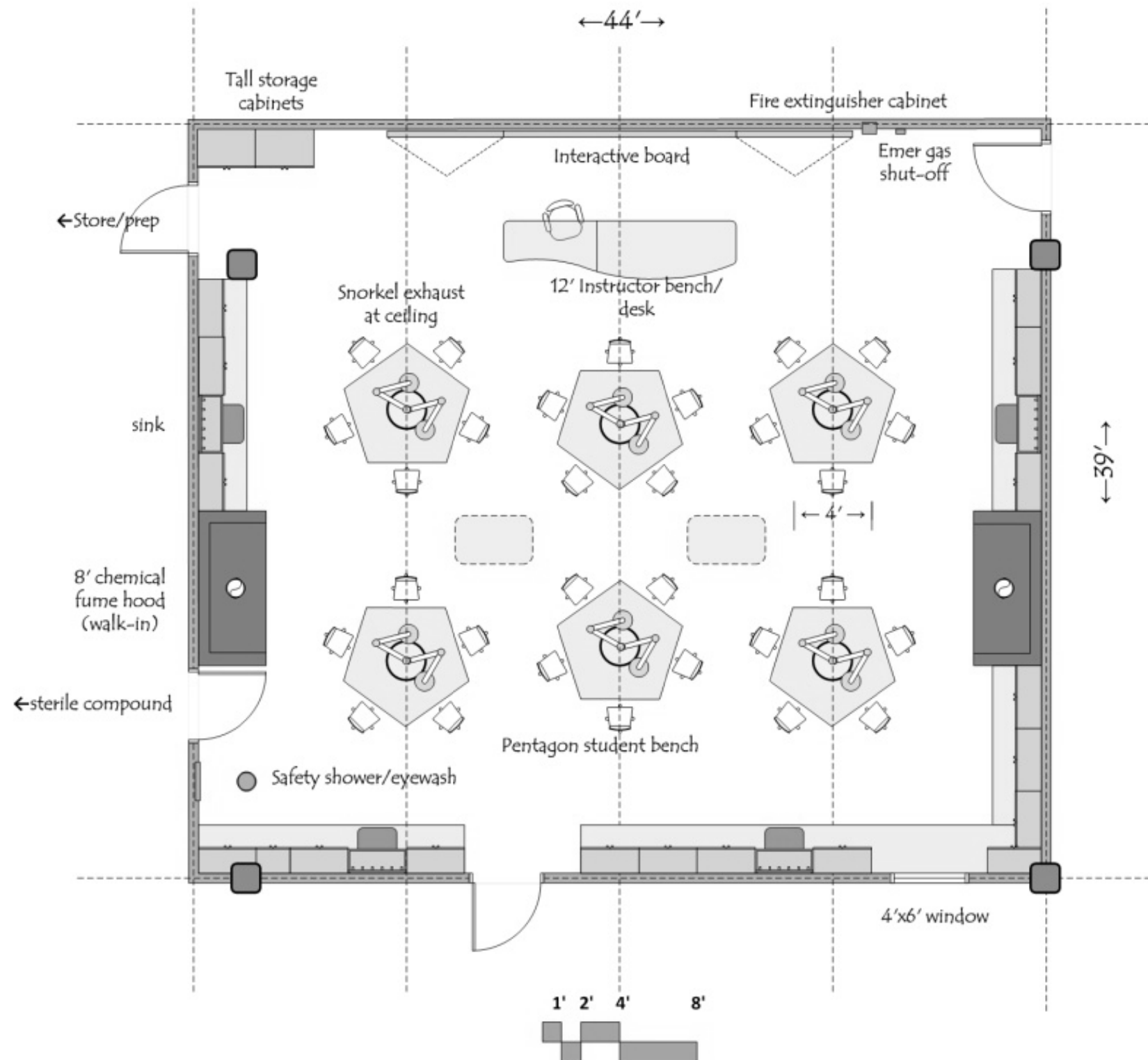


Health Sciences Building
Lab Sketchbook
Chapman University
Irvine, California
2013 Nov 19



Contents



Level 1 Floor Plan.	3
Level 1 Anatomy Lab Suite.	4
Anatomy Lab	5
Wet/Dry Lab	9
Level 2 Floor Plan	15
Level 2 Pharmacy Lab Suite	16
Research Lab Suite A	17
Core Lab A	18
Microscopy	21
Rx Teaching Lab	23
Core Lab B	26
Autoclave	29
Research Lab Suite B	30
Cylinders	35
Waste	37
Rx Compounding Teaching Lab	38
Sterile Compound	44
Procedure	48
Env Room	51
Store/Prep	53
NMR	57
Pharmaceutics Teaching Lab	61
Tableting	67
Section Details	71
Equipment Cut Sheets	79

Level 1 Floor Plan



Anatomy Lab



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: gypsum board and epoxy paint
 Ceiling: 10'- 12' acoustic mylar washable tile
 Doors: 3'x8'/3'x8' pair no window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust; Pressure: negative to corridor
 15 air changes per hour occupied
 6 air changes per hour unoccupied
 low exhaust at perimeter (~35%)
 high exhaust at ceiling

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.
 Exam lights at cadaver tables
 Duplex 110v retractable power chord above each cadaver table
 Ceiling mounted speakers

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Dedicated waste for tissue sink
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

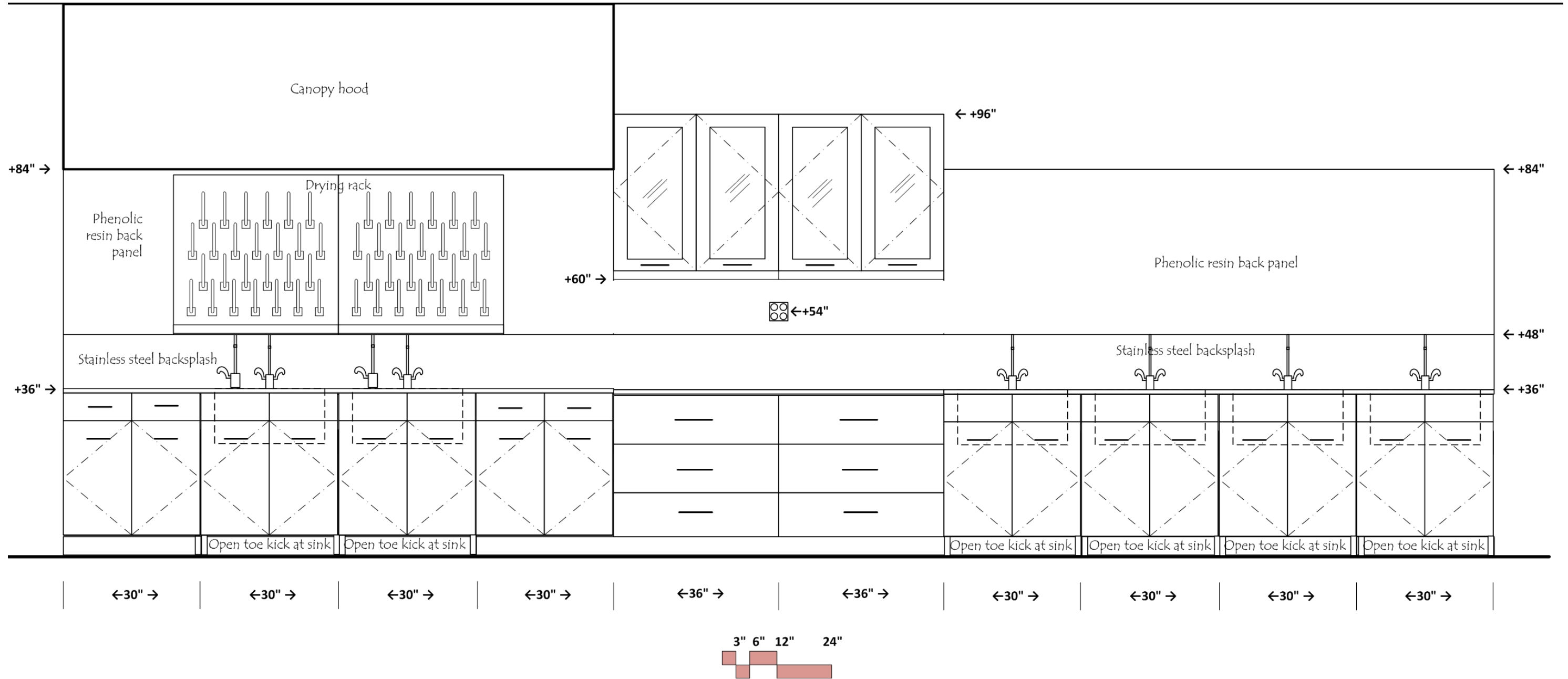
Stainless steel lab casework
 stainless steel tops and sinks
 Faucets & fittings
 Canopy hood above tissue sink- 75 f.p.m. face velocity
 Fire extinguisher cabinet (not shown)
 Safety shower/eyewash
 Marker boards; LCD monitors

UNIVERSITY FURNISHED EQUIPMENT

Chairs; Cadaver tables
 Mobile cart units; Scientific equipment
 Soap and paper towel dispensers at sinks

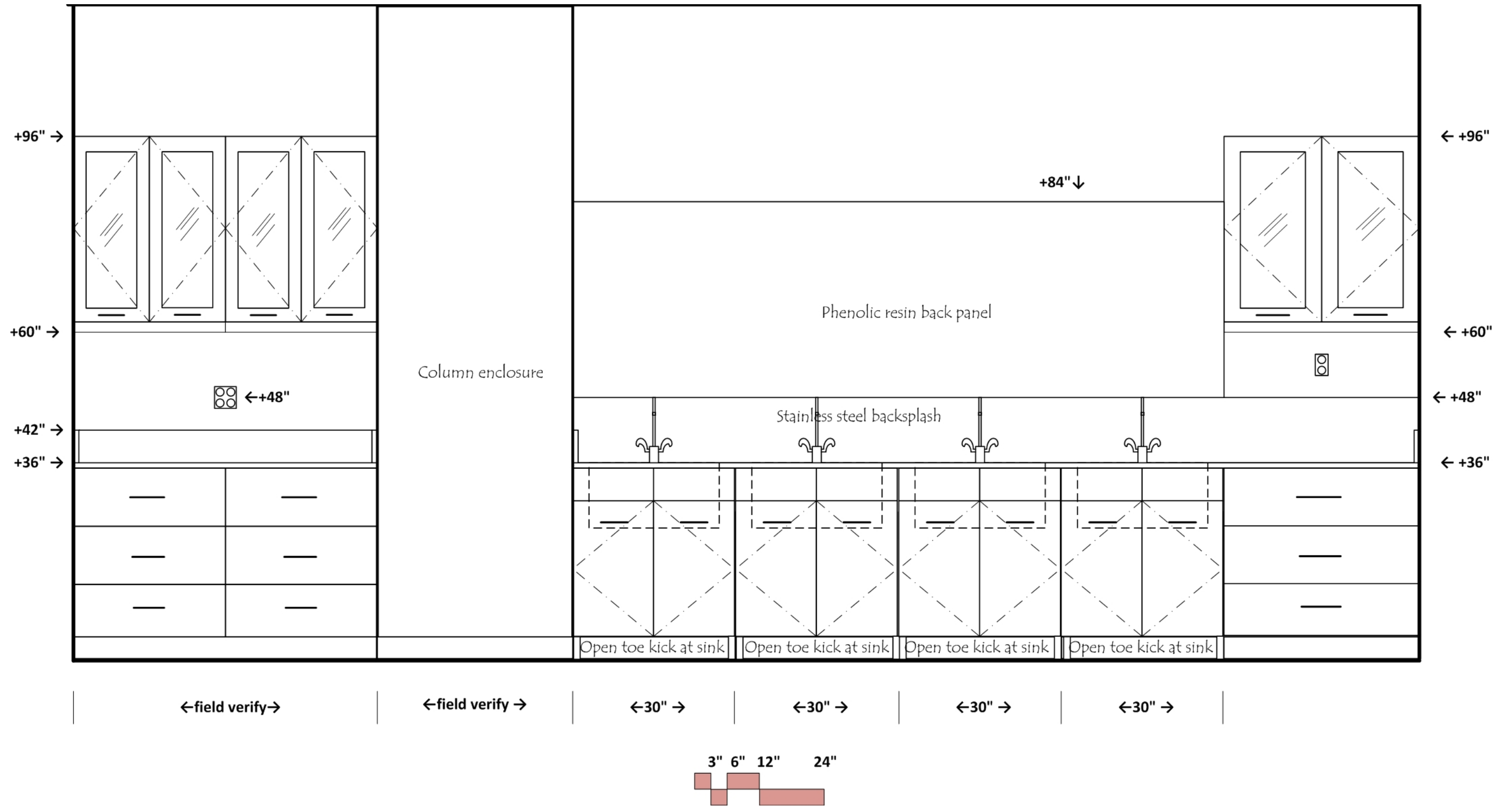
Elevation A

Anatomy Lab



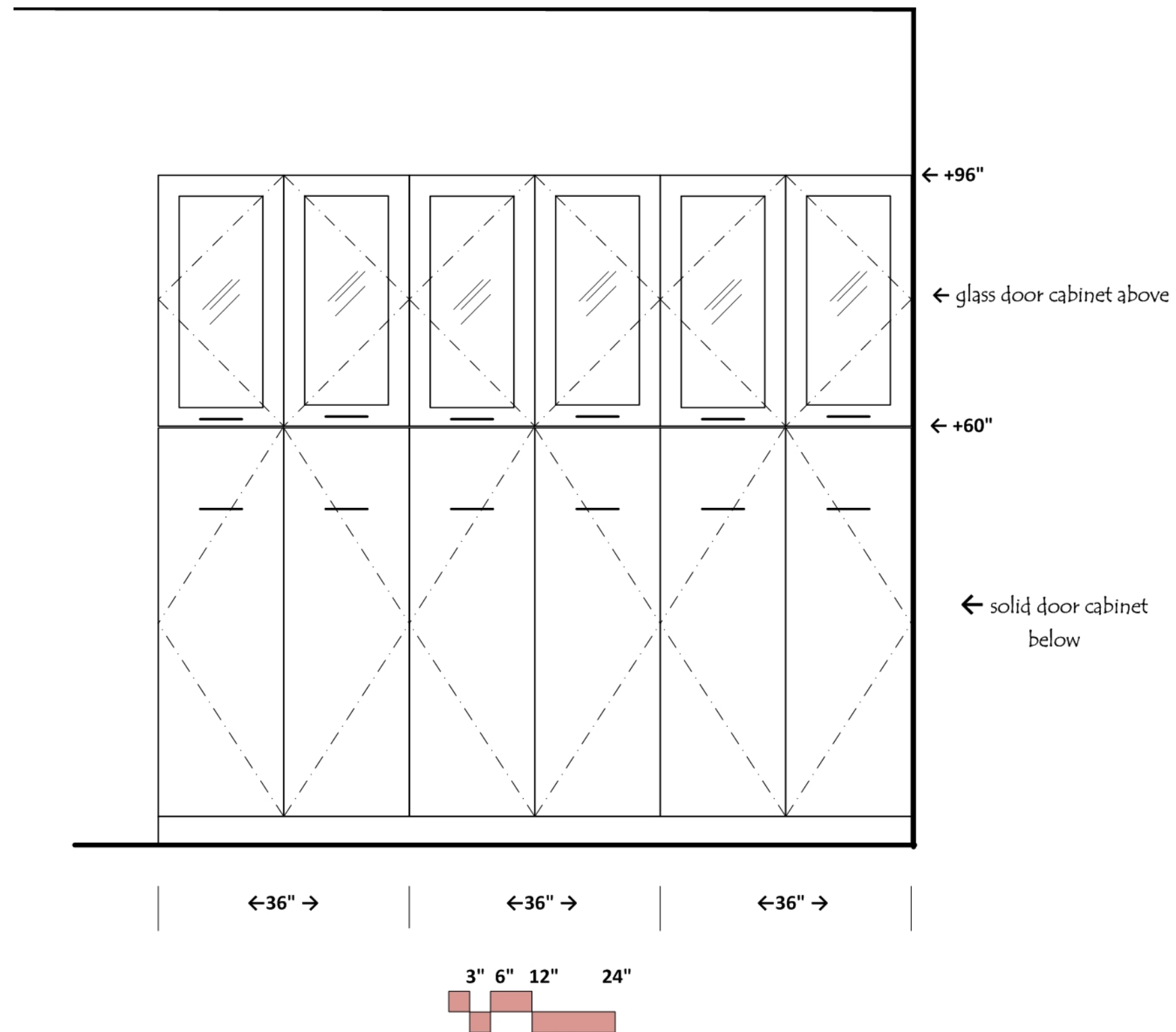
Elevation B

Anatomy Lab



Elevation C

Anatomy Lab



Wet/Dry Lab

ARCHITECTURAL

Occupancy: B
 Floor: epoxy; Walls: gypsum board and epoxy paint
 Ceiling: 10'-12' acoustic mylar washable tile
 Doors: 3'x8'/3'x8' pair no window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust; Pressure: negative to corridor
 15 air changes per hour occupied
 6 air changes per hour unoccupied
 low exhaust at perimeter (~35%)
 high exhaust at ceiling

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Standby power at u.c. freezer and ref
 Duplex 110v retractable power chord above each cadaver table
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breakers
 Pure water at sink
 Dedicated waste for tissue sink
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

Stainless steel lab casework
 Stainless steel tops and sinks
 Mobile lab tables; Metro shelf units
 Faucets & fittings
 Canopy hood above tissue sink- 75 f.p.m. face velocity
 Fire extinguisher cabinet (not shown)
 Safety shower/eyewash
 Marker boards and marker board sliding panels
 LCD monitors

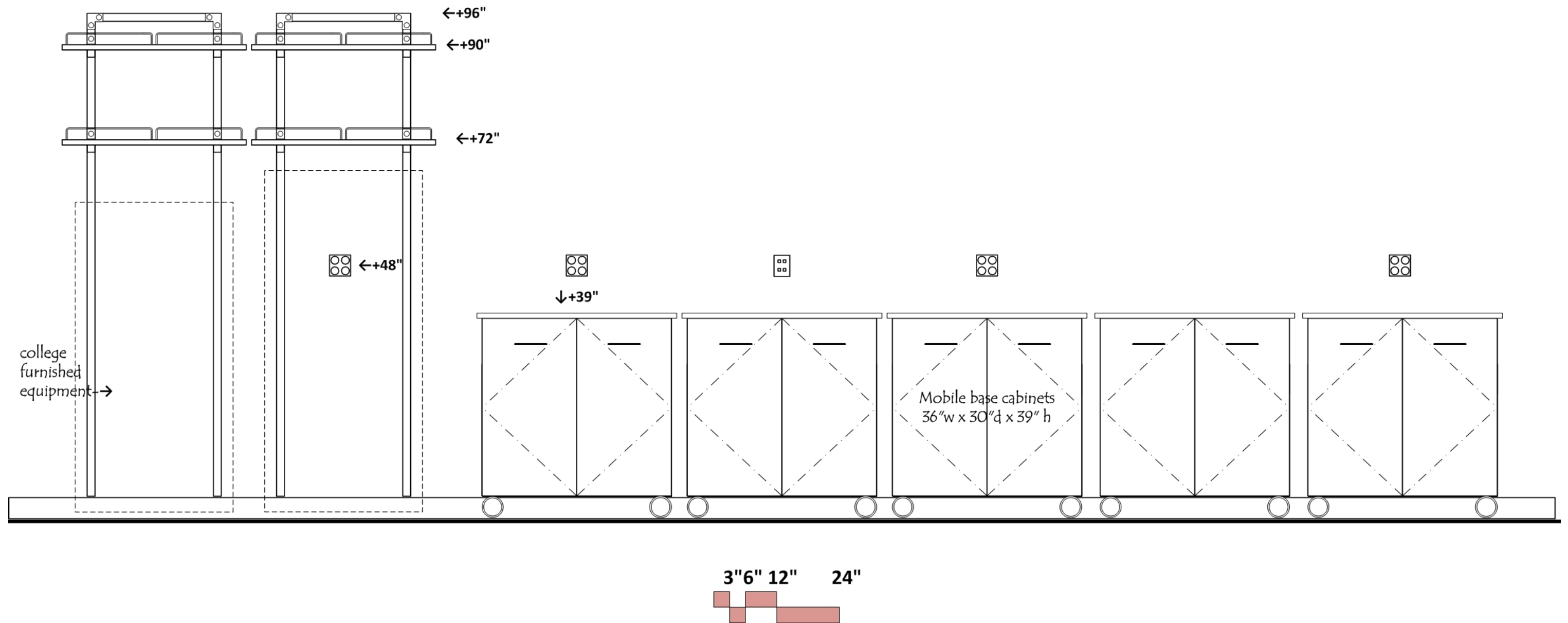
UNIVERSITY FURNISHED EQUIPMENT

Chairs; Scientific equipment
 Soap and paper towel dispensers at sinks
 Refrigerator; mobile camera cart
 Undercounter freezer; undercounter washer



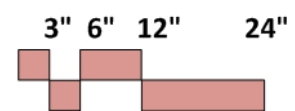
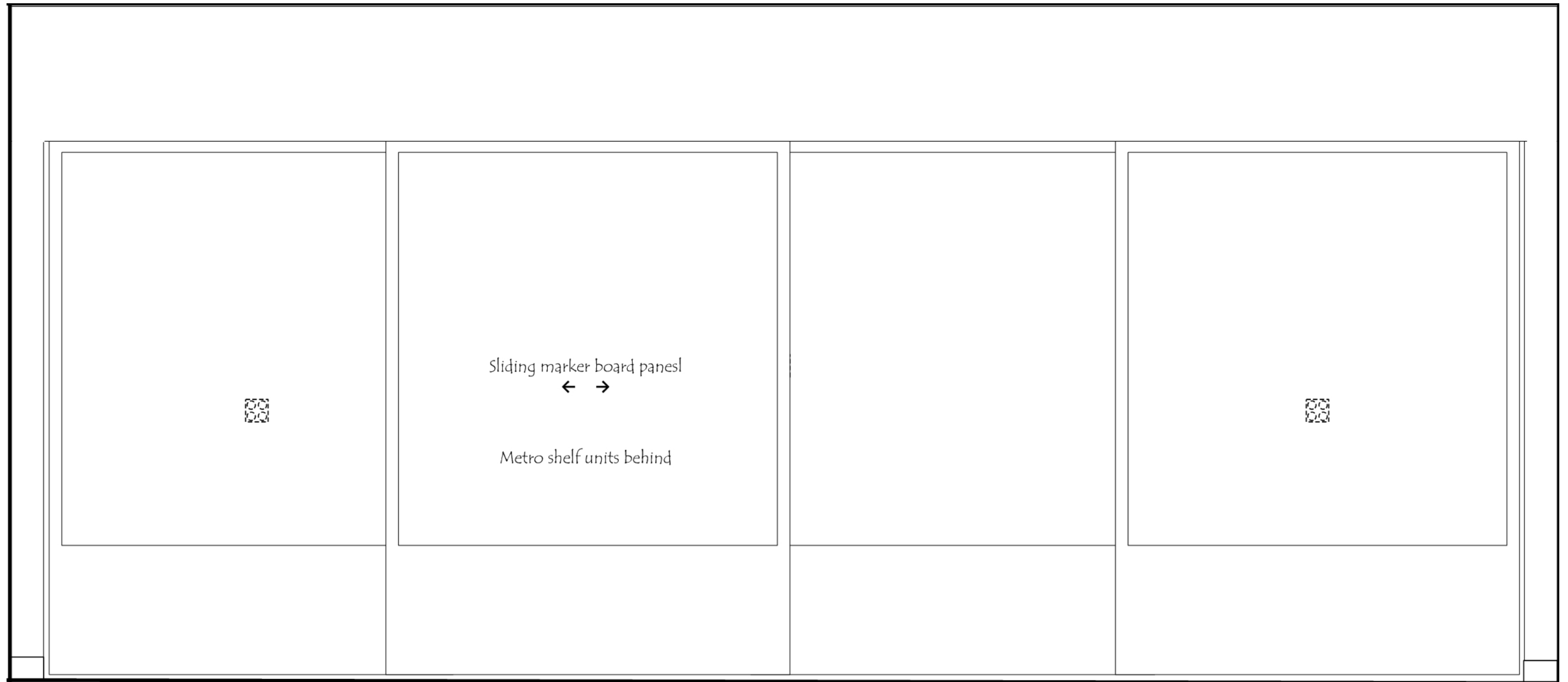
Elevation D

Wet/Dry Lab



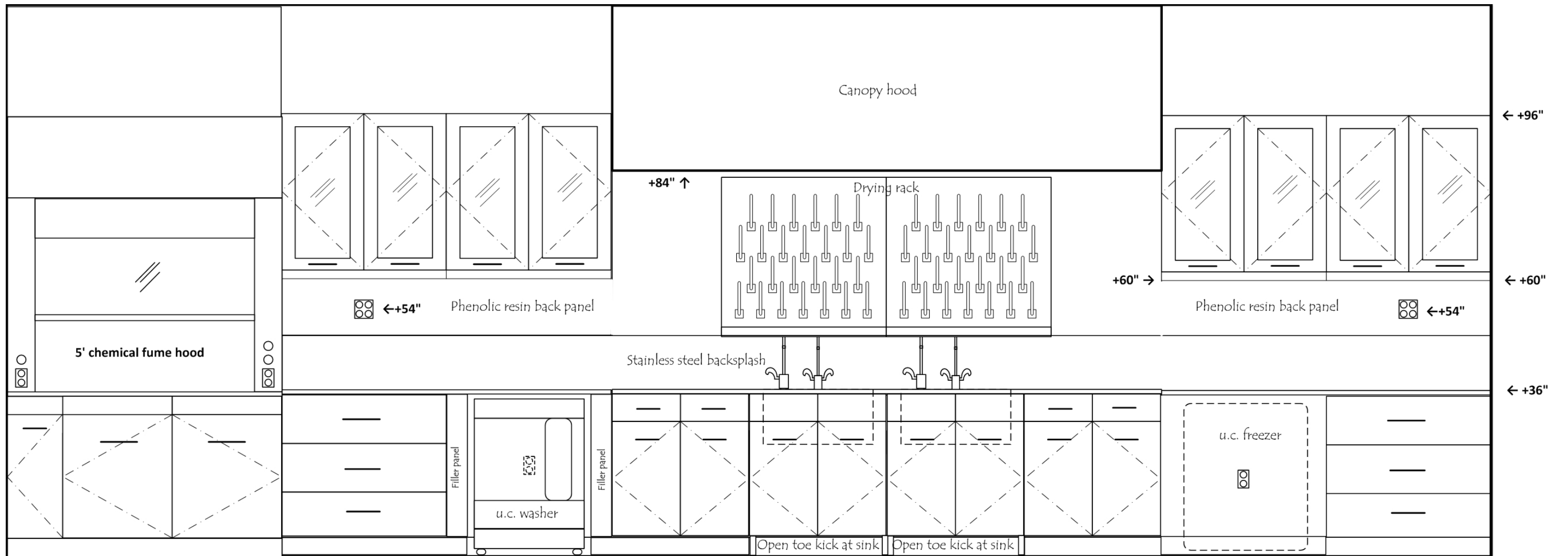
Elevation E

Wet/Dry Lab



Elevation F

Wet/Dry Lab



←60" →

←36" →

←36" →

←30" →

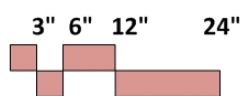
←30" →

←30" →

←30" →

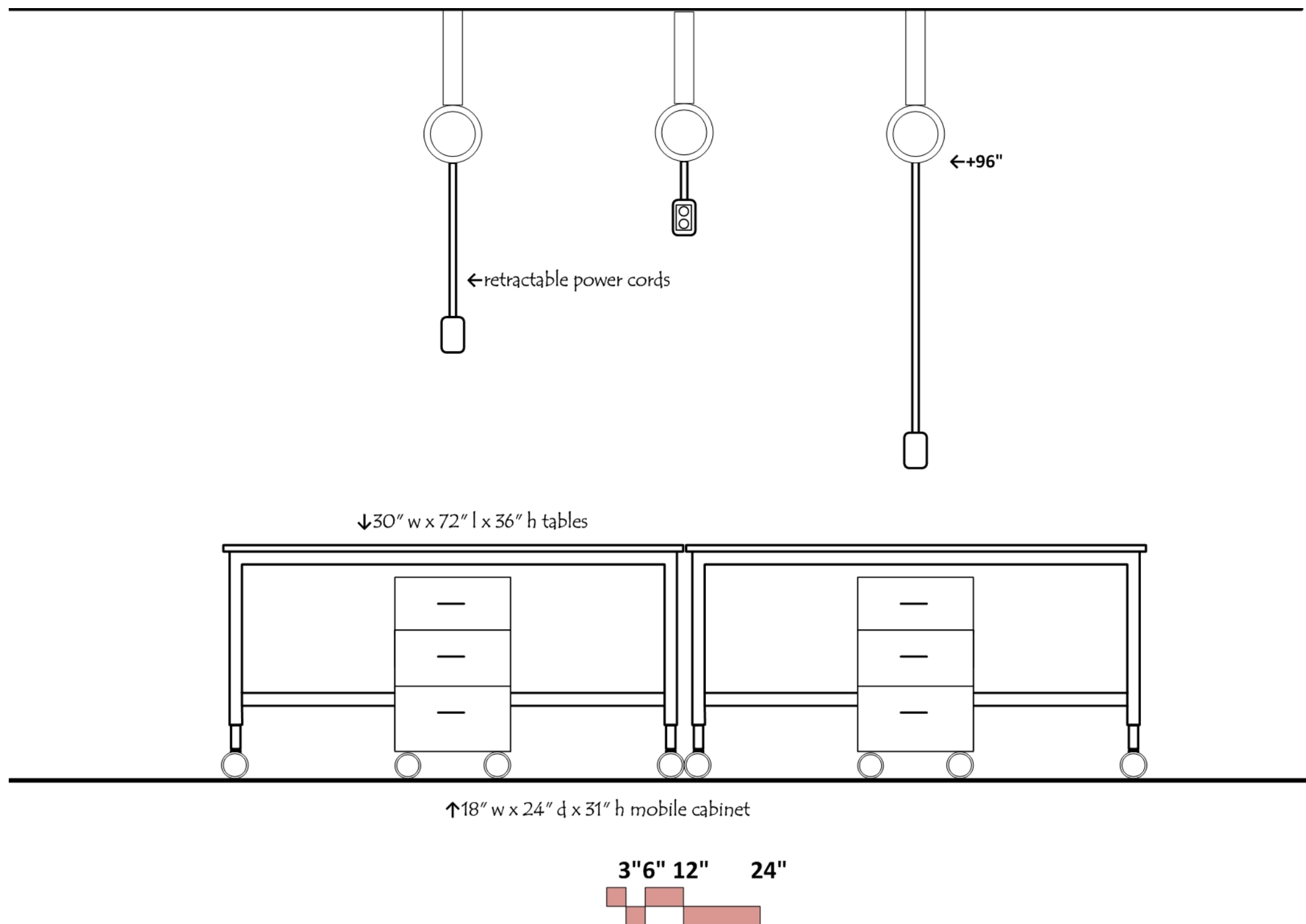
←36" →

←36" →



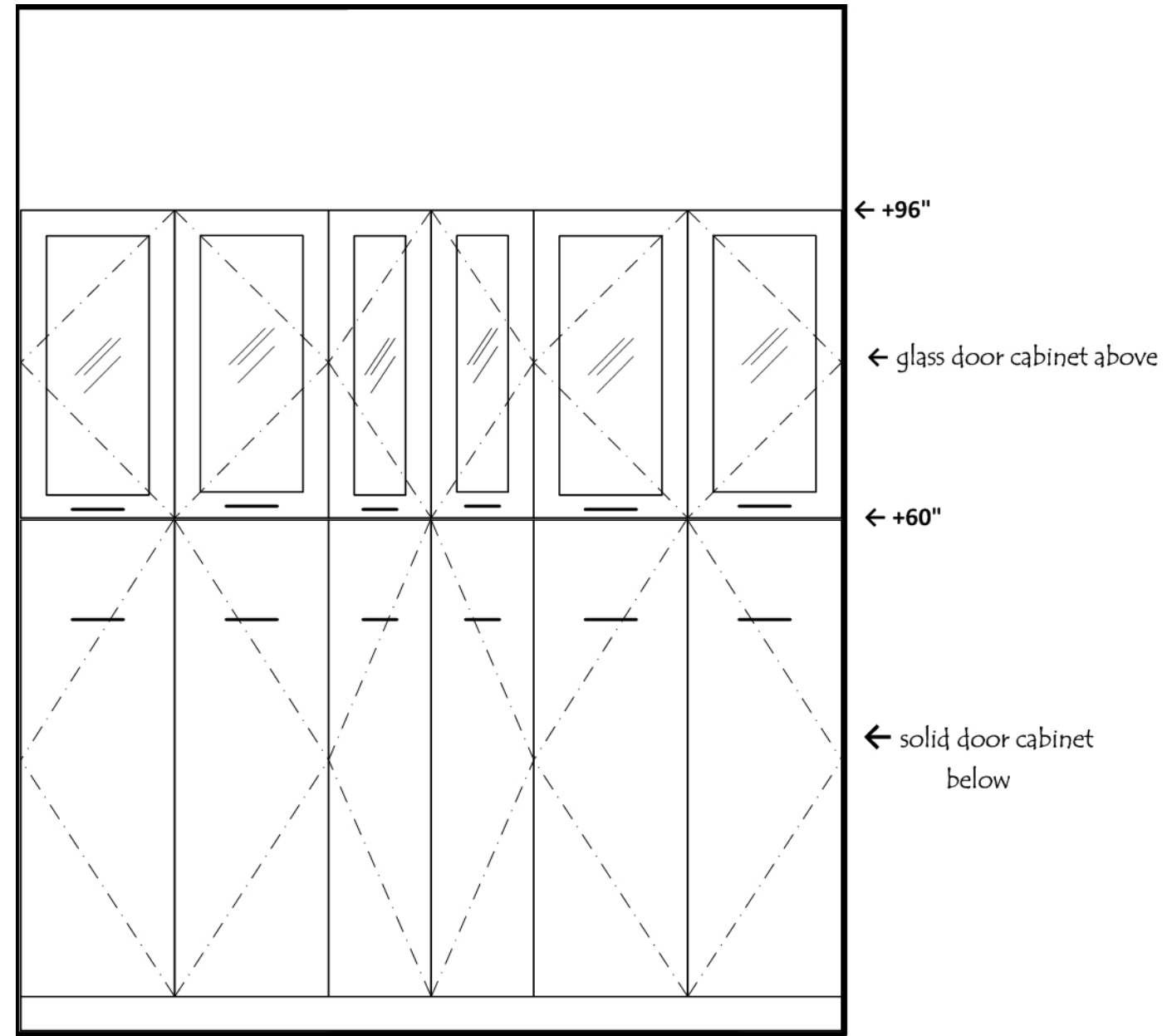
Elevation G

Wet/Dry Lab



Elevation H

Wet/Dry Lab

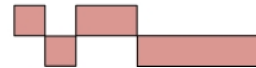


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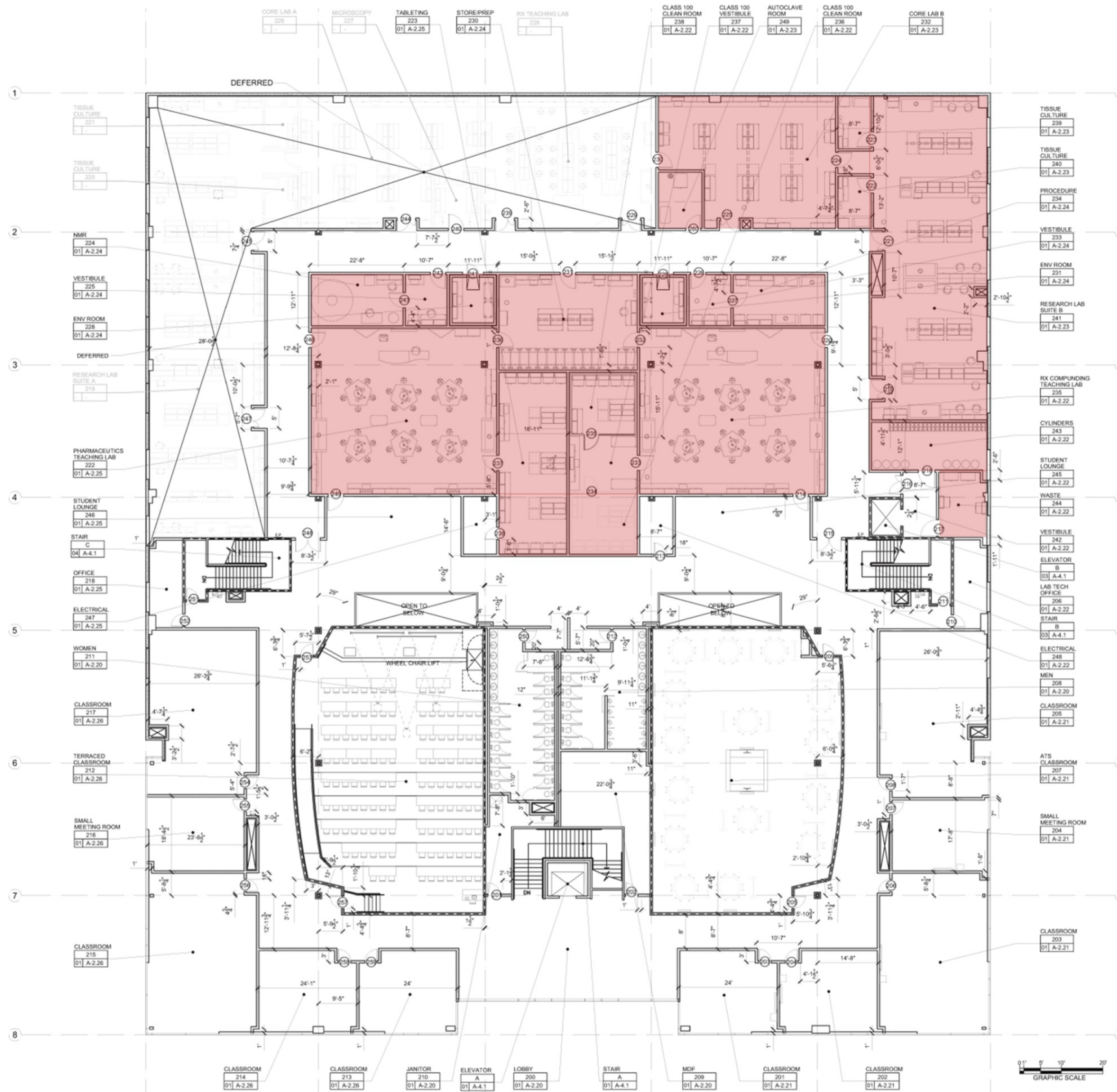
←field verify →

