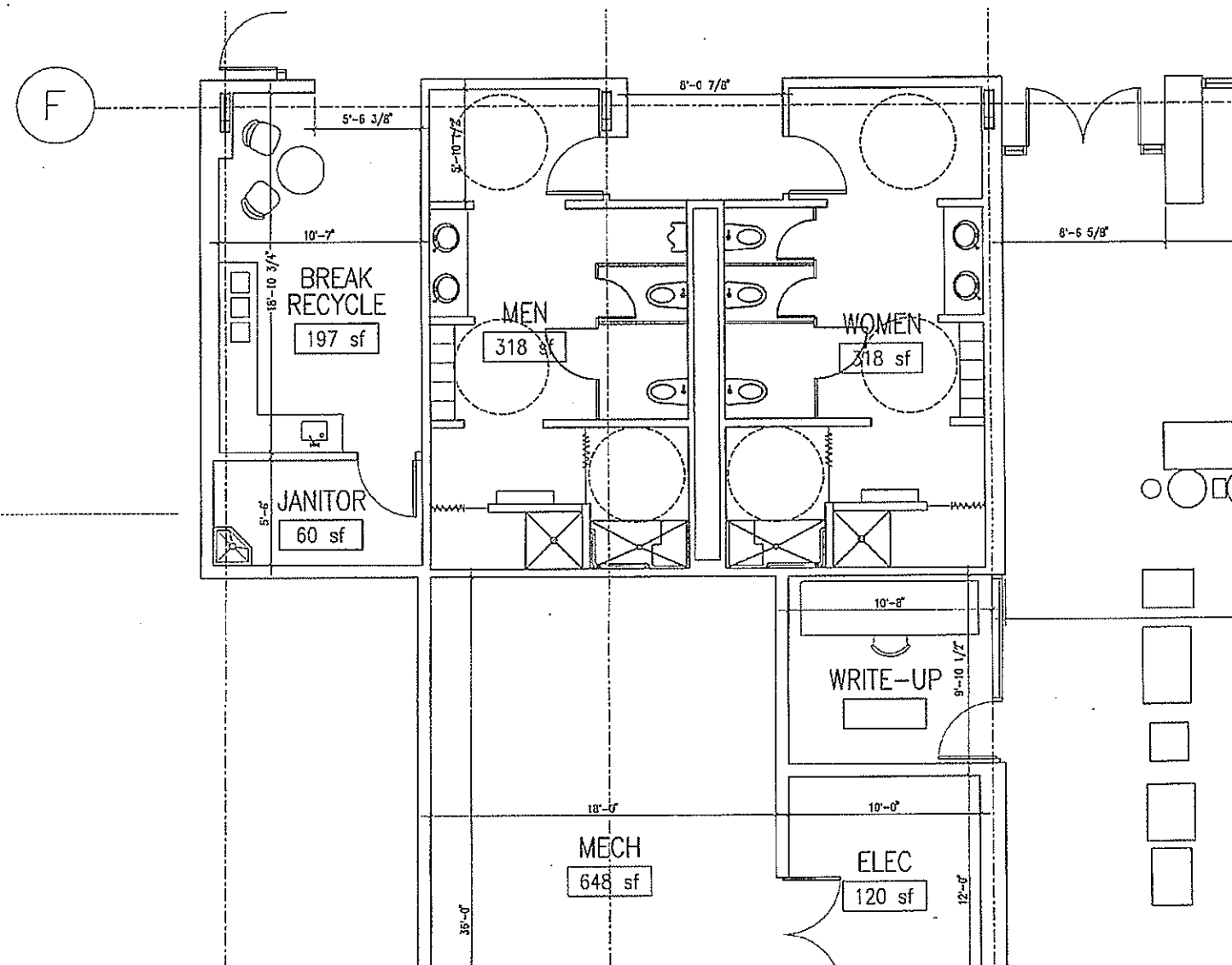
Casework: Clothes hooks (12).

Sinks & fixtures: (2) Sinks. (1) Waterless Urinal. (2) Toilets. (2) Showers.

Grey water systems: Greywater to toilets.

Domestic water: Hot and cold to sinks and showers.

NOT REVIEWED



Women's Bathroom

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: As Required

Major equipment: Air compressor, vacuum system, deionized water system, reverse osmosis water system, water heaters, HVAC equipment. See "Equipment List Sorted by Room" for complete list of research equipment in addition to building systems equipment.

Signage: Campus standard room sign. Educational room function description/display.

Telephone outlets: (1) outlet.

Data outlets: (4) outlets with 2 cables each.

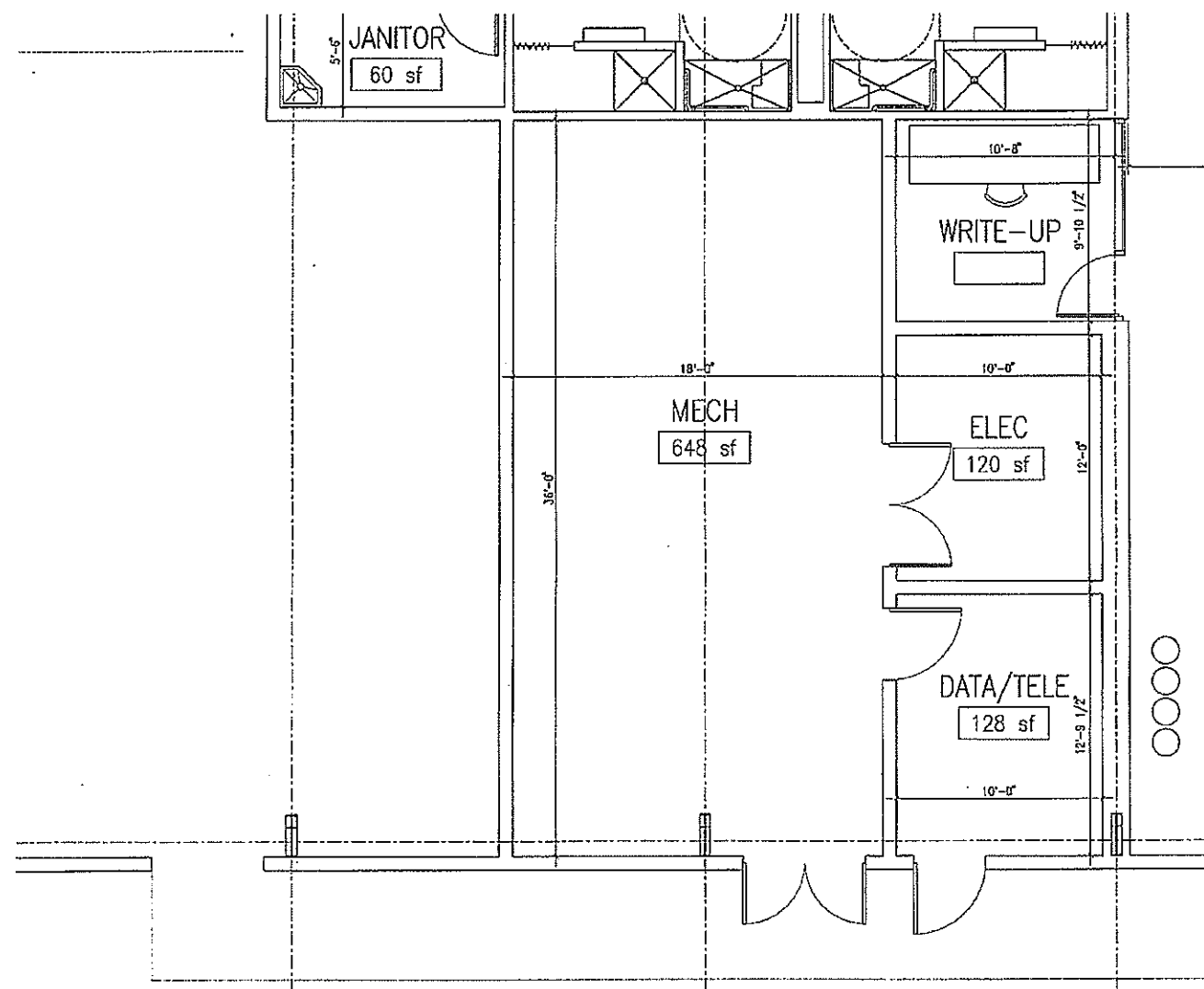
Sinks & fixtures: (1) hose bib; see equipment requirements.

Floor drains: Area drain.

Industrial water: Cold to hose bib; see equipment requirements.

Metering: Provide building meters for steam, chilled water, domestic water and natural gas per Performance Specifications.

NOT REVIEWED



Mechanical Room

Scale: 1/8" = 1'-0"

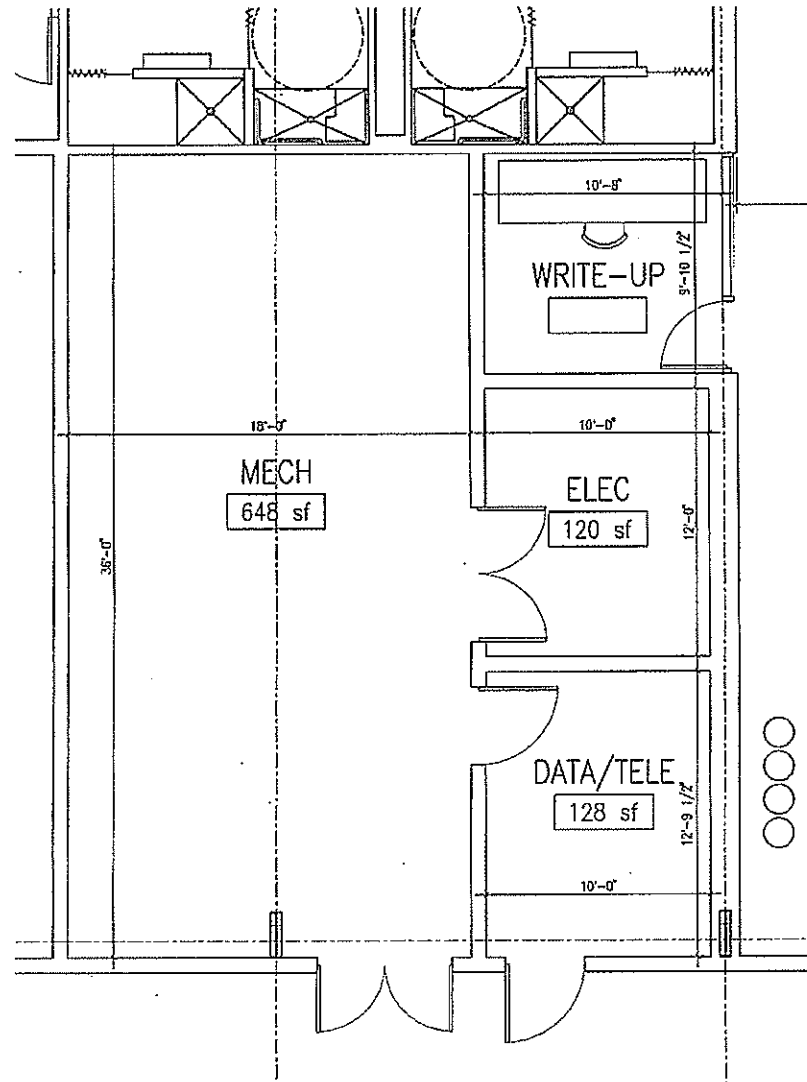
General Room Requirements

Net sq. ft.: 120

Major equipment: None.

Doors: Galvanized steel double door, 72"w x 84"h (1).

Metering: Building meter per Performance Specifications.



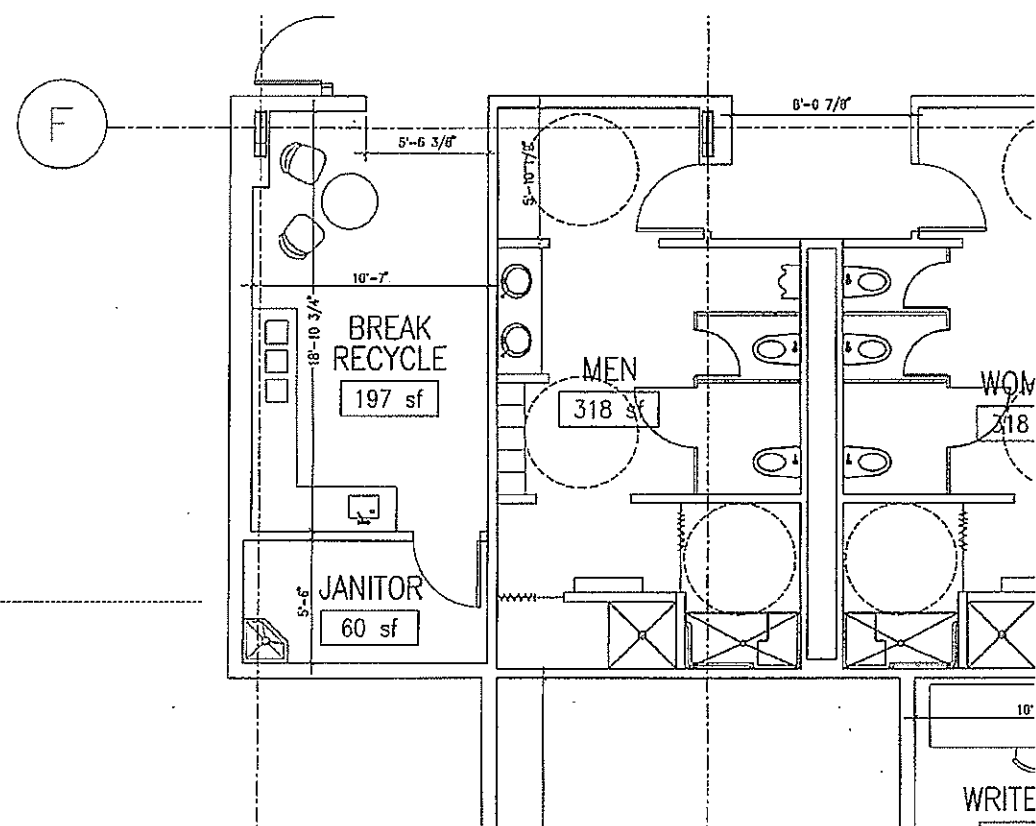
NOT REVIEWED

Electrical Room

Scale: 1/8" = 1'-0"

General Room Requirements

General Room Requirements Not Available.



PROVIDE DISHWASHER FOR V+E DEPT IN THIS AREA.

Recycle / Break Room

Scale: 1/8" = 1'-0"

General Room Requirements

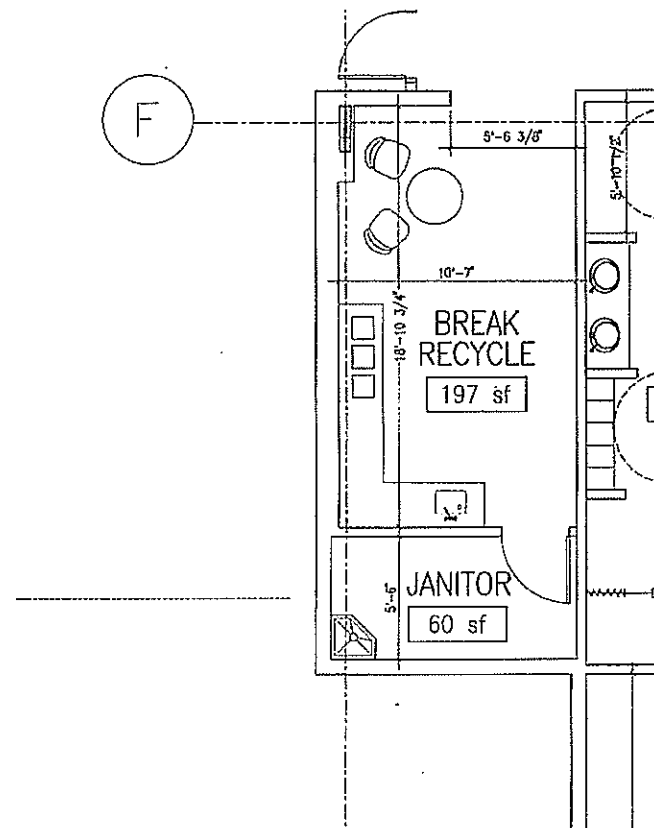
Net sq. ft.: 60

Major equipment: None.

Signage: Campus standard room sign.

Sinks & fixtures: (1) Mop sink.

Industrial water: Hot and cold water to mop sink.



NOT REVIEWED

Janitorial Closet

Scale: 1/8" = 1'-0"

General Room Requirements

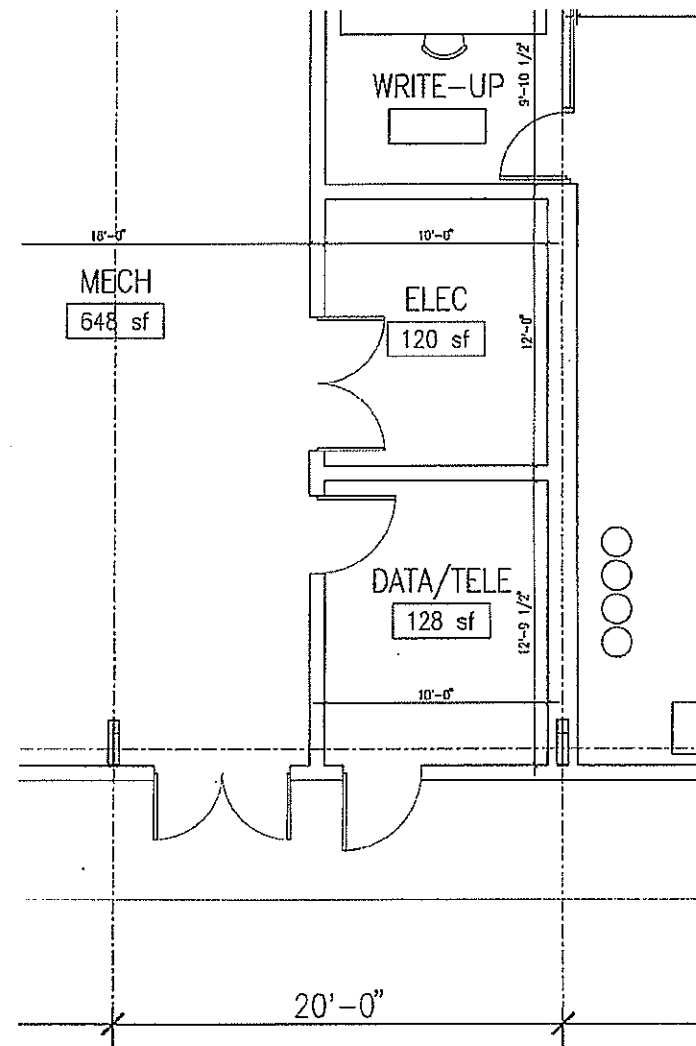
Net sq. ft.: 120

Major equipment: None.

Signage: Campus standard room sign.

Sinks & fixtures: (1) Mop sink.

Industrial water: Hot and cold water to mop sink.



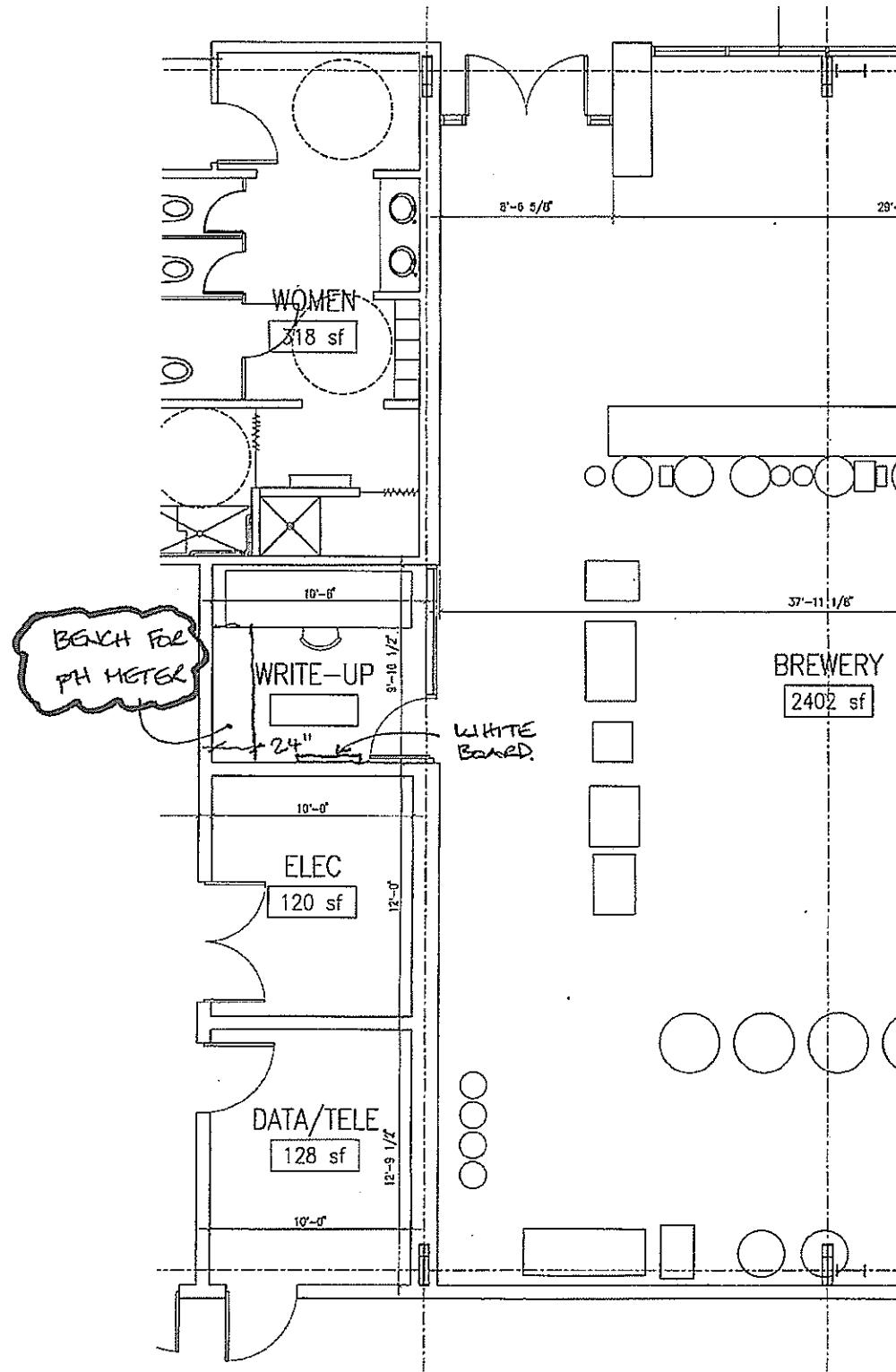
NOT REVIEWED

Telecom / Data Room

Scale: 1/8" = 1'-0"

General Room Requirements

General Room Requirements Not Available.



NIC (5'x10')

5'x10'

10'x10'

- PROVIDE DESK FOR WRITE UP + COMPUTER.
- WHITE BOARD
- BENCH FOR PH METER. (24" DEPTH MAX.)

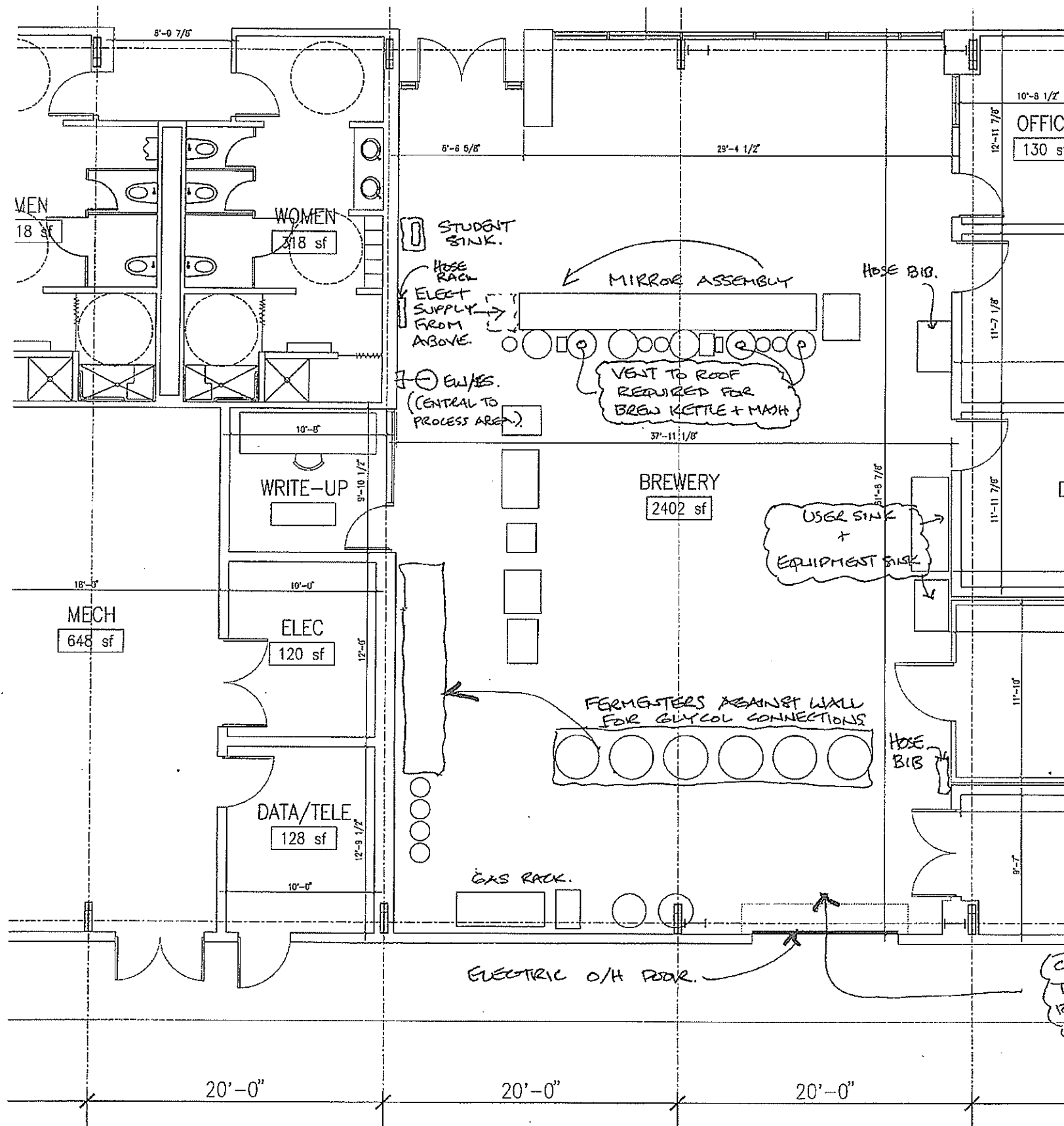
Brewery Write-Up

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UCDAVIS

10-14-2008



General Room Requirements

- 2 HOSE BIB LOCATIONS (INDUSTRIAL + DI WATER)

- HOSE RACK TO ACCOMMODATE 2 LONG + 8 SHORT HOSES. (20' LONG) (10' LONG)

Handwritten note: 20' LONG + 8 SHORT HOSES. (20' LONG) (10' LONG)

Handwritten note: CHECK FORK LIFT TRUCK TURNING RADIUS INTO BREWERY

UCD to provide info on forklift

Brewery

Scale: 1/8" = 1'-0"

Equipment

Bottle Crowner

Width: 30 Depth: 48 Height: 80
Mounting location: Floor - fixed
Drains: Bottle overflow drain to SS

Bottle Filler

Width: 30 Depth: 36 Height: 96
Access requirements: All four sides during operation
Mounting location: Floor - fixed
Power requirement: 220v 15A 3 P
Drains: Bottle overflow drain to SS
Compressed air: Compressed air.