←36" →

3" 6" 12" 24"



Level 2 Floor Plan



Research Lab Suite A

To be shelled

ARCHITECTURAL

Occupancy: B
 Floor: epoxy; Walls: gypsum board and enamel paint
 Ceiling: 10'-12' acoustic tile
 Doors: 3⁰x8⁰/1⁶x8⁰ pair with window at corridor
 3⁶x8⁰ with window at tissue culture and core lab
 Acoustic Attenuation: NC 40 or less
 Light Attenuation: vertical perforated blinds at exterior windows
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F; Humidity: ambient
 100% exhaust; Pressure: negative to corridor
 Tissue culture rooms positive to lab
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

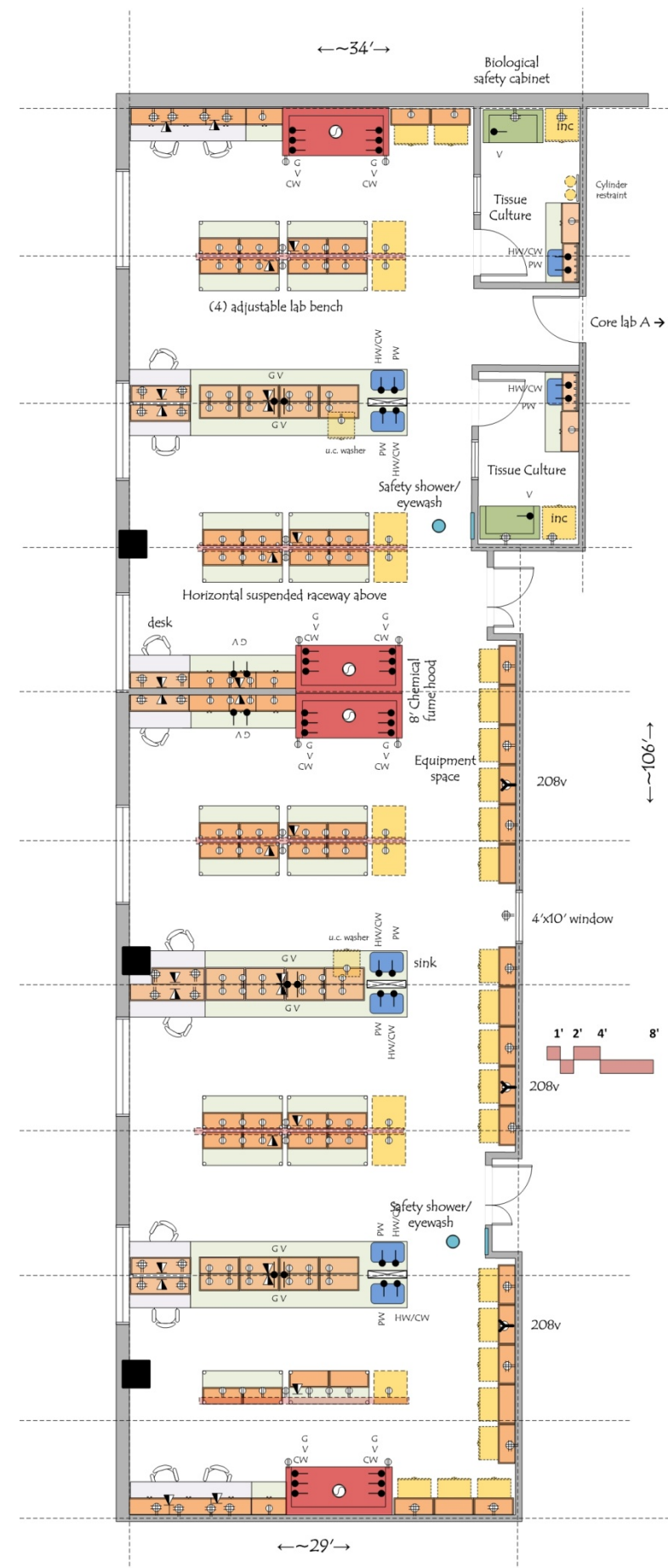
Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks; Pure water at undercounter washers
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

Lab casework; Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods- designate (1) hood with stainless steel liner for radioisotope use
 Fire extinguisher cabinet
 Safety shower/eyewash

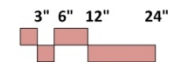
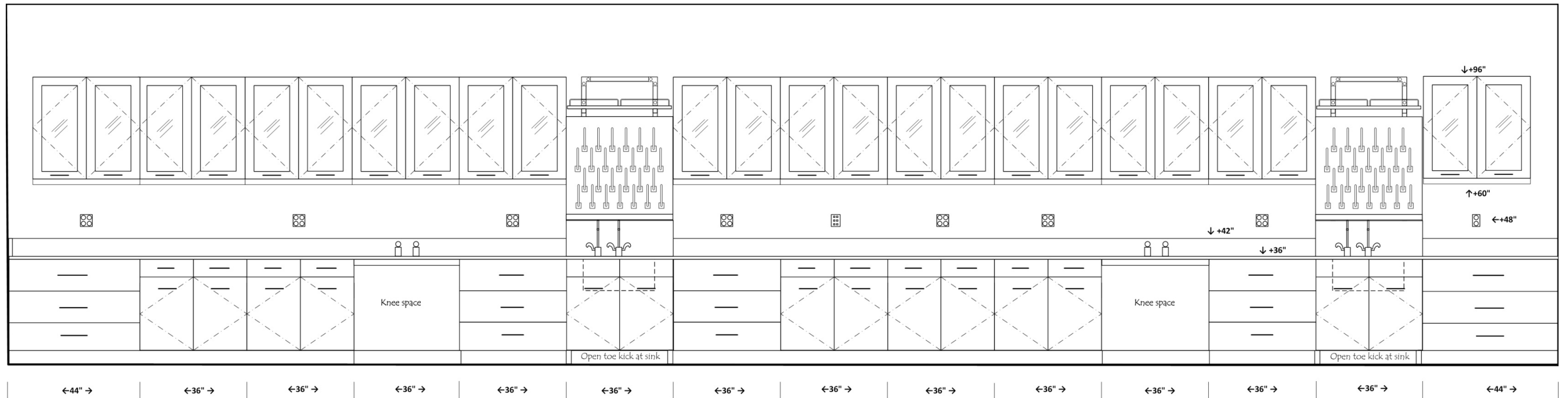
UNIVERSITY FURNISHED EQUIPMENT

Chairs; Benchtop analytical instruments
 Scientific equipment
 Undercounter glassware washers
 Biological safety cabinets; Refrigerators
 Soap and paper towel dispensers at sinks



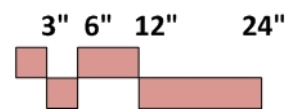
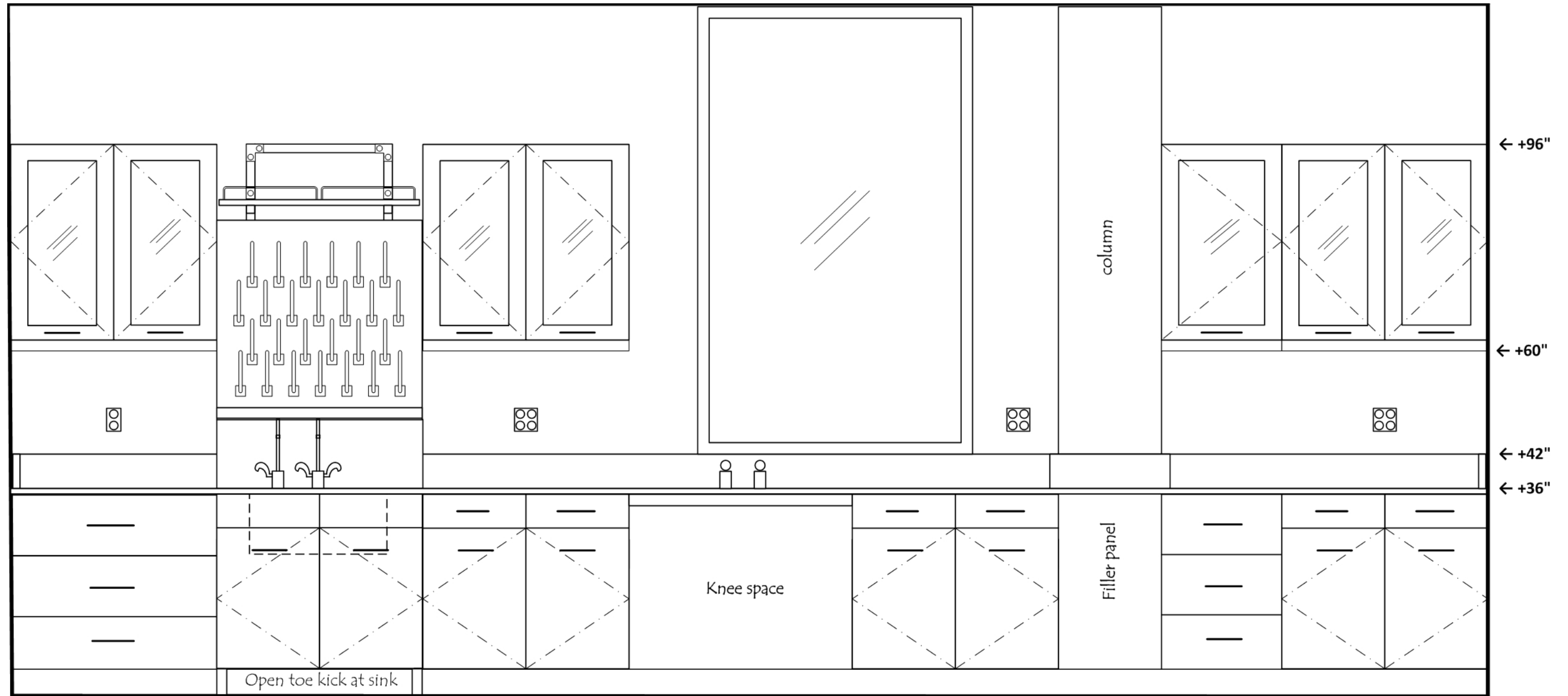
Elevation I

Core Lab A

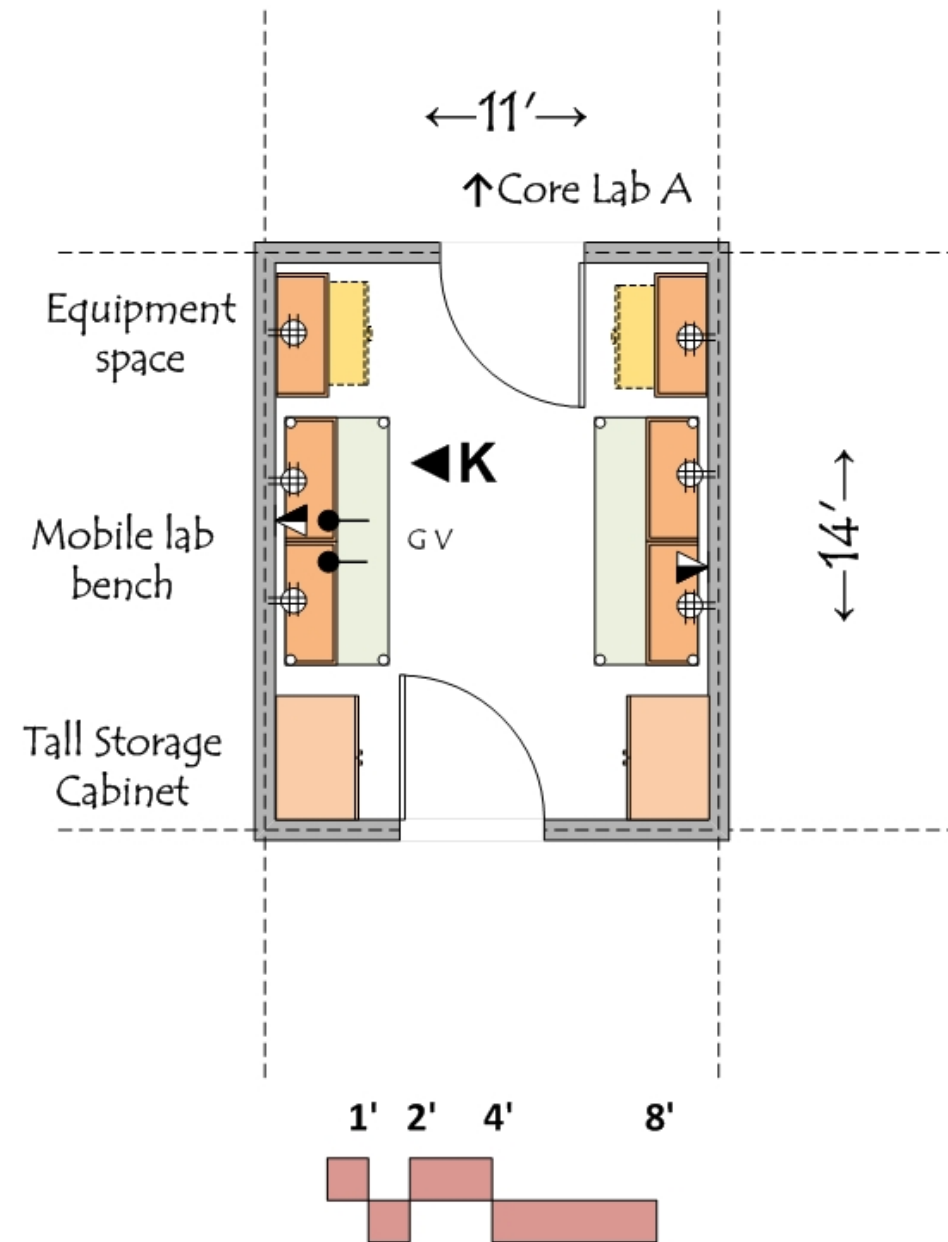


Elevation J

Core Lab A



Microscopy



ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl or VCT
 Walls: gypsum board and enamel paint
 Ceiling: 10" acoustic tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: positive to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Natural gas and vacuum

CONTRACTOR FURNISHED EQUIPMENT

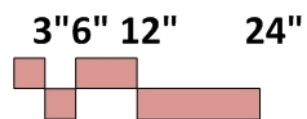
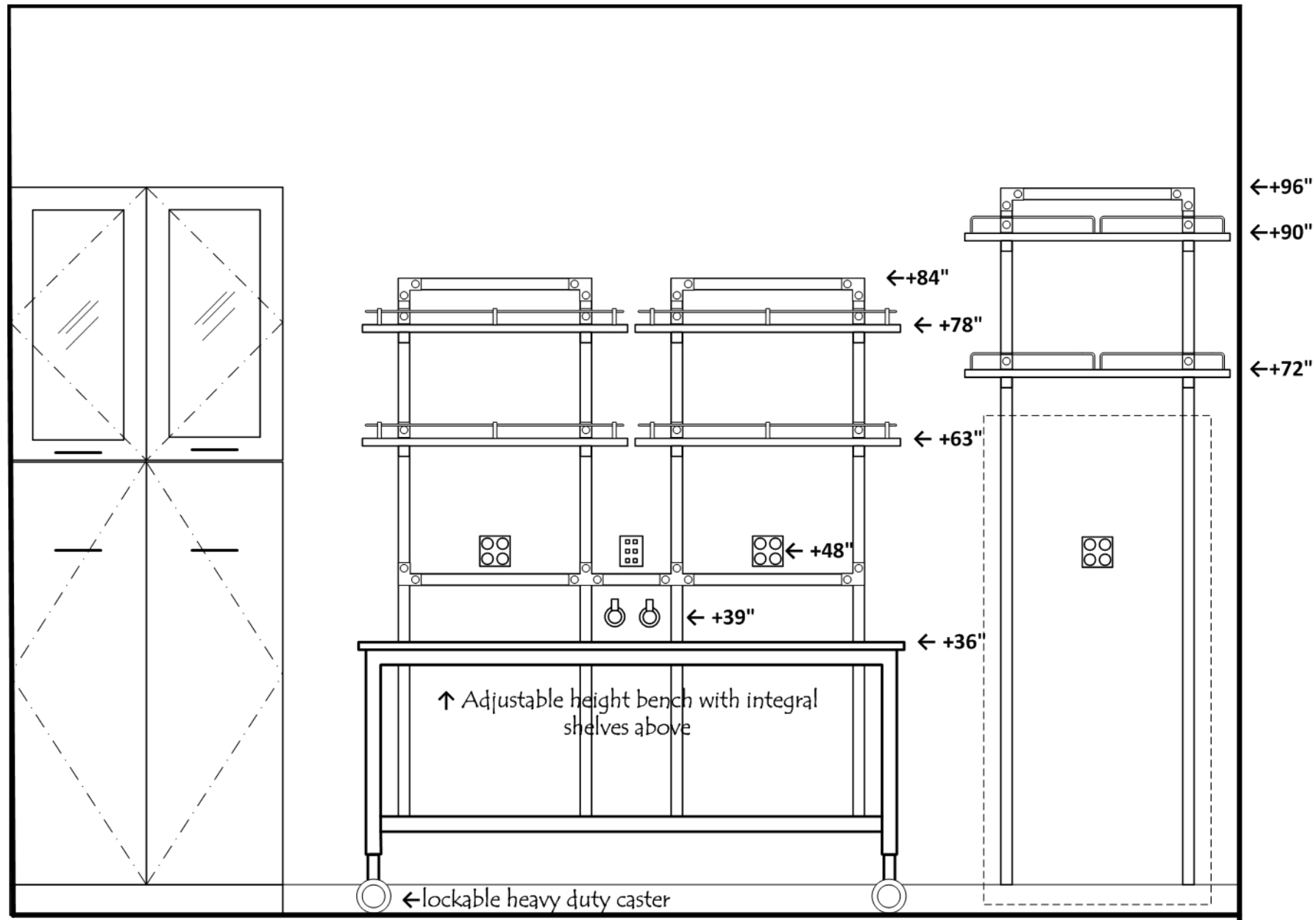
Lab casework
 Epoxy resin tops

UNIVERSITY FURNISHED EQUIPMENT

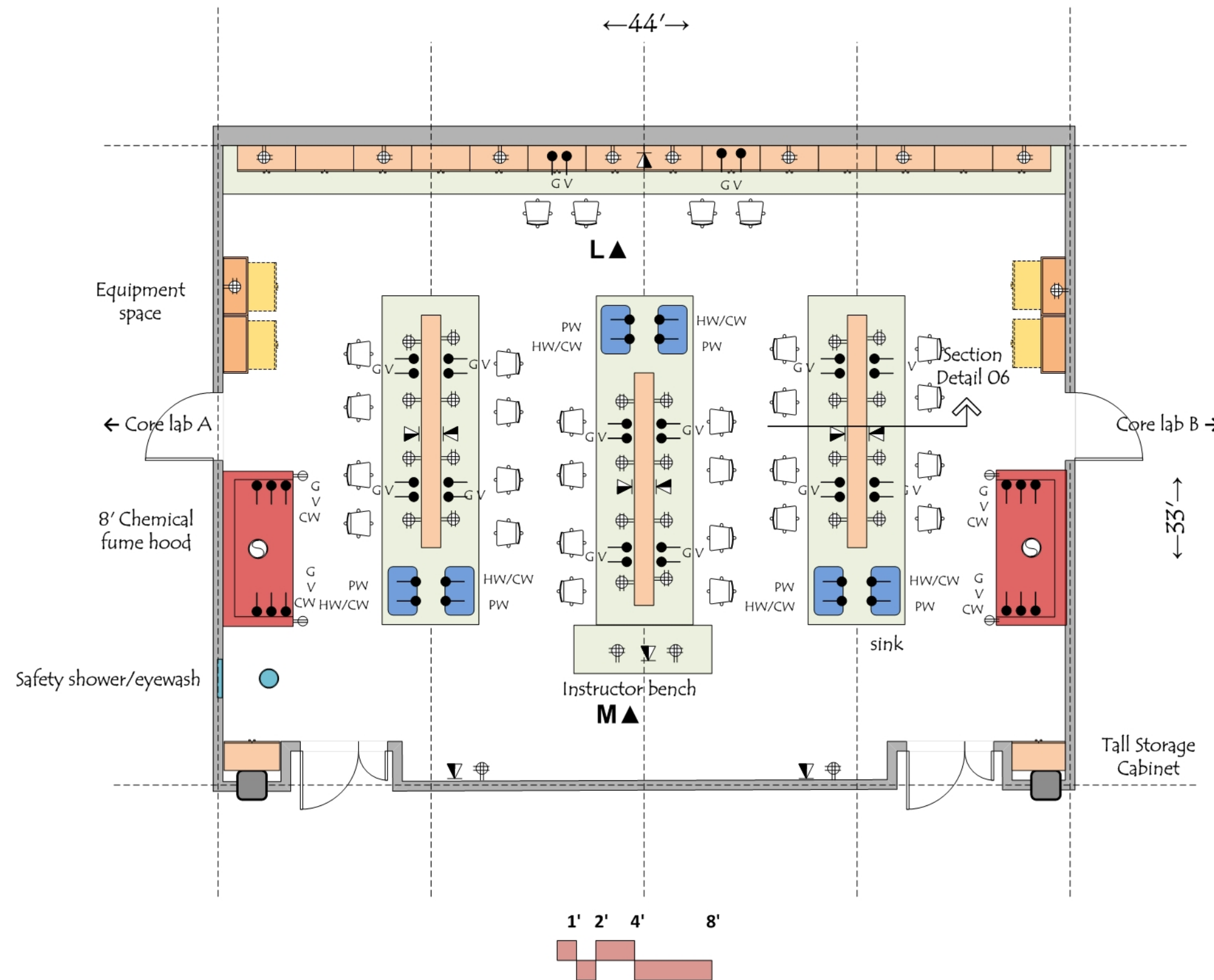
Chairs
 Benchttop analytical instruments
 Microscopes

Elevation K

Microscopy



Rx Teaching Lab



ARCHITECTURAL

Occupancy: B
 Number of students: 28
 Floor: epoxy
 Walls: gypsum board and enamel paint
 Ceiling: 10'-12' acoustic tile
 Doors: 3'0"x8'0"/1'6"x8'0" pair with window at corridor
 3'6"x8'0" with window at core labs
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

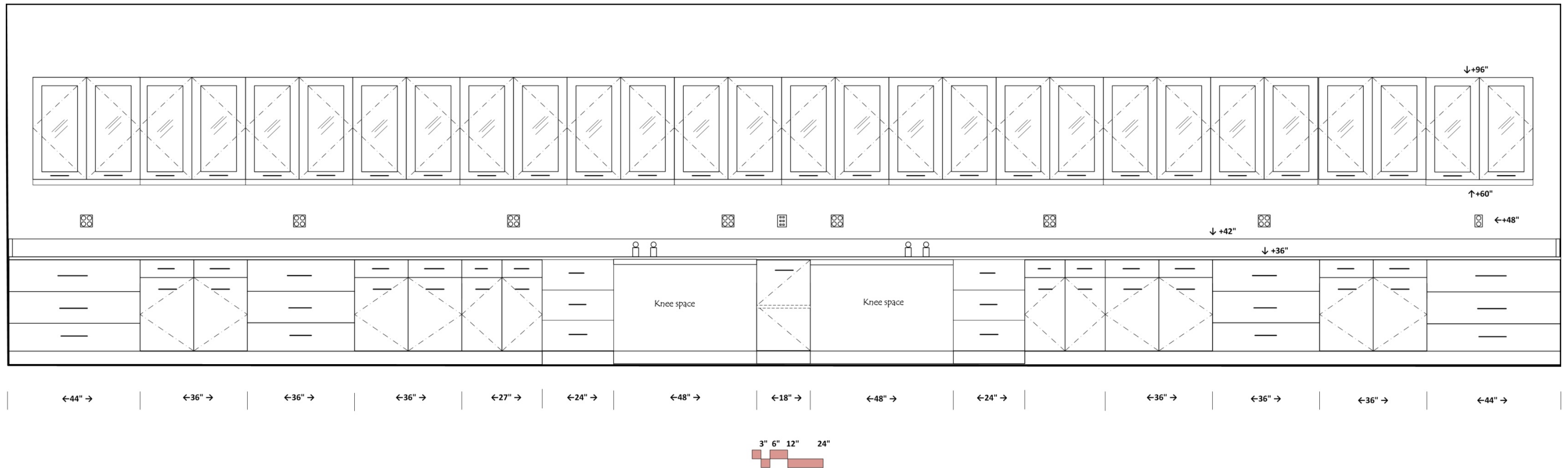
Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sinks

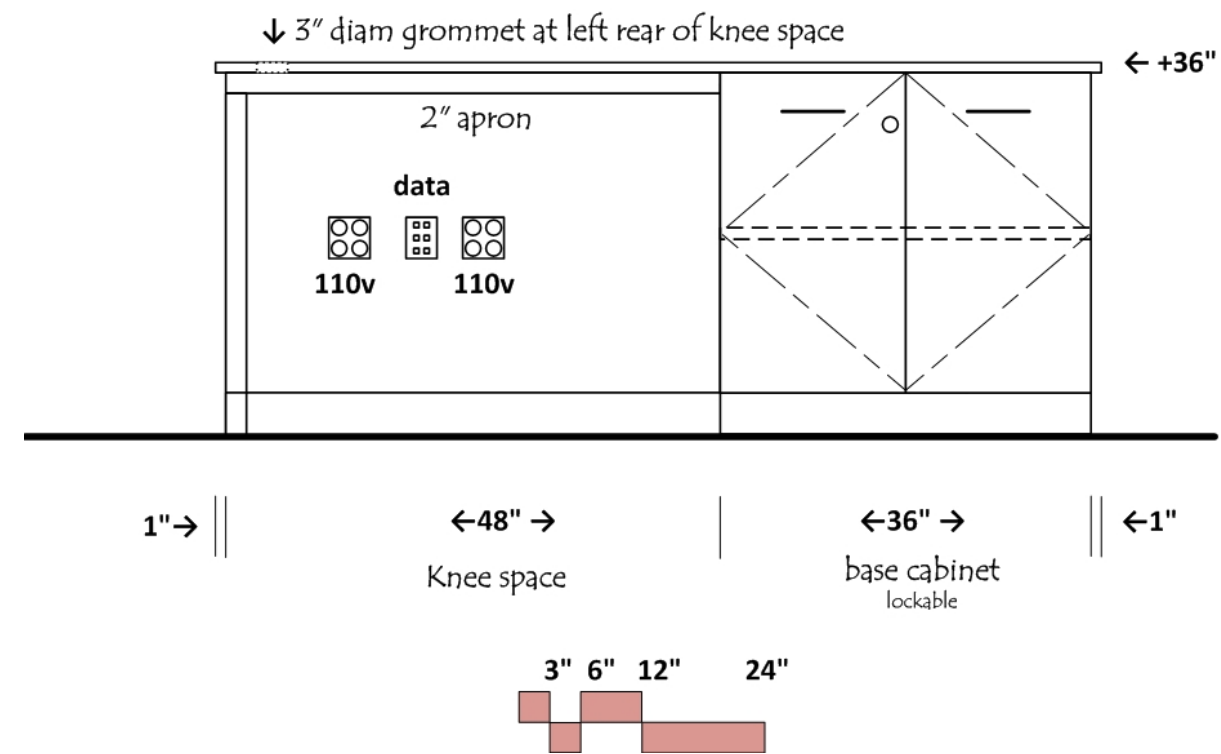
Elevation L

R_x Teaching Lab

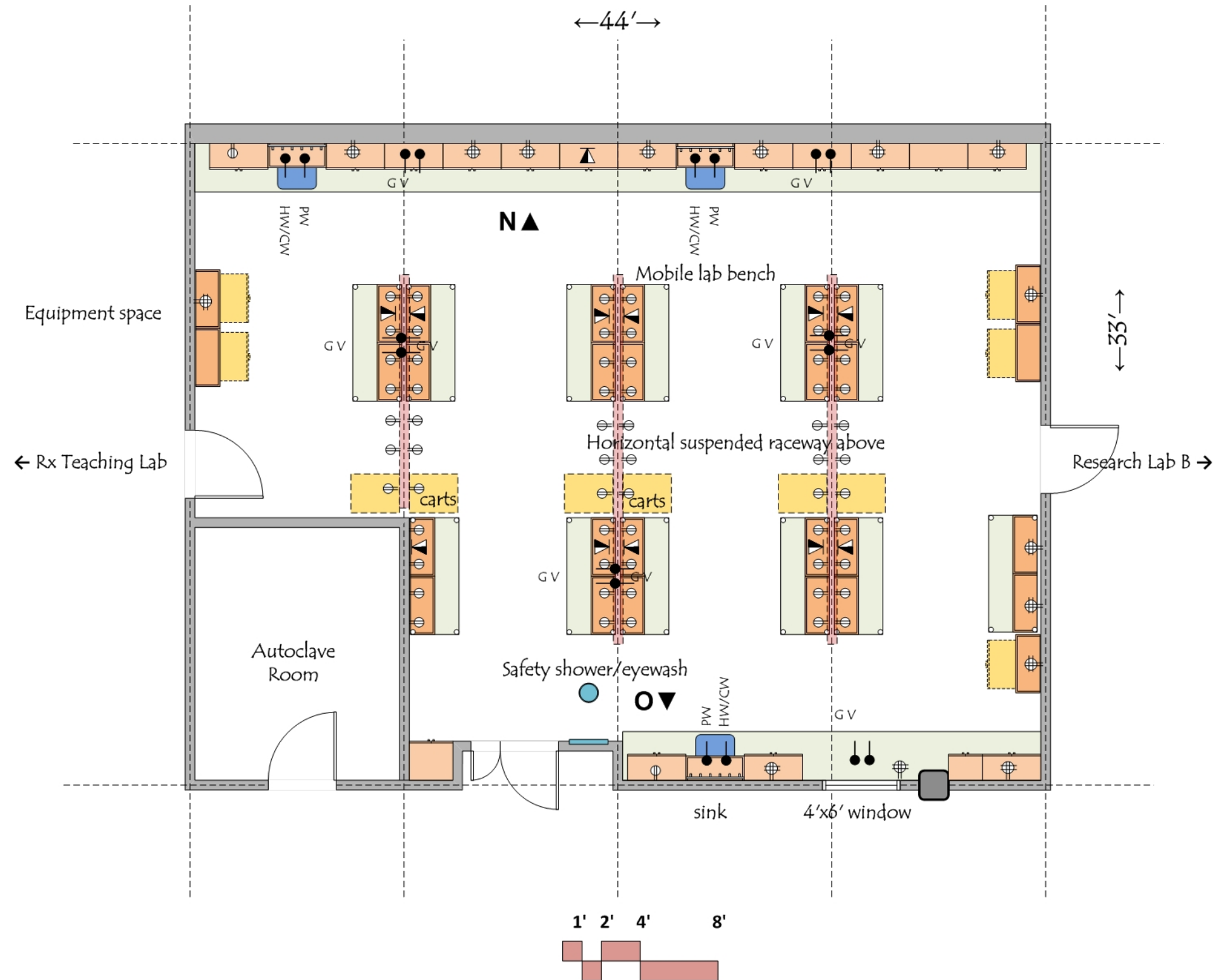


Elevation M

R_x Teaching Lab



Core Lab B



ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl or VCT
 Walls: gypsum board and enamel paint
 Ceiling: 10'-12' acoustic tile
 Doors: 3'x8'/1'6"x8' pair with window at corridor
 3'6"x8' with window at research lab and teaching lab
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

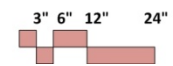
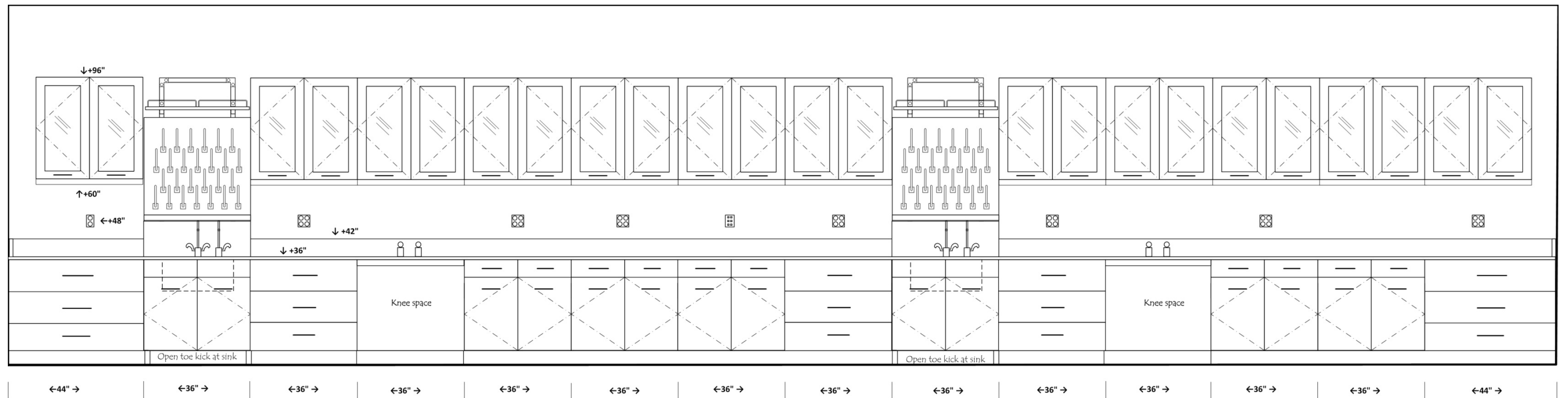
Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 HPLC, GC, Mass Spec
 Scientific equipment
 Soap and paper towel dispensers at sinks

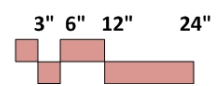
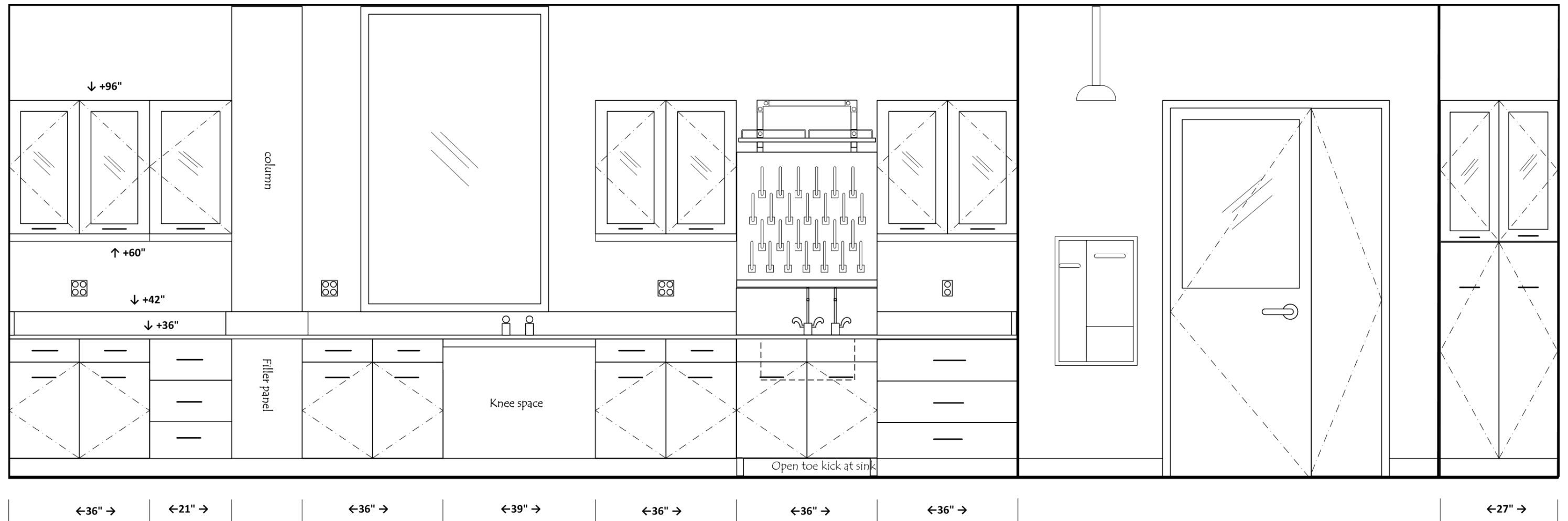
Elevation N

Core Lab B

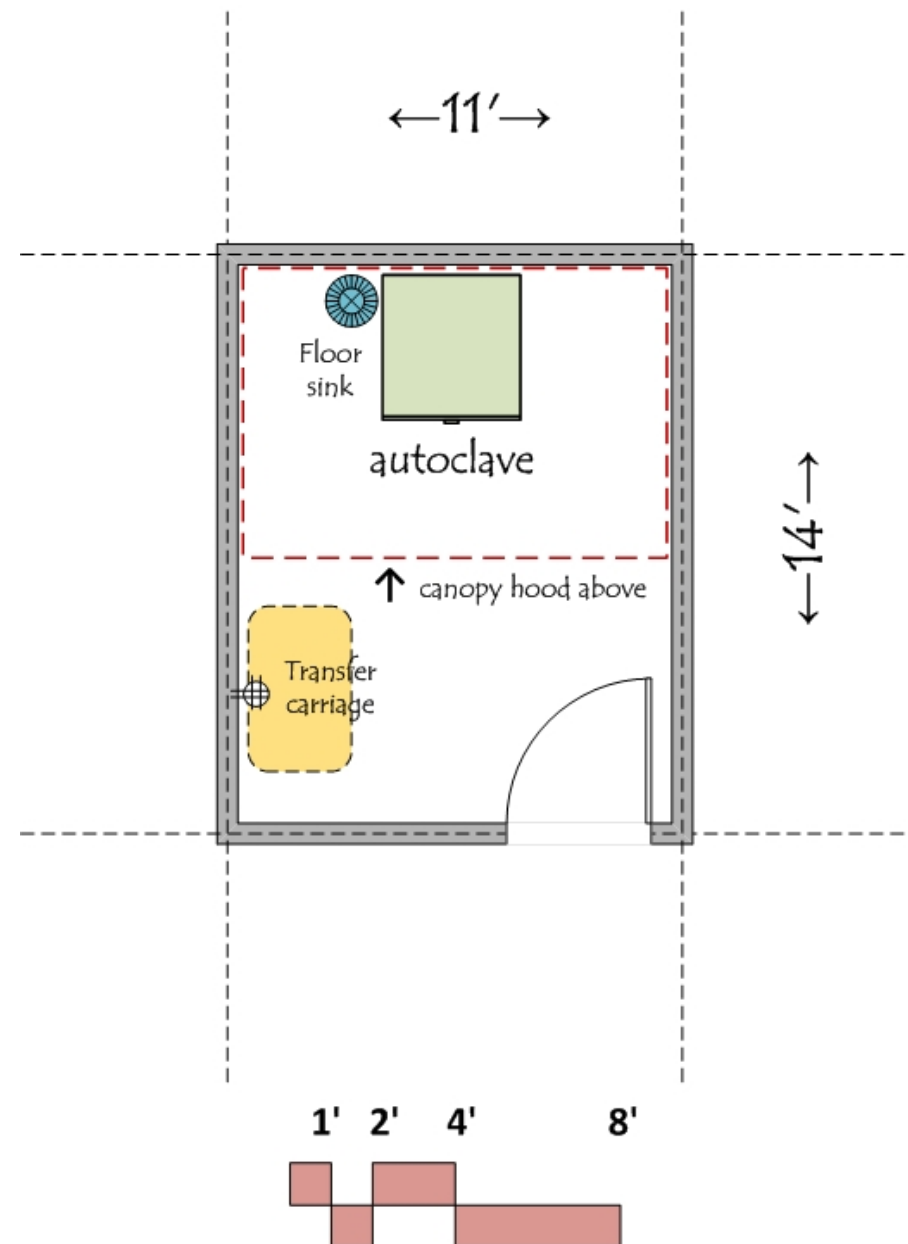


Elevation O

Core Lab B



Autoclave Room



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: water proof gypsum board and epoxy paint
 Ceiling: 10' mylar tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 50 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 12 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 75 btuh/sf

ELECTRICAL

110v fourplex outlet- dedicated circuit
 Lighting: indirect fluorescent @ 50 f.c.

PLUMBING

Hot/Cold water at autoclave
 Softened water feed supply
 Floor sink

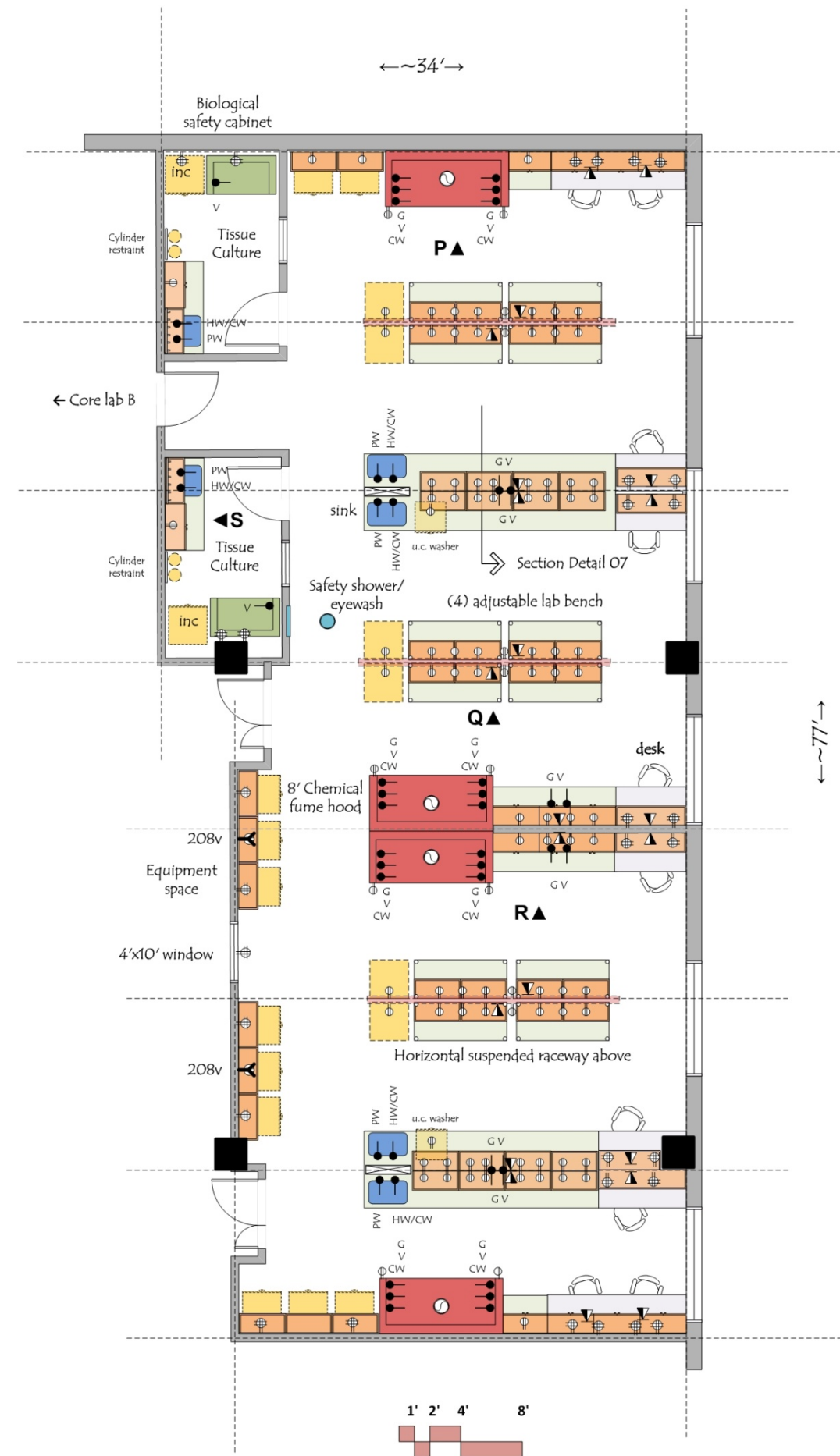
CONTRACTOR FURNISHED EQUIPMENT

Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 HPLC, GC, Mass Spec
 Scientific equipment
 Soap and paper towel dispensers at sinks

Research Lab Suite B



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: gypsum board and enamel paint
 Ceiling: 10'- 12' acoustic tile
 Doors: 3⁰x8⁰/1⁶x8⁰ pair with window at corridor
 3⁶x8⁰ with window at tissue culture and core lab
 Acoustic Attenuation: NC 40 or less
 Light Attenuation: vertical perforated blinds at exterior windows
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust; Pressure: negative to corridor
 6 air changes per hour occupied; 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf; 50 btuh/sf in Tissue Culture Rooms

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks; Pure water at glassware washers
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

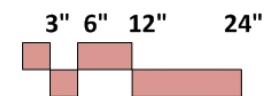
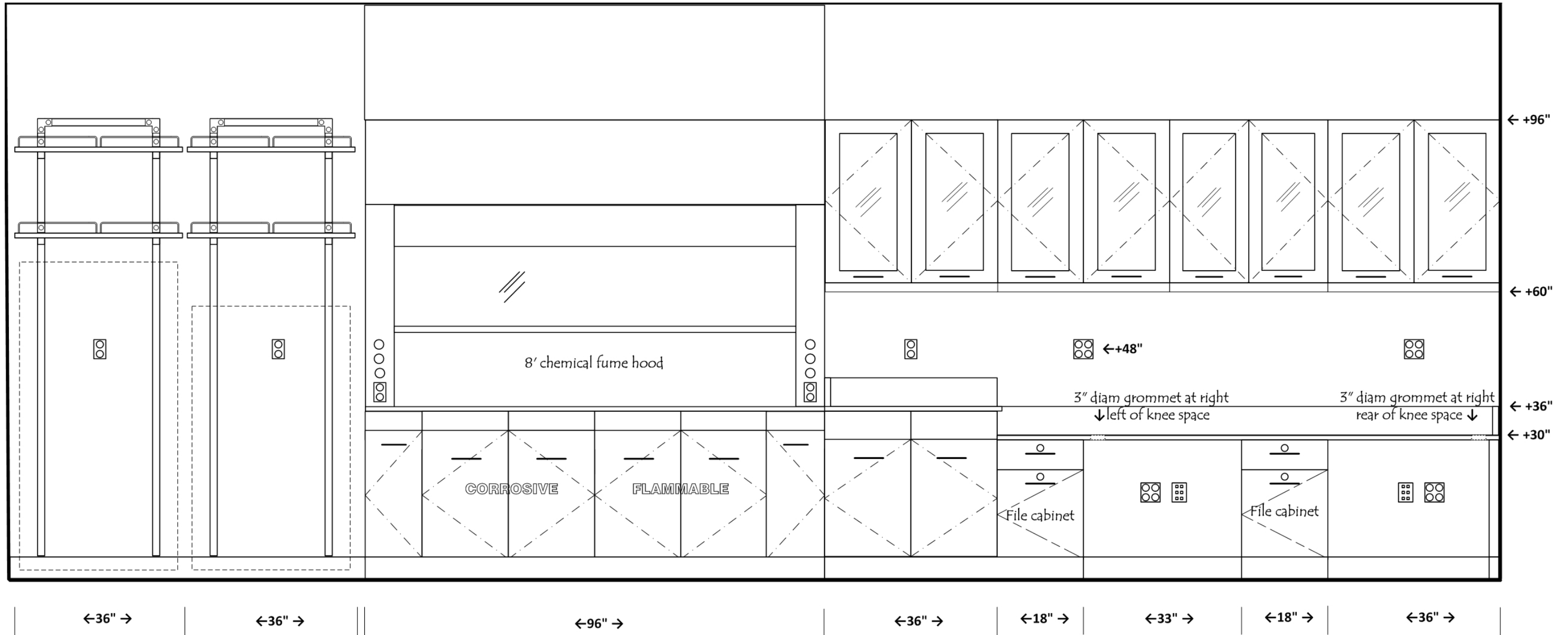
Lab casework
 Epoxy resin tops and sinks; Faucets & fittings
 Chemical fume hoods
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs; Benchtop analytical instruments
 Scientific equipment
 Undercounter glassware washers
 Biological safety cabinets; Refrigerators
 Soap and paper towel dispensers at sinks

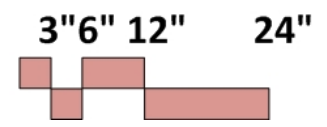
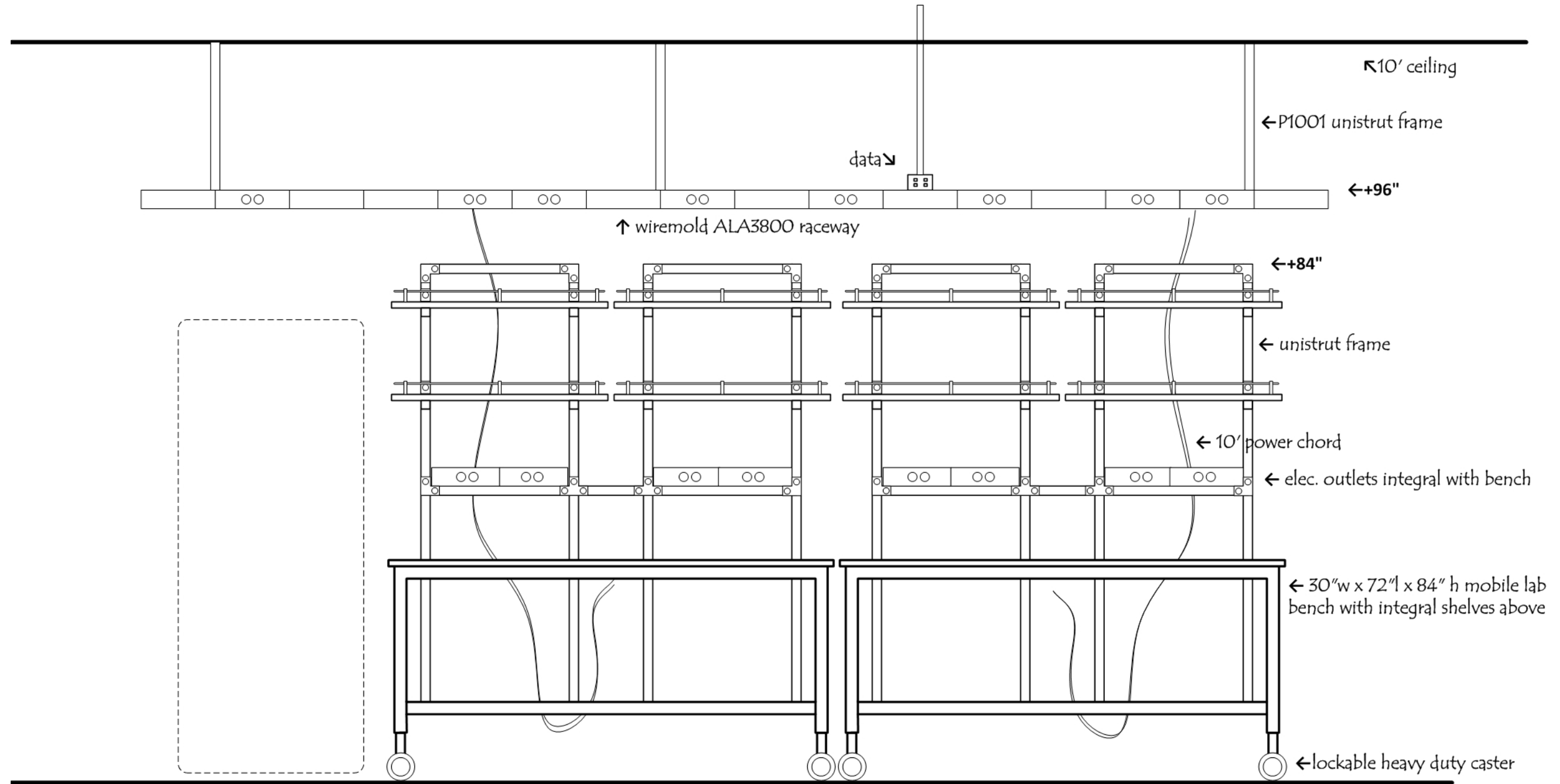
Elevation P

Research Lab Suite B



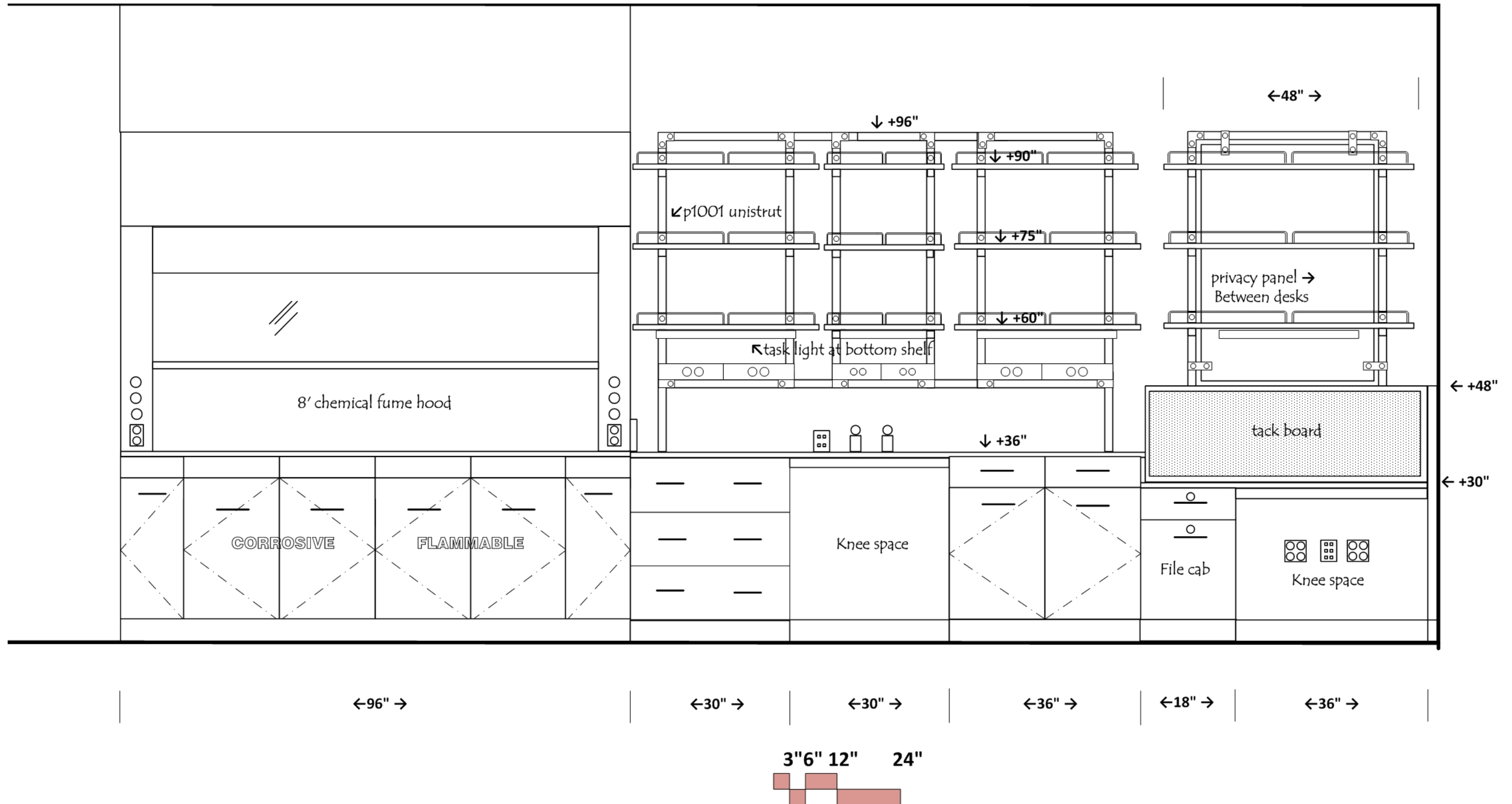
Elevation Q

Research Lab Suite B



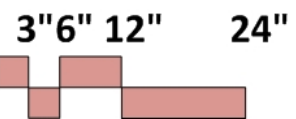
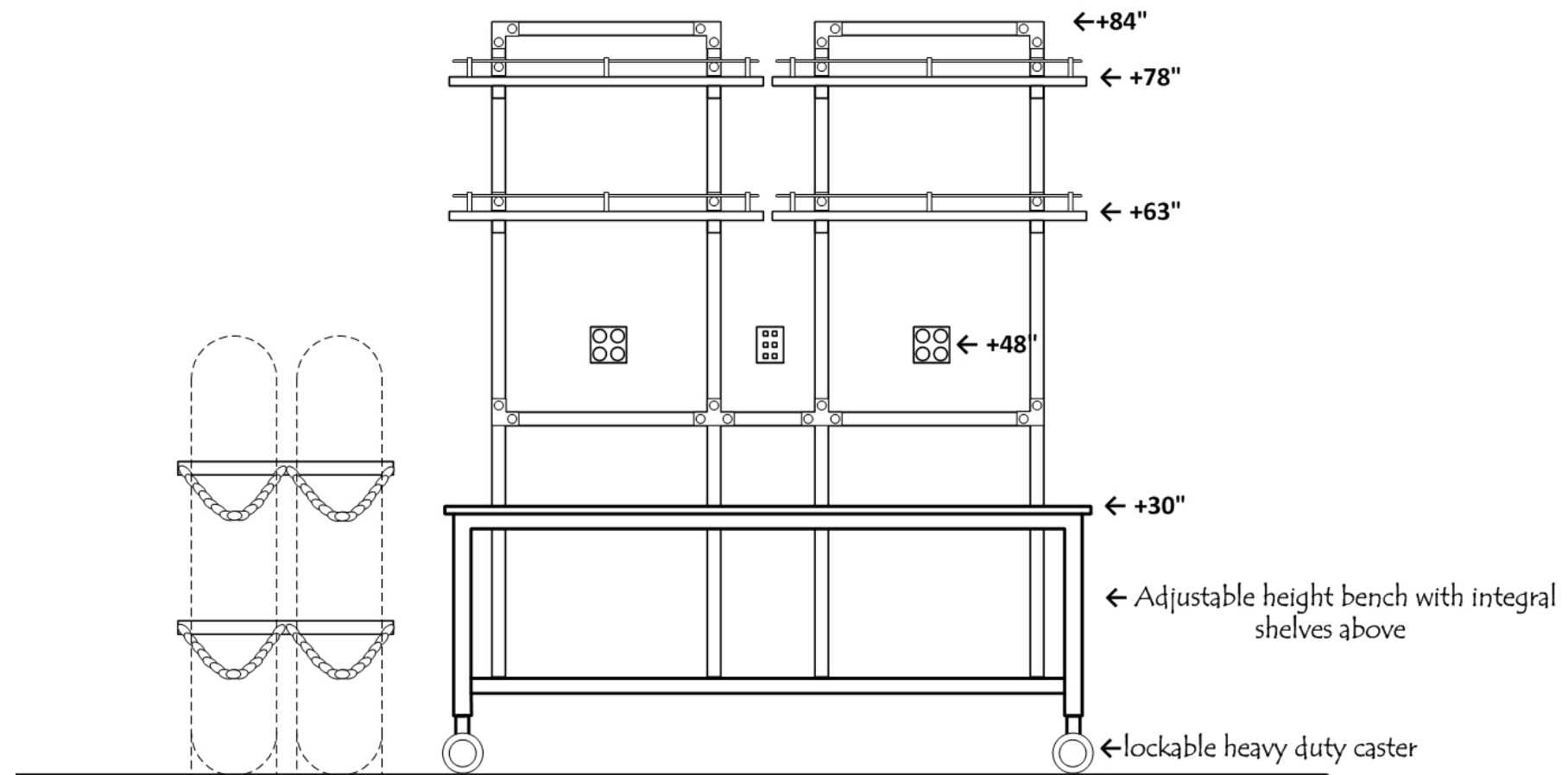
Elevation R

Research Lab Suite B

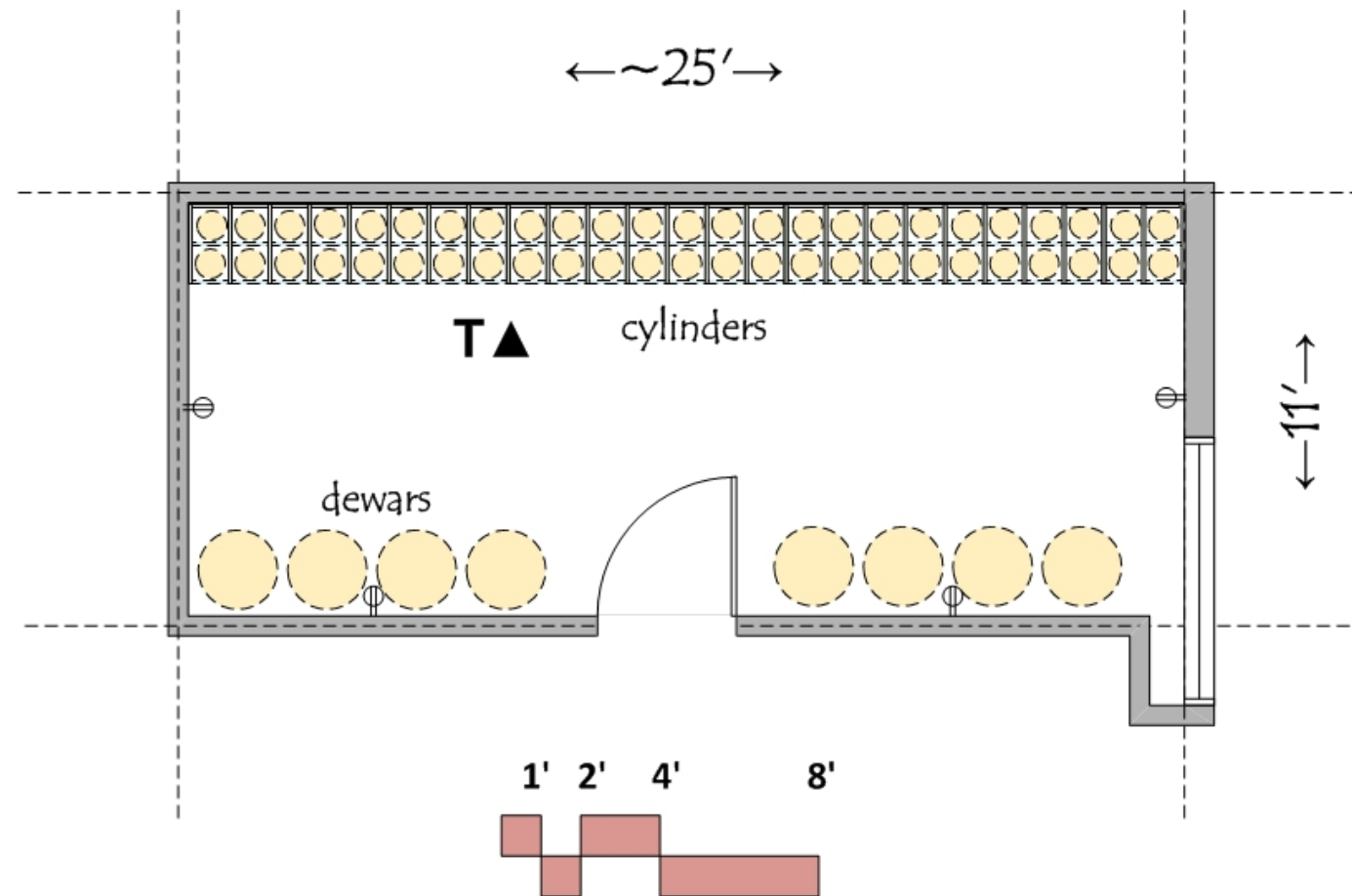


Elevation S

Research Lab Suite B



Cylinders



ARCHITECTURAL

Occupancy: B
 Floor: sealed concrete
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour 24/7
 Heat gain: negligible

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wireless data
 Lighting: indirect fluorescent @ 50 f.c.

PLUMBING

None

CONTRACTOR FURNISHED EQUIPMENT

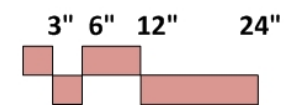
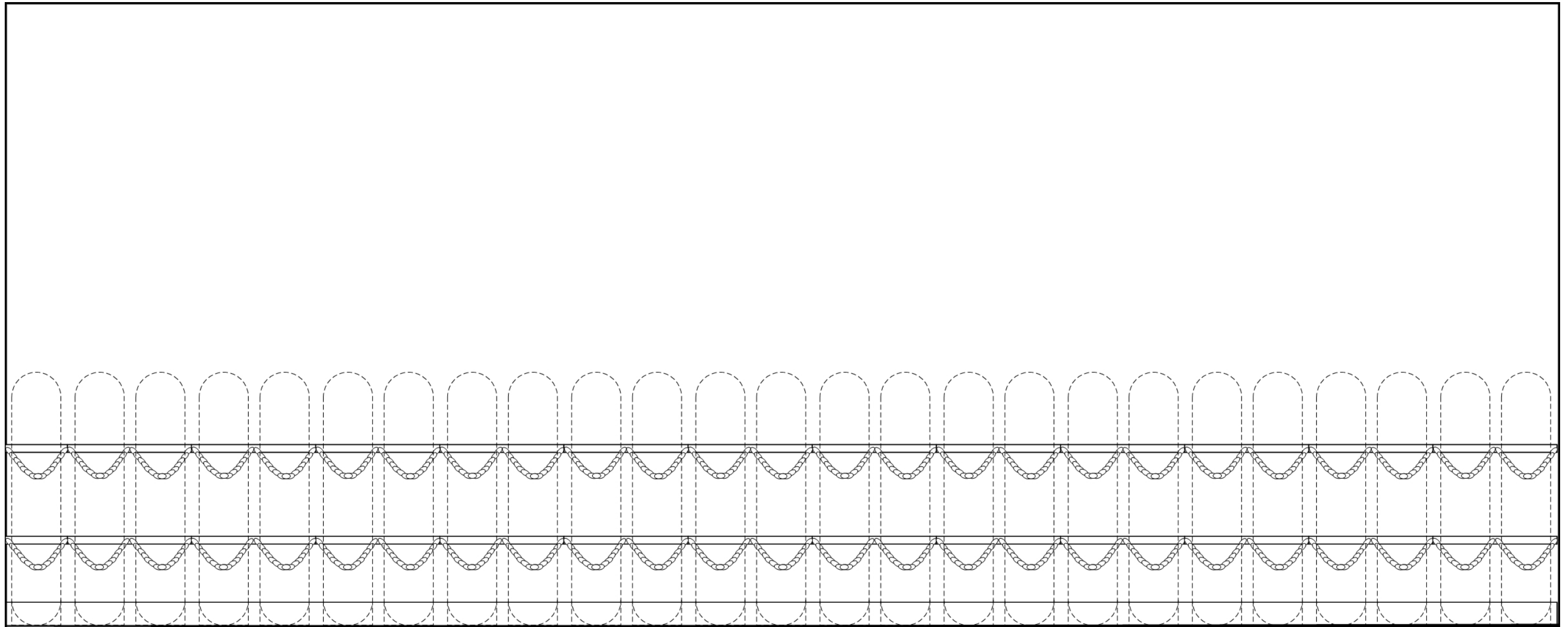
Cylinder restraints at wall

UNIVERSITY FURNISHED EQUIPMENT

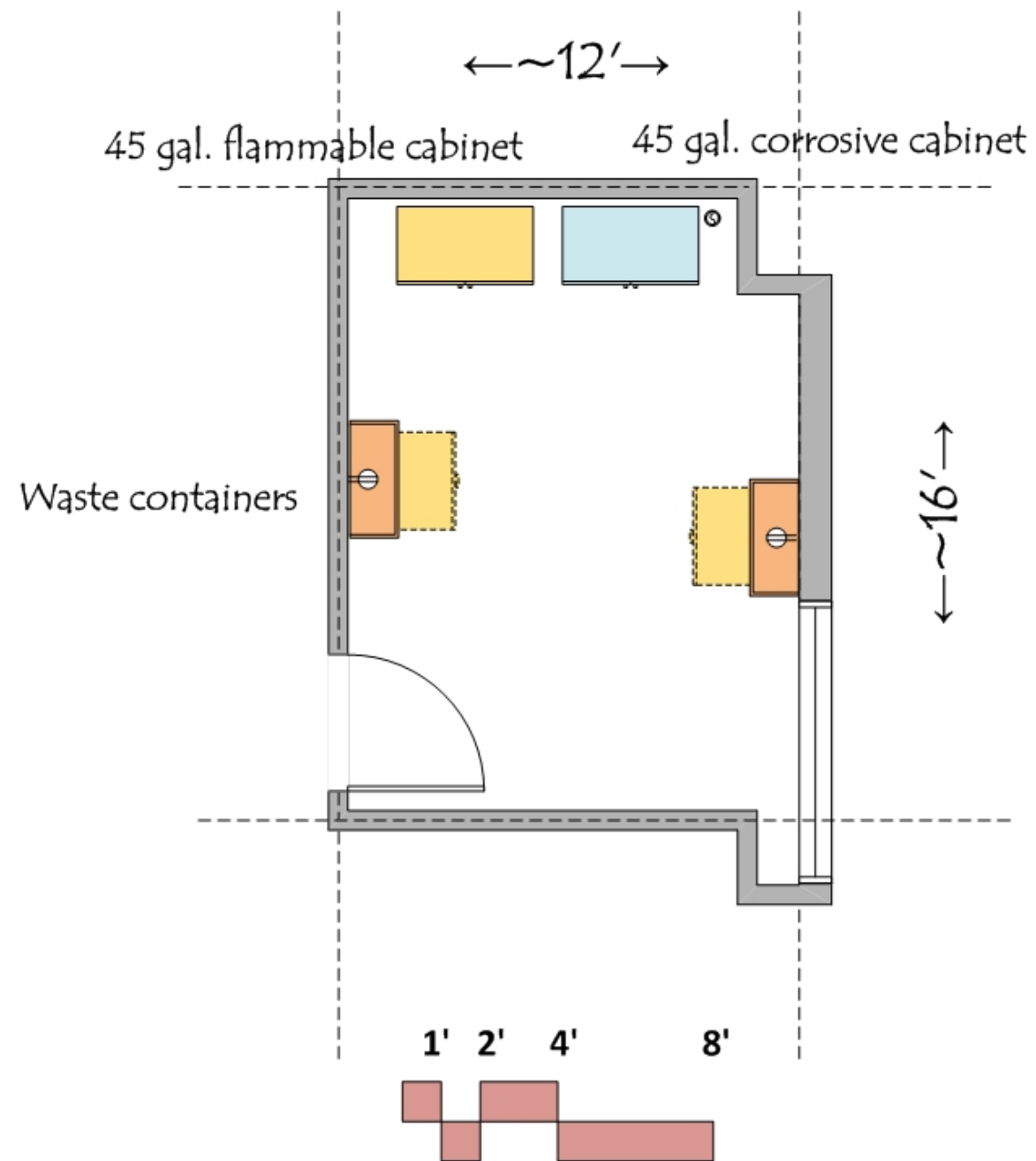
Cylinders
 Dewars

Elevation T

Cylinders



Waste



ARCHITECTURAL

Occupancy: B
 Floor: sealed concrete
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3⁶x8⁰ with window
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour 24/7
 Heat gain: negligible
 Exhaust vent at corrosive cabinet