Bottle Filler Controller

Width: 36 Depth: 25 Height: 52
Adjacencies: Next to bottle filler
Mounting location: Floor - rolling

Brew Box

Width: 32 Depth: 24 Height: 36
Mounting location: Floor - rolling

Brewhouse Brew Kettle

Mounting location: Floor fixed
Exhaust requirements: Exhaust to exterior.
Drains: Drain to sanitary sewer
Industrial steam: Industrial steam.
Compressed air: Compressed air.

Brewhouse Lauter Tub

Mounting location: Floor fixed
Drains: Drain to sanitary sewer
Industrial steam: Industrial steam.
Compressed air: Compressed air.

Brewhouse Lauter Tub agitator

Mounting location: Floor fixed

Brewhouse Mash Vessel #1

Mounting location: Floor fixed
Exhaust requirements: Exhaust to exterior.
Drains: Drain to sanitary sewer
Industrial steam: Industrial steam.
Compressed air: Compressed air.

Brewhouse Mash Vessel #2

Mounting location: Floor fixed
Exhaust requirements: Exhaust to exterior.
Drains: Drain to sanitary sewer
Industrial steam: Industrial steam.
Compressed air: Compressed air.

Brewhouse Process Water CIP tank

Mounting location: Floor fixed

Brewhouse Pump (Knock Out)(Brew Kettle)

Mounting location: Floor fixed

Brewhouse Pump (Lauter tub mixer)

Mounting location: Floor fixed

Brewhouse Pump (Lauter Tub)

Mounting location: Floor fixed

Brewhouse Pump (Mash)

Mounting location: Floor fixed

Brewhouse Pump (Process Water/CSS)

Mounting location: Floor fixed

Brewhouse Pump (Wort Cooler)

Mounting location: Floor fixed

Brewhouse Whirl Pool

Mounting location: Floor fixed
Drains: Drain to sanitary sewer
Compressed air: Compressed air.

Brewhouse Wort Cooler

Mounting location: Floor fixed
Drains: Drain to sanitary sewer

Work Table

Width: 72 Depth: 20 Height: 34

Carlsberg Flask

Width: 20 Depth: 26 Height: 54
Mounting location: Floor - rolling

Fermentor 1.5 Barrel (62gal.)

Width: 48 Depth: 48 Height: 72
Mounting location: Floor - rolling
CO2 capture: CO2 exhaust required.
Drains: Drain to sanitary sewer
Glycol cooling: Glycol cooling.

Fermentor 100 Gal

Width: 44 Depth: 44 Height: 144
Mounting location: Floor - fixed
CO2 capture: CO2 exhaust required
Drains: Drain to sanitary sewer
Glycol cooling: Glycol cooling.

Fermentor 16 Gal

Width: 16 Depth: 16 Height: 44
Mounting location: moveable

Freezer

Width: 42 Depth: 28 Height: 60

Hose Storage

Mounting location: Wall - fixed
Drains: Drain to sanitary sewer

Large Sheet Filter

Width: 28 Depth: 72 Height: 37
Mounting location: Floor - rolling

Programmable Logic Controller (PLC)

Width: 30 Depth: 38 Height: 80
Mounting location: Floor - fixed

Refrigerator

Width: 42 Depth: 28 Height: 60
Mounting location: Floor - moveable

Rolling Pump #1, 2, 3

Width: 18 Depth: 36 Height: 36

Small Sheet Filter

Width: 32 Depth: 20 Height: 39
Mounting location: Rolling

General Room Requirements

Net sq. ft.: 2,400

Major equipment: Brewhouse and fermentation tanks. See "Equipment List Sorted by Room" for complete list.

^{DESIRED} Audio/visual equipment: Marker Board, 4' x 8' (1). Public address system with cordless microphones (2).

Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque. ^{OUTSIDE OF BUILDING @ ENTRY}

Doors: Insulated galvanized steel rollup door (120"w x 120"h) from Brewery Receiving Area (1); glazed entry door from Corridor (1).

Equipment exhaust: Canopy hoods and dedicated direct vents required for the brew kettle and the cooker. See equipment requirements for all requirements.

Sinks & fixtures: (2) hand washing sinks near the corridor door and the receiving door; (2) hose stations on opposite walls; (1) large 3 compartment service sink provided by University with all fittings provided by Contractor.

Eyewashes/showers: Provide combination emergency eyewash and shower within 100 feet of any location within the room - may be in corridor.

Floor drains: Provide continuous stainless steel trench drain, 12 inches wide, with completely removeable grate section rated for forklift traffic. Drain lines from the Brewery shall be dedicated and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

Other special piping: See equipment requirements. Provide racks for 6 cylinders for gases such as carbon dioxide, oxygen, high pressure air and nitrogen. Distribution piping is not required.

Metering: Configure piping so that process loads for the brewery could be metered in the future, separate from other building functions, including steam, industrial water and treated water.

Brewery

General Room Requirements

Net sq. ft.: 130

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 4' (1).

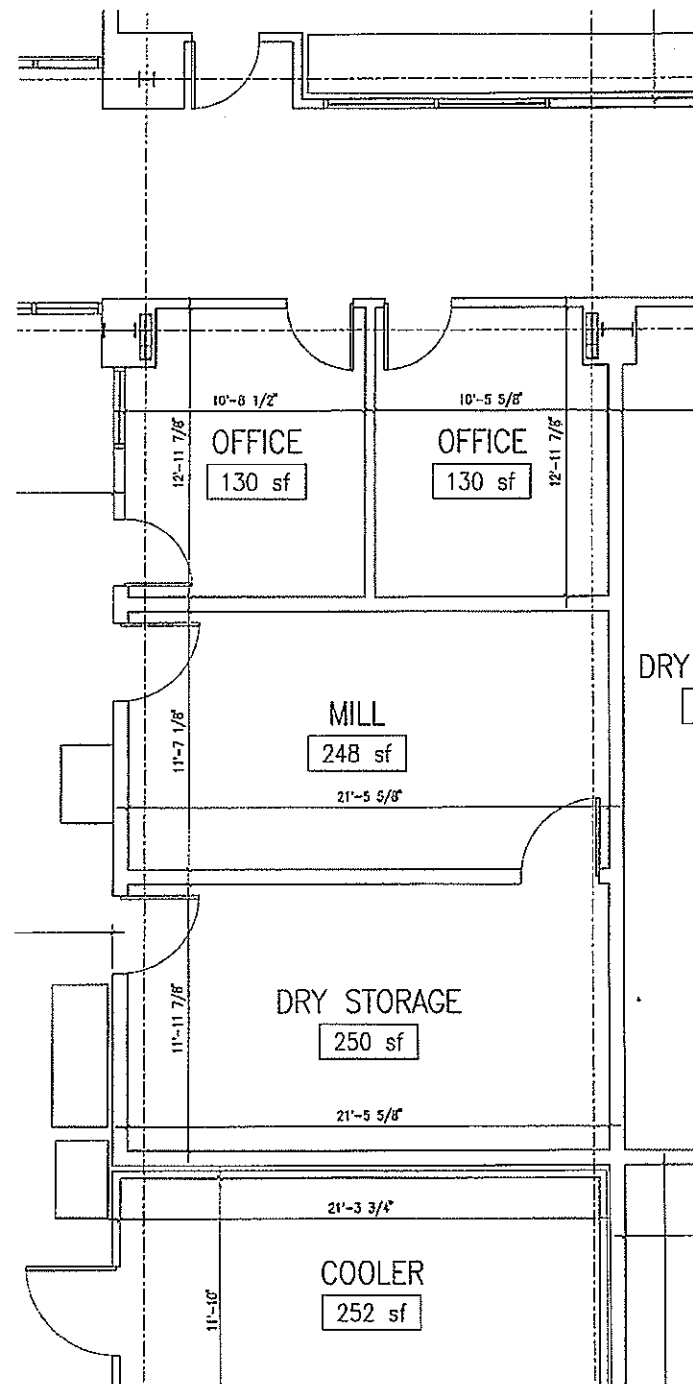
Furniture: Desk with Return (1), Desk Chair (1), Stacking Chair (2), File Cabinet (2), Bookshelf (144"long x 72"h).

Signage: Campus standard room sign. Donor recognition plaque.

Floor plan dimensions: Minimum 10 feet nominal width.

Doors: Wood door with viewing window or sidelight, 36"w x 84"h, from Corridor (1).

Casework: None.



No COMMENTS.

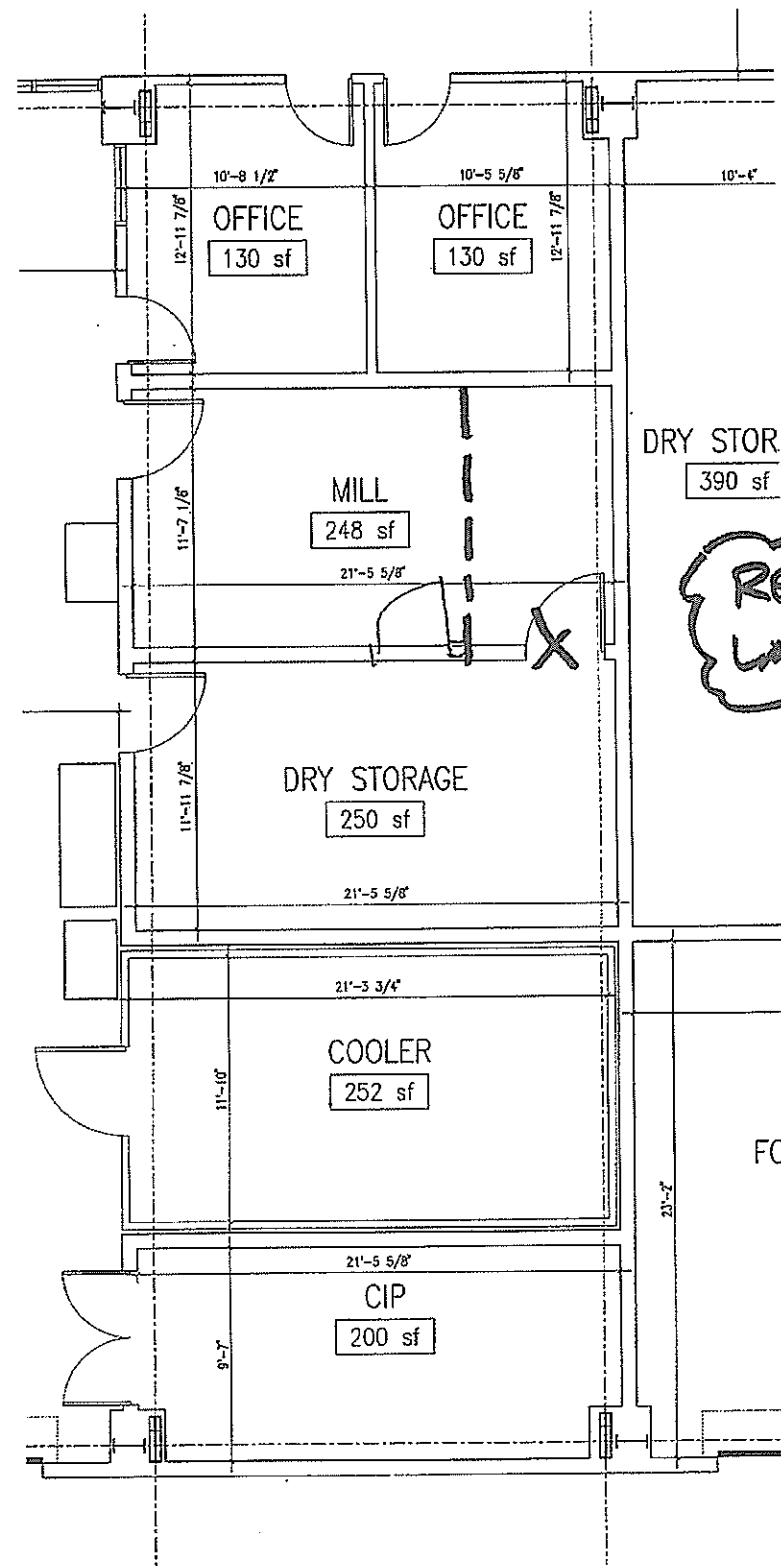
Brewery Office

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10/14/2008



General Room Requirements

Net sq. ft.: 100

Major equipment: Malt mill.

Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Equipment

Malt Mill

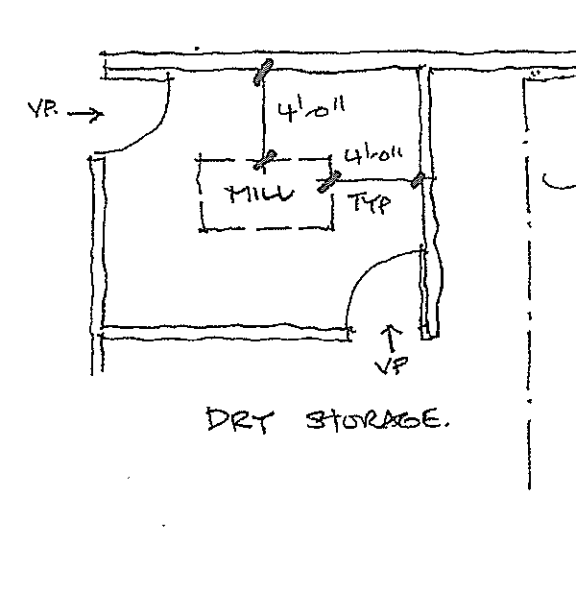
Width: 28 Depth: 42 Height: 73

Access requirements: 48" clear on left and side

Exhaust requirements: Dust extraction system required.

NOTE:
IF ROOM VENTILATION
CAN PROVIDE THIS
NOT REQUIRED

VP. - PROVIDE VISION PANEL IN DOORS



OPTIONAL FOR ADDITIONAL
SHELVING - AFOI

PAINTED OR NEW (if applicable)

Brewery Mill

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UCDAVIS

10/14/2008

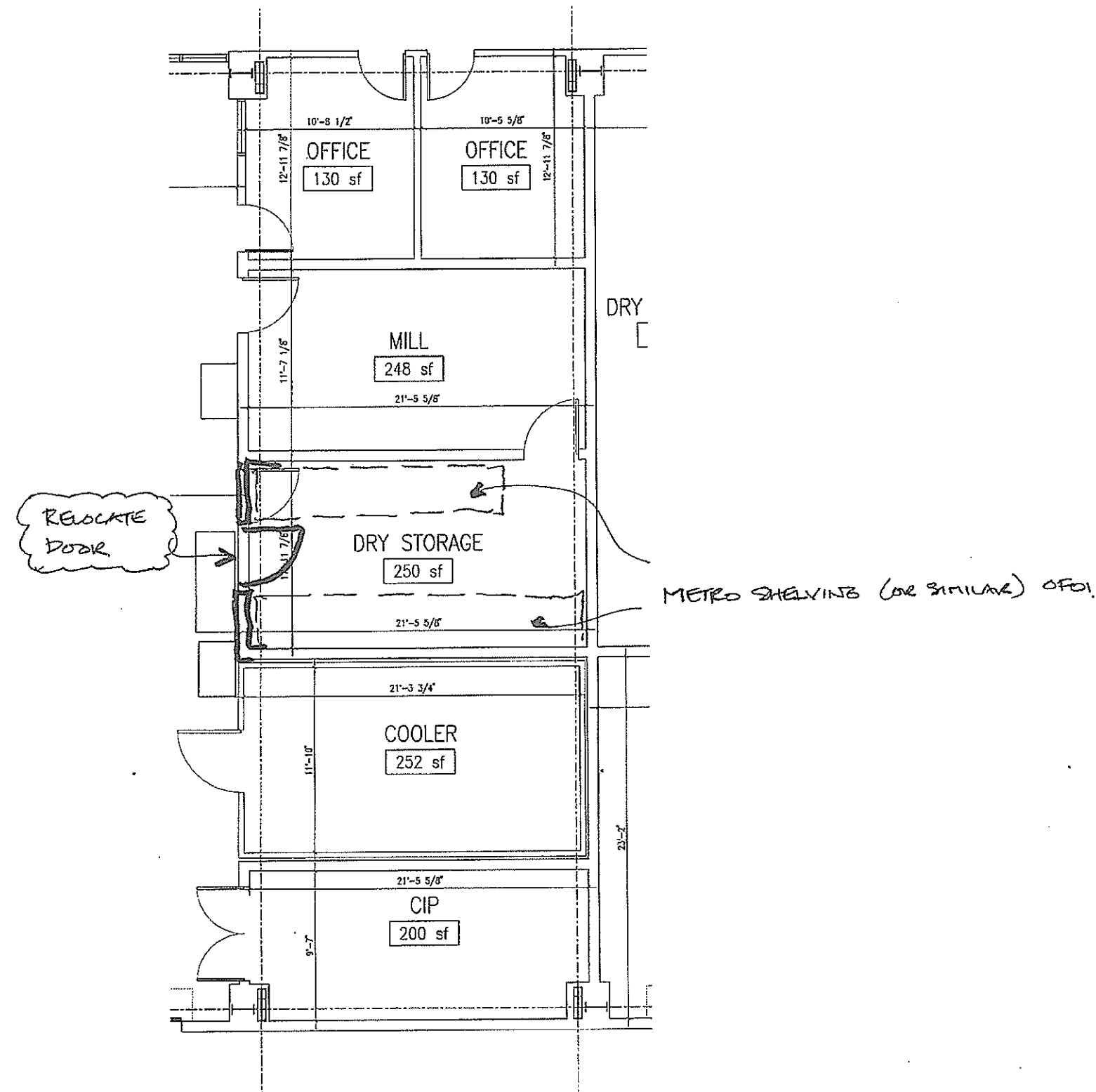
General Room Requirements

Net sq. ft.: 400

Major equipment: Large and small sheet filters; Carlsberg flask and rolling cart; portable pumps; gas cylinder stands for oxygen/nitrogen/compressed air; counterflow wort chiller; shop dry vacuum; Opteck-Danulek turbidmeter; Mettler-Toledo dissolved oxygen meter; upright freezer; brewery spare parts; 20 to 32 gallon malt storage bins (20); 32 gallon compost bin (1). See "Equipment List Sorted by Room" for complete list.

Furniture: File cabinet (1); spare parts cabinet (1); storage shelving for brewery supplies (30 lineal feet).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.



• PROVIDE VISION PANEL IN DOOR.

See if interior door would allow

Brewery Dry Storage

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 250

Major equipment: None.

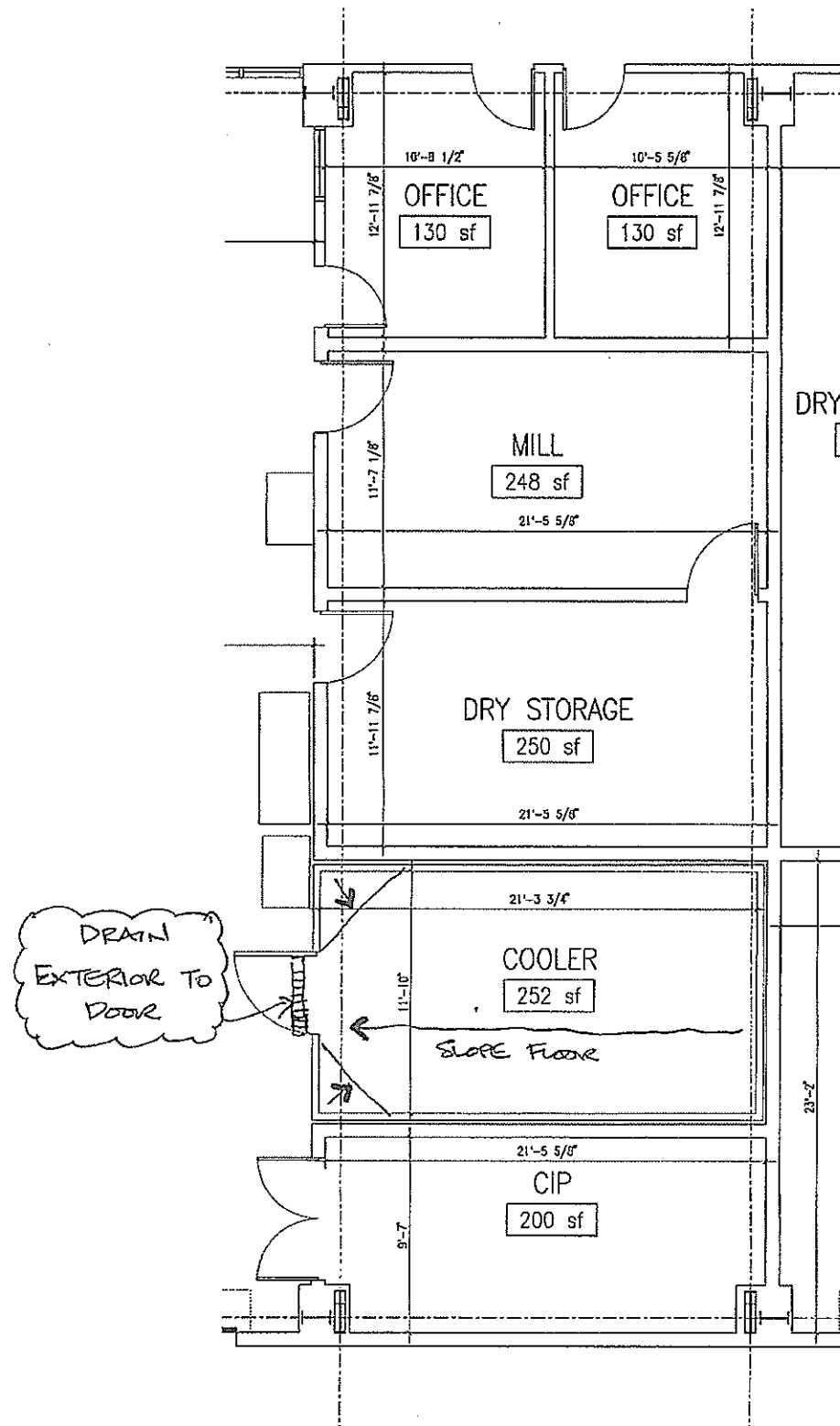
Furniture: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Floor drains: None. Slope floor to drain towards door. *include drain outside door.*

- PROVIDE PROTECTION TO SIDES OF INSULATED WALL @ TOP OF KEG (APPROX 30" A.F.F.)
- SHELVING IN COOLER O.F.O.I.

also provide credit for storage space. @ 1000 cu ft. @ 1000



Brewery Cooler

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 200

Major equipment: Glycol cooling system and clean-in-place system for brewery fermenters. See "Equipment List Sorted by Room" for complete list.

Signage: Campus standard room sign. Educational room function description/ display. Donor recognition plaque.

Floor drains: Area drain. Drain lines from the Brewery Glycol & Equipment Room shall be dedicated and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

Equipment

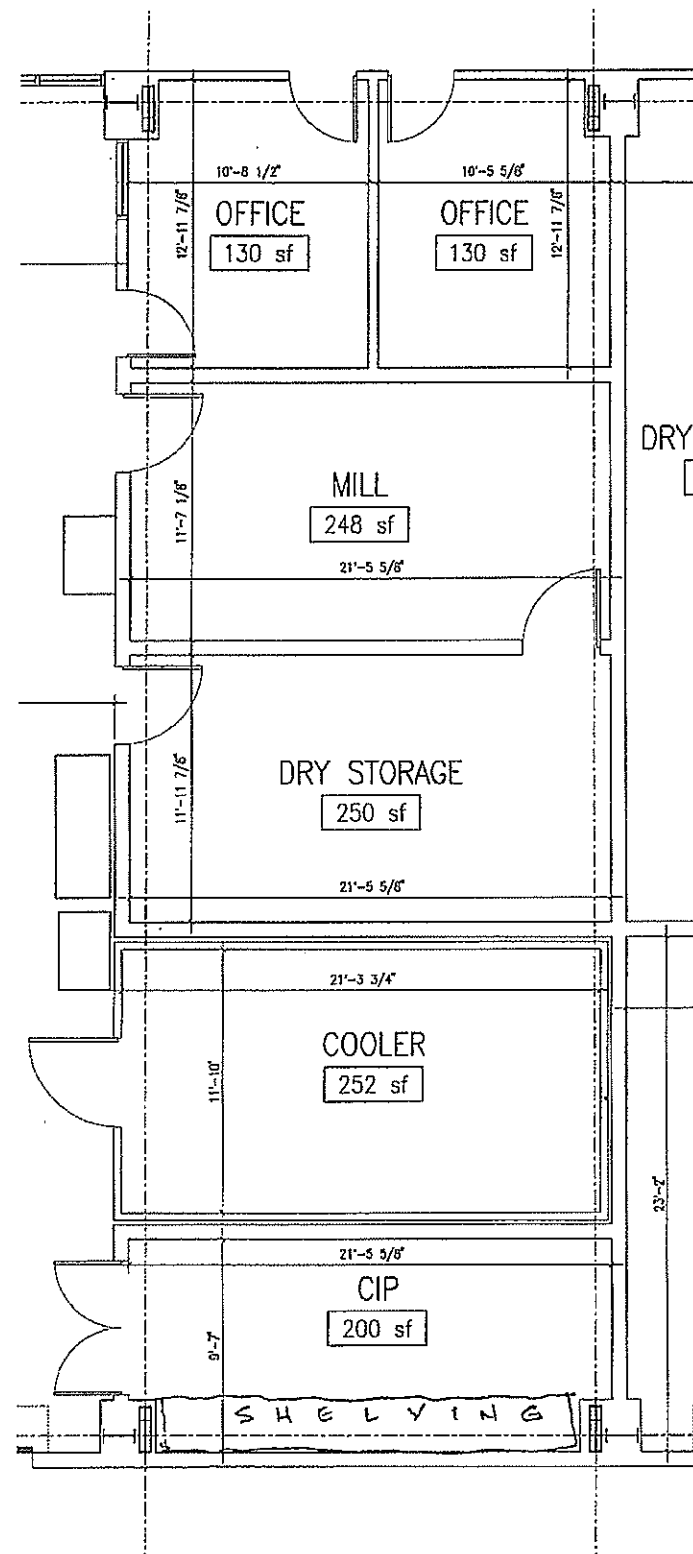
Glycol Control Panel

Adjacencies: Adjacent to glycol equipment
Mounting location: Wall - fixed

Glycol System

Width: 72 Depth: 120 Height: 60
Mounting location: Floor - fixed
Drains: Drain to sanitary sewer

- CIP SYSTEM IS FUTURE - NO DETAILS AVAILABLE
- CHEMICAL STORAGE ON SHELVING (OFOI) IN 5 GALLON BOTES (NaOH, DETERGENTS....)



Brewery CIP / GLYCOL

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 600

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 20' (1); Projection Screen, motorized, 8' x 12' (1).