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

None

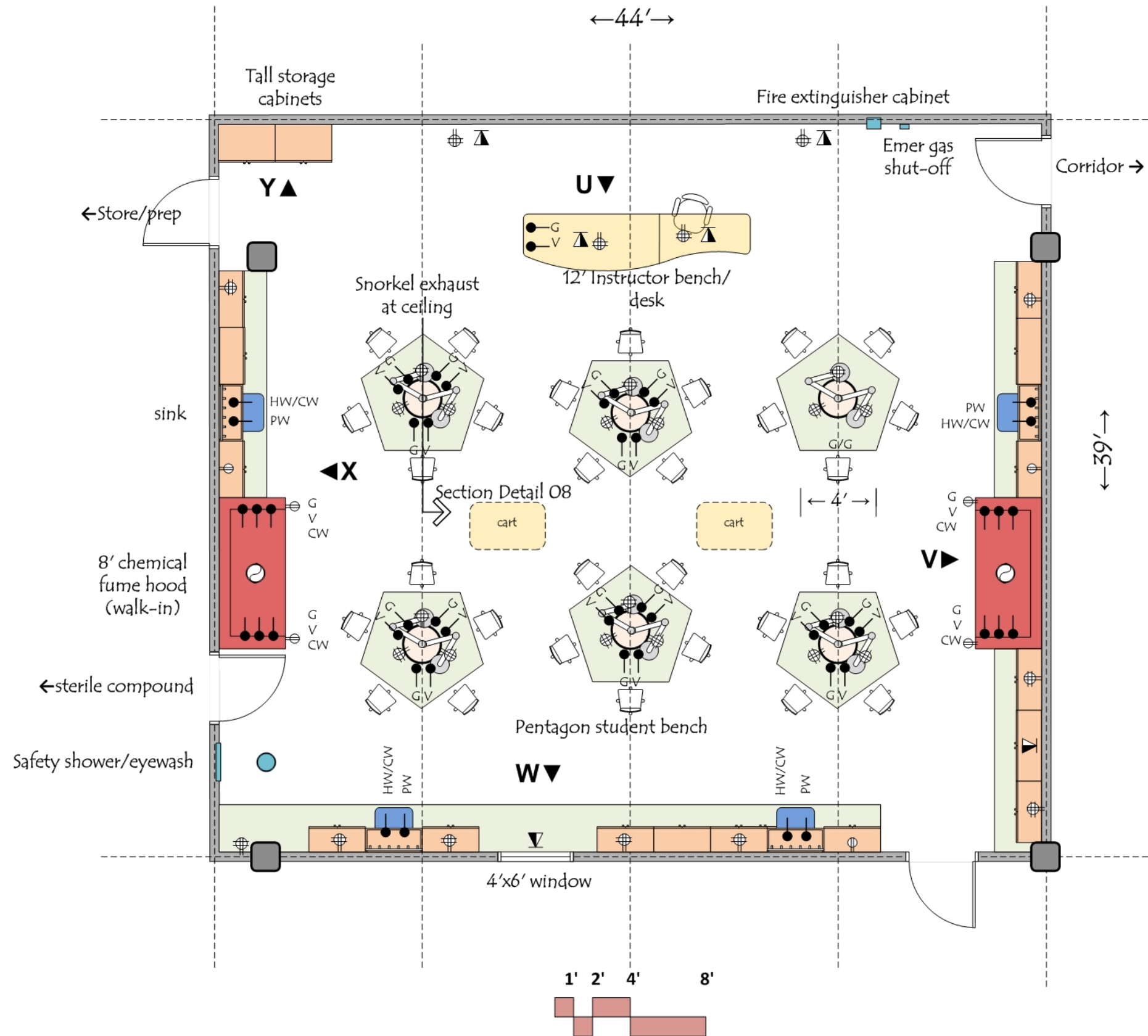
CONTRACTOR FURNISHED EQUIPMENT

Shelves
 Chemical storage cabinets

UNIVERSITY FURNISHED EQUIPMENT

Waste containers

R_x Compounding Teaching Lab



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: gypsum board and enamel paint
 Ceiling: 10'- 12' acoustic tile
 Doors: 3⁰x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.
 Video camera at instructor bench

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

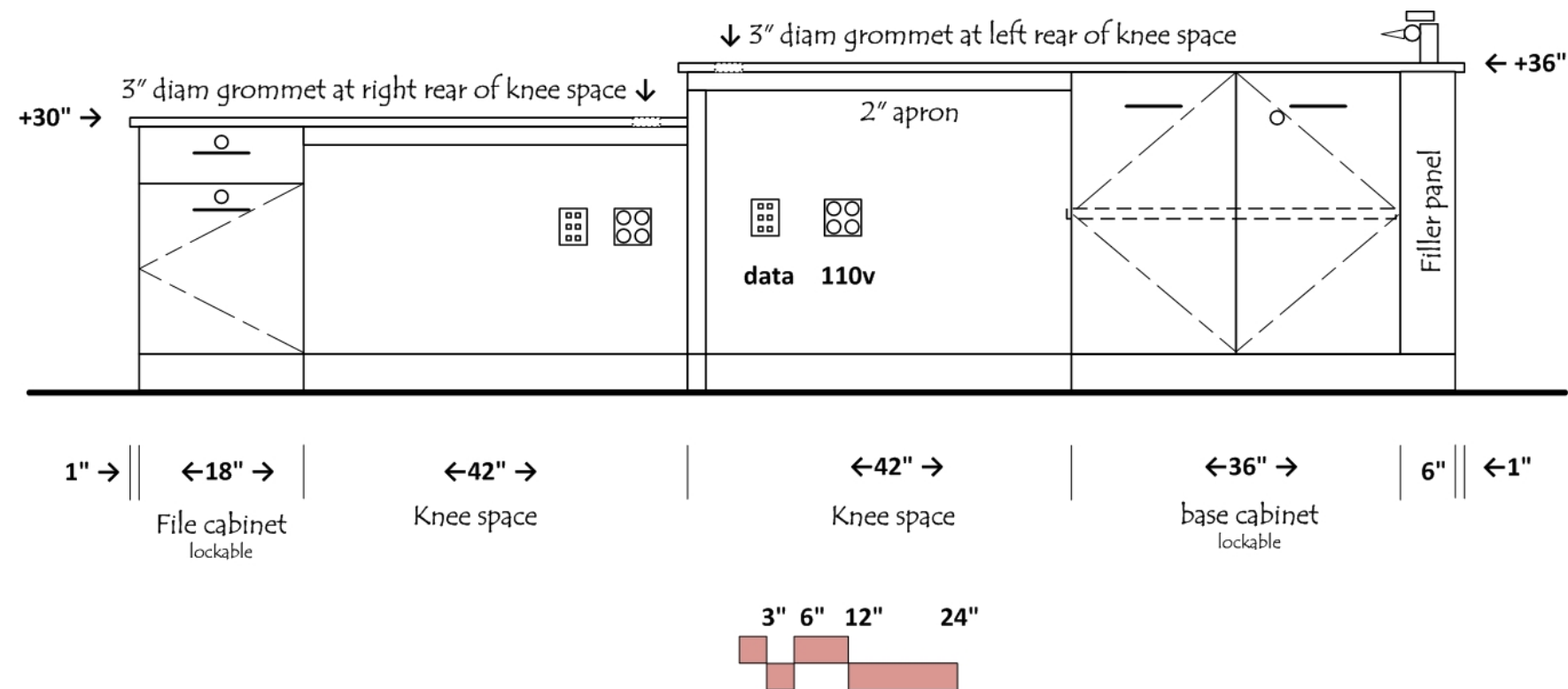
Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods
 Snorkel exhaust units
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sinks

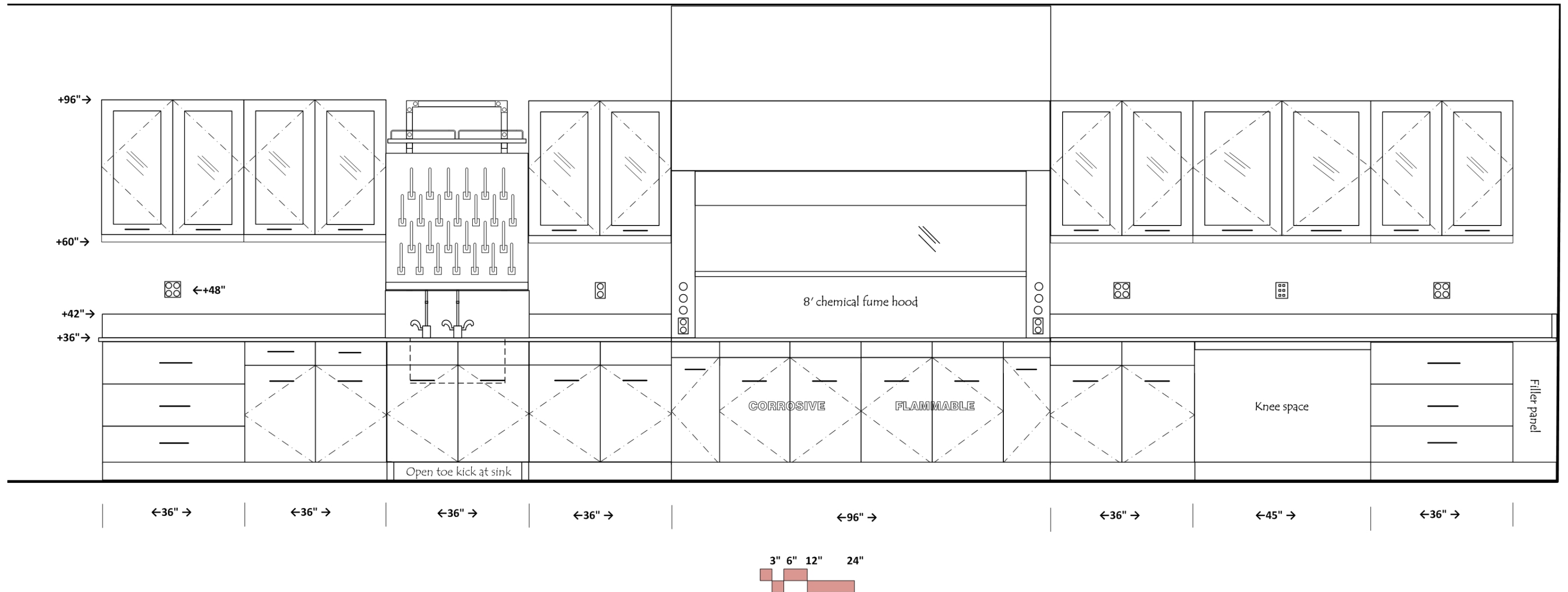
Elevation U

R_x Compounding Teaching Lab



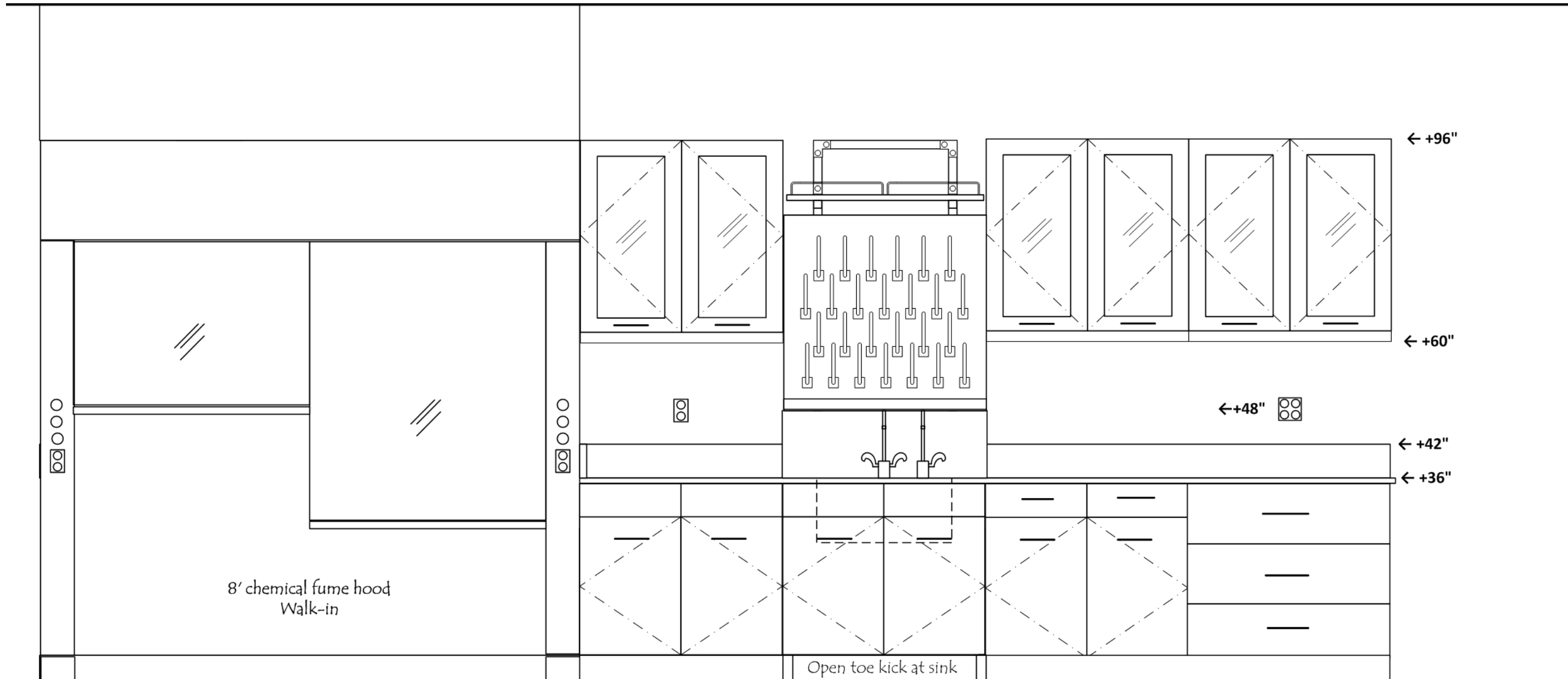
Elevation V

R_x Compounding Teaching Lab



Elevation X

R_x Compounding Teaching Lab



8' chemical fume hood
Walk-in

Open toe kick at sink

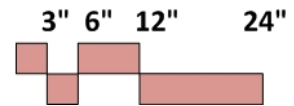
←96" →

←36" →

←36" →

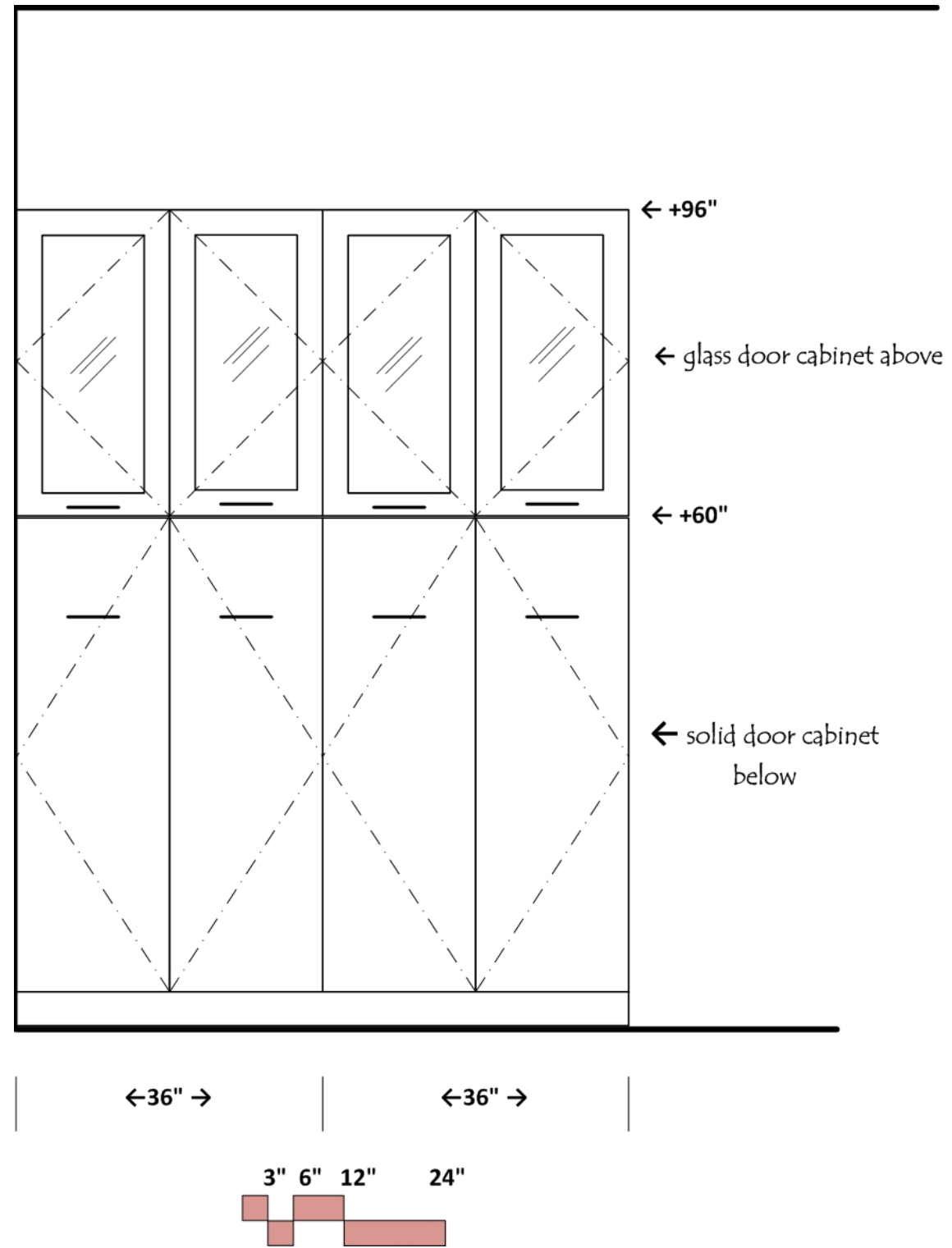
←36" →

←36" →

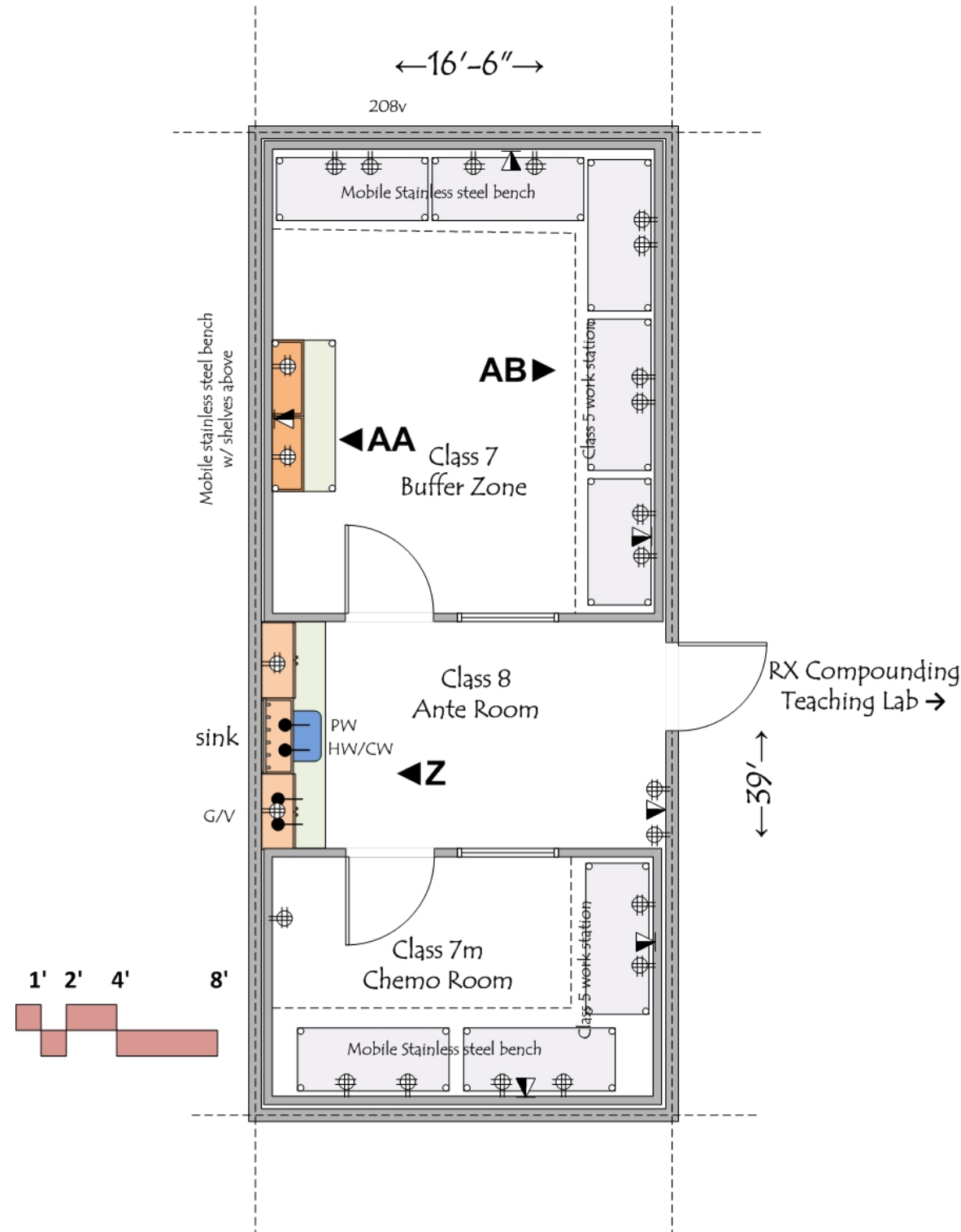


Elevation Y

R_x Compounding Teaching Lab



Sterile Compound



ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl
 Walls: gypsum board and enamel paint
 prefab walls at clean rooms
 Ceiling: 10'- 12' acoustic tile
 Doors: 3⁰x8⁰/1⁶x8⁰ pair with window at corridor
 3⁶x7⁰ pre fab doors at clean rooms
 Acoustic Attenuation: NC 40 or less
 Security: none

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 Recirculated air
 Pressure: Clean Rooms positive to vestibule
 Vestibule positive to teaching lab
 Heat gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breaker
 Pure water at sink
 Natural gas and vacuum

CONTRACTOR FURNISHED EQUIPMENT

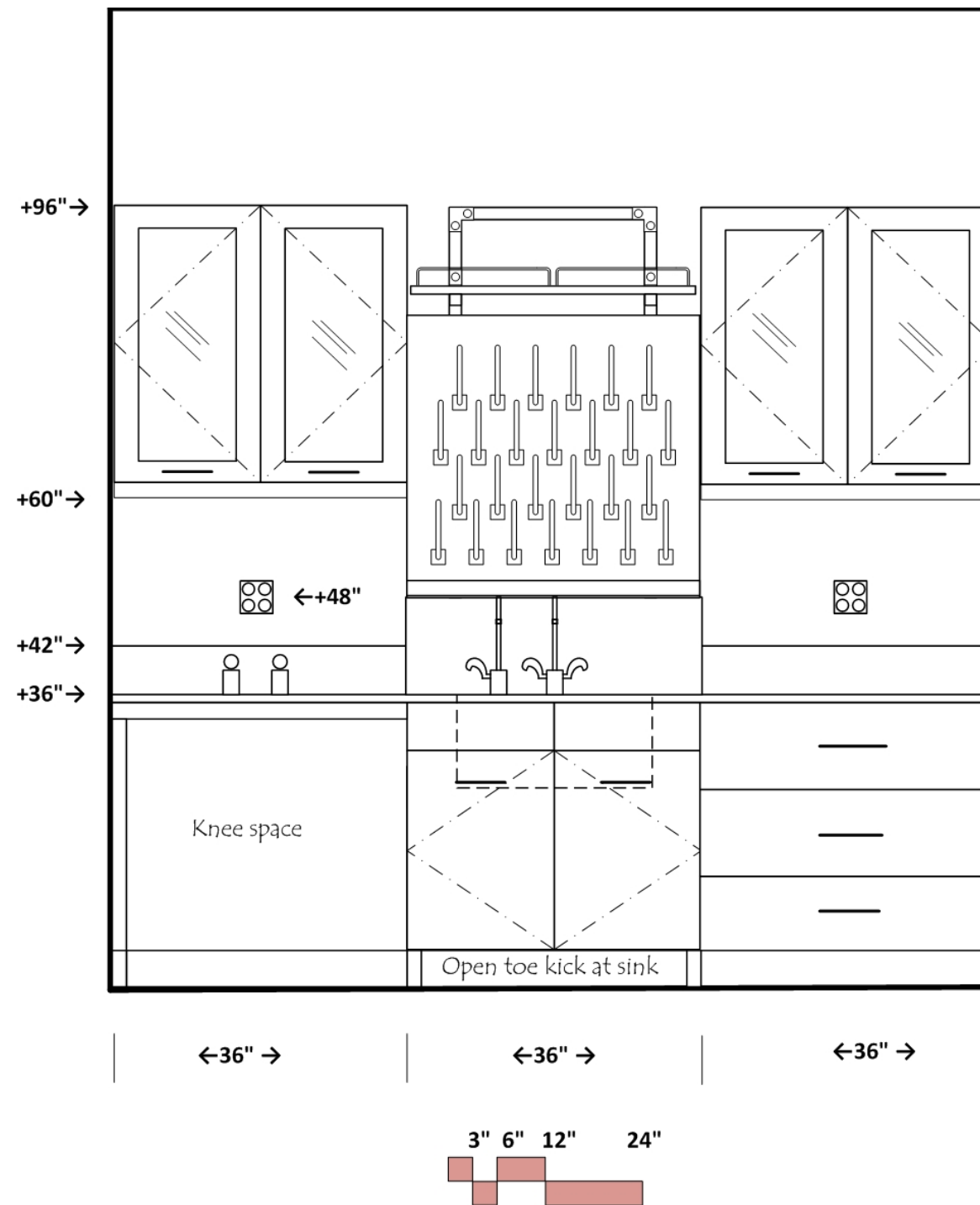
Stainless Steel lab casework
 Stainless steel tops and sinks
 Stainless steel mobile lab benches and tables
 Faucets & fittings
 Prefab clean room system for Class 7 &8 rooms

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchttop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sink

Elevation Z

Sterile Compound



Elevation AA

Sterile Compound

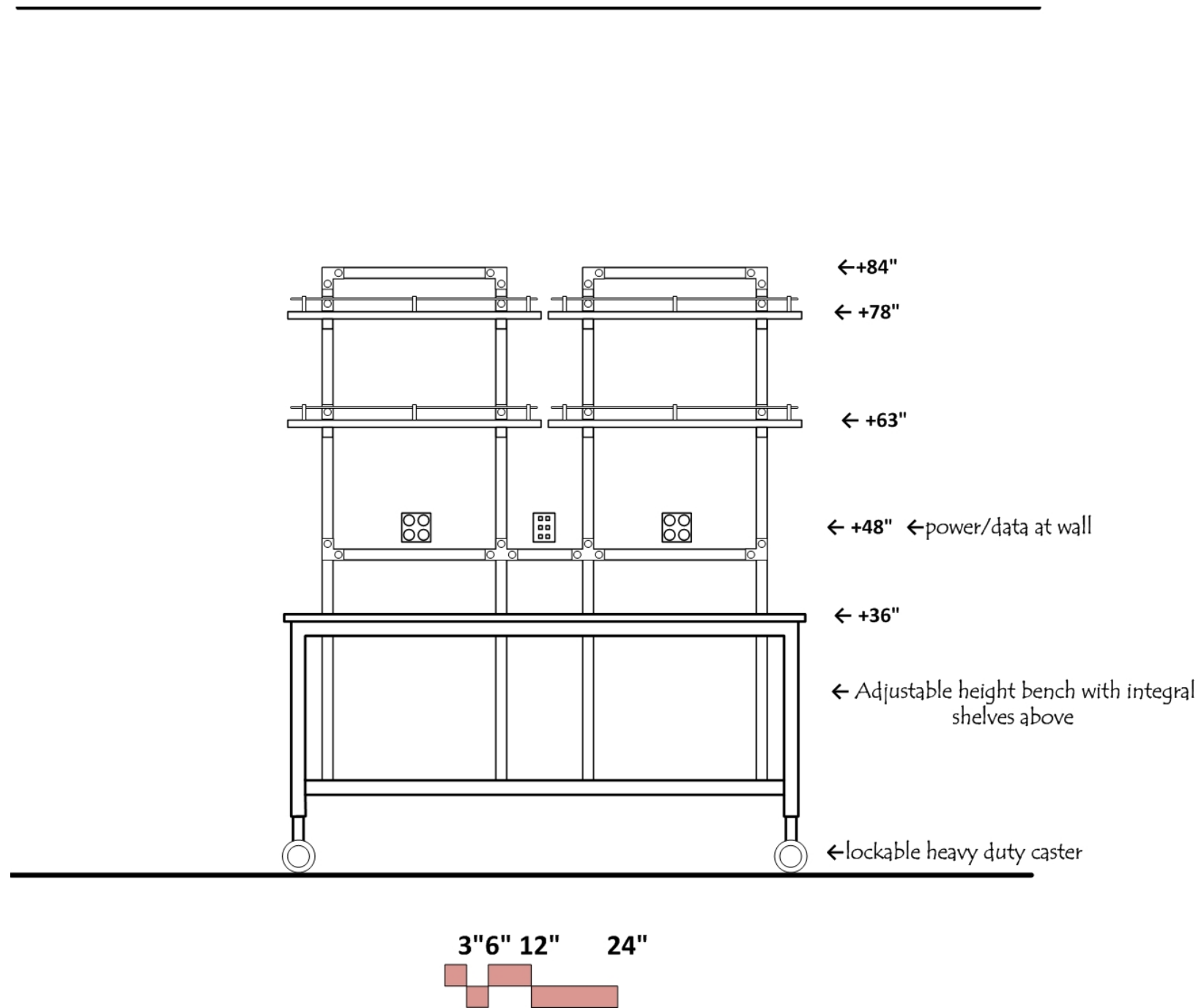


Photo AB

Similar Clean Room at another location



Procedure

ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3'x8' with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: Negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

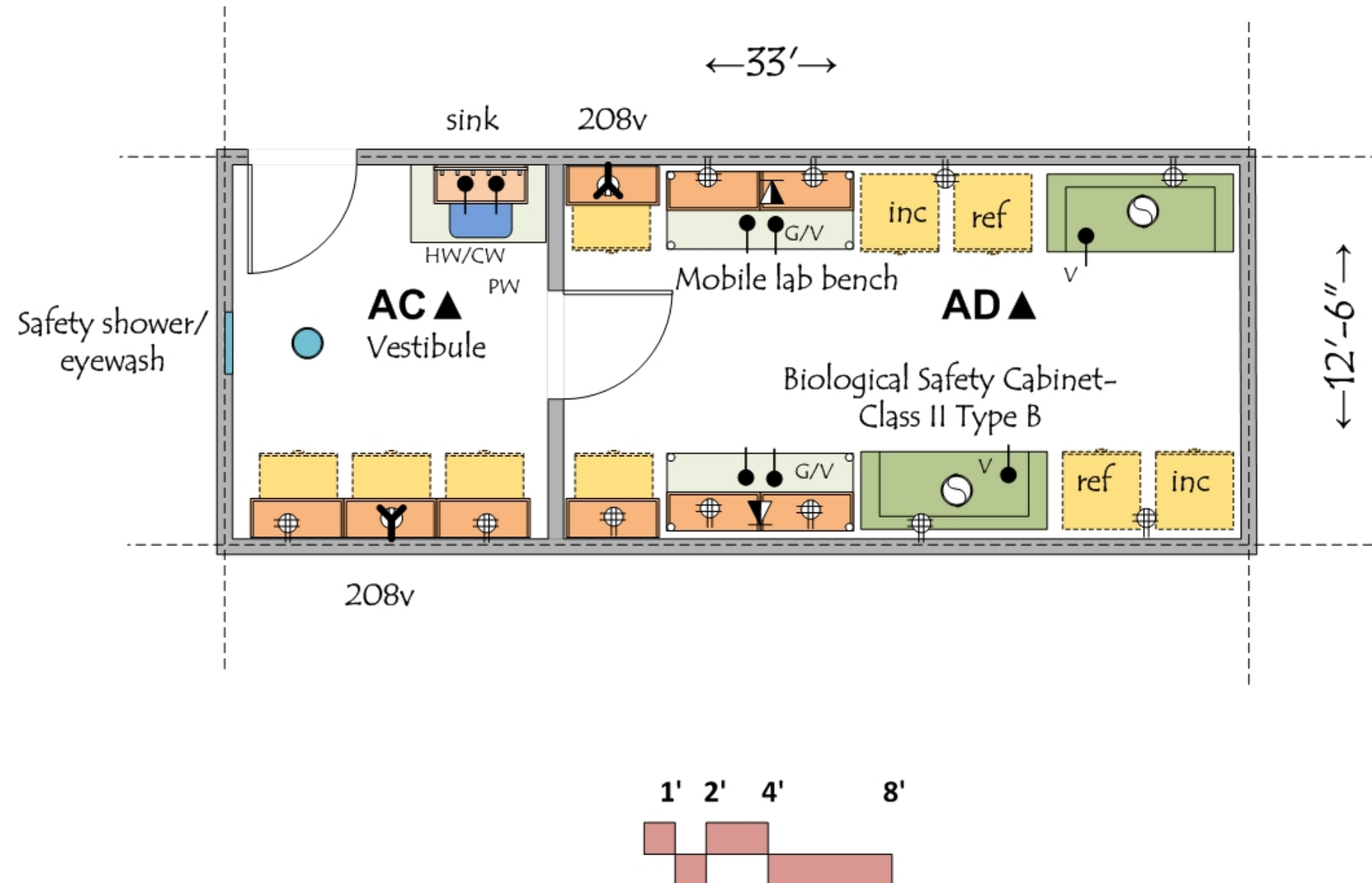
Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Biological Safety Cabinets- Class II Type B 100% exhaust
 Fire extinguisher cabinet
 Safety shower/eyewash