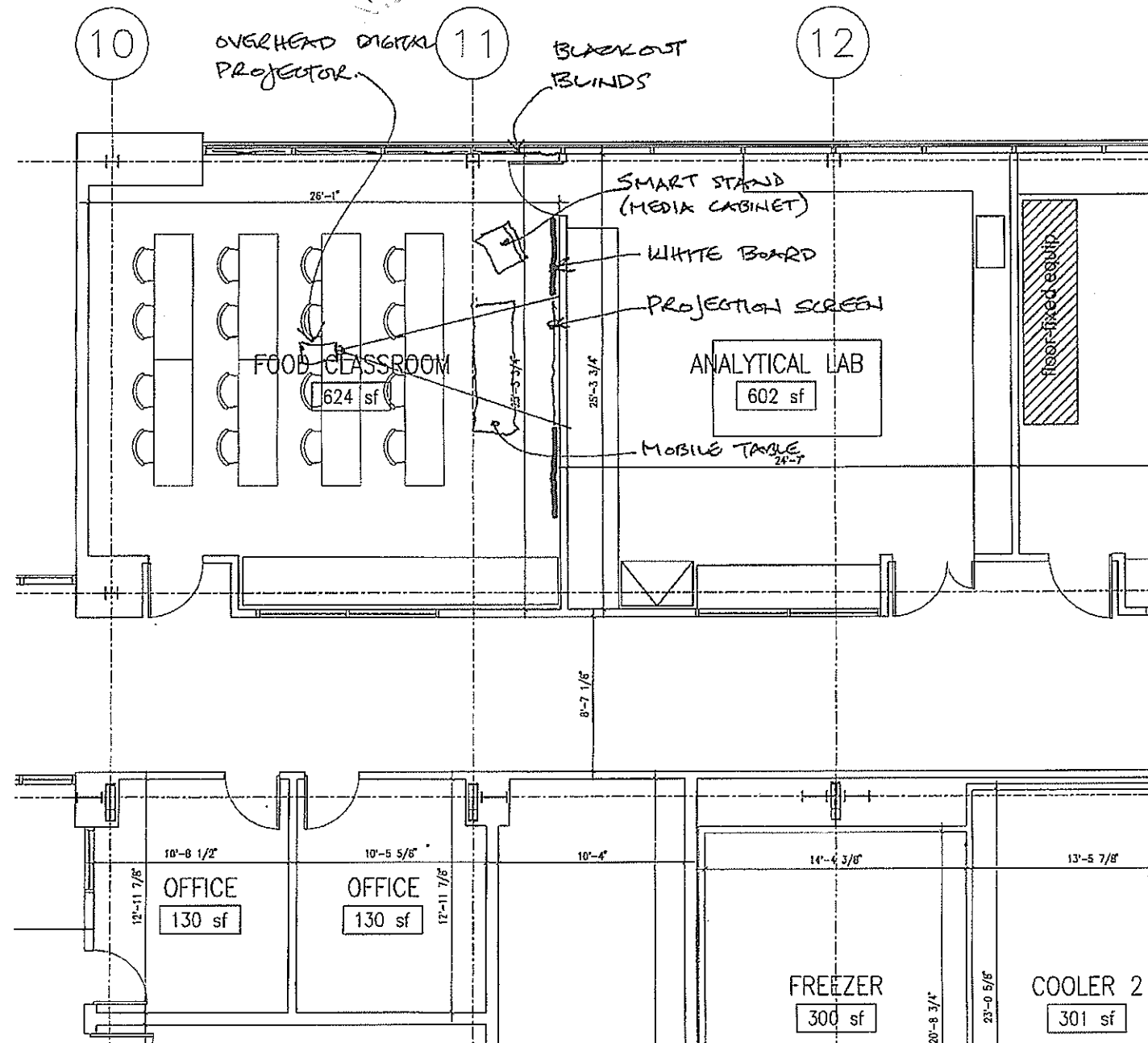
Furniture: Class Room Table, 30"d x 72"w x 30"h (6); Stacking Chairs (18).

Signage: Campus standard room sign. Donor recognition plaque.

Casework: Counter and undercounter storage (approx. 15 lineal feet).

Sinks & fixtures: (1) Stainless steel bar sink. — SINGLE SINK.

Treated water: Hot and cold treated water to bar sink. + COFFEE.



- SINK TO INCLUDE FOOD DISPOSAL.
- WHITE BOARD
- PROJECTION SCREEN / O/H PROJECTOR @ CEILING.
- INFRA-STRUCTURE SIMILAR TO GENERAL ASSIGNMENT CLASSROOMS — UCD TO VERIFY.
- TABLE + MOBILE SMART STAND @ FRONT OF ROOM (REQUIRED)
- SHELVING FOR LIBRARY CAPABILITY
- CONTROLS FOR ALT. LIGHTING SCENARIOS.
+ BLACKOUT CAPABILITY (LUTRON SYSTEMS)
- 2 DIGITAL CONNECTIONS FOR EQUIPMENT FEEDS

Food Science Classroom

Scale: 1/8" = 1'-0"

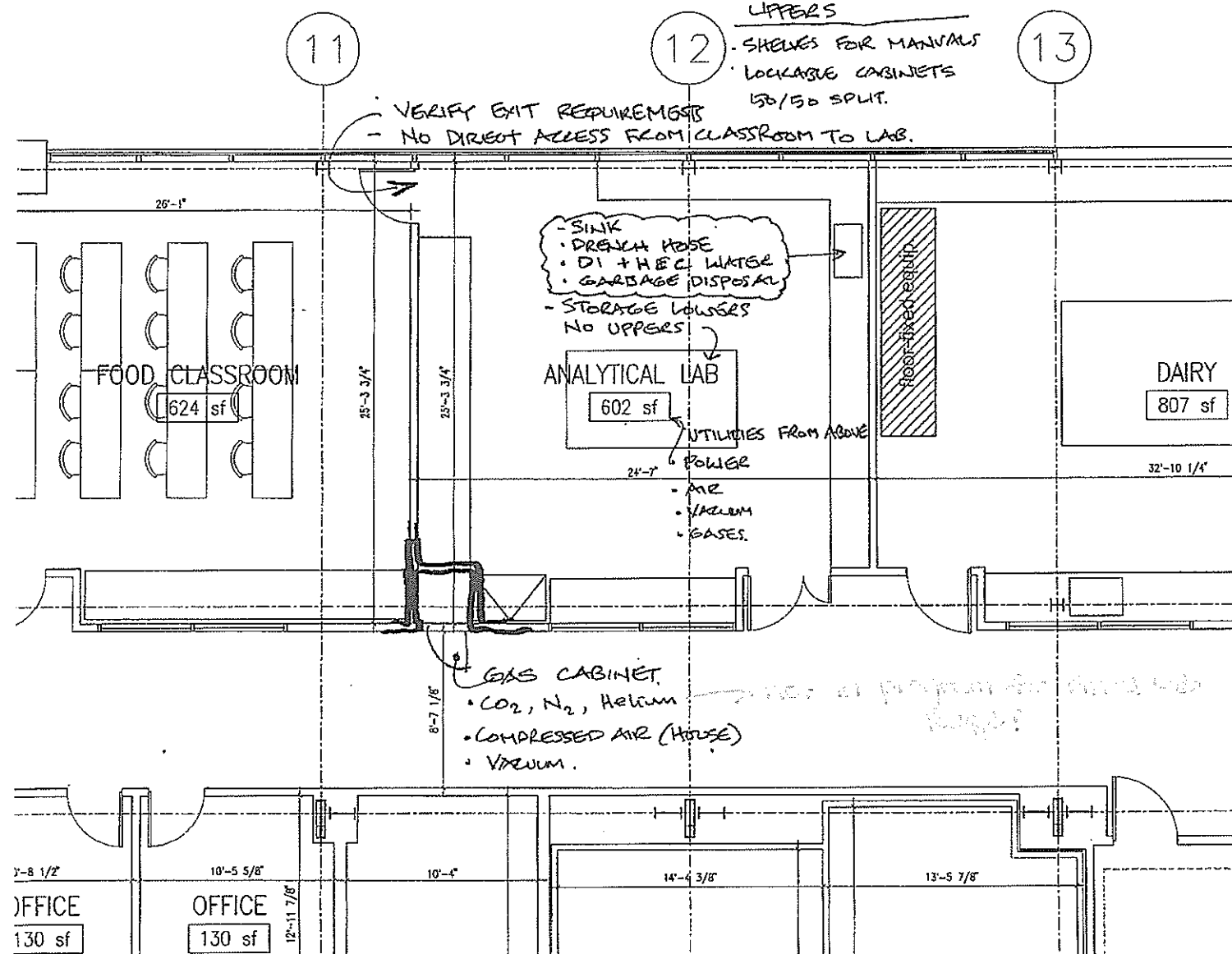
LAB CASEWORK

LOWER CABINETS

- STORAGE FOR SUPPLIES
- VARIETY OF CABINETS, SOME DRAWERS WITH MULTIPLE DEPTHS.
- FLEX SHELVES.

UPPERS

- SHELVES FOR MANUALS
- LOCKABLE CABINETS
- 50/50 SPLIT.



General Room Requirements

Net sq. ft.: 600

Major equipment: Benchtop analytical equipment and possibly a refrigerator and/or freezer. See "Equipment List Sorted by Room" for complete list.

Audio/visual equipment: Marker Board, 4' x 4' (1).

Furniture: Laboratory Stool (3).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Casework: Epoxy countertop, undercounter drawers and cabinets, overhead reagent shelving and closed cabinets (approx. 65 lineal feet). Materials and construction per Campus Standards & Design Guide.

Chemical hoods: One four foot wide chemical hood per Campus Standards & Design Guide.

Sinks & fixtures: (1) Lab sink (epoxy); (1) Cupsink in fume hood.

Eyewashes/showers: Emergency shower and eyewash combination within 100 feet of any point in the room. May be in corridor. Provide a separate sink eyewash if the emergency shower and eyewash combination is not provided within the room.

Equipment

30" x 30" Centrifuge - High Speed
Mounting location: Floor - moveable

Chemical Fume Hood
Width: 48
Clearances: Provide 60 inches front clearance.
Mounting location: Floor - fixed
Exhaust requirements: Direct vent to exterior.
Drains: Drain from cupsink.

Evaporator / Concentrator

10' PLAN LENGTH
(CAN BE ON CASTERS)

Single Stage Sauce Evaporator

Visometer
Mounting location: Bench

Homogenizer - IN PILOT PLANT

Refrigerator
Width: 96 Depth: 36

HOP BREAK FROM CON-AGRA

Food Science Laboratory

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10.14.2008

General Room Requirements

Net sq. ft.: 130

Major equipment: None.

Audio/visual equipment: Marker Board, 4' x 4' (1).

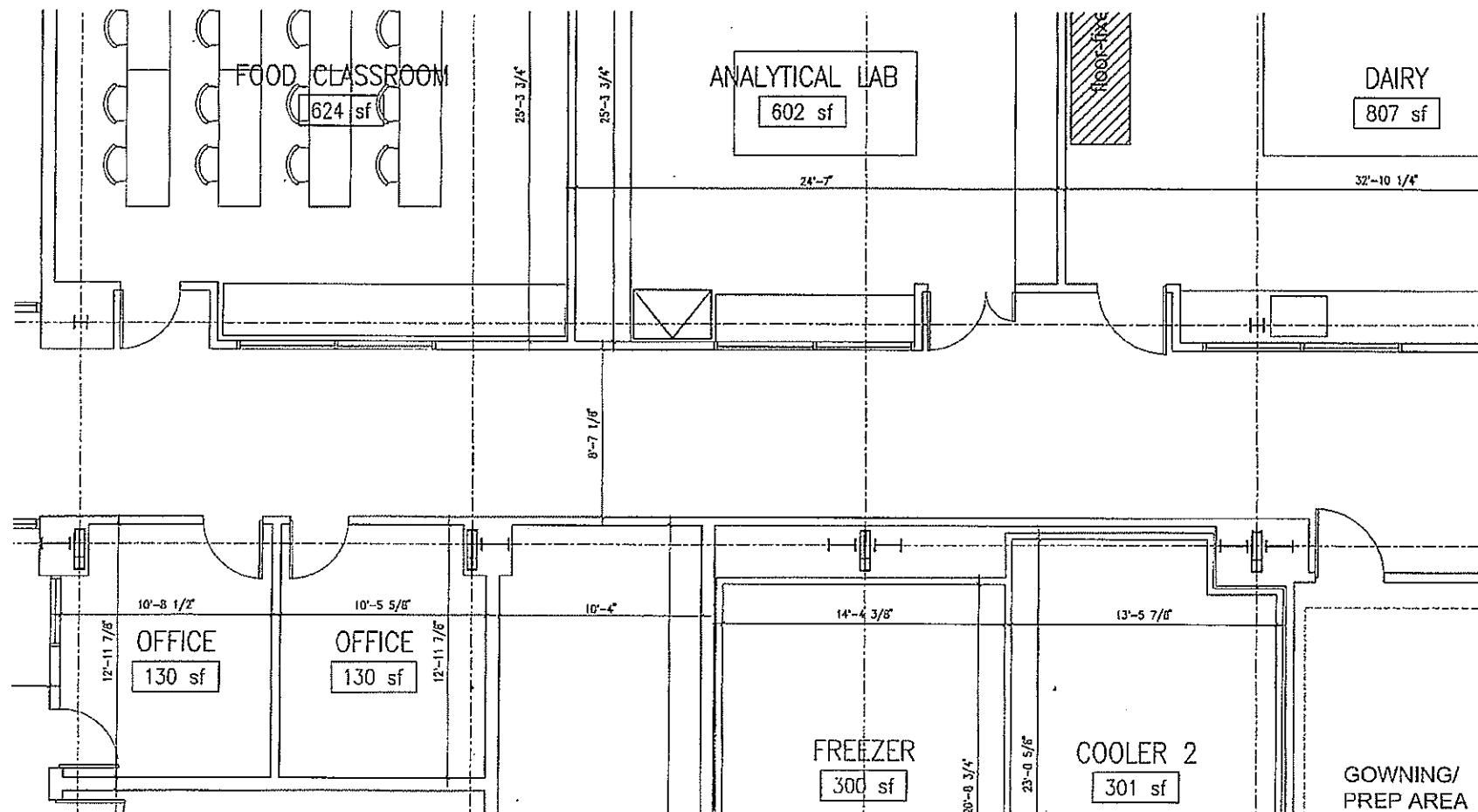
Furniture: Desk with Return (1), Desk Chair (1), Stacking Chair (2), File Cabinet (2), Bookshelf (144"long x 72"h).

Signage: Campus standard room sign. Donor recognition plaque.

Floor plan dimensions: Minimum 10 feet nominal width.

Doors: Wood door with viewing window or sidelight, 36"w x 84"h, from Corridor (1).

Casework: None.