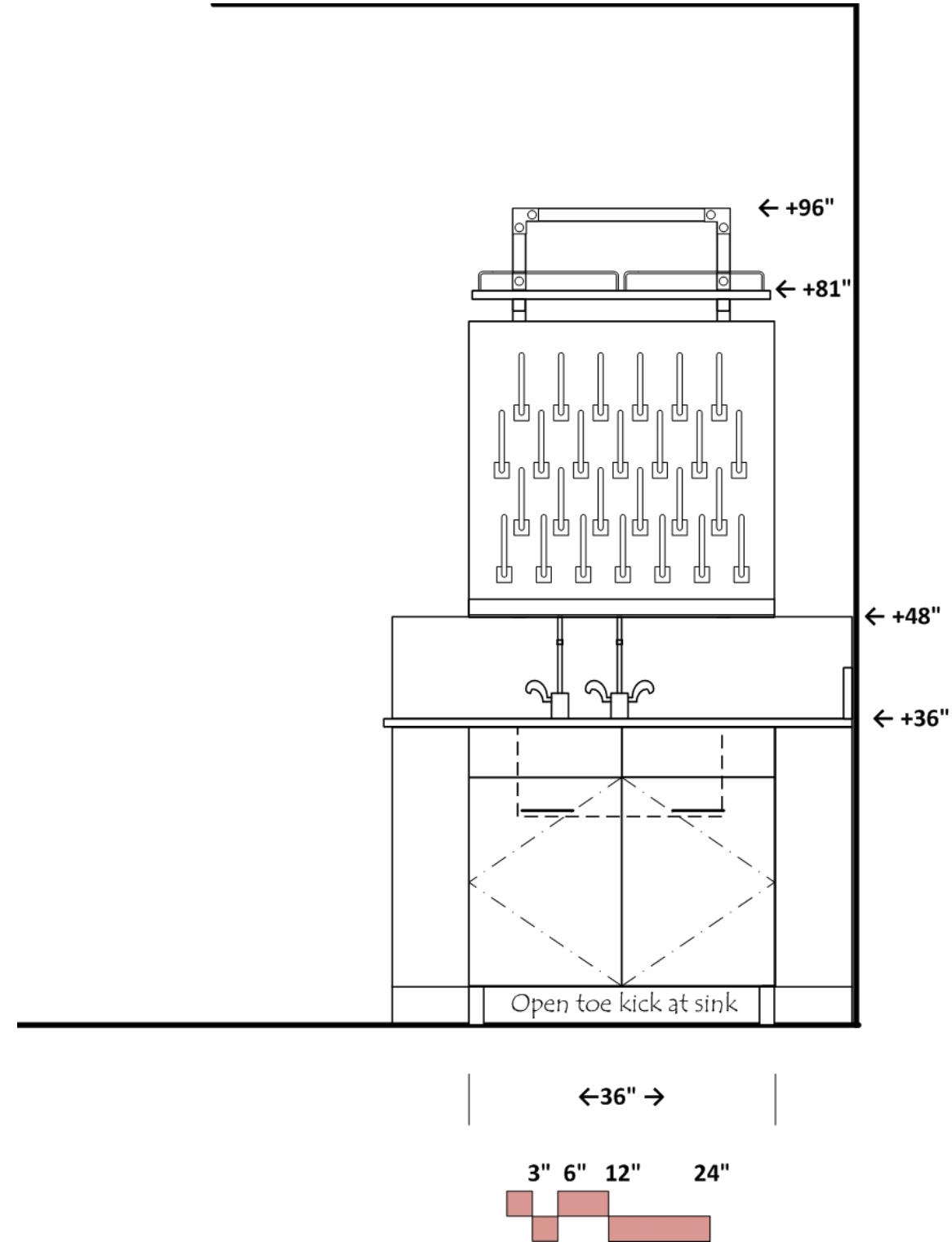
UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sink



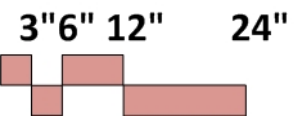
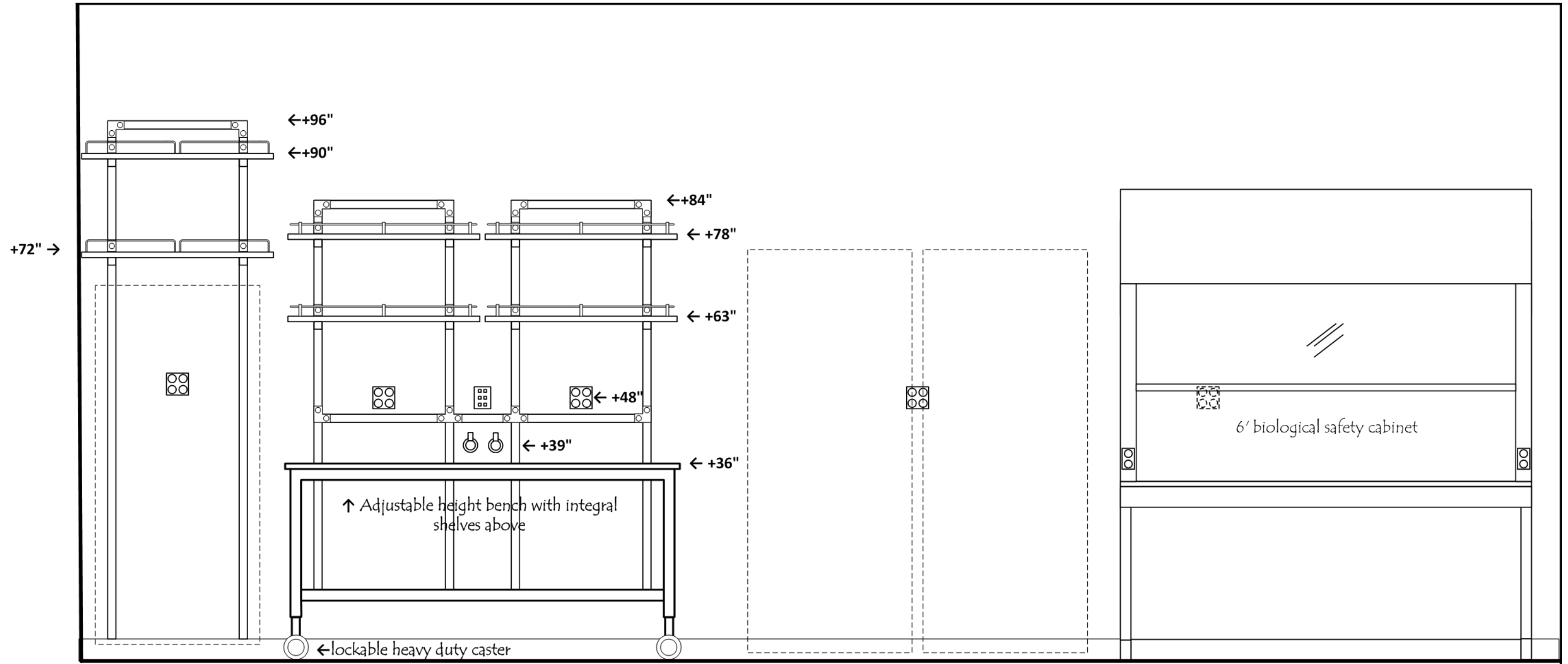
Elevation AC

Procedure



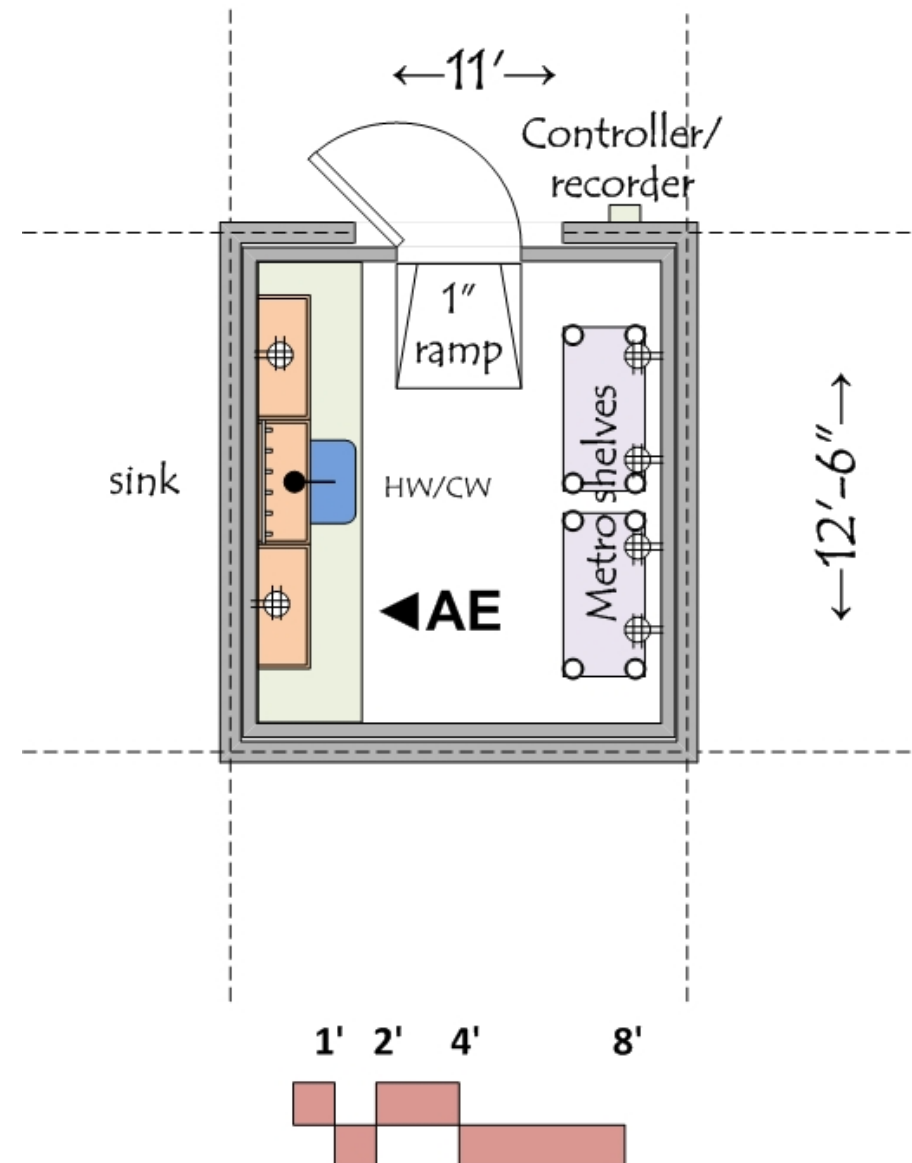
Elevation AD

Procedure



Env Room

Similar for 2 Rooms



ARCHITECTURAL

Occupancy: B
 Floor: diamond plate panel over 1" insulated floor panel
 Walls: 4" insulated wall panels
 Ceiling: 8'-6" insulated panel with egg crate plenum
 Doors: 3⁰x7⁰ insulated with window
 Acoustic Attenuation: NC 40 or less
 Security: None

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 4-40 deg C +/- 2 deg C
 Humidity: controlled 30-50% relative
 Supply air: 50 cfm

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Room on standby power
 Wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breaker

CONTRACTOR FURNISHED EQUIPMENT

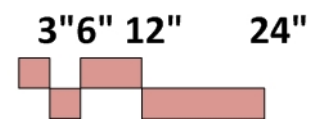
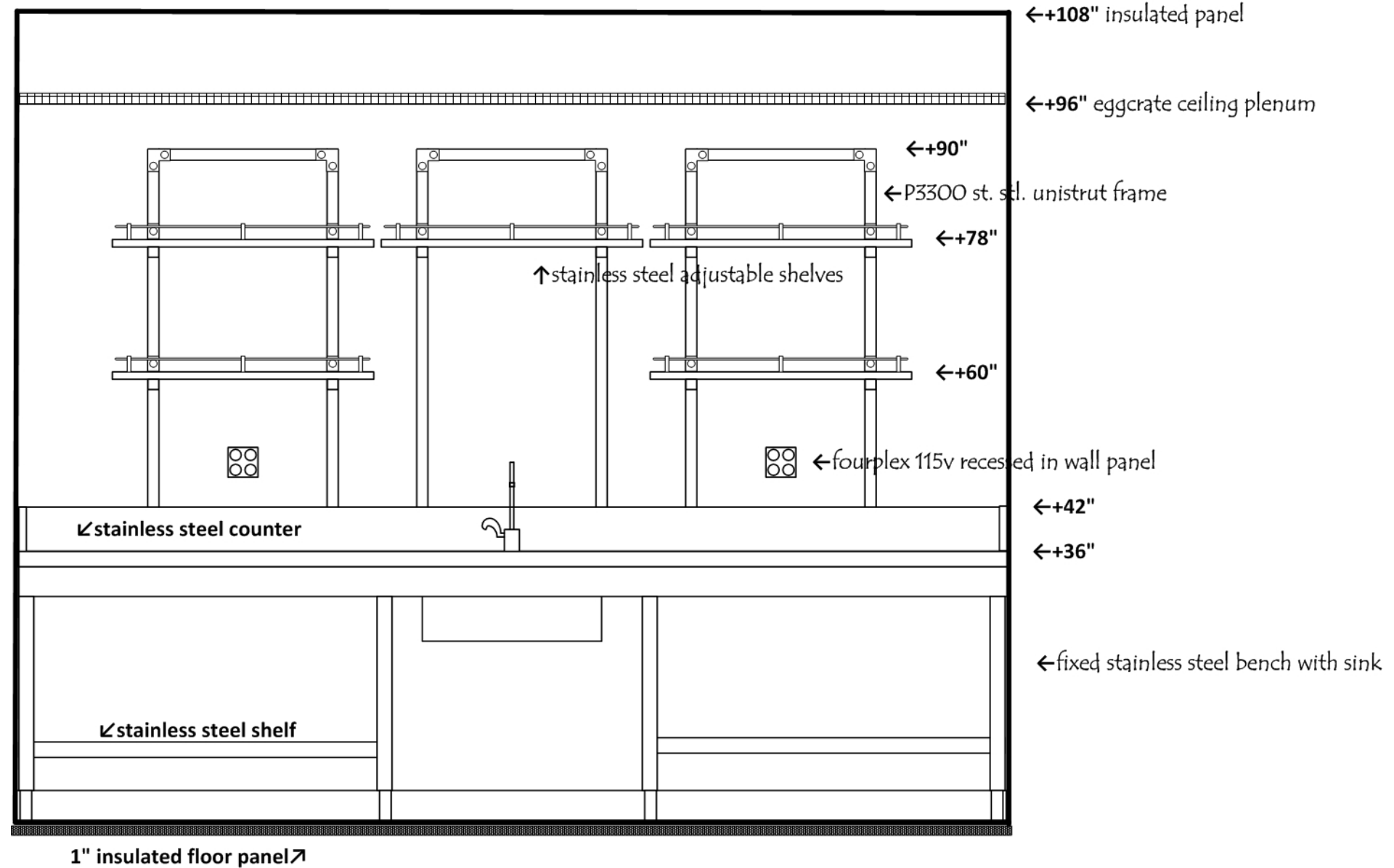
Lab casework- stainless steel
 Sink- stainless steel
 Faucets & fittings
 Metro shelf units

UNIVERSITY FURNISHED EQUIPMENT

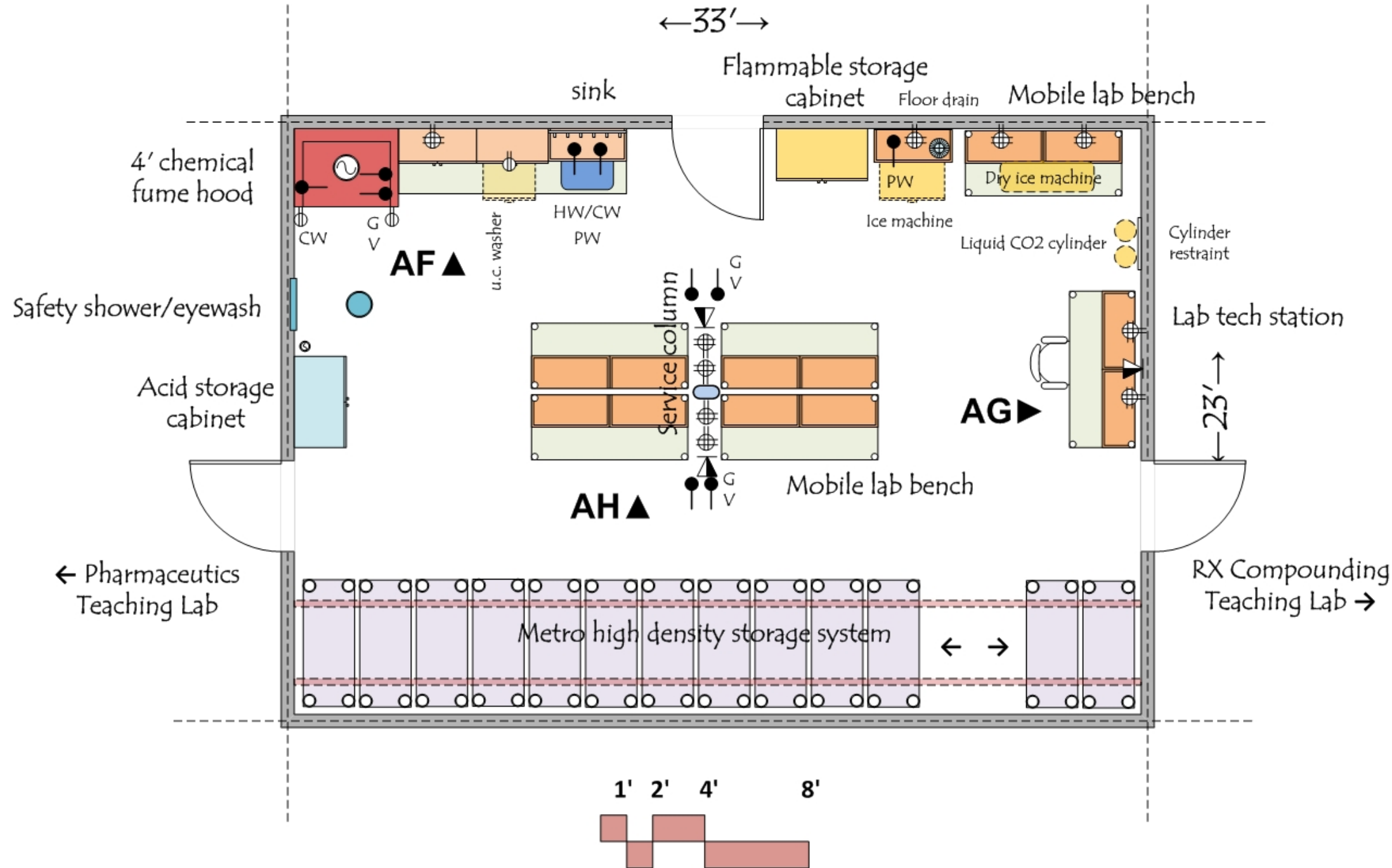
Benchtop analytical instruments
 Scientific equipment

Elevation AE

Env Room



Store/Prep



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor and labs
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf
 Exhaust vent at corrosive cabinet

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breakers
 Pure water at sink
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

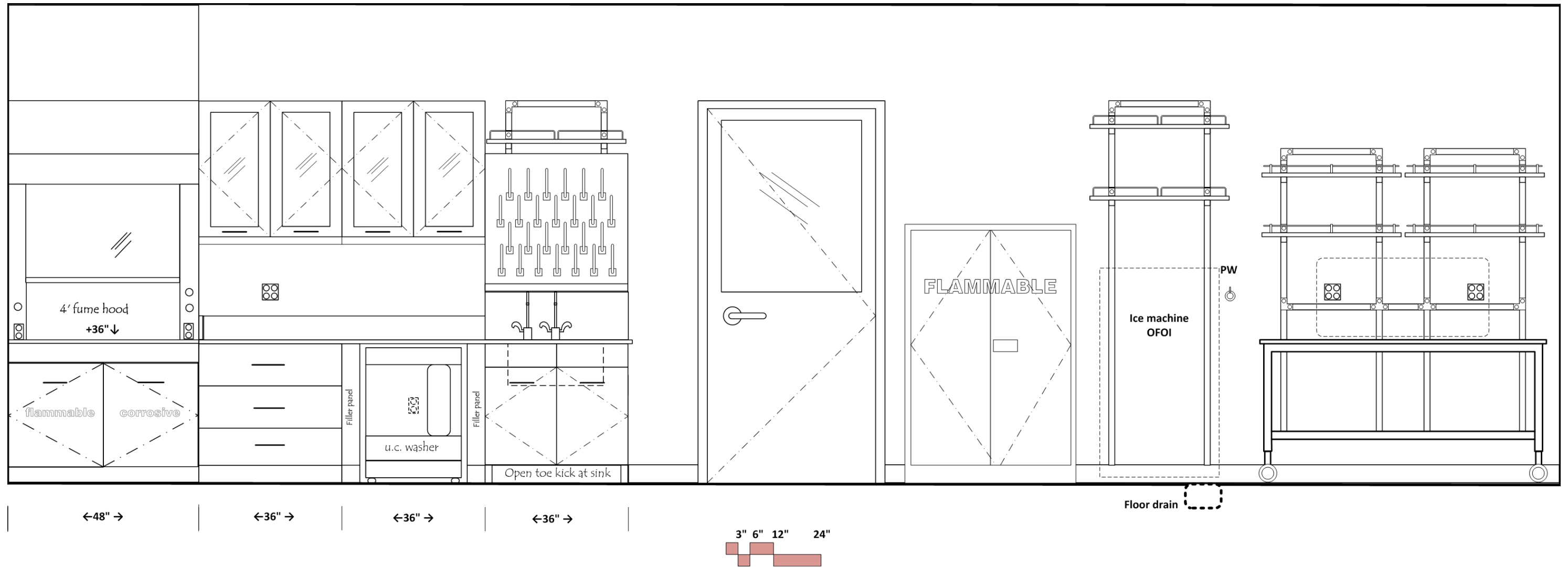
Lab casework; Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hood
 Flammable and Acid storage cabinets
 Metro high density storage system
 Fire extinguisher cabinet
 Safety shower/eyewash
 Undercounter glassware washer

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Scientific equipment
 Ice machine
 Dry ice machine
 Soap and paper towel dispensers at sink

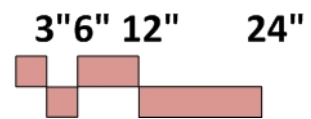
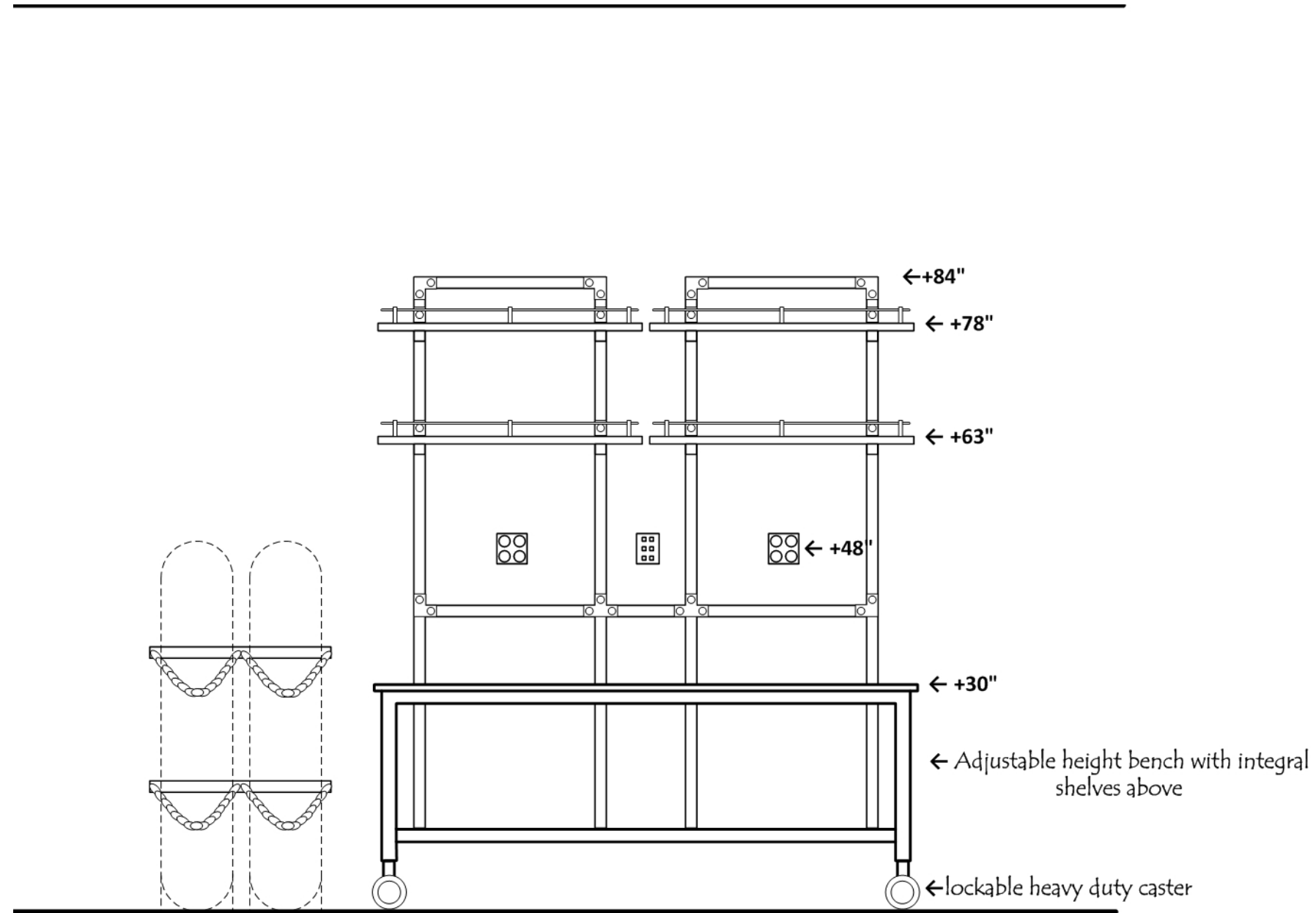
Elevation AF

Store/Prep



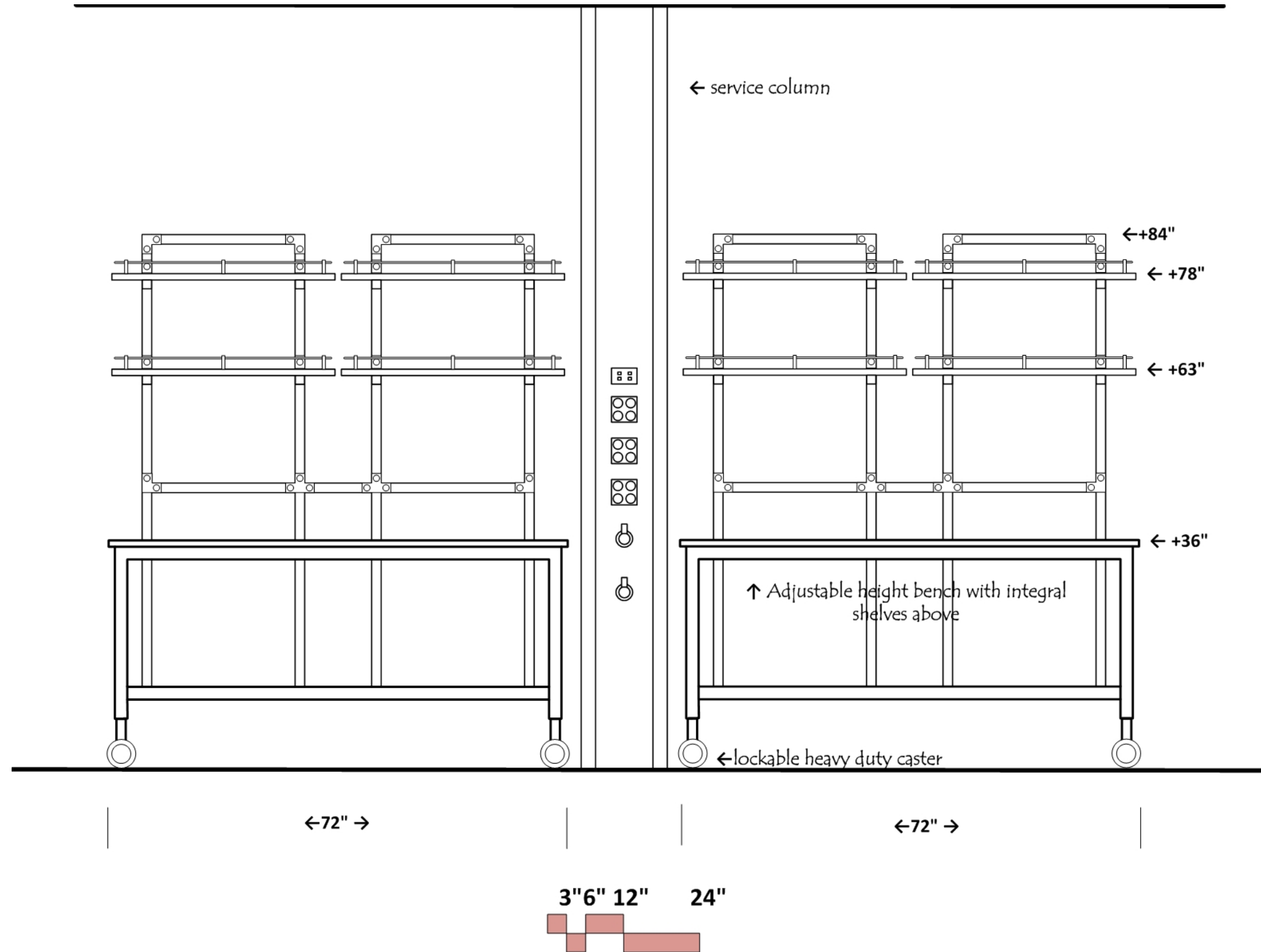
Elevation AG

Store/Prep

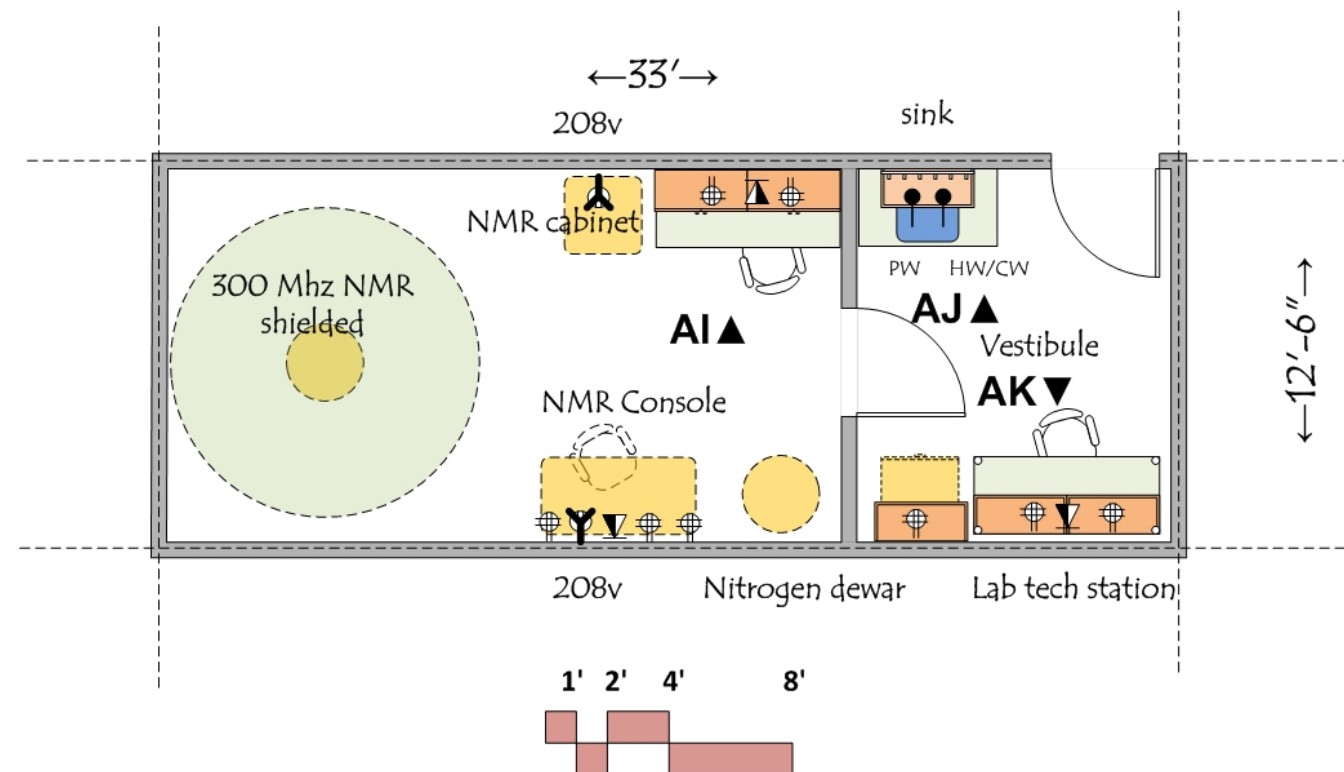


Elevation AH

Store/Prep



NMR



ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl or VCT
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 1,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F at vestibule
 68-70 deg F +/- 1 deg F at NMR room
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Nitrogen sensor with alarm
 Heat gain: 75 btuh/sf
 Provide oxygen sensor with integrated exhaust

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breaker
 Pure water at sink

CONTRACTOR FURNISHED EQUIPMENT

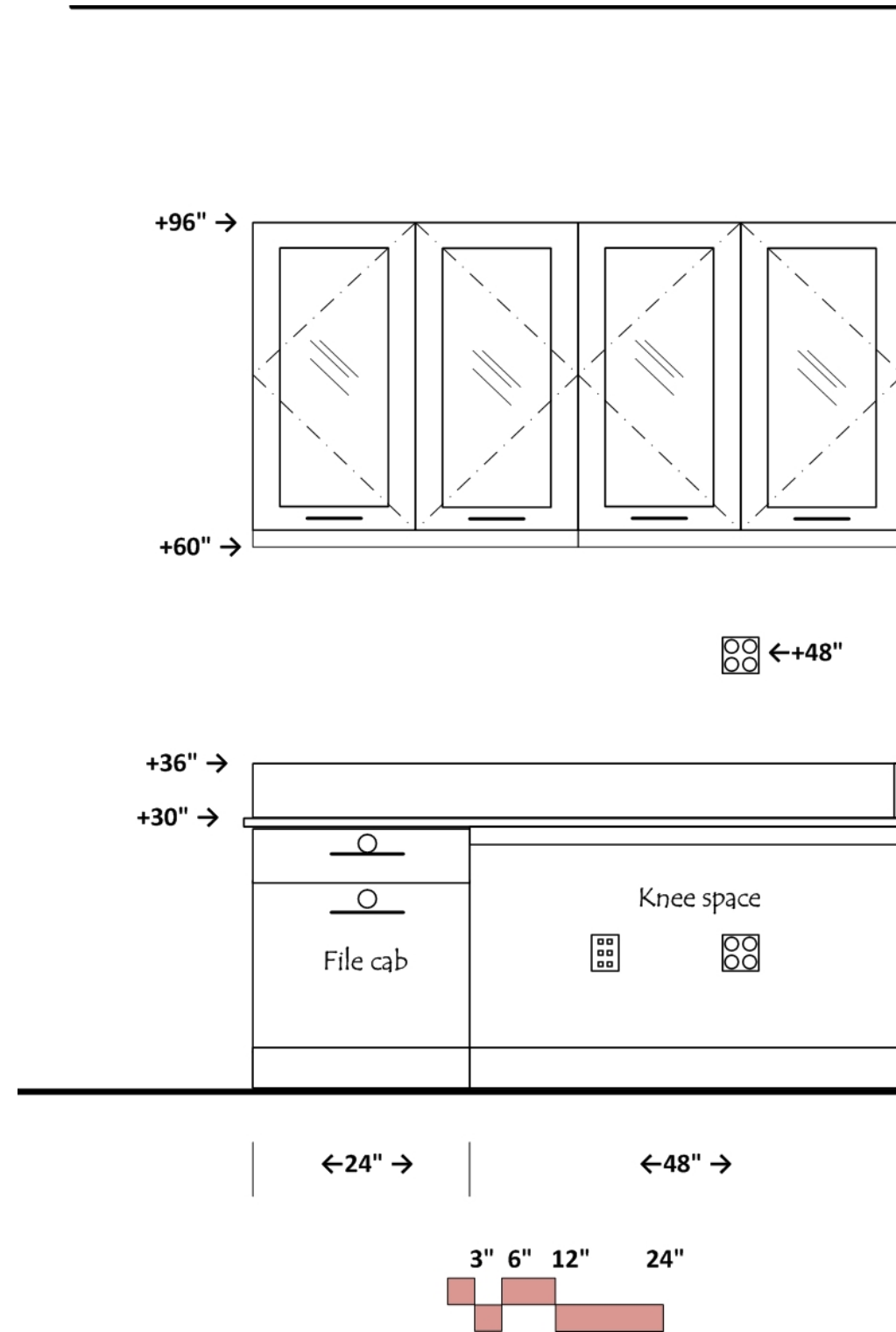
Lab casework
 Epoxy resin tops and sink
 Faucets & fittings

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 NMR equipment
 Soap and paper towel dispensers at sink

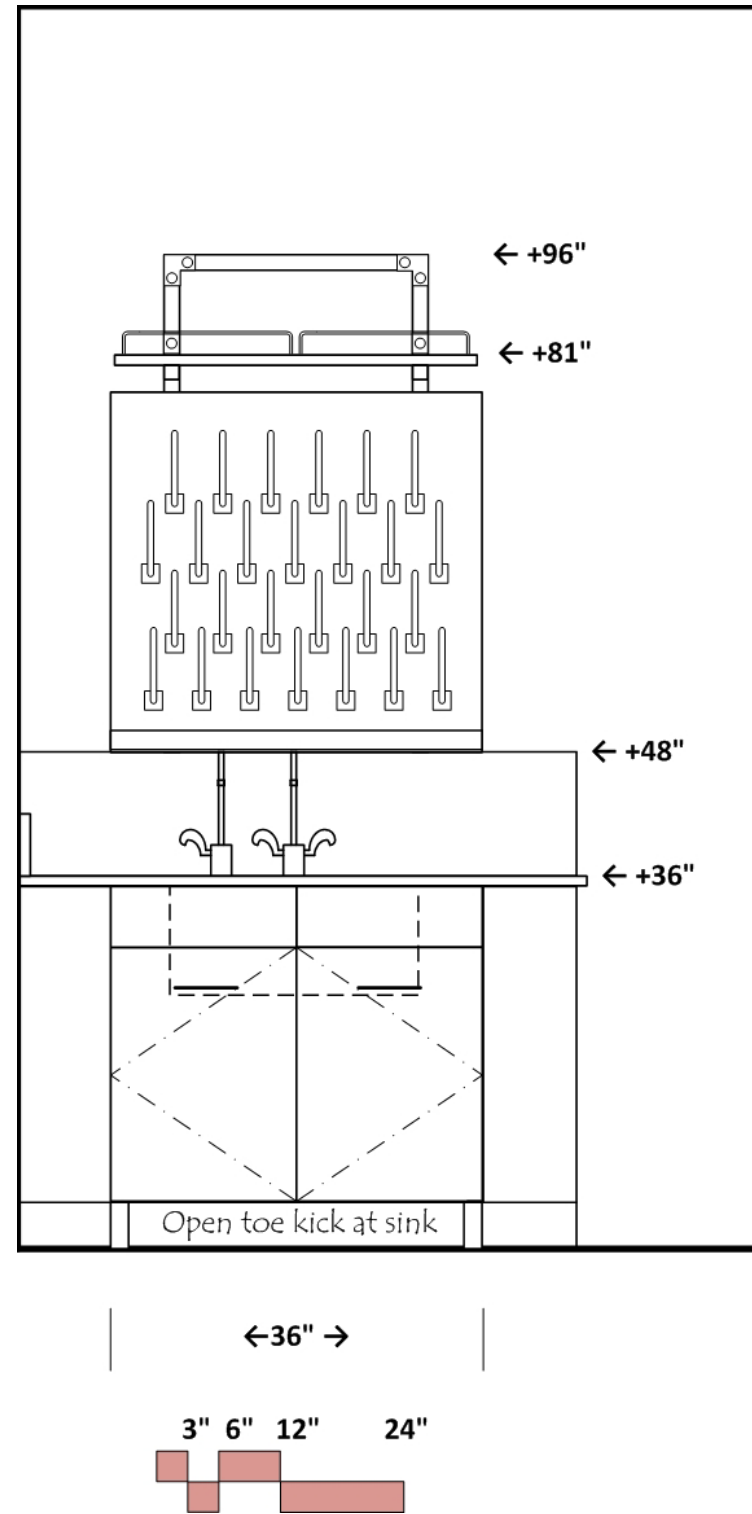
Elevation A1

NMR



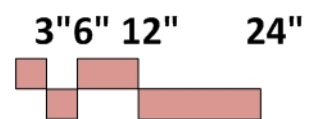
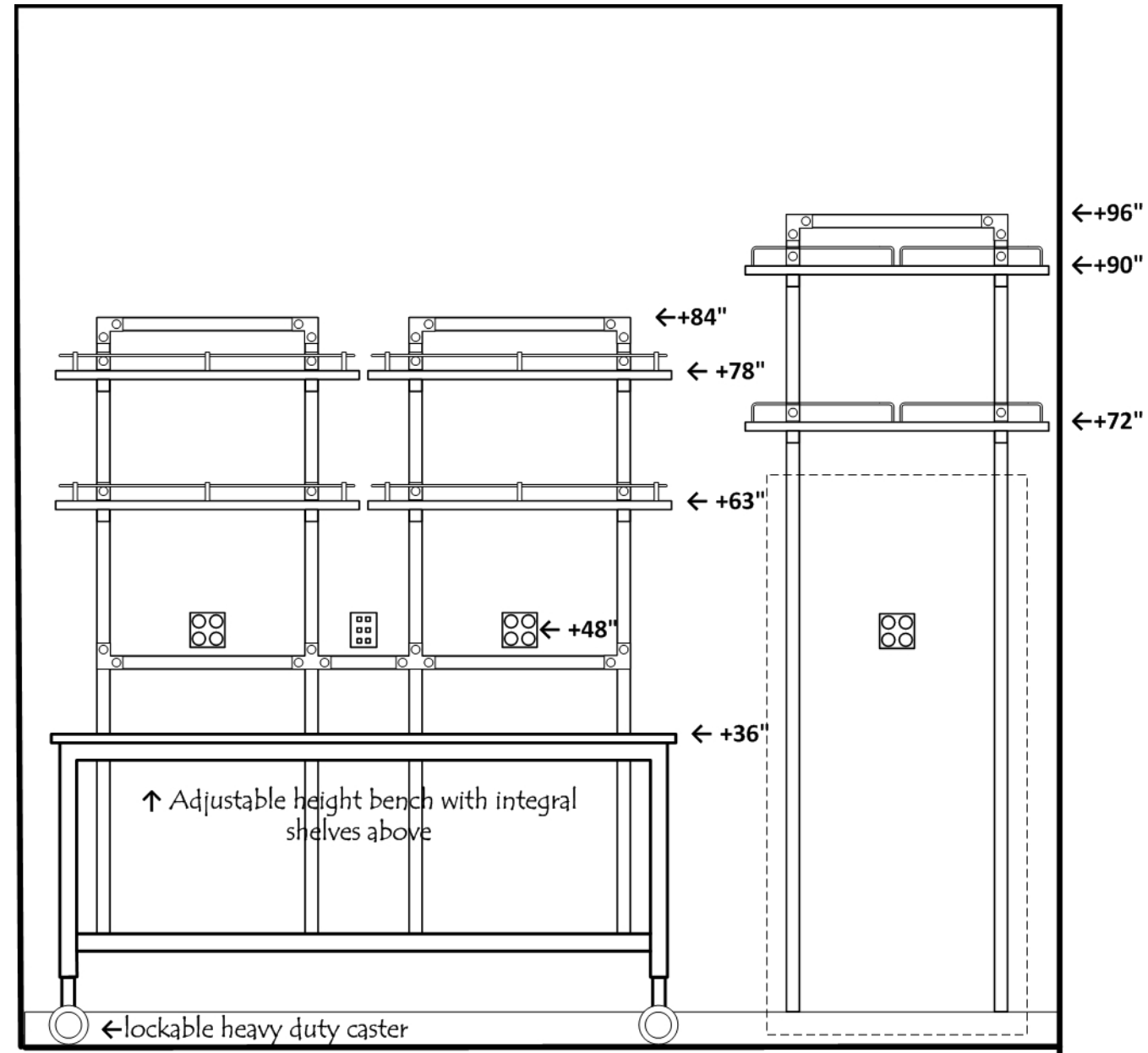
Elevation AJ

NMR

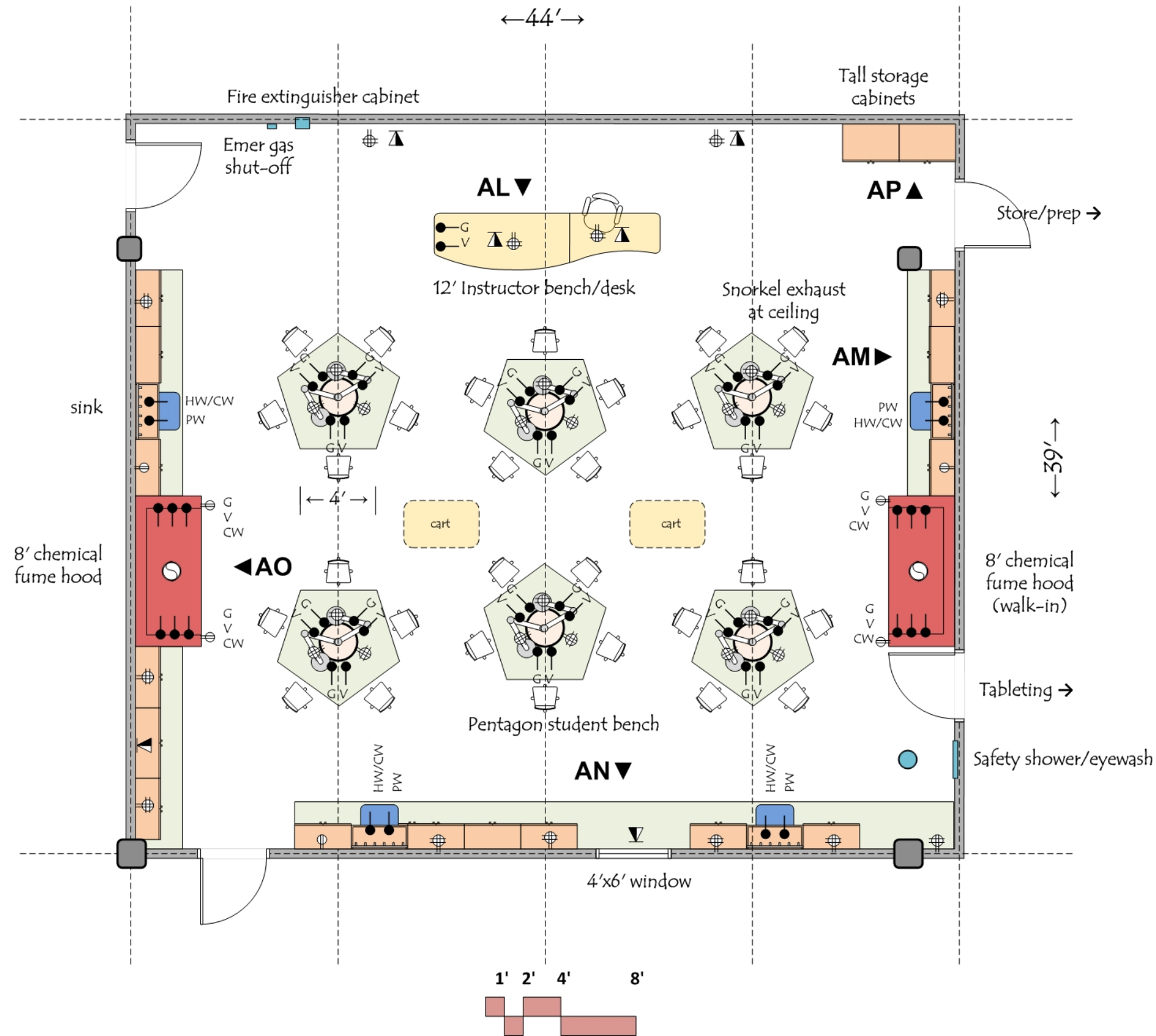


Elevation AK

NMR



Pharmaceutics Teaching Lab



ARCHITECTURAL

Occupancy: B
 Floor: epoxy
 Walls: gypsum board and enamel paint
 Ceiling: 10'-12' acoustic tile
 Doors: 3'0"x8'0" with window
 Acoustic Attenuation: NC 40 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative to corridor
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.
 Video camera at instructor bench

PLUMBING

Hot/Cold water at sinks with vacuum breakers
 Pure water at sinks
 Natural gas and vacuum
 Domestic water at safety shower/eyewash
 Floor drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

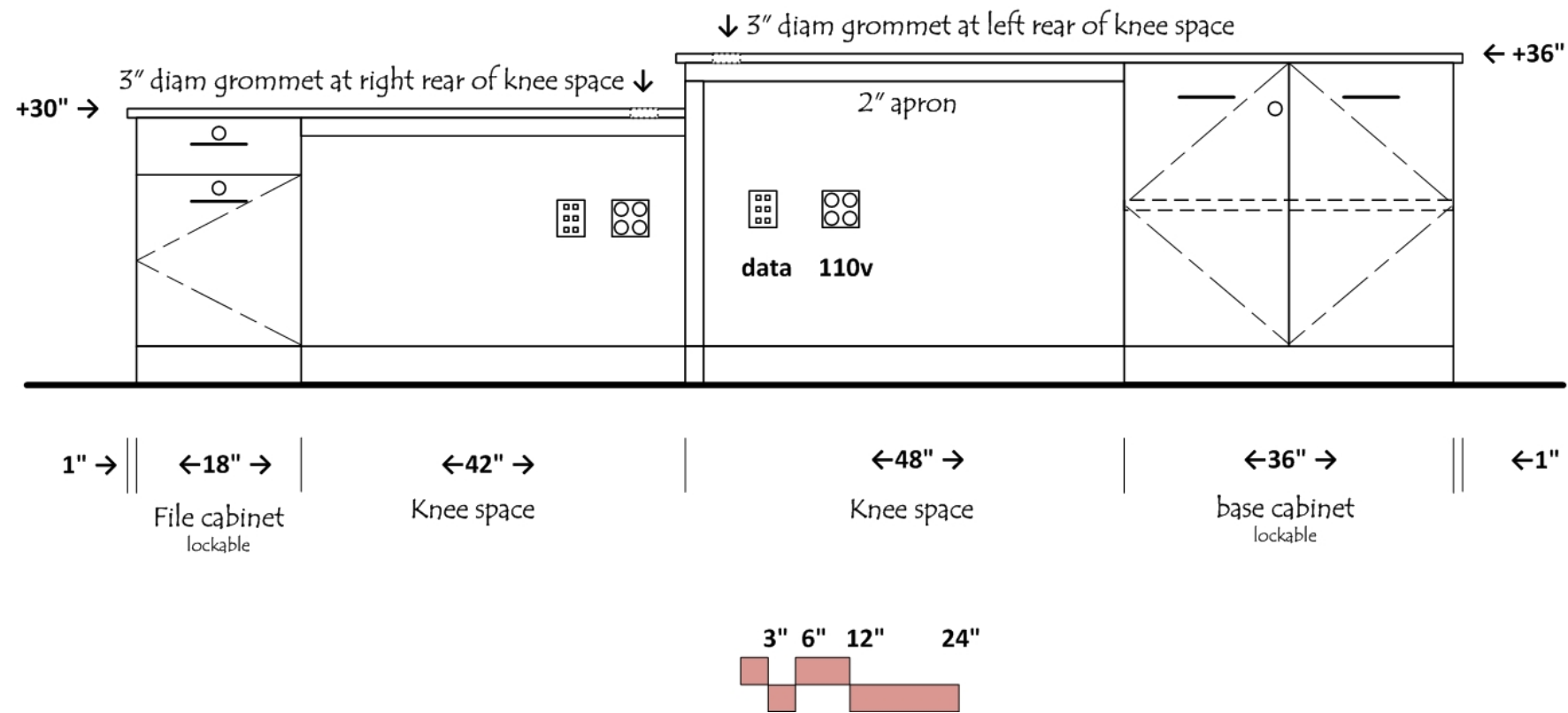
Lab casework
 Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods
 Snorkel exhaust units
 Fire extinguisher cabinet
 Safety shower/eyewash

UNIVERSITY FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sinks

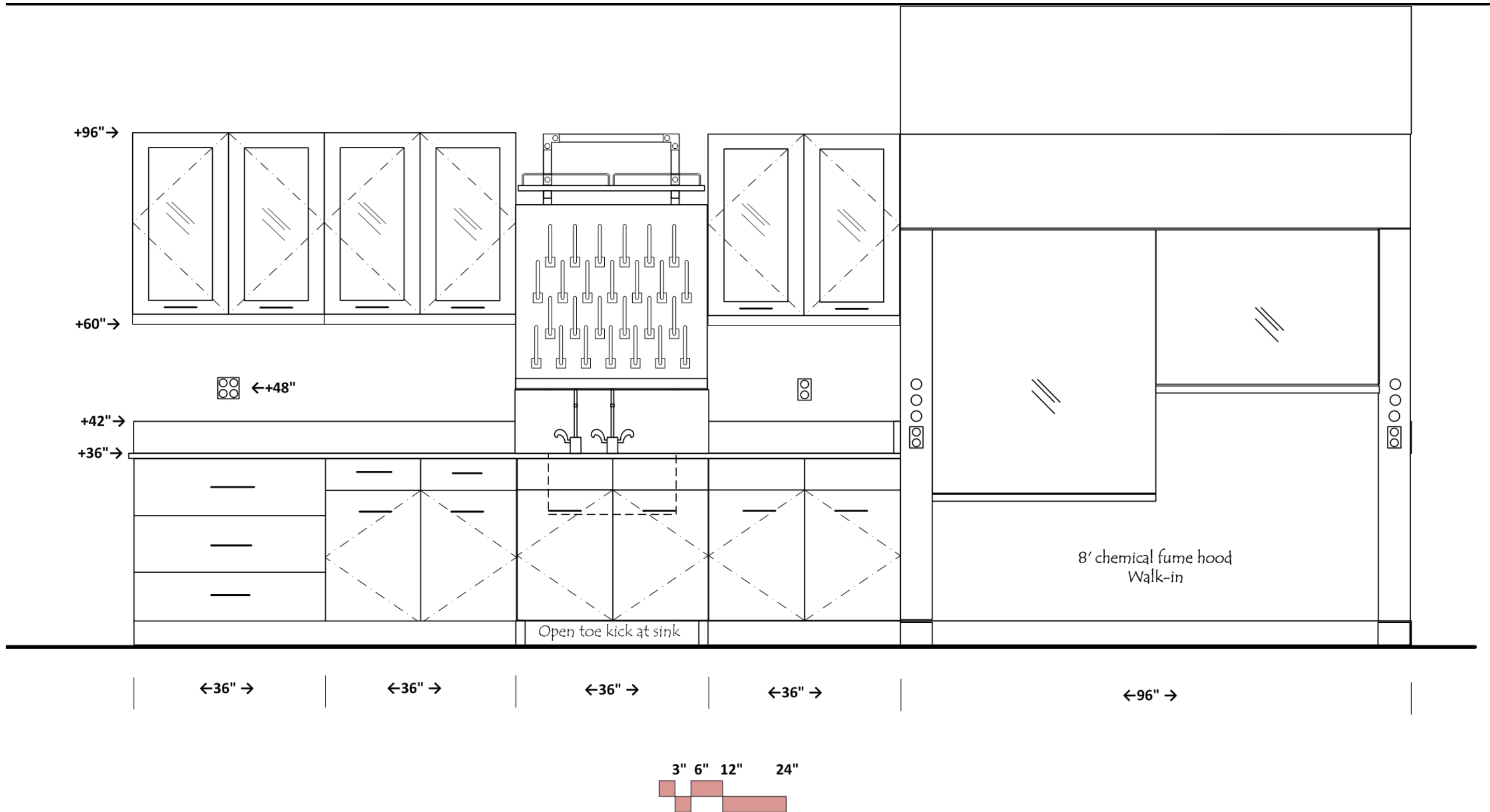
Elevation AL

Pharmaceutics Teaching Lab



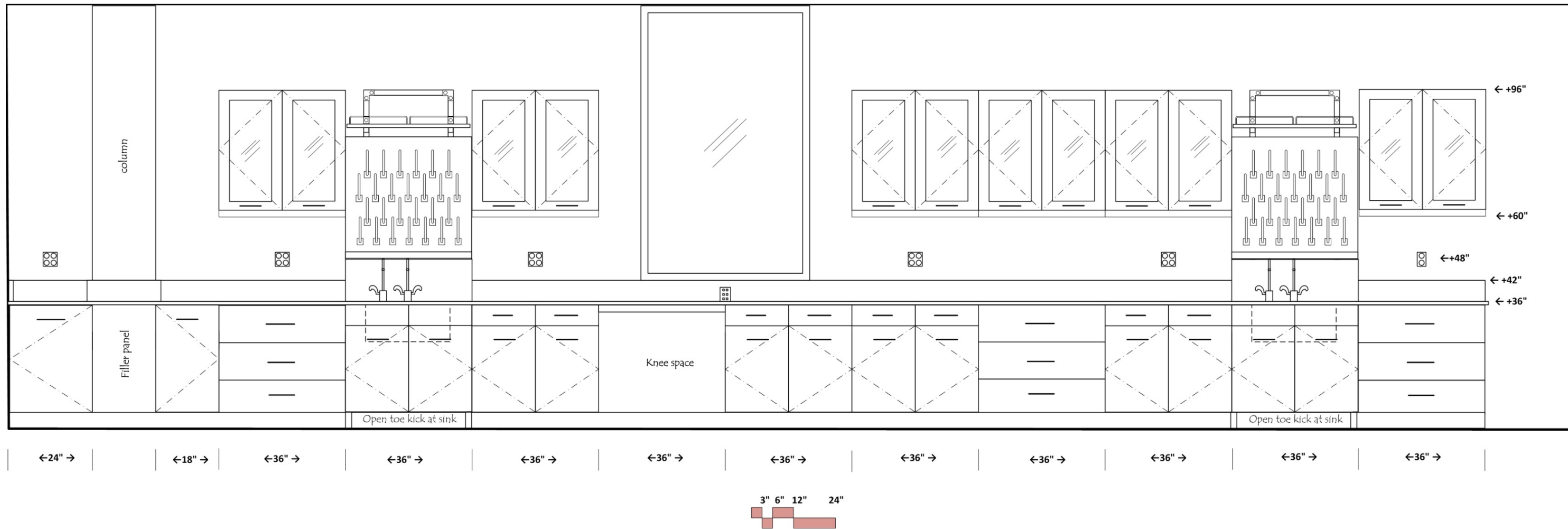
Elevation AM

Pharmaceutics Teaching Lab



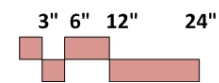
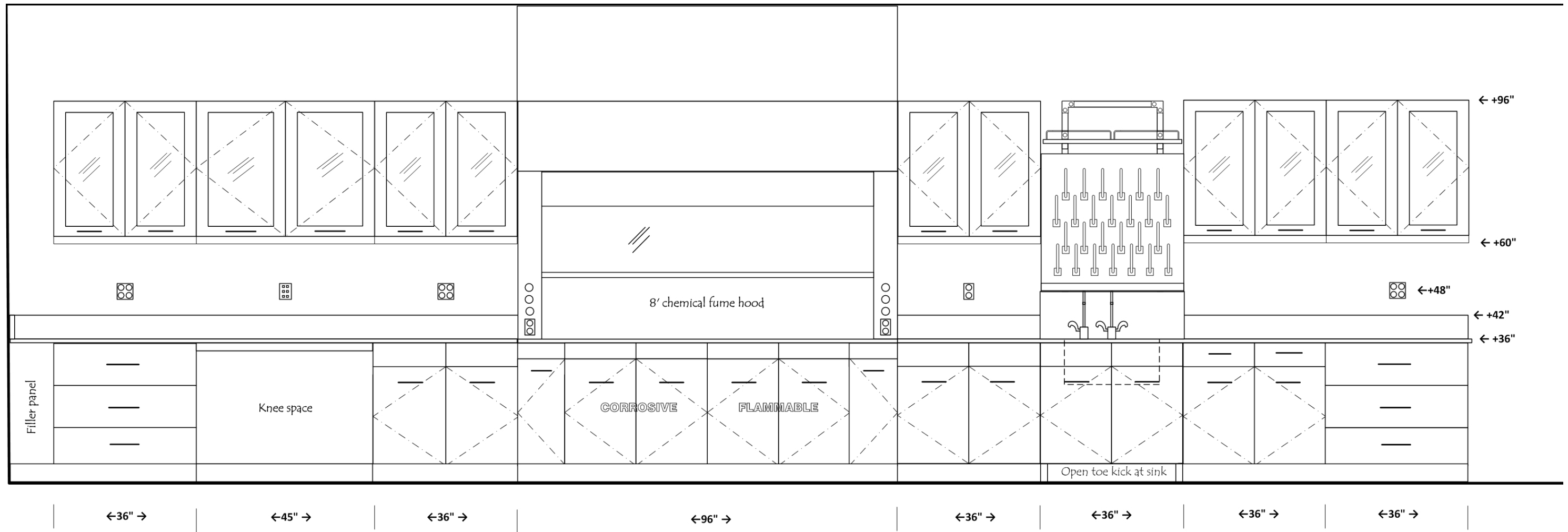
Elevation AN

Pharmaceutics Teaching Lab



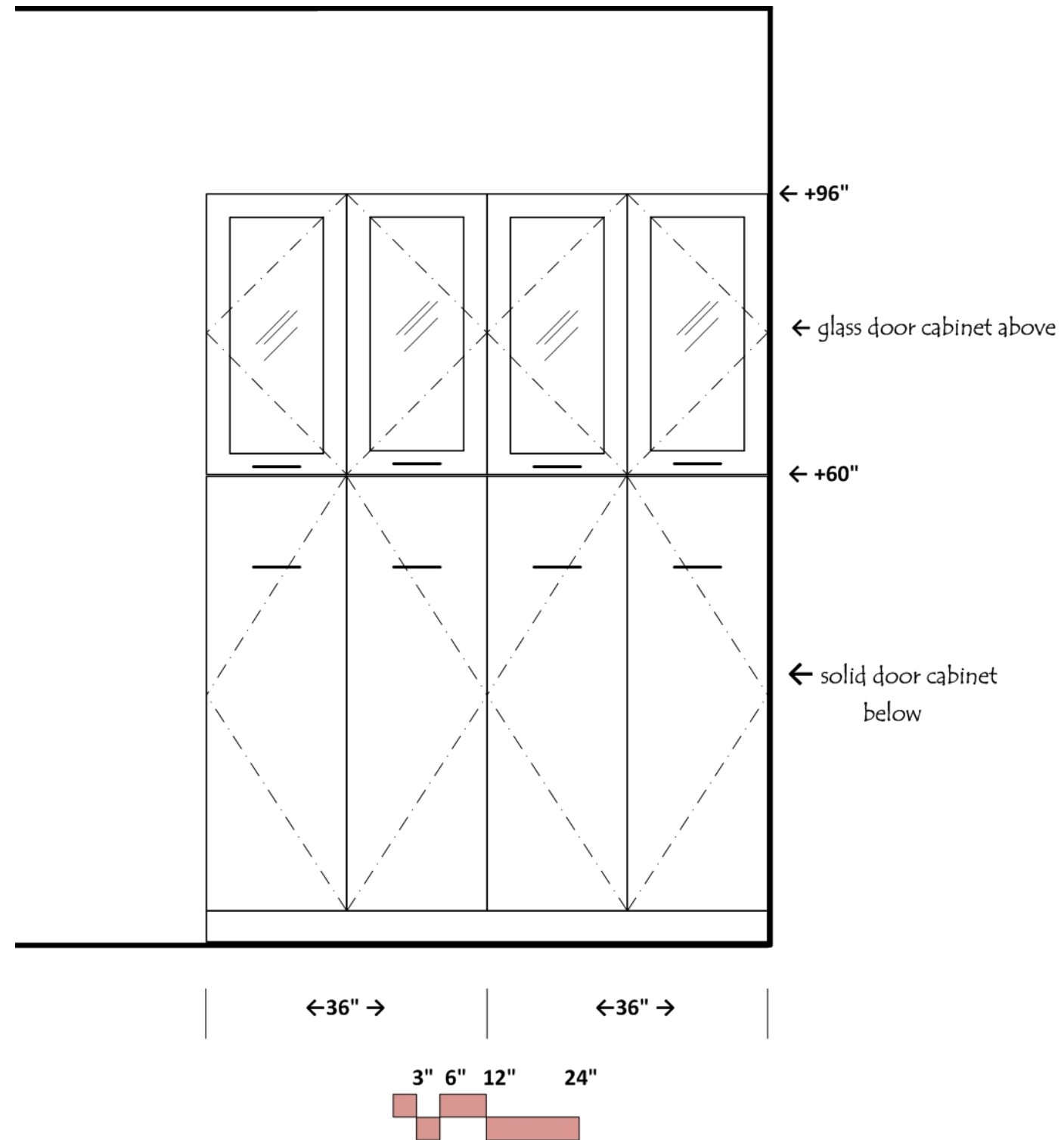
Elevation AO

Pharmaceutics Teaching Lab

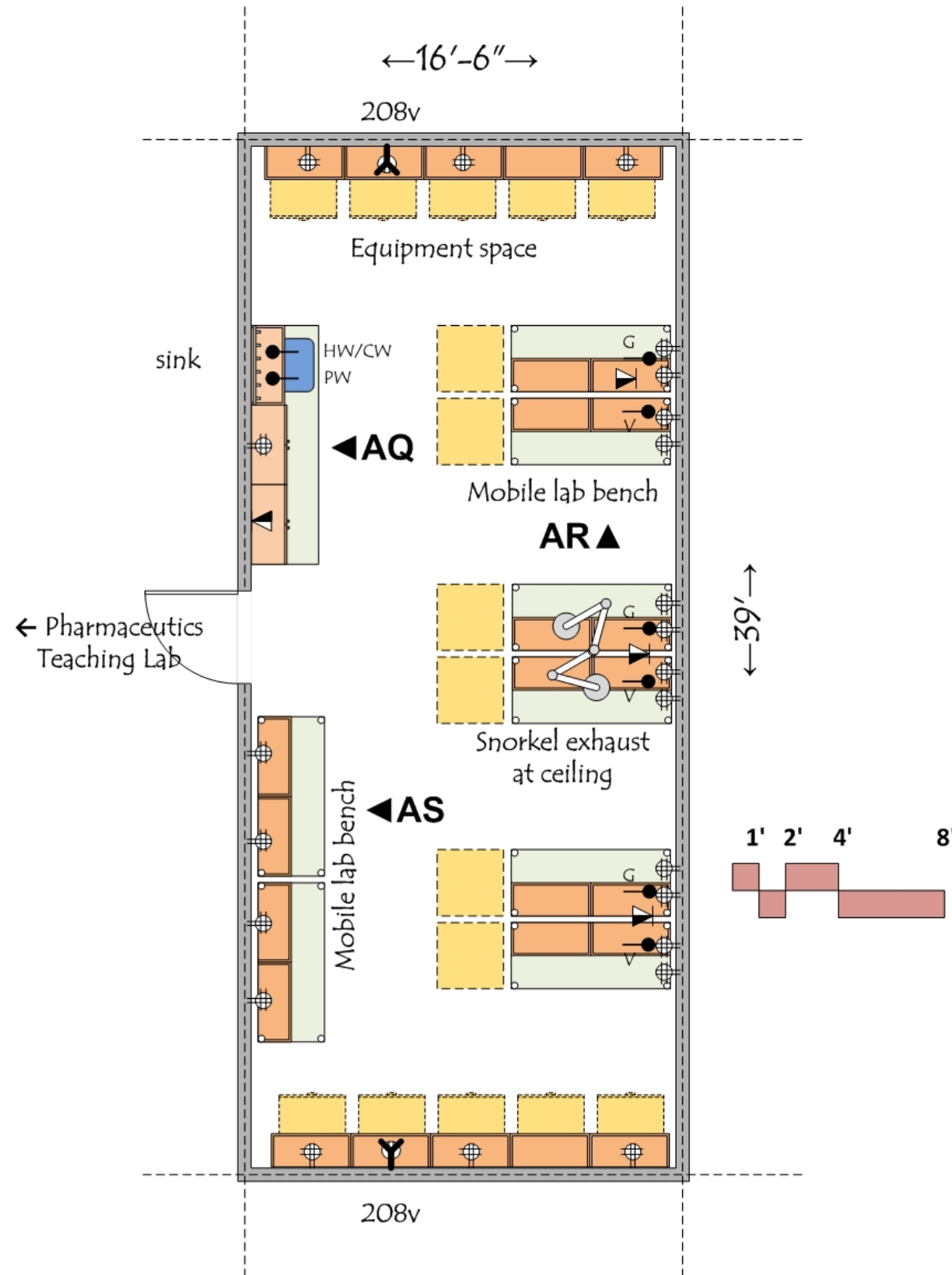


Elevation AP

Pharmaceutics Teaching Lab



Tableting



ARCHITECTURAL

Occupancy: B
 Floor: sheet vinyl or VCT
 Walls: gypsum board and enamel paint
 Ceiling: 10' acoustic tile
 Doors: 3⁶x8⁰ with window
 Acoustic Attenuation: NC 40 or less
 Security: None

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 68-72 deg F +/- 2 deg F
 Humidity: ambient
 100% exhaust
 Pressure: negative
 6 air changes per hour occupied
 4 air changes per hour unoccupied
 Heat gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Outlets at equipment space on standby power with dedicated circuits
 Wired and wireless data
 Lighting: indirect fluorescent @ 60 f.c.