NOT REVIEWED

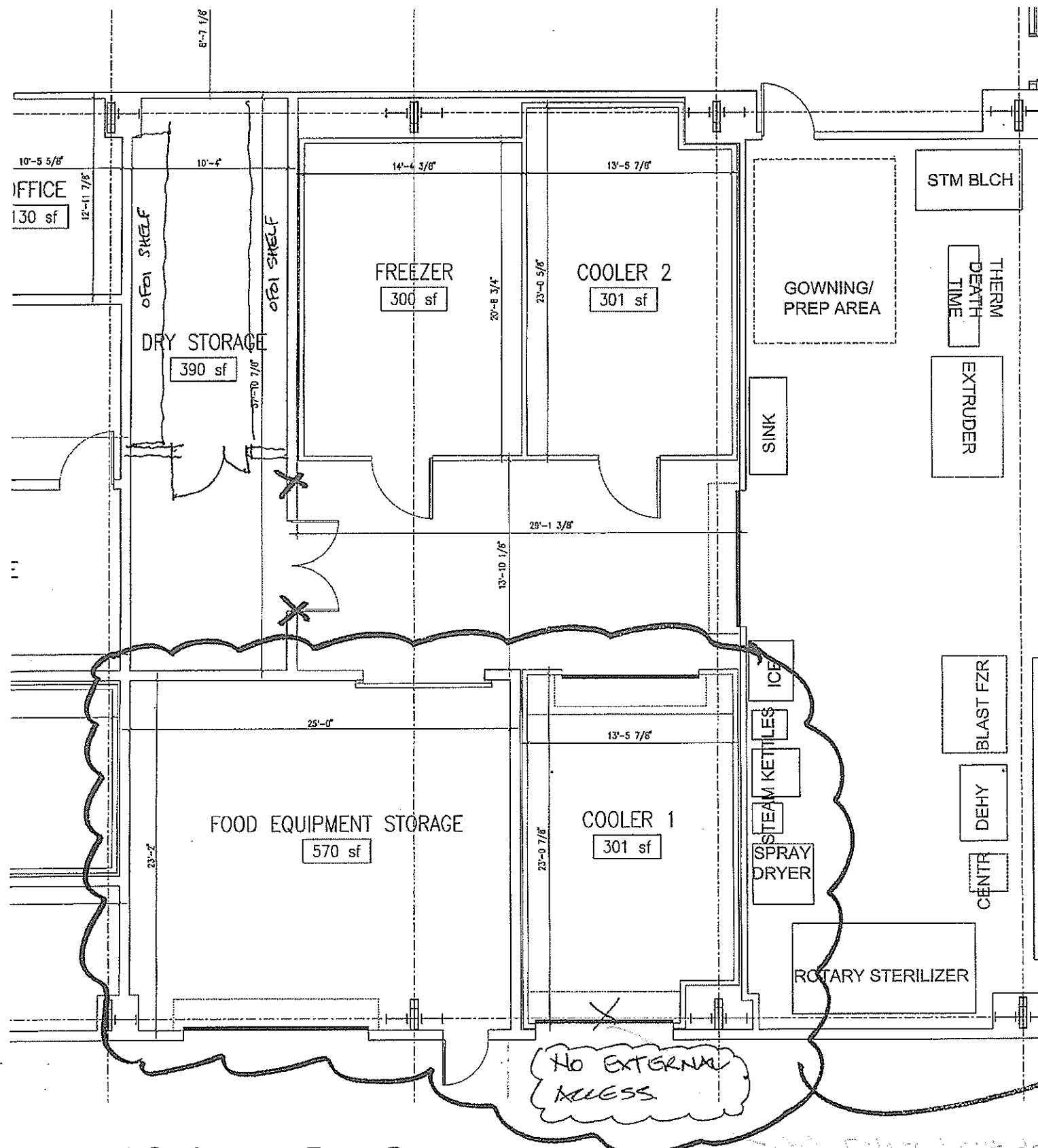
Food Science Office

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10.14.2008



General Room Requirements

Net sq. ft.: 200

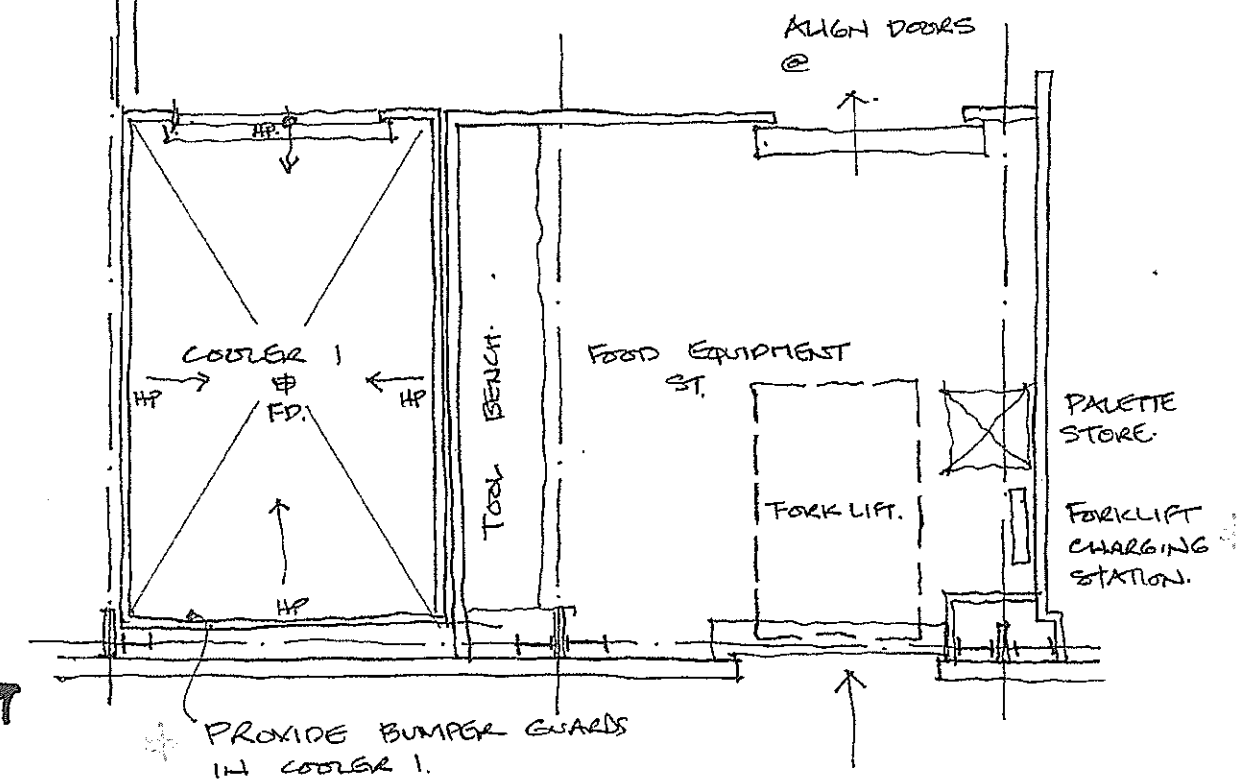
Major equipment: None.

Furniture: Shelving.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

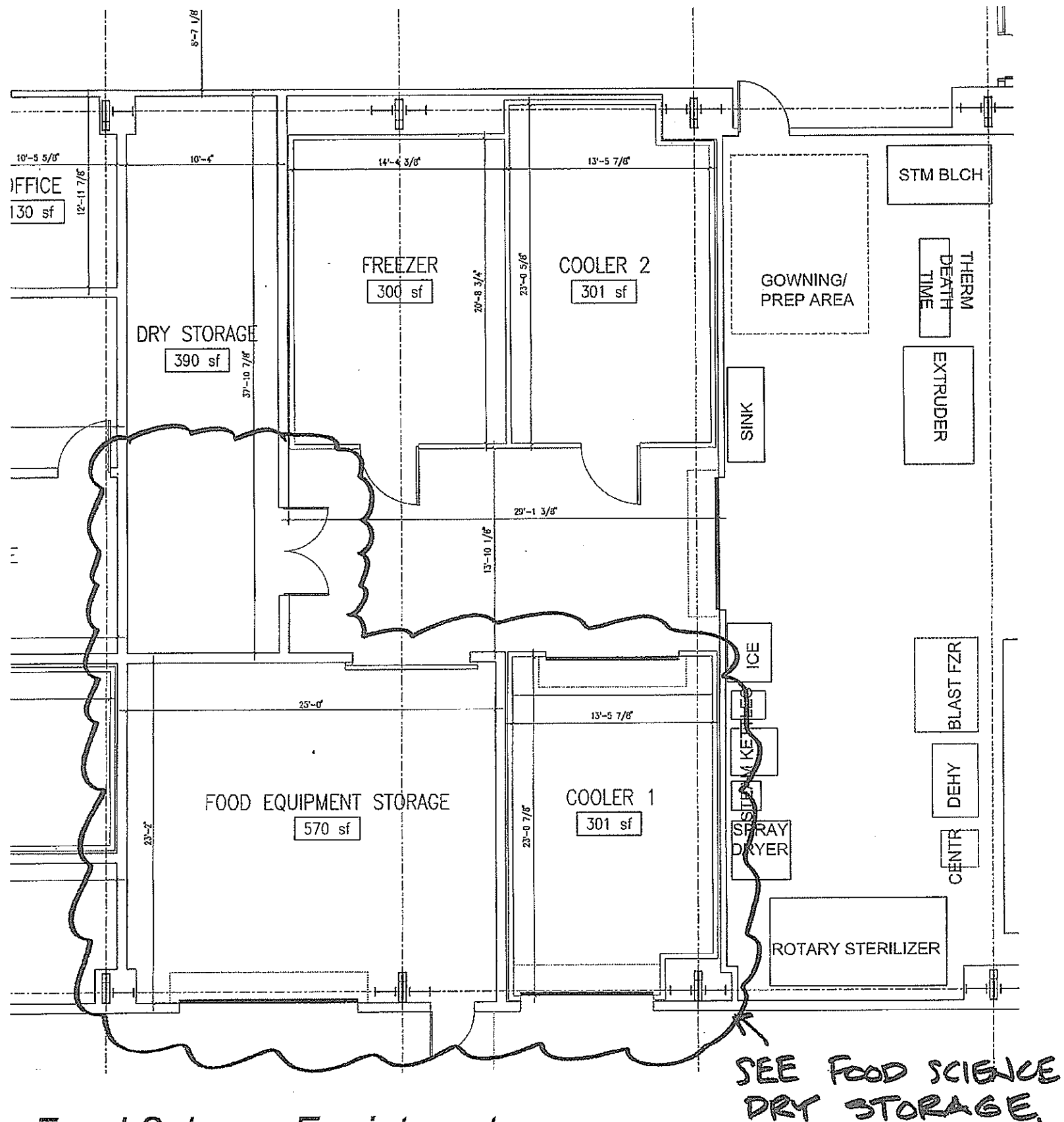
• MIRROR COOLER 1 + FOOD EQUIPMENT STORE
PER PLAN BELOW

• WORK BENCH -- SHELVING ABOVE (6' ABOVE/5' CLOSED)
- COMPRESSED AIR
- WELDING UNIT (OFOI)
- POWER.



Food Science Dry Storage

Scale: 1/8" = 1'-0"



Food Science Equipment

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 600

Major equipment: Large and small food processing equipment typically used in General Food Processing but stored in Food Processing Equipment Storage. Also tool storage in a locked cage area and chemical dispensing in a locked cage area. See "Equipment List Sorted by Room" for complete list.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Sinks & fixtures: (1) Hose station.

Floor drains: Area drain (2).

Compressed air: 3 drops, including one in the tool storage area.

Equipment

Chocolat Equipment

Mounting location: Floor - moveable

Continuous Fryer

Exhaust requirements: Exhaust hood?

Extruder

Fork Lift

Clearances: 12 foot minimum height clearance.

Exhaust requirements: Gas fumes generated while in operation.

Homogenizer

Meat Slicer

Mixer

Mounting location: Floor - moveable

Pallette jack

Mounting location: Floor - rolling

Plate Heat Exchanger

Pressure Washer

Treated water: Deionized hot water.
Mounting location: Floor - rolling

Small Blancher

Tofu Making Equipment

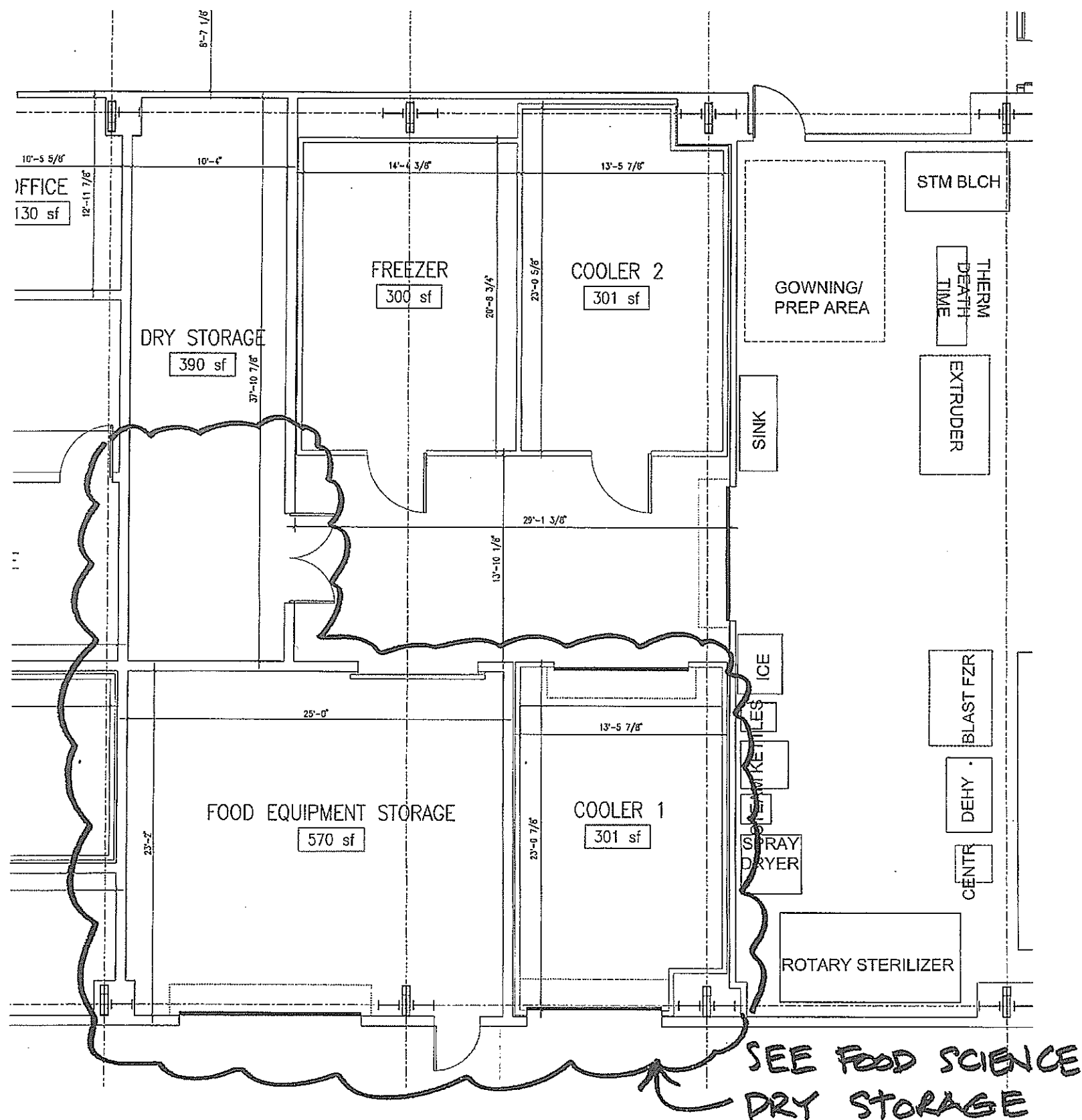
Brown Citrus Finisher

Disintegrator (Rietz)

Width: 42 Depth: 32 Height: 72
Mounting location: Floor

Reeves Mills

Width: 28 Depth: 39 Height: 52
Mounting location: Floor



General Room Requirements

Net sq. ft.: 300

Major equipment: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Casework: None.