PLUMBING

Hot/Cold water at sink with vacuum breaker
 Pure water at sink
 Natural gas and vacuum

CONTRACTOR FURNISHED EQUIPMENT

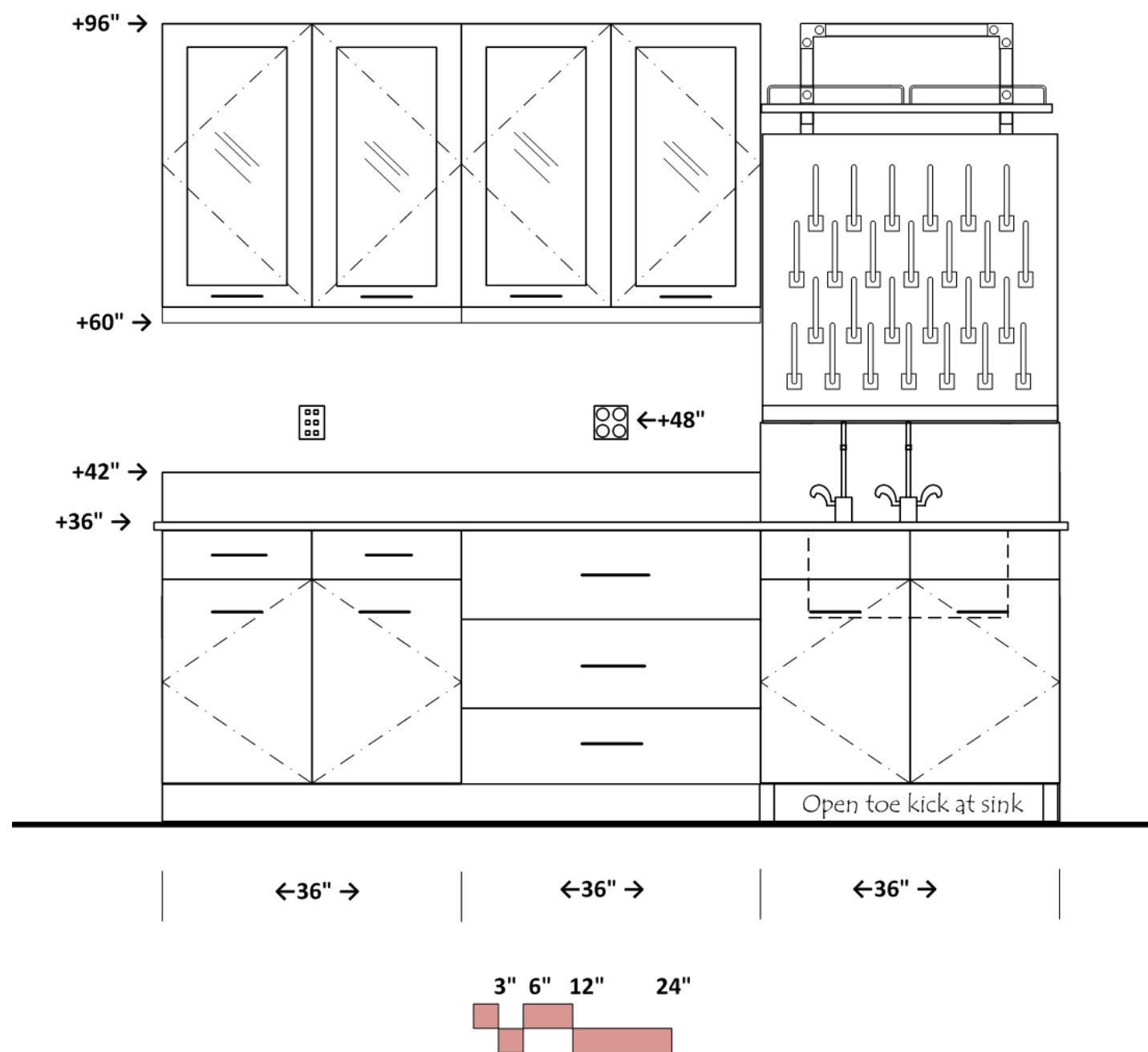
Lab casework
 Epoxy resin tops and sink
 Faucets & fittings
 Snorkel exhaust

UNIVERSITY FURNISHED EQUIPMENT

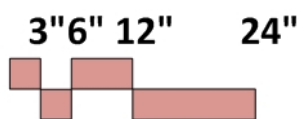
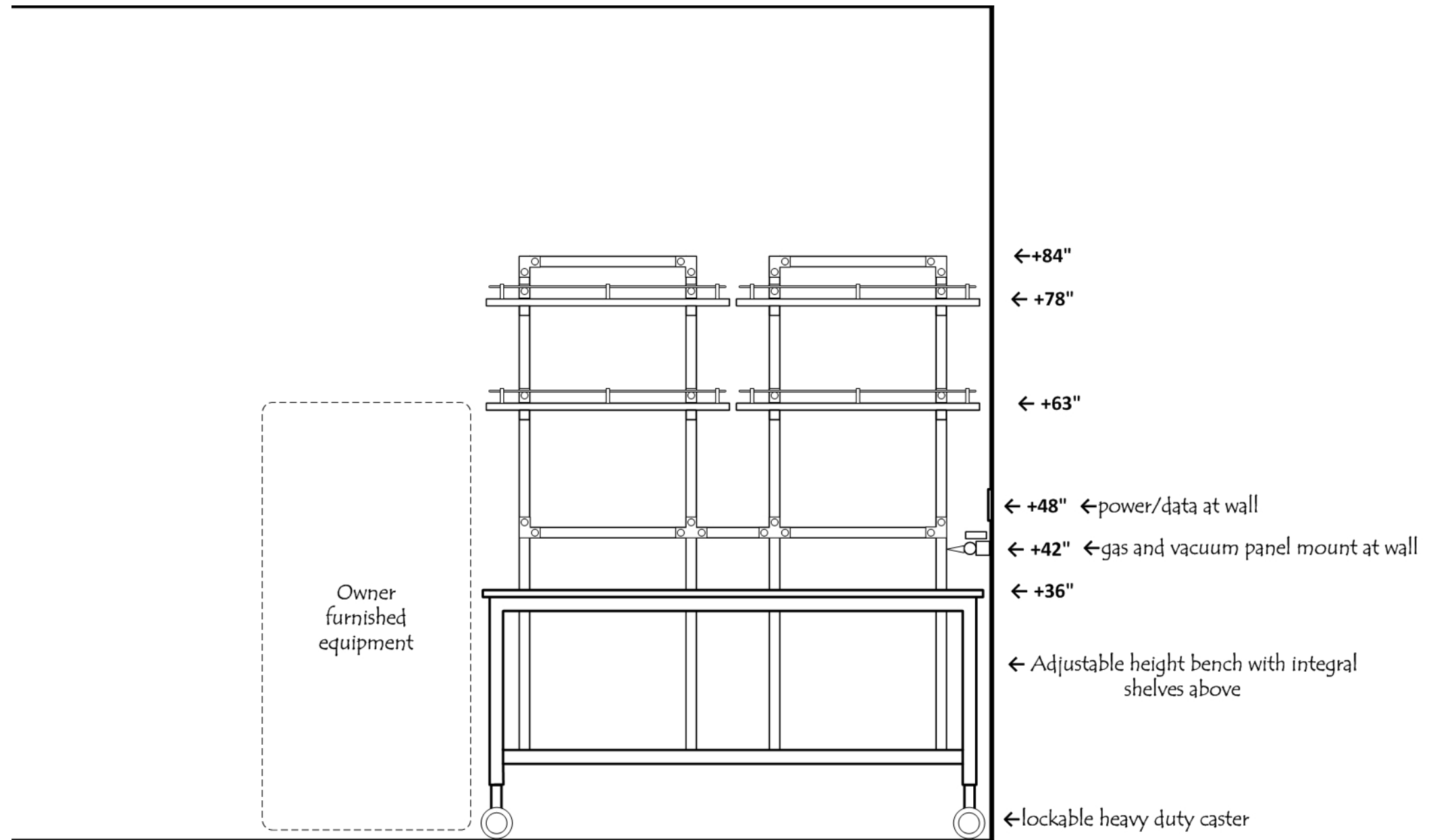
Chairs
 Benchtop analytical instruments
 Scientific equipment
 Soap and paper towel dispensers at sink

Elevation AQ

Tableting

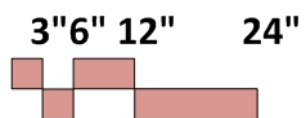
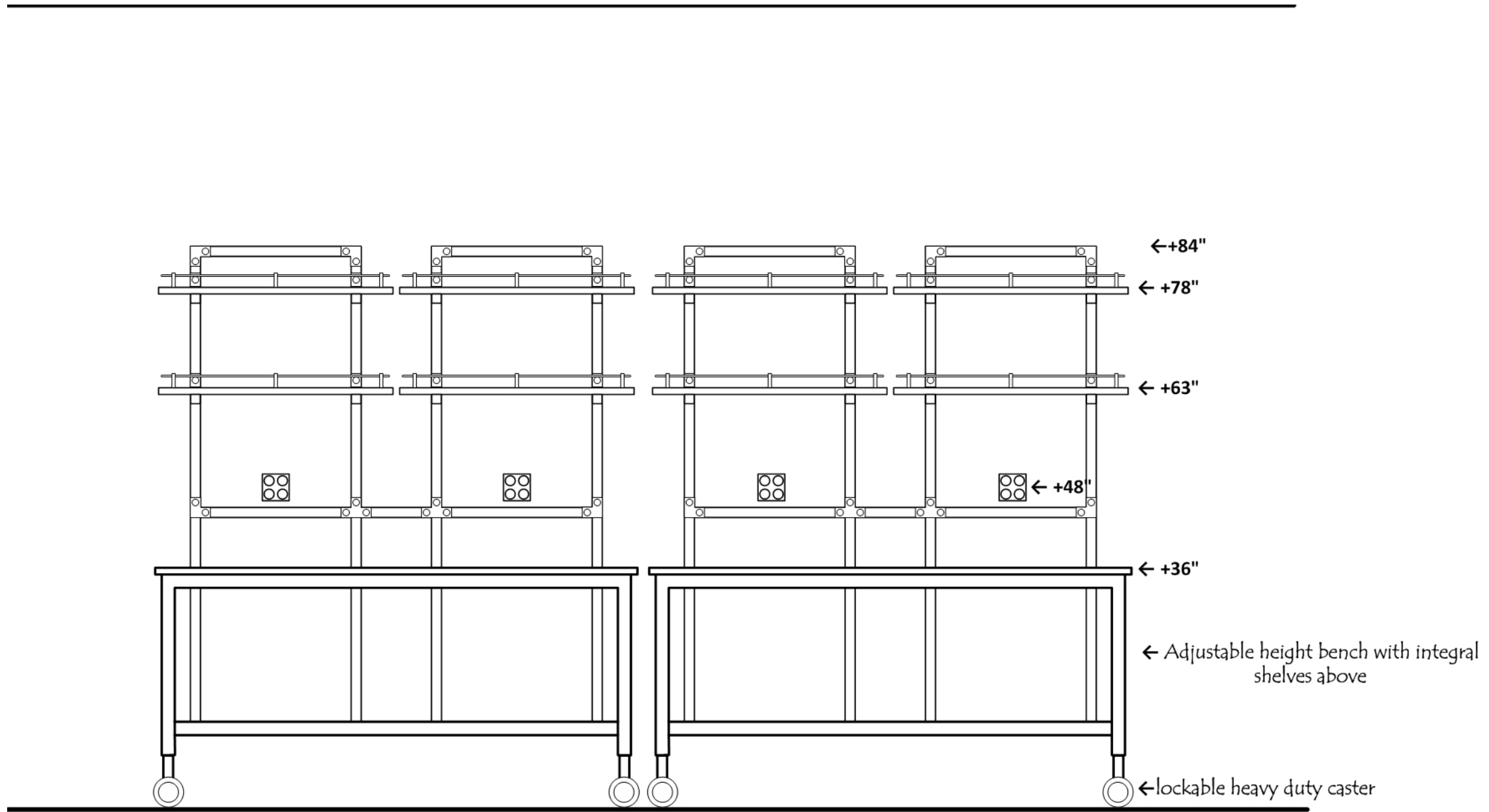


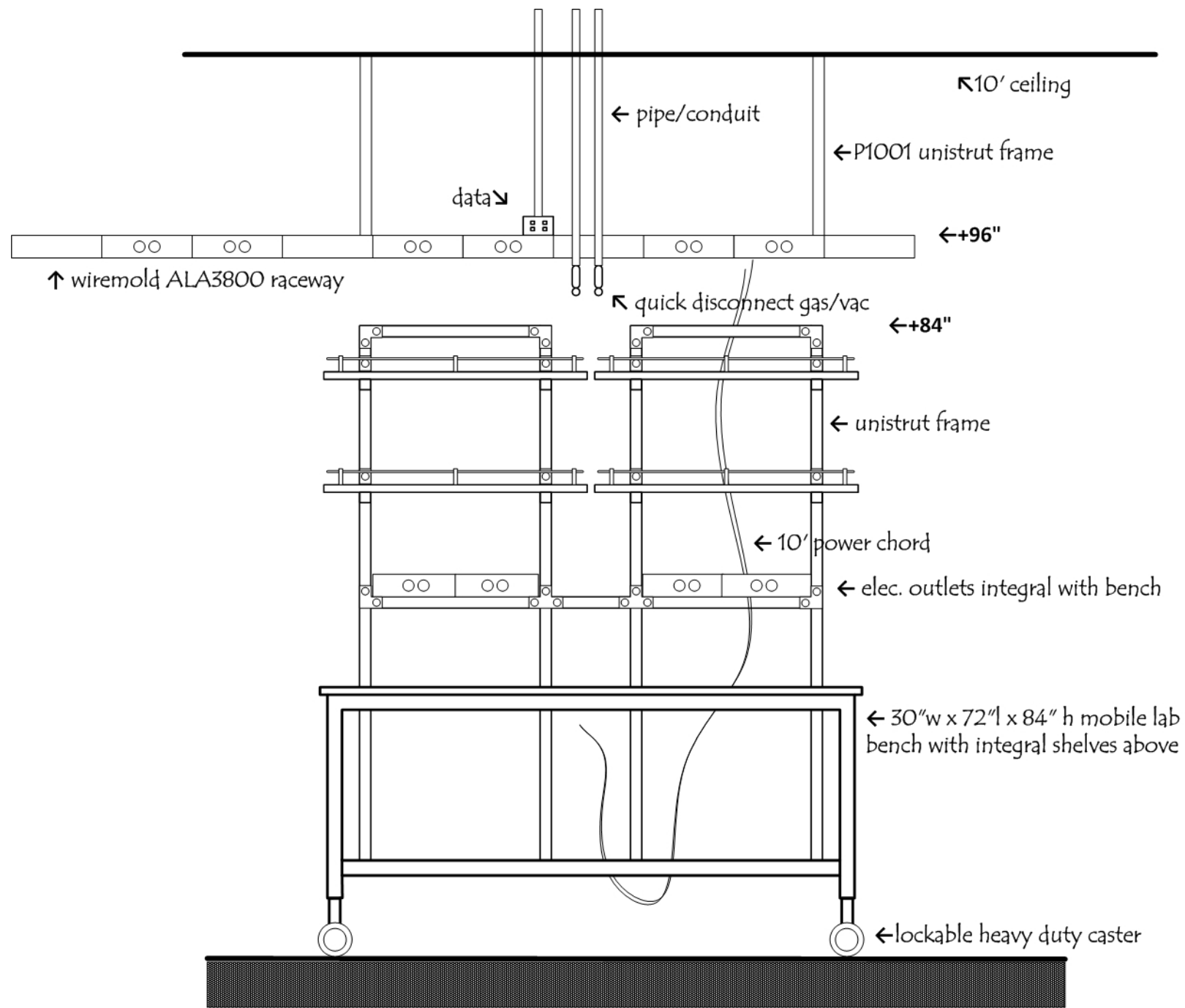
Elevation AR Tableting



Elevation AS

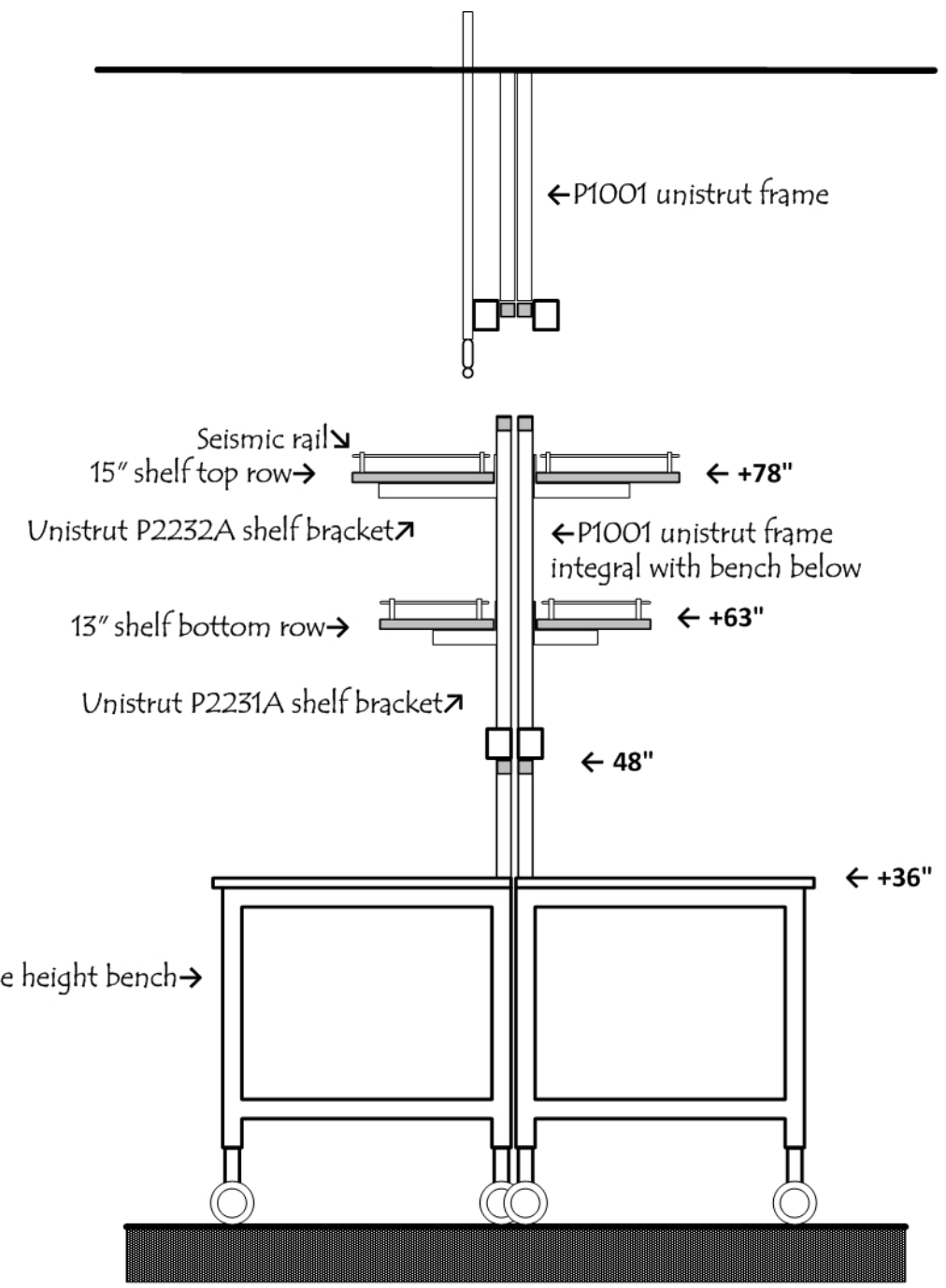
Tableting



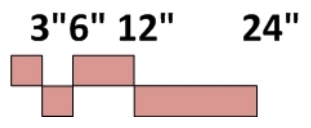


Elevation

Section Detail 01
Mobile lab bench

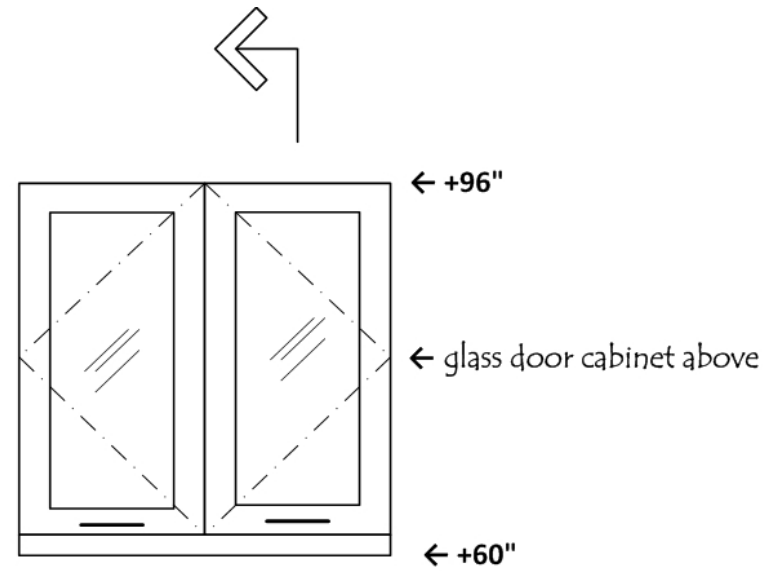



Section

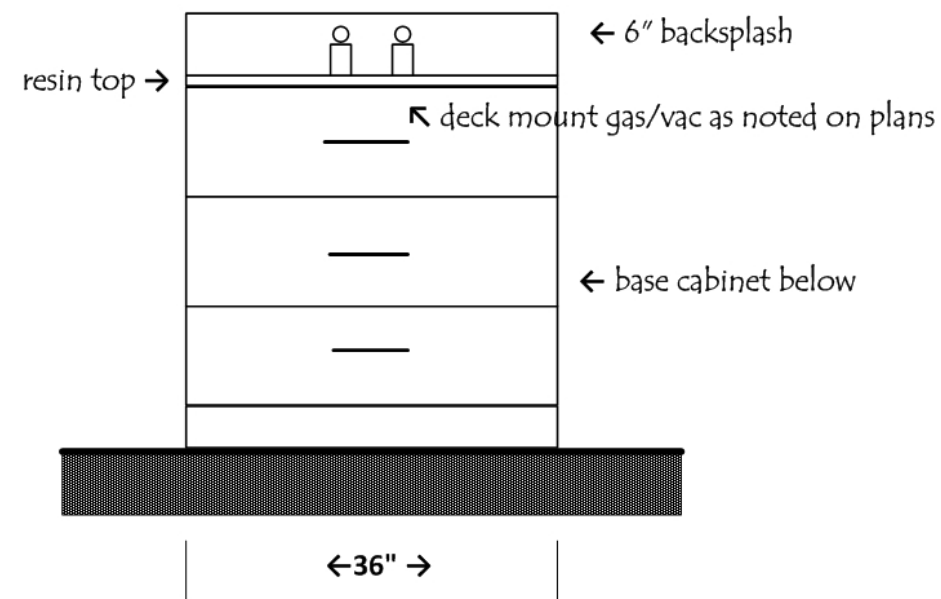


Section Detail 02

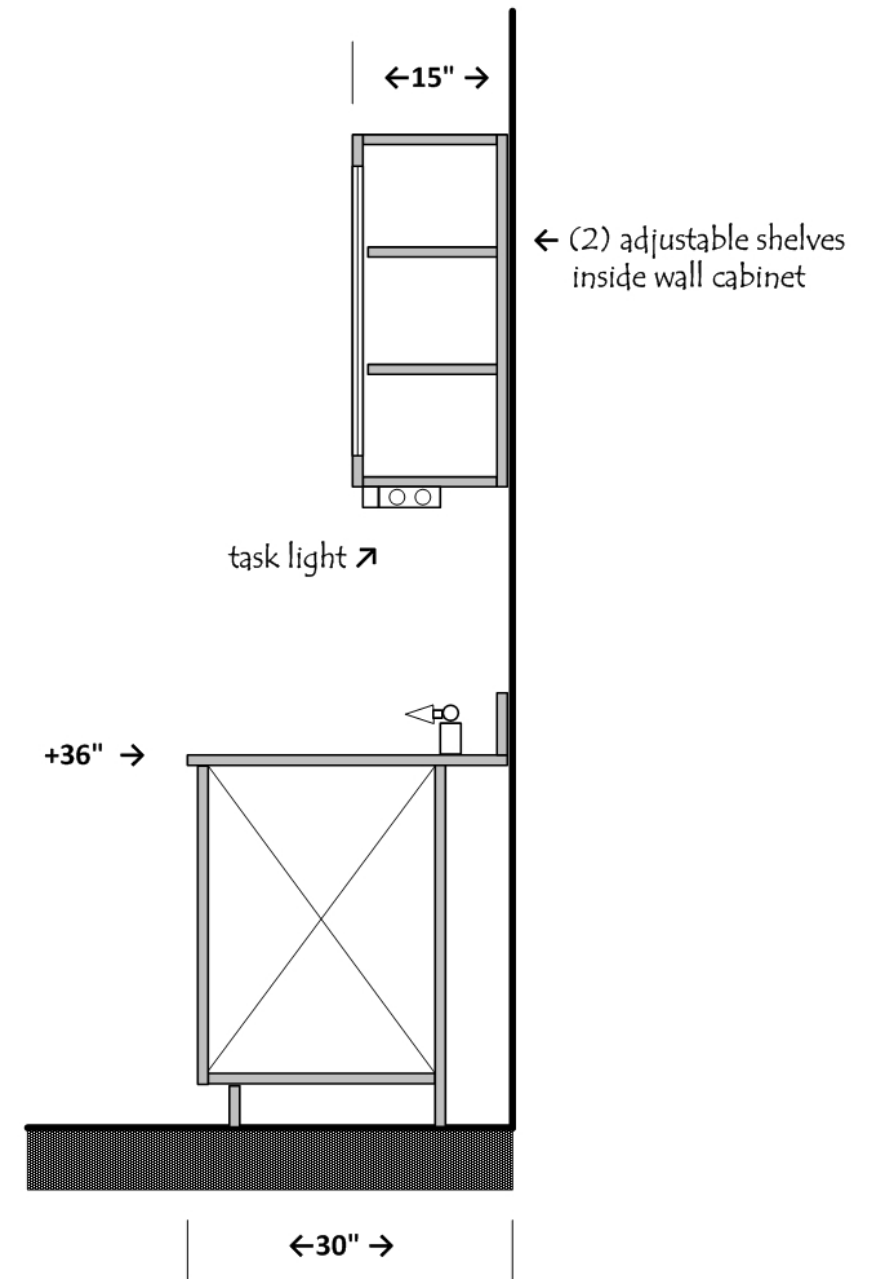
Bench at wall



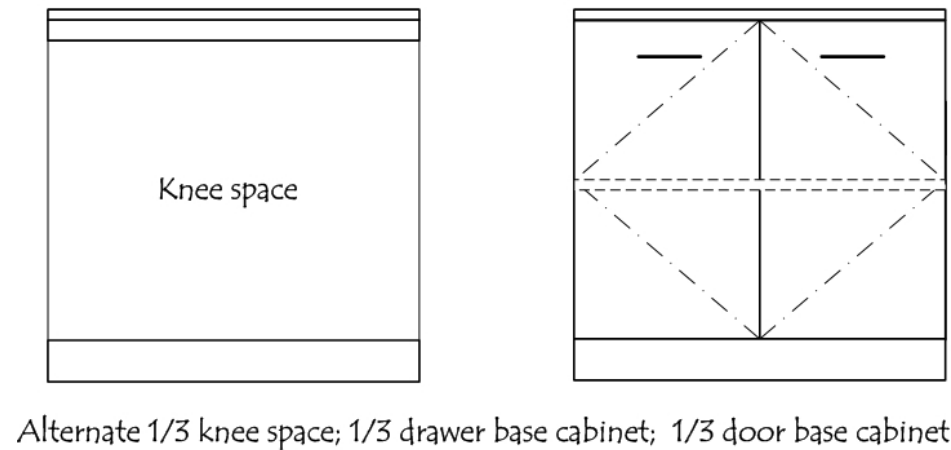
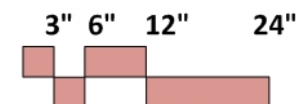
power/data as noted on plans →  ← +48" to center of box



Elevation

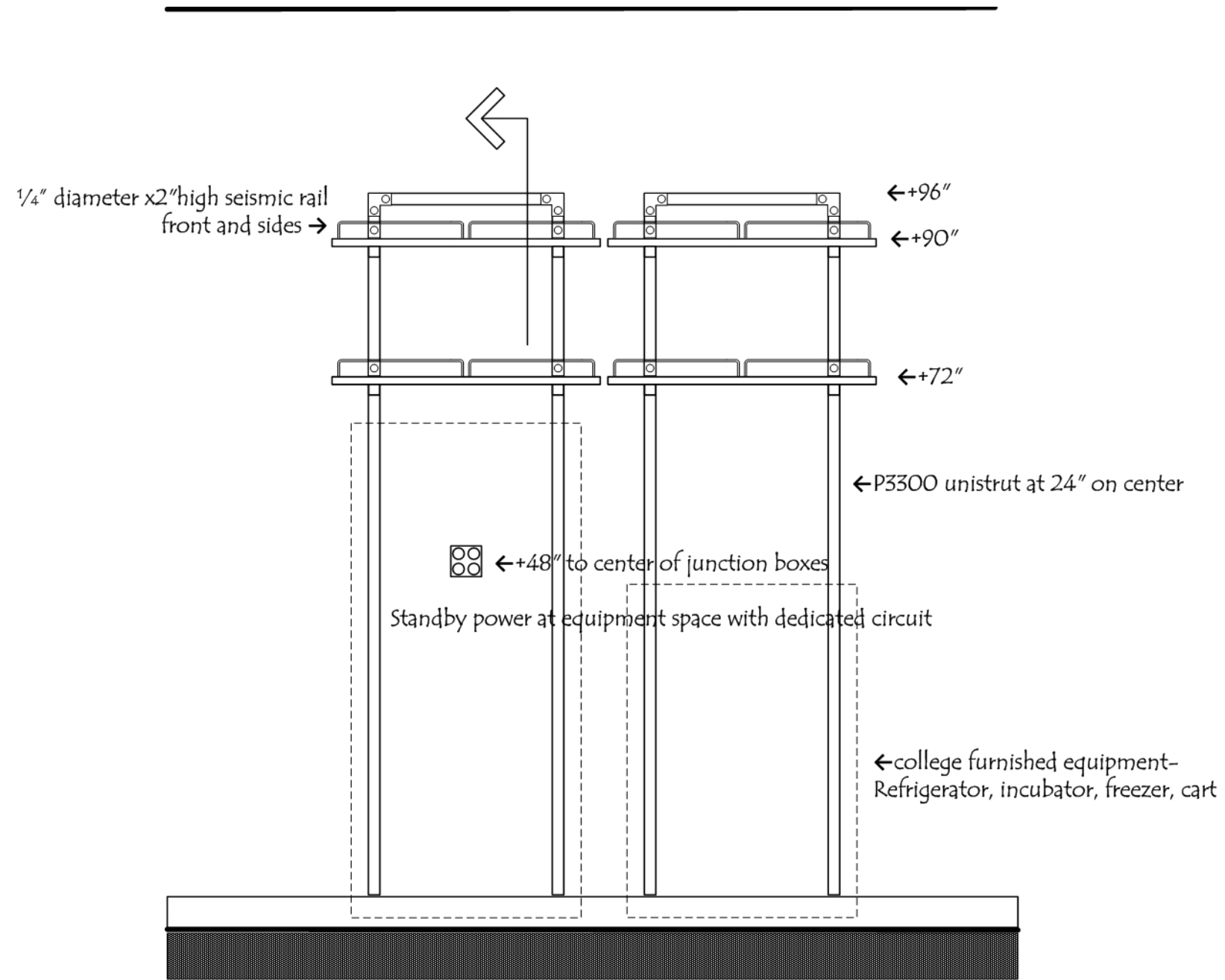


Section

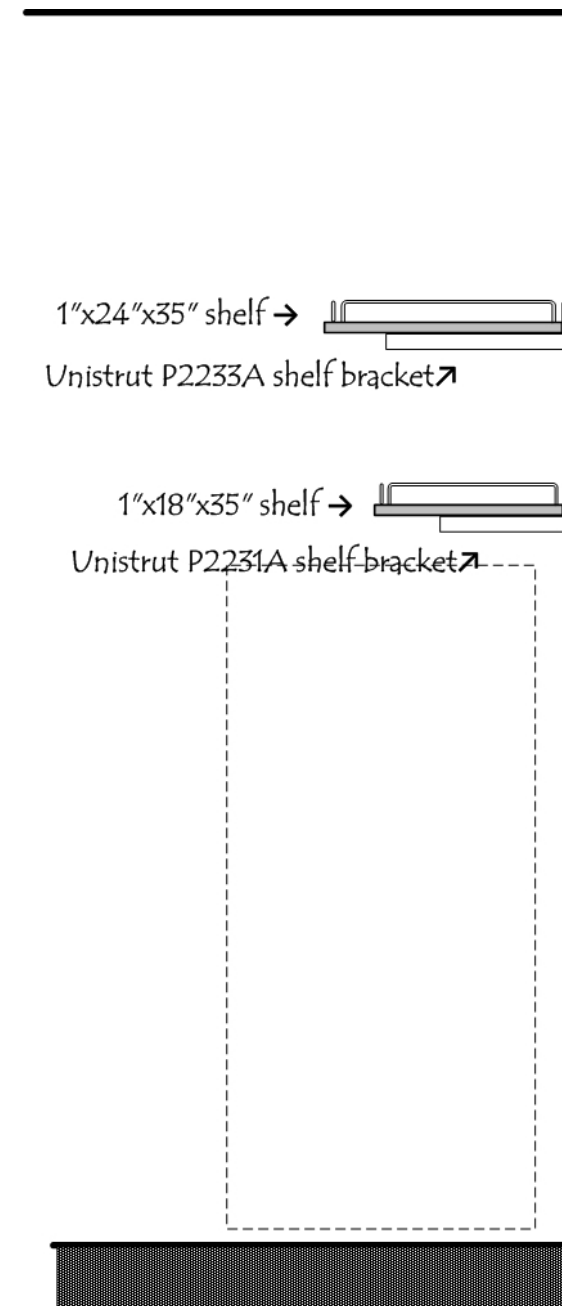
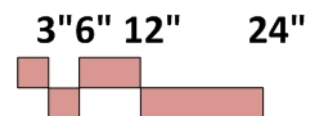