Sinks & fixtures: (1) hose bib.

Floor drains: Area drain (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

Domestic water: Cold to hose bib.

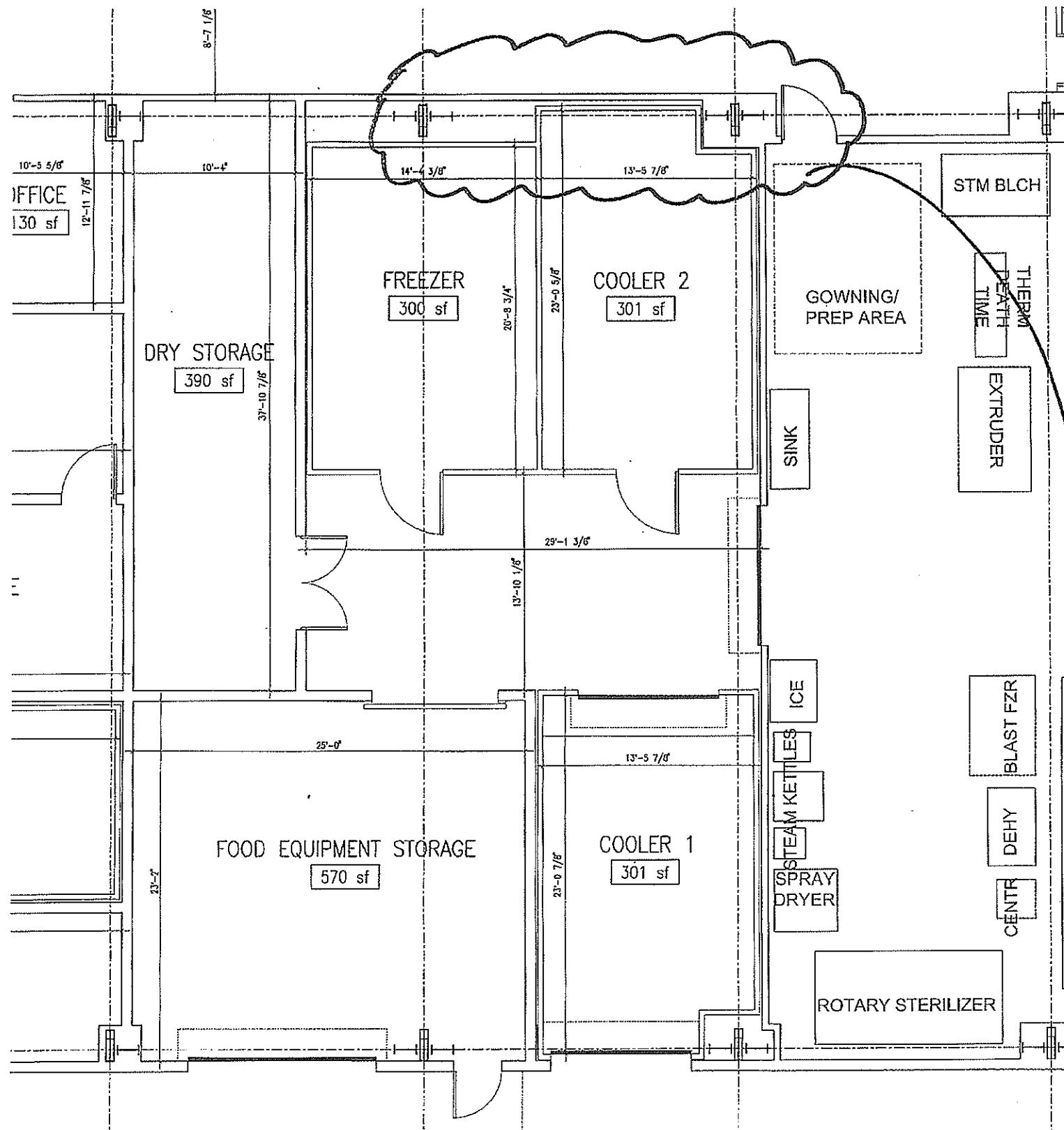
Floor drains: Area drain (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

- PROVIDE BUMPER GUARDS IN COOLER 1
- REVIEW OPERATING MECHANISM FOR OVERHEAD DOORS
CHAIN OPERATED IS ISSUE FOR CLEANING

• CONSIDER STEEL WALL PANELS FOR COOLERS

Food Science Cooler No. 1

Scale: 1/8" = 1'-0"



General Room Requirements

Net sq. ft.: 300

Major equipment: None.

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

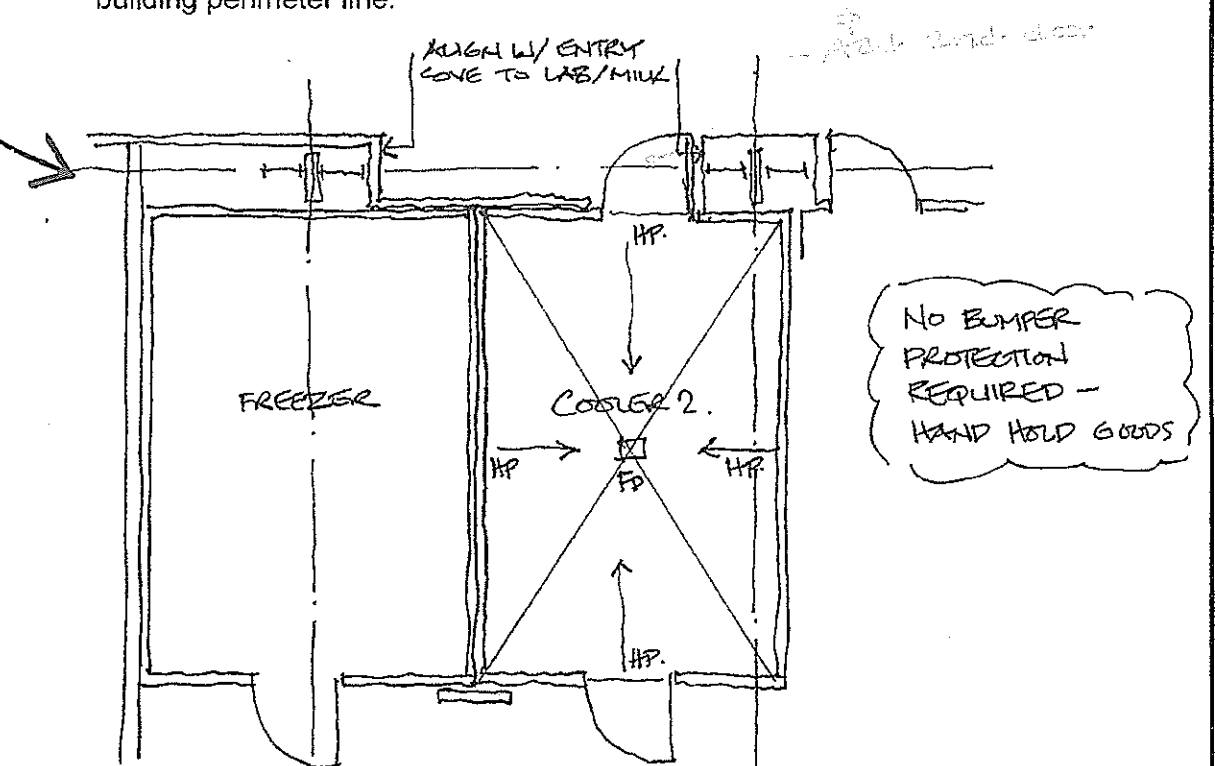
Casework: None.

Sinks & fixtures: (1) hose bib.

Floor drains: Area drain (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

Domestic water: Cold to hose bib.

Floor drains: Area drain (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.



Food Science Cooler No. 2

Scale: 1/8" = 1'-0"

General Room Requirements

Net sq. ft.: 300

Major equipment: None.

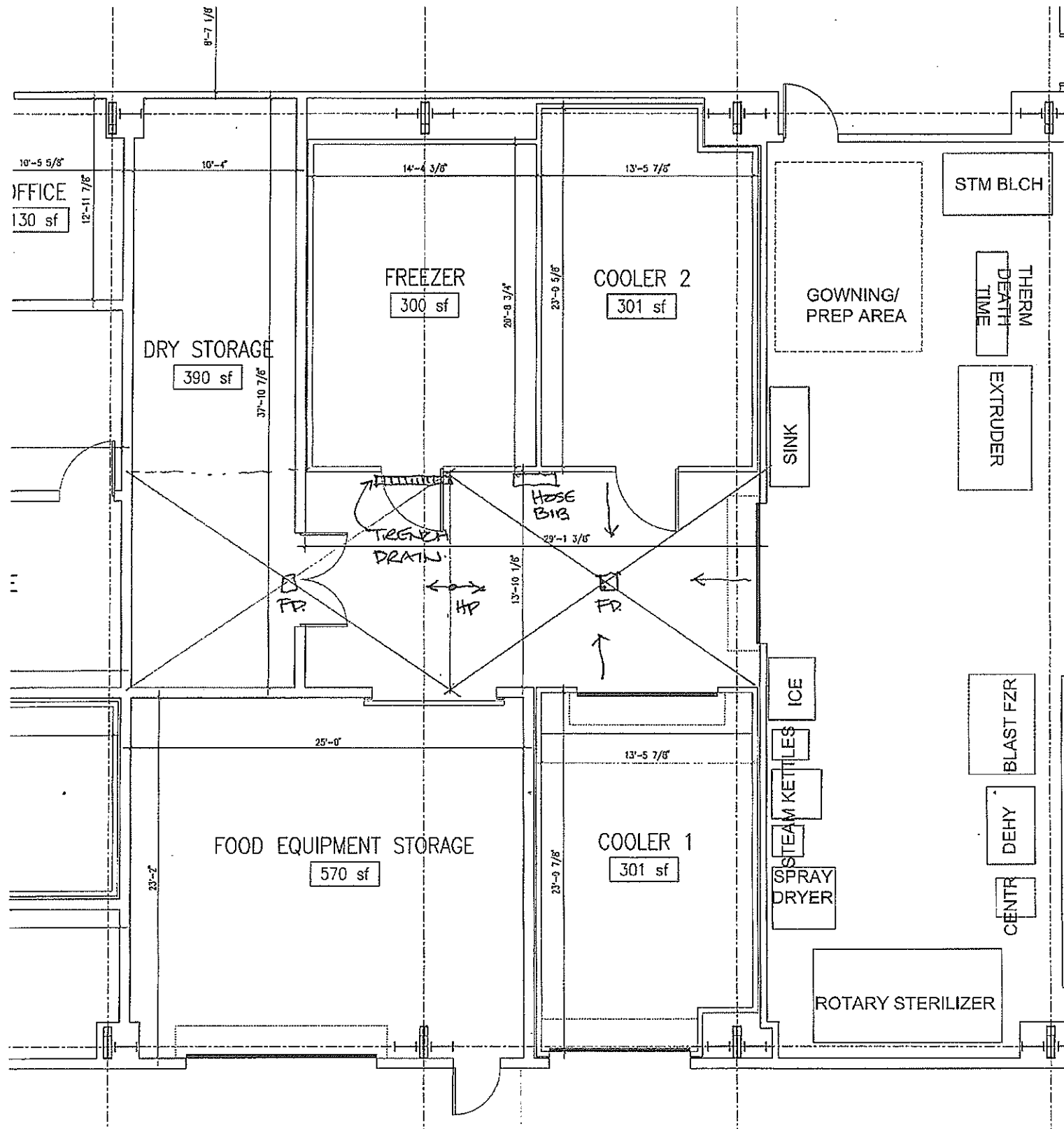
Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Casework: None.

Floor drains: Area drain (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

No Floor drains: Area drains (2). Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

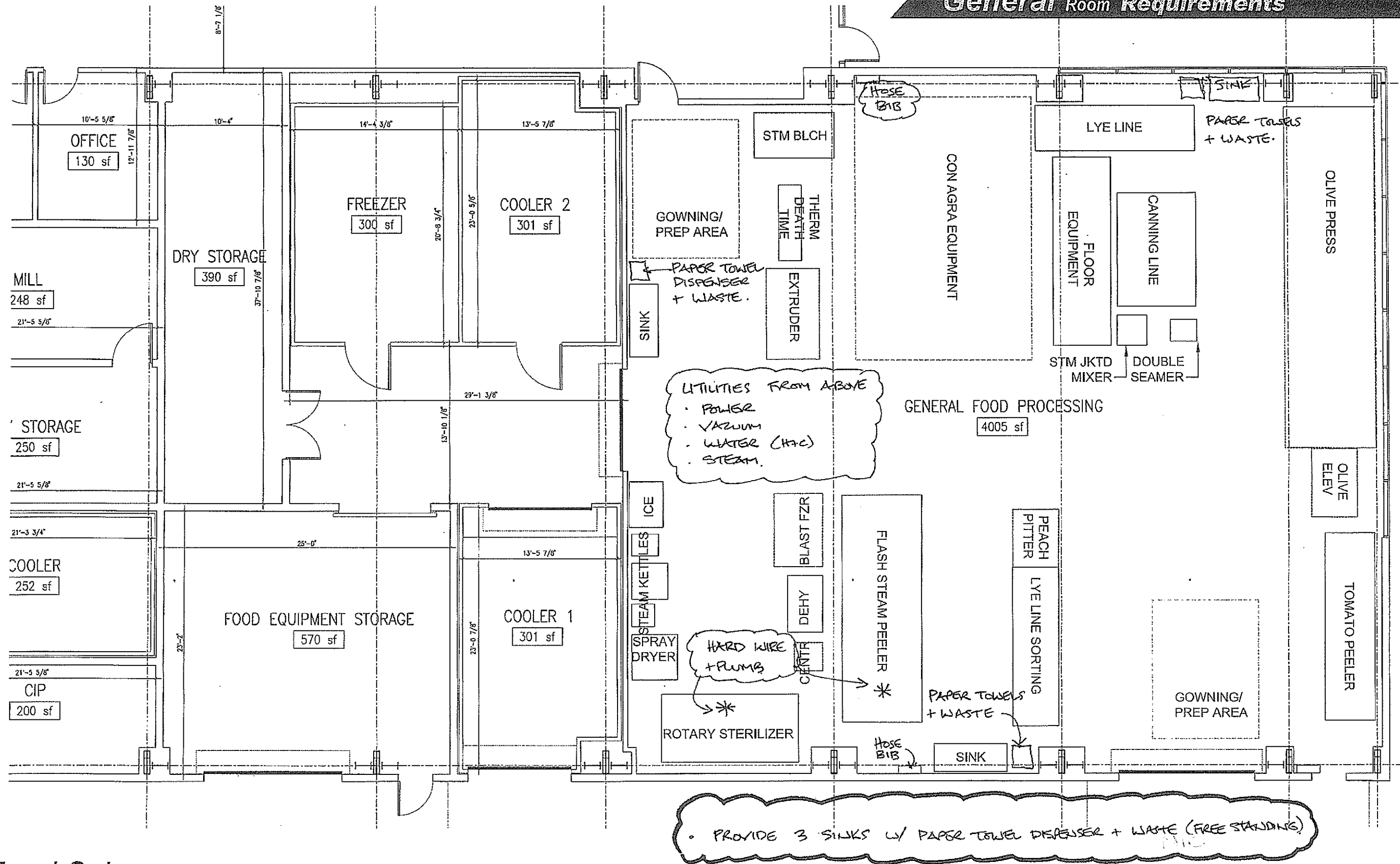
- SAMPLES OF FRP + COOLER ROOM MATERIAL TO UCD FOR REVIEW. (NO S/S REQUIRED)
- MOBILE SHELVING IN FREEZER (OFOI)
- PROVIDE FLOOR DRAINS IN ANTE AREA OUTSIDE OF FREEZER / COOLERS.
- TRENCH DRAIN OUTSIDE ROOM. (FREEZING ISSUE)



Food Science Freezer

Scale: 1/8" = 1'-0"

General Room Requirements



Food Science

Scale: 1/8" = 1'-0"

Brewery, Winery, & Food Process Facility

UC DAVIS

10/14/2008

Equipment

Blast Freezer

Width: 77 Depth: 51 Height: 88

BTUCY

Drains: Drain with strainer.
Domestic water: 40 to 50 psi
Special utilities: Vacuum 20" Hg

Canning Line

Mounting location: Floor - fixed
Drains: Drain to sanitary sewer

Centrifuge

Compressed air: Clean air at 60 psi.

Centrifuge - Ultra

Mounting location: Floor - moveable

Centrifuge - Ultra High Speed

Mounting location: Floor - moveable

Dehydrator

Width: 60 Depth: 37 Height: 48
Drains: Drain to sanitary sewer?

Double Seamer

Width: 28 Depth: 23 Height: 80
Drains: Drain to sanitary sewer

Extruder

Width: 96 Depth: 56 Height: 80

Flash Steam Peeler

Width: 240 Depth: 84 Height: 144
Drains: Drain to sanitary sewer

Freeze Dryer

Width: 52 Depth: 39 Height: 74

Hose and Hose Rack

Mounting location: Wall - fixed

Hot Break Tanks

Ice machine

Drains: Drain to sanitary sewer.

Lye Line

Width: 180 Depth: 50 Height: 40
Mounting location: Floor - fixed

Lye Line Sorting Line

Adjacencies: Adjacent to Lye Line.
Mounting location: Floor - rolling

Olive Press

Width: 360 Depth: 96

Olive Press Top Elevator

Olive Press Water Flushing Section

Mounting location: Floor - moveable

Peach Pitter

Width: 61 Depth: 48 Height: 134
Drains: Drain to sanitary sewer

Pilot Paste Machine

Drains: 2 inch drain

Refrigerator

Mounting location: Floor - moveable

Rocker Bath Cooler

Rotary Flask

Rotary Sterilizer

Width: 144 Depth: 72 Height: 96

Scrape Surface Separators

Sink (Scullery 3 tub)

Mounting location: Floor - fixed

Spray Dryer

Width: 48 Depth: 48 Height: 84

Steam Blancher

Mounting location: Floor

Steam Jacketed Mixer

Width: 32 Depth: 32 Height: 72
Mounting location: Floor - fixed
Drains: Drain to sanitary sewer

Steam Kettles - Large

Width: 36 Depth: 33 Height: 54
Drains: Drain to sanitary sewer

Steam Kettles - Medium

Width: 38 Depth: 38 Height: 40
Drains: Drain to sanitary sewer

Steam Kettles - Small

Width: 24 Depth: 24 Height: 34
Mounting location: Floor - fixed

Thermal Death Time

Width: 80 Depth: 24 Height: 50
Drains: Drain to sanitary sewer

Tomato Peeler

Width: 198 Depth: 53 Height: 57
Drains: Drain to sanitary sewer

General Room Requirements

Net sq. ft.: 4,000

Major equipment: Provide extensive utilities and power connections at a range of voltages to accommodate a wide variety of fixed and portable food processing equipment. Major equipment anticipated at move-in include blast freezer, canning line, dehydrator, seamer, extruder, flash steam peeler, freeze dryer, ice machine, lye line, olive press, peach pitter, power washer, refrigerator, rotary sterilizer, steam jacketed mixer, steam kettles and tomato peeler. See "Equipment List Sorted by Room" for complete list of research equipment.

Audio/visual equipment: Marker Board, 4'x6', (1). Public address system with cordless microphones (2).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Sinks & fixtures: Handwashing sinks adjacent to entry doors and one other location in the open lab (3 total); Hose stations (4).

Floor drains: 6 inch to 8 inch diameter area drains, with strainers, less than 20 feet on center. Slope floor to drains at 1/4 inch per foot. Coordinate drain locations with utility drops and anticipated equipment locations - place drains in aisles and not under equipment. Drain lines from the Food Processing Cooler #1, Food Processing Cooler #2, Food Processing Freezer and General Food Processing may be combined with each other but shall not be combined with any other drains and shall not connect to a common sanitary sewer main until outside of the building perimeter line. Provide sufficient space between building perimeter and connection to common sanitary sewer main to allow for the future installation of a grease trap.

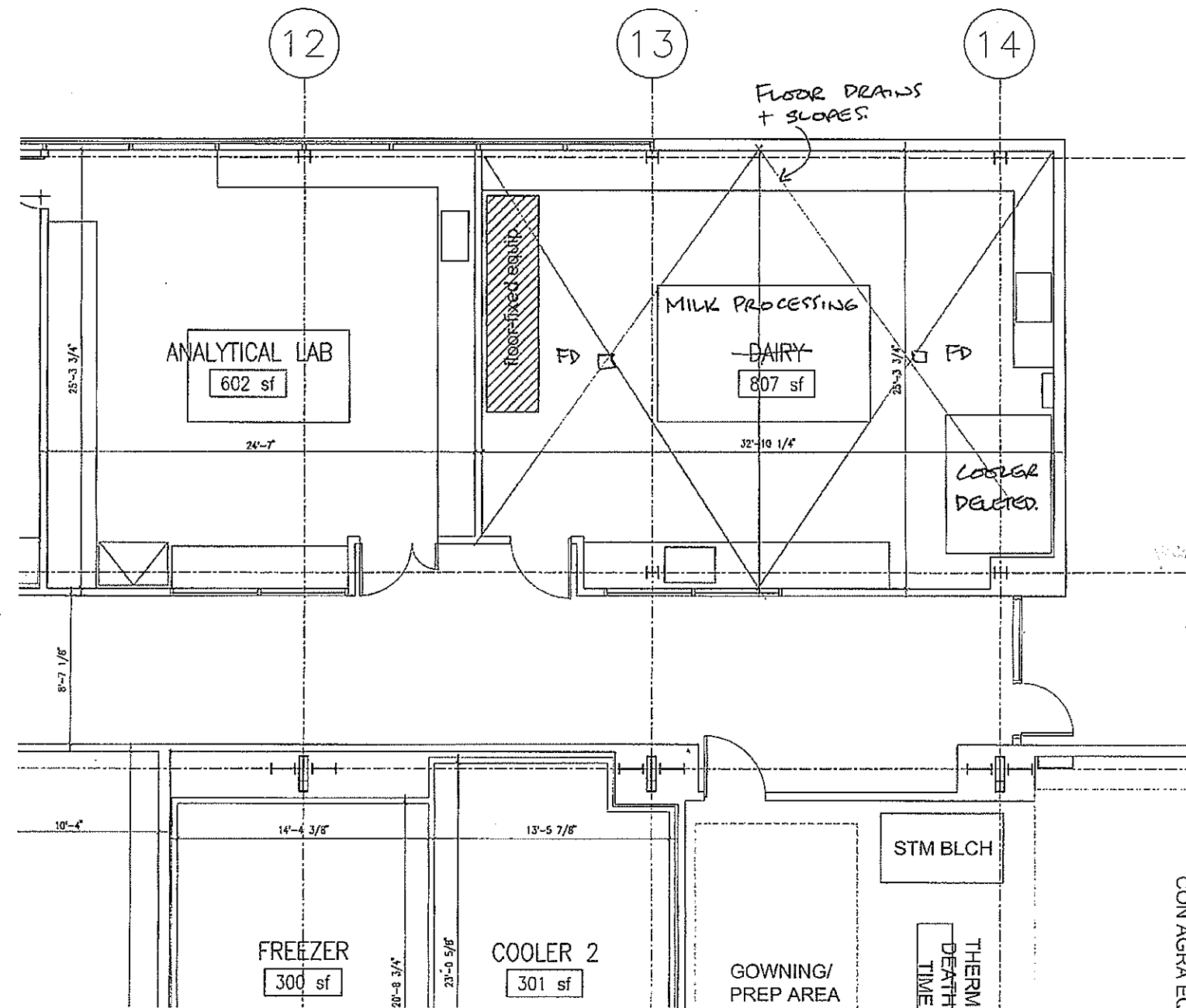
Other special piping: See equipment requirements. Include vacuum line ceiling drops, 12 feet on center on main lines not more than 20 feet apart (total 15 drops).

Metering: Configure piping so that process loads can be metered in the future, separate from other building functions, including steam, natural gas, industrial water, chilled water and treated water.

Food Science

Scale: 1/8" = 1'-0"

General Room Requirements



- CHANGE NAME OF SPACE TO MILK PROCESSING
- ADD WINDOWS TO EXTERIOR AND BLACKOUT BLINDS
- DELETE COOLER AS DIRECT ACCESS TO COOLER 2 IS NOW PROVIDED
- 2 FLOOR DRAINS IN SPACE WITH TRAP PRIMERS

UCD to provide preferred layout for this area based on vendor information.

MILK PROCESSING
~~Dairy Innovations~~

Scale: 1/8" = 1'-0"

Equipment

Autoclave

Mounting location: Bench

Exhaust requirements: Steam capture hood?

Butter Churn

Mounting location: Bench

Cheese Vat

Width: 40 Depth: 20 Height: 22

Mounting location: Bench

Cold Room

Width: 72 Depth: 96 Height: 96

Mounting location: Floor - fixed

Drains: Area drain.

Disc Bowl Centrifuge

Width: 26 Depth: 24 Height: 28

Multi Purpose Processing Vessel

Width: 25 Depth: 25 Height: 47

Mounting location: Floor - rolling

Pressure Homogeniser

Width: 22 Depth: 16 Height: 22

Process Vessel & Scraped Surface Freezer

Reverse Osmosis/Ultrafiltration Unit

Width: 28 Depth: 28 Height: 42

Rising Film Evaporator

Width: 32 Depth: 30 Height: 102

Spray Dryer & Drum Dryer

Mounting location: Bench.

UHT Processing Unit

Width: 40 Depth: 26 Height: 68

General Room Requirements

Net sq. ft.: 800

Major equipment: Benchtop and small scale floor mounted equipment for milk processing, cheesemaking and tofu making. Small walk-in package cooler. See "Equipment List Sorted by Room" for complete list. Audio/visual equipment: Marker Board, 4'x6', (1). Public address system with cordless microphones (2).

Audio/visual equipment: Marker board, 4' x 6' (1).

Furniture: Adjustable height equipment tables with epoxy tops, 30"x72" (8).

Signage: Campus standard room sign. Educational room function description/display. Donor recognition plaque.

Sinks & fixtures: (1) handwashing sink near main entry door; (2) stainless steel sinks with multiple large and deep compartments.

Eyewashes/showers: None.

Floor drains: Area drains. Drain lines from Dairy Innovations shall be dedicated and shall not connect to a common sanitary sewer main until outside of the building perimeter line.

Treated water: Hot and cold to multiple compartment sinks. (4) general ceiling drops. See equipment requirements for additional requirements.

Other special piping: See equipment requirements. (2) chilled water ceiling drops.