Section Detail 03

Equipment space



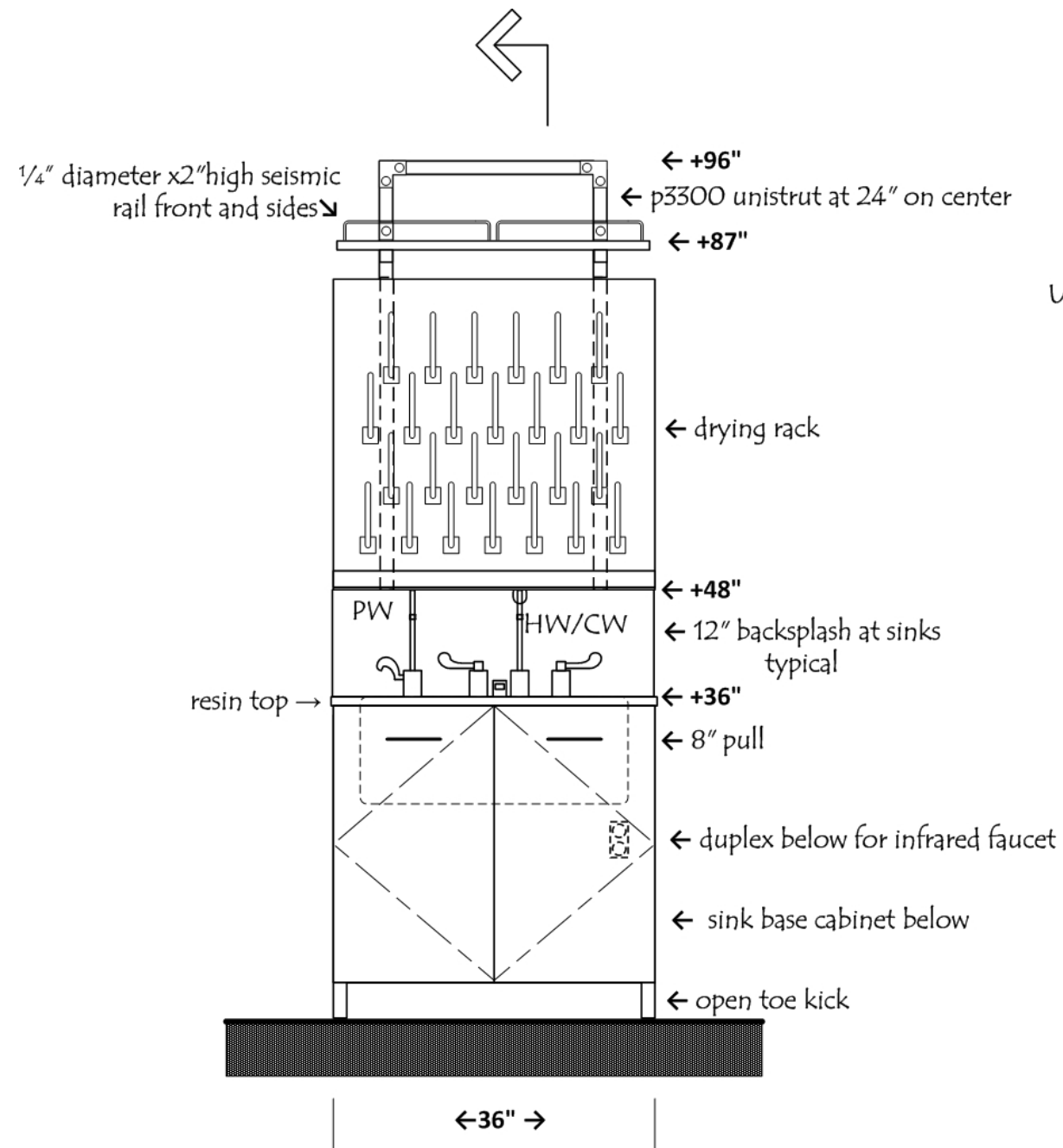
Elevation



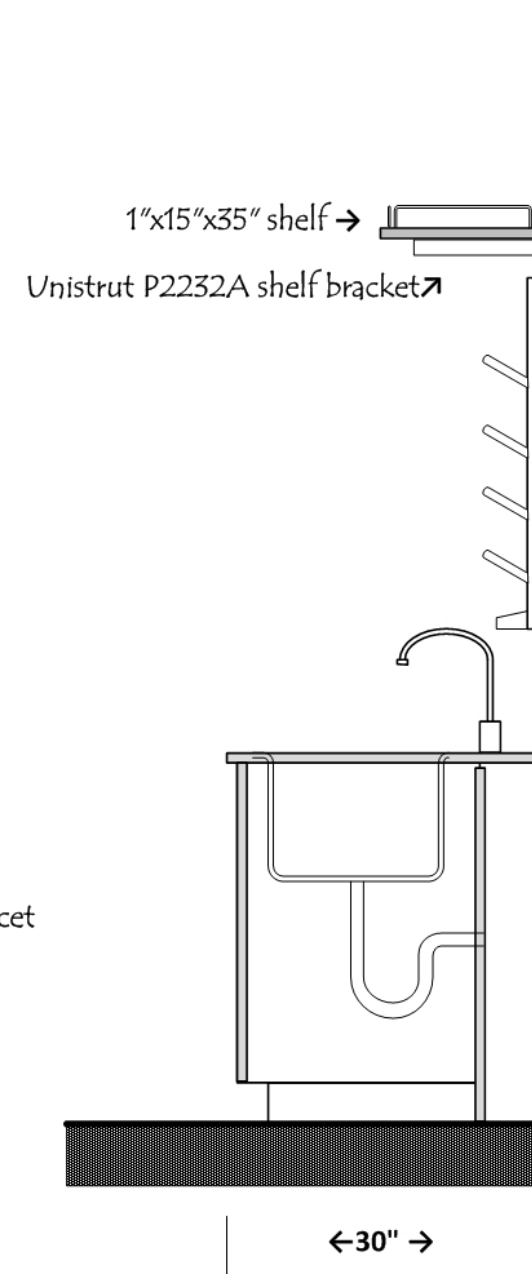
Section

Section Detail 04

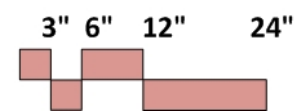
Sink at wall



Elevation

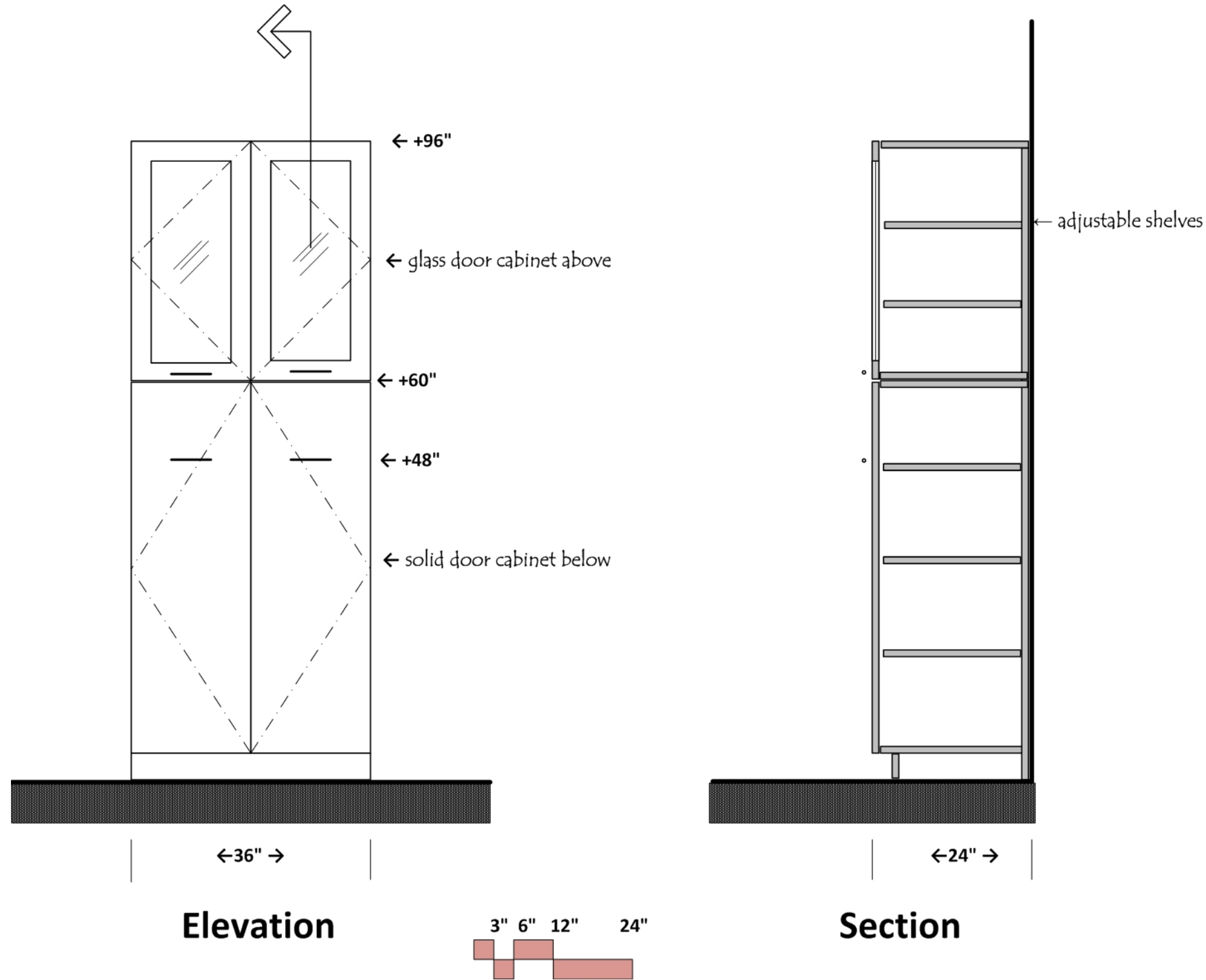


Section



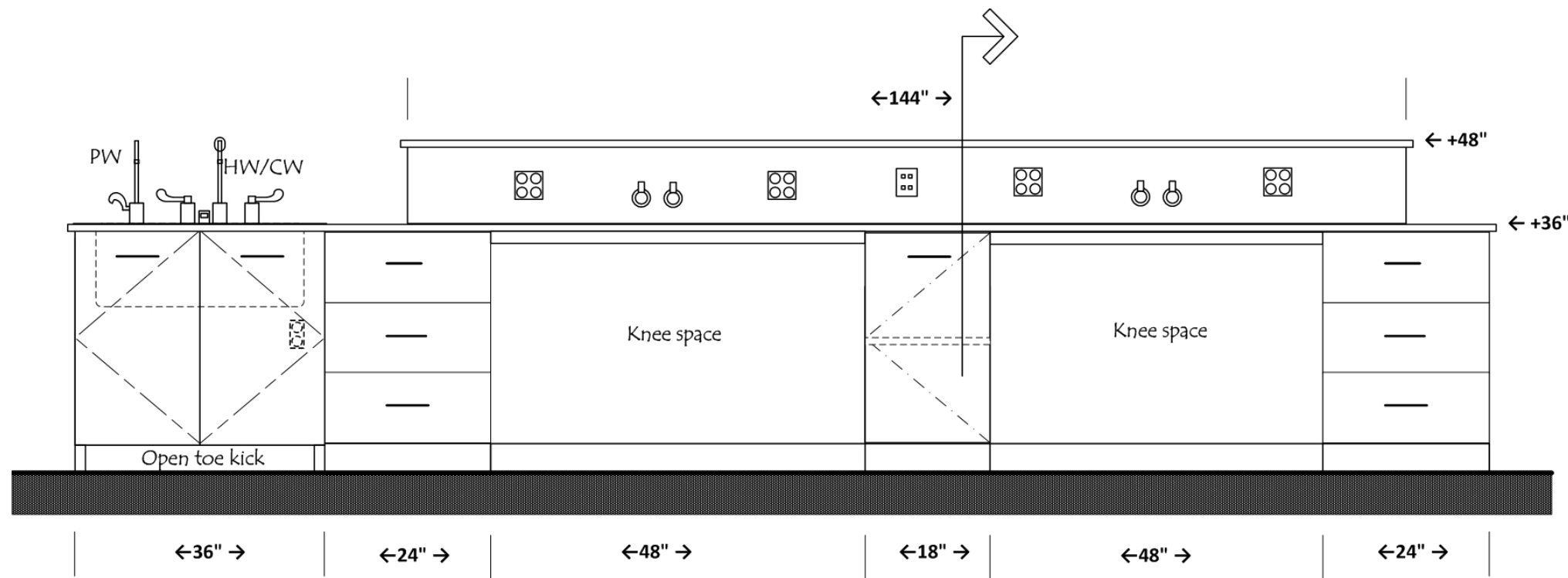
Section Detail 05

Tall Storage Cabinet

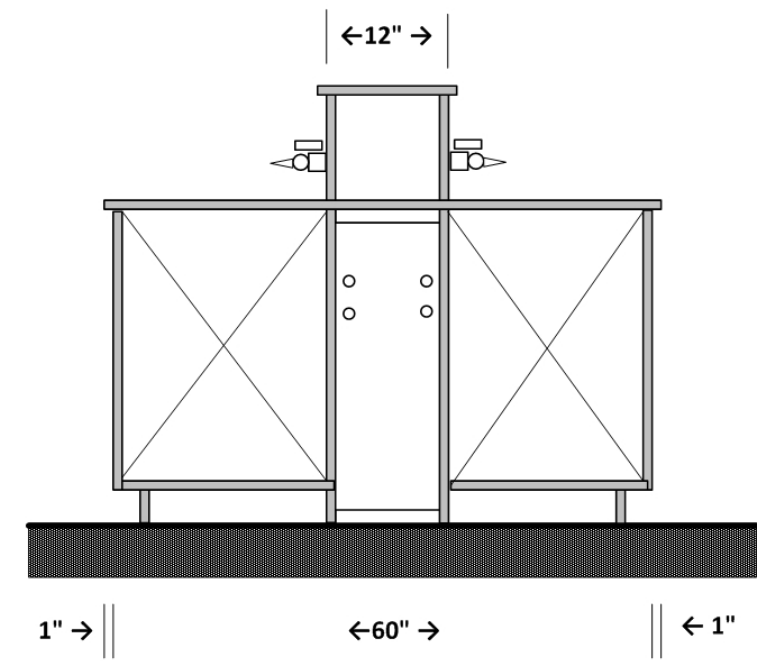


Section Detail 06

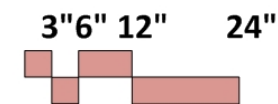
Island Bench- Rx Teaching Lab



Elevation



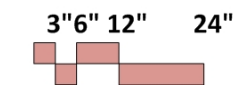
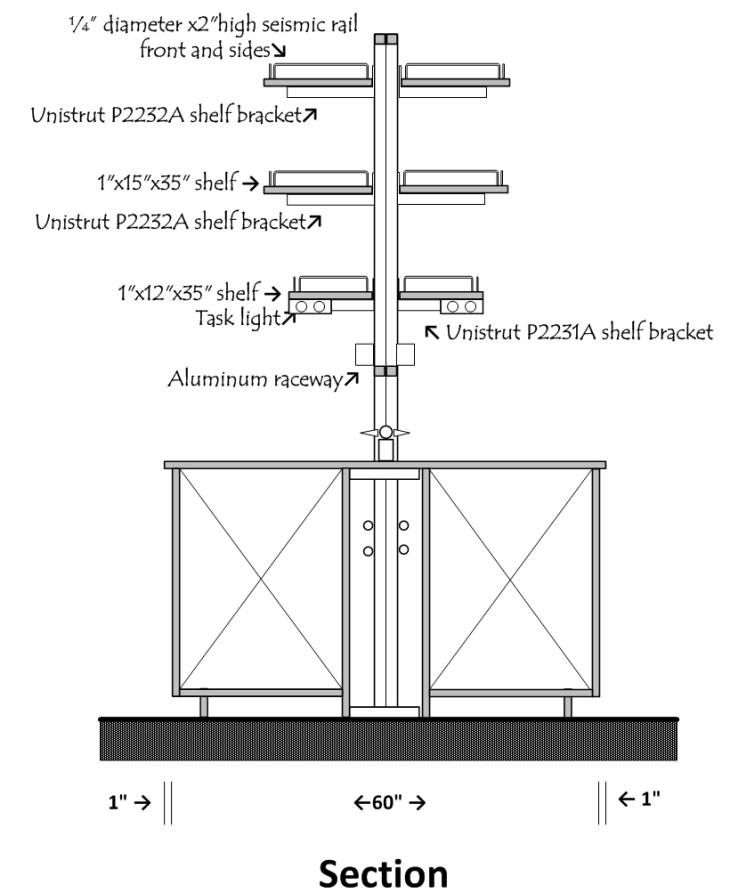
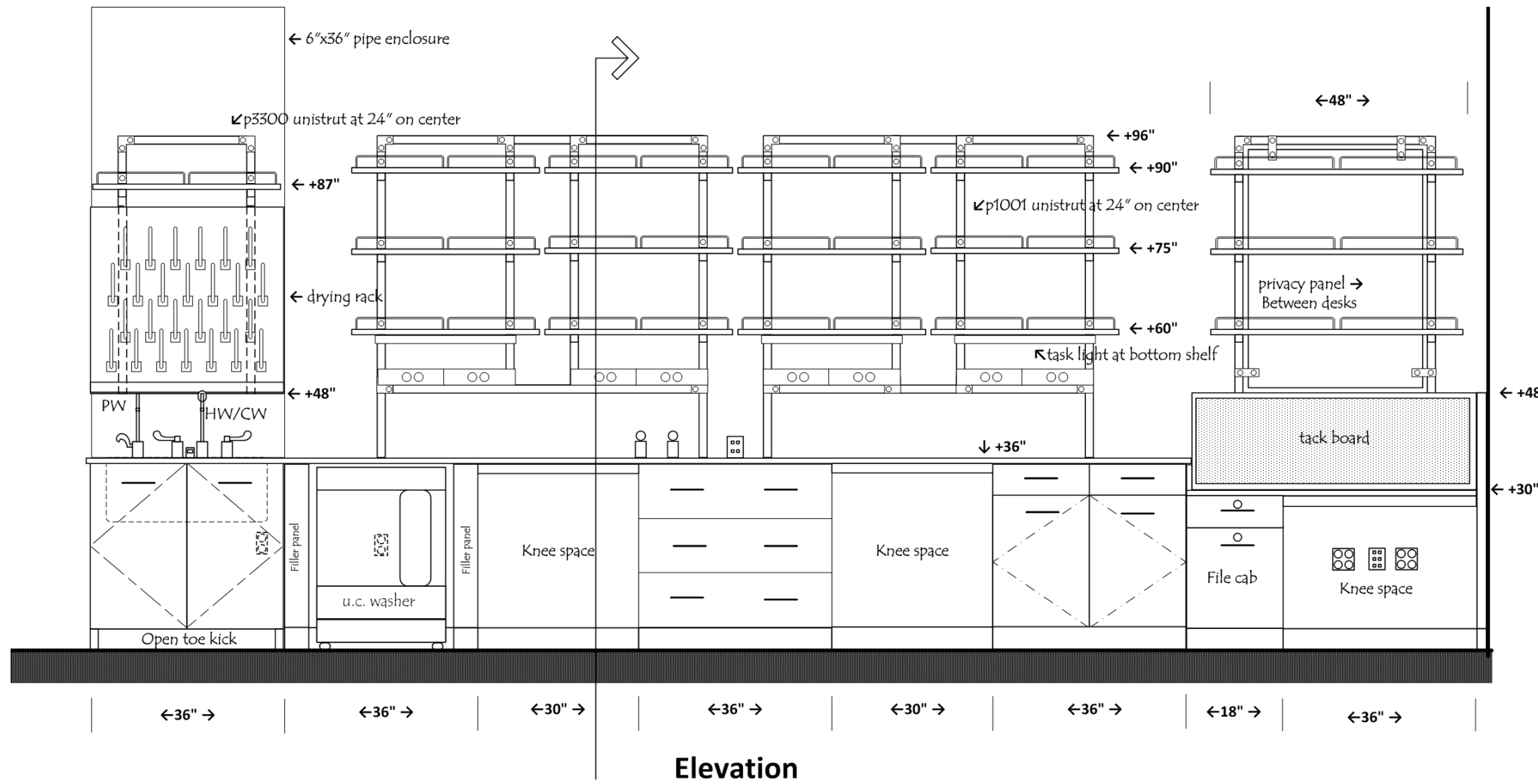
Section



Section Detail 07

Peninsula Bench- Research Lab B

Similar for Research Lab A

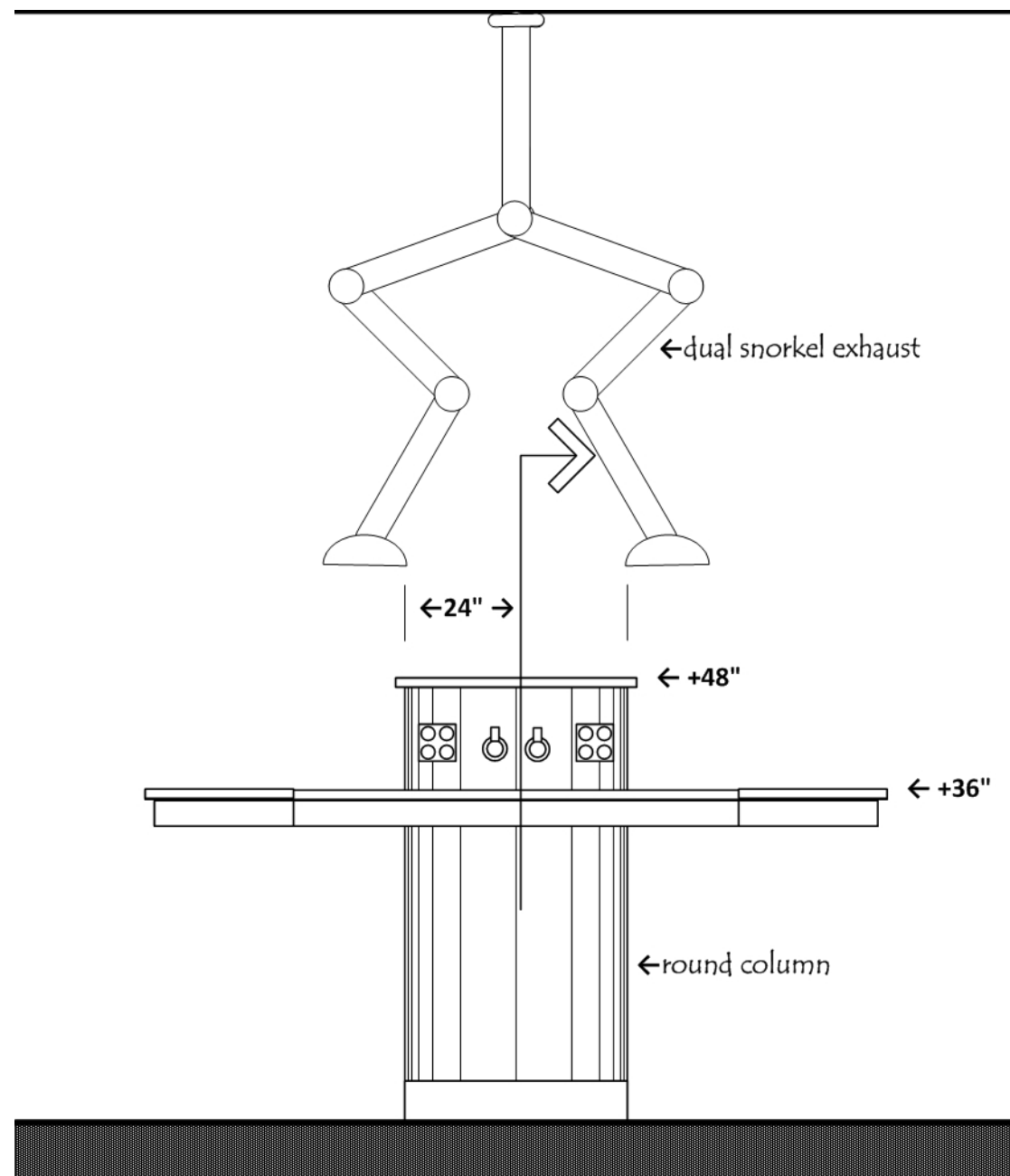


Section Detail 08

Pentagon Bench

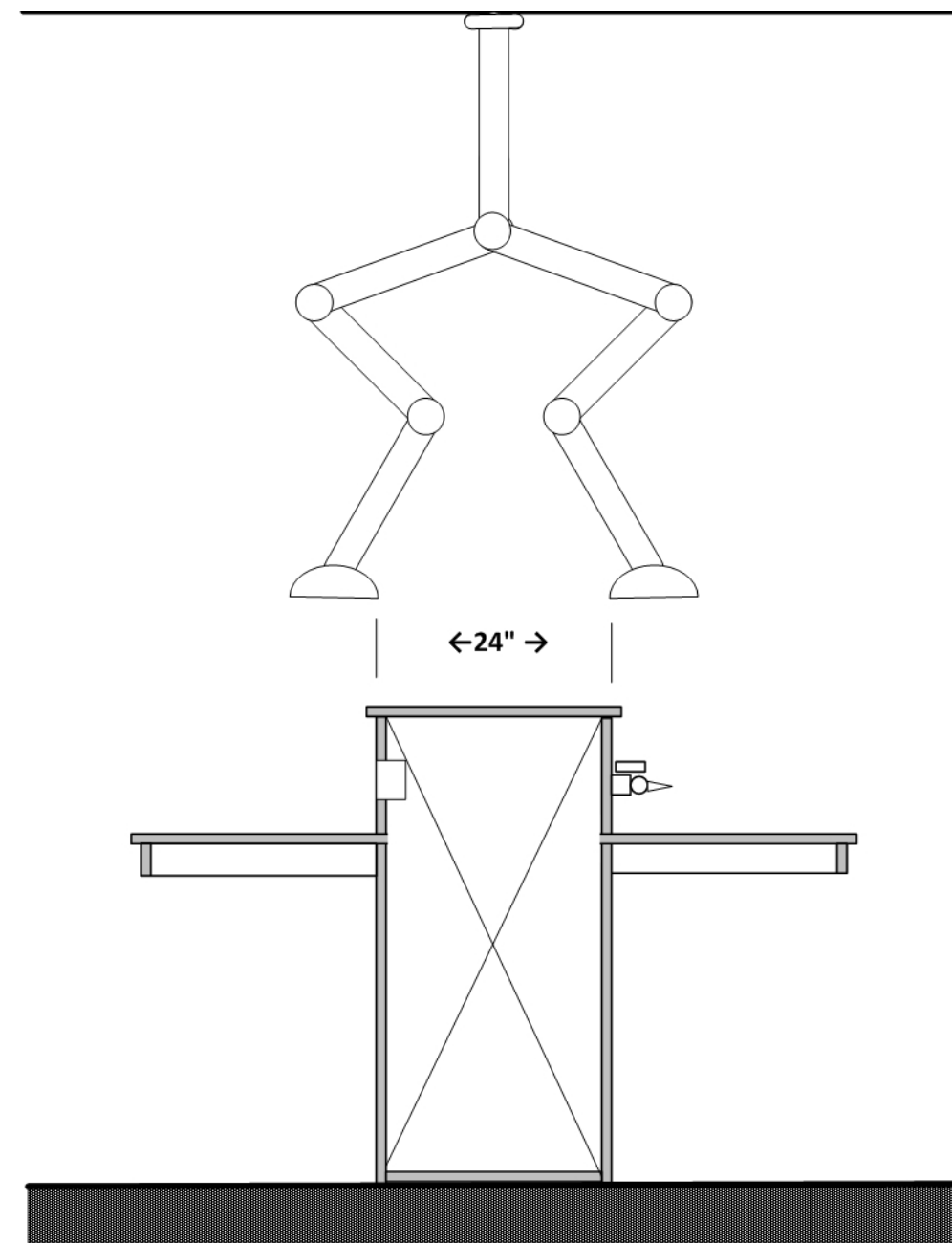
RX Compounding Teaching lab

Similar for Pharmaceutics Teaching Lab



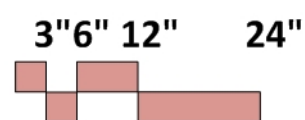
1" → || ← 78" → || ← 1"

Elevation



1" → || ← 72" → || ← 1"

Section



Protector® XStream® Laboratory Hoods



Protector XStream Laboratory Hood 9840600 is shown with SpillStopper Work Surface 9849800, Protector Acid Storage Cabinet 9901100 and Protector Standard Storage Cabinet 990100. Blower, ductwork, work surface and base cabinets must be ordered separately.

All models feature:

- Modified by-pass airflow design.
- Ergonomic air foil with aerodynamic Clean-Sweep® airflow openings.
- Upper Dilution Air Supply.*
- Glacier white, dry powder epoxy-coated steel exterior.
- Chemical-resistant, fiberglass-reinforced, composite panel liner and pre-set Rear Downflow Dual Baffle System* with flame spread less than 25 per ASTM E-84
- 3/16" thick tempered safety glass vertical-rising sash with epoxy-coated aluminum sash handle with large radius and perforations.*

- Removable front and side panels and front and interior service access panels for access to plumbing and electrical wiring.
- Pre-wired T8 fluorescent lighting, ADA-compliant light and blower switches for 115 volt, 60 Hz operation.
- Sash stop located at 18" sash opening position.
- Epoxy-coated stainless steel, 12.81" ID exhaust connection(s).

Contact Labconco at **800-821-5525** or **816-333-8811** for ordering information on explosion-proof lighting and other sash configurations and for blower sizing assistance.

All models conform to the following regulations and standards:

- SEFA 1-2002
- NFPA 45-2000
- ASTM E84-01
- ASHRAE 110-95
- ANSI Z9.5-1993
- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1
- UL 1805
- CE Conformity Marking (230 volt models)†

Fixed models feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. **Inlet tubing is not provided.**
- One pre-wired 115 volt, 20 amp electrical duplex receptacle on lower right side.

All models require (not included):

- **Remote Blower.** See back pocket.
- **Ductwork.** See back pocket.
- **Work Surface.** See pages 92-95.
- **Base Cabinet or Stand.** See pages 96-106.

Optional accessories for on-site installation include:

- **Service Fixture Kits.** See page 107.
- **Electrical Duplex Kits.** See page 108.
- **Guardian Jr. and Digital Airflow Monitor Kits.** See page 108.
- **Distillation Grid Kits.** See page 110.
- **Sash Stop Kits.** See page 108.
- **Snuffer Fire Extinguishers.** See page 110.
- **Ceiling Enclosure and Rear Finish Panel Kits.** See page 109.

* U.S. Patent No. 6,961,233

† pending

■ Slights of switches, electrical receptacle and service fixtures meet requirements of ADA.

■ Exclusive Feature

FUME HOOD CUT SHEET

Other acceptable manufacturers include Hamilton, Kewaunee, Mott
8' walk in hood: 4200 c.f.m. VAV
8' standard hood: 1060 c.f.m. VAV
5' standard hood: 610 c.f.m. VAV

ASHRAE 110-95 tests show less than 0.05 ppm leak rate when tested at 4.0 fpm; at OSHA-approved 60, 80, and 100 fpm face velocity and sash positions of 18" and 28". To ensure performance at 60 fpm, Labconco engineers challenged the Protector XStream Hood at less

than ideal conditions such as 30 fpm cross drafts, modified ASHRAE test procedures and average face velocities lower than 60 fpm. Contact Labconco for a technical paper with complete ASHRAE test data.

Total Exhaust CFM and Static Pressure @ 18" Sash Opening (60% open)

Nominal Width	100 fpm		80 fpm		60 fpm		CFM Savings at 60 fpm vs. 100 fpm	Total Average Annual Dollar Savings at 60 fpm vs. 100 fpm*
	s.p.		s.p.		s.p.			
4 feet	470	0.11'	330	0.07'	280	0.04'	190	\$760
5 feet	610	0.13'	490	0.08'	370	0.05'	240	\$960
6 feet	750	0.15'	600	0.10'	450	0.06'	300	\$1200
8 feet	1060	0.12'	850	0.08'	640	0.04'	420	\$1680

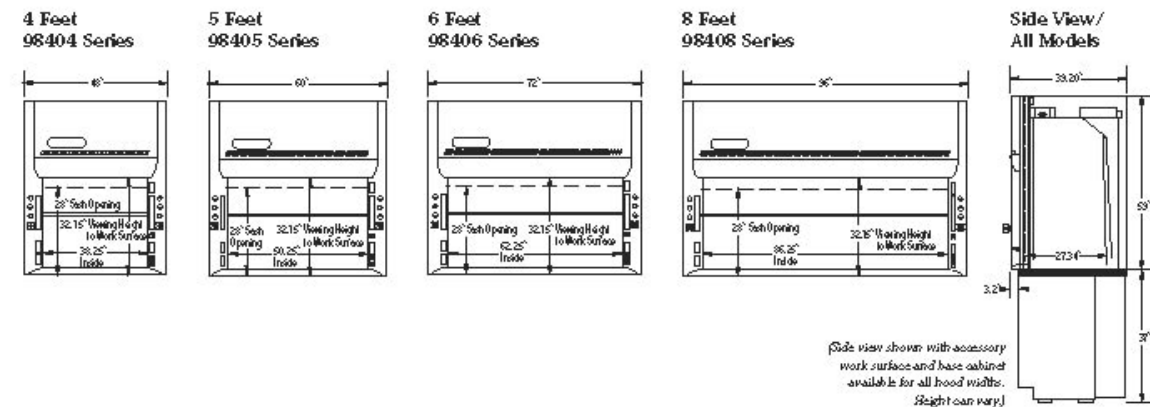
Total Exhaust CFM and Static Pressure @ 28" Sash Opening (100% open)

Nominal Width	100 fpm		80 fpm		60 fpm		CFM Savings at 60 fpm vs. 100 fpm	Total Average Annual Dollar Savings at 60 fpm vs. 100 fpm*
	s.p.		s.p.		s.p.			
4 feet	730	0.25'	590	0.13'	440	0.08'	290	\$1160
5 feet	960	0.30'	770	0.19'	580	0.11'	380	\$1520
6 feet	1180	0.36'	940	0.23'	710	0.13'	470	\$1880
8 feet	1660	0.28'	1330	0.18'	1000	0.10'	660	\$2640

*Based on average annual dollars per CFM usage of \$4.00; fume hood operating 24 hours a day and 5 days per week (6240 hours per year).

Catalog Number	Nominal Width	Electrical Requirements	Exterior Depth	Interior Working Depth	Fluorescent Lamps	Service Fixtures	Electrical Duplex	Exhaust Collar(s)	Shipping Wt. lbs./kg
9840400	4 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 25 watt	None	None	12.81" ID	400/181
9840401	4 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 25 watt	2	1	12.81" ID	400/181
9840402**	4 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 25 watt	None	None	12.81" ID	400/181
9840403**	4 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 25 watt	2	None	12.81" ID	400/181
9840500	5 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	460/209
9840501	5 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	2	1	12.81" ID	460/209
9840502**	5 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	460/209
9840503**	5 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	2	None	12.81" ID	460/209
9840600	6 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	520/236
9840601	6 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	2	1	12.81" ID	520/236
9840602**	6 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	520/236
9840603**	6 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	2	None	12.81" ID	520/236
9840800	8 feet	115 volts, 60 Hz	39.20"	27.3"	(4) 25 watt	None	None	(2) 12.81" ID	700/318
9840801	8 feet	115 volts, 60 Hz	39.20"	27.3"	(4) 25 watt	2	1	(2) 12.81" ID	700/318
9840802**	8 feet	230 volts, 50 Hz	39.20"	27.3"	(4) 25 watt	None	None	(2) 12.81" ID	700/318
9840803**	8 feet	230 volts, 50 Hz	39.20"	27.3"	(4) 25 watt	2	None	(2) 12.81" ID	700/318

**International electrical configuration



PURIFIER[®] LOGIC⁺ CLASS II, TYPE A2 BIOSAFETY CABINETS

SPECIFICATIONS



Purifier Logic+ Class II, Type A2
Biosafety Cabinet 302411100



Performance Features

- Electronically Commutated Motor (ECM)
- Constant Airflow Profile[™] (CAP) Technology airflow monitoring system that communicates with the ECM to deliver the precise volume of air as required and automatically adjust as filters load without relying on airflow sensors
- Air-Wave[™] Entry System*
- Contain-Air[™] Negative Pressure Channel*
- Smart-Start[™] System that allows the user to program start up and shut down operations
- Night-Smart[™] System that idles the blower when the sash is fully closed
- Built-in interval or elapsed timer for experiment monitoring, fluorescent light or UV light control (on models with UV light)
- Digital clock
- Removable towel catch located under work surface
- Bright, 90-100 footcandle, glare-free fluorescent lighting located outside the contaminated work area
- Five year warranty

Safety Features

- LCD information center with "Filter Life Remaining" bar graph, status line for alarm conditions and alerts to warn when filter life diminishes to 20% and 0%
- Electronic security lock (optional activation) that requires code to operate the cabinet
- Two electrical duplex receptacles, (single outlets on 230 volt models), located one on each side, with ground fault interruption (115 volt models)
- Intrinsically safe negative pressure design
- Fully-closing, clear 1/4" tempered safety glass sash
- Stainless steel inlet grille with Reserve-Air[™] Secondary Airflow Slots*
- Supply and exhaust 99.99% efficient HEPA filters. Contact Labconco for optional 99.999% efficient ULPA filters.
- Leak-tight stainless steel interior

Comfort Features

- Interior-mounted, line-of-sight, full color LCD information center with easy-to-understand MyLogic[™] OS
- 21.7" (54 cm) maximum sash opening height and 27.0" (69 cm) viewing height
- Curved inlet grille for forearm support
- Flush-mounted stainless steel electrical receptacle covers with dampened hinges
 - Removable, seamless type 304 stainless steel, dished work surface with lift out knobs
 - 10° Angled sash with counterbalanced, anti-racking mechanism for ease of lifting
- ADA-compliant touchpad control on right-hand side post for manual activation of blower, light(s), timer, electrical receptacles, audible alarm mute and menu selection
- Noise level < 63 dBA
- Heat load 990 BTU/hour (4' models)

Specifications

- Nominal inflow velocity of 105 feet per minute (fpm) (0.5 m/sec)
- Nominal downflow velocity of 55 fpm (0.3 m/sec)
- Approximately 70% air recirculation
- Powder-coated steel exterior
- NSF International listed (Logic+ models). NSF International and modified ASHRAE 110 compliant (Cell Logic+ models).
- ETL listed
- CE conformity marking (230 volt models)
- Class 5 conditions per ISO 14644-1 and 2 (formerly Class 100)
- Overall depth x height: 31.2" x 61.7" (79.2 x 156.7 cm)
- 10' (3 m) power cord with plug

Options

- Non-welded, NSF-Approved, powder-coated steel telescoping base stand with fixed feet
- Accessory Package: 254 nm UV lamp, ADA-compliant service fixture(s) with ball-type valve(s), and NSF-Approved Vacu-Pass[™] Cord & Cable Portal
- Cell Logic+ Packages: Scope-Ready[™] Package consisting of 7.0" wide x 10.5" high (18 x 27 cm) sash cutout and Pure-Vu[™] Seal with powder-coated steel collar. **Stand-Still[™] Isolation Platform is required and sold separately. See page 16.** Temp-Zone[™] Package consisting of temperature-controlled work area, 10.5" (27 cm) wide x 12.0" (30 cm) deep (7.0" x 12.0" on 3' models) located on the left side of the work surface. **Circulator is required (not included).** Circulator requirements: minimum flow rate of 0.4-0.5 GPM (1.5-1.9 LPM), typical volume of 6 liters, and temperature of 0-50° C (chiller/heater).
- Ventus[™] Canopy Connection, NSF-Approved, with low flow design and audio/visual alarms (adds 1.25" to overall cabinet height)

Required Accessory

- Supporting base if non-welded stand option is not selected

Exclusive Labconco feature *U.S. Patent No. 6,368,206

Complies with Americans with Disabilities Act Standard for height of controls and receptacles

See Dimensional Data on page 14, Accessories on pages 15-17, and Base Stands on pages 18-20.

BIOLOGICAL SAFETY CABINET CUT SHEET

Class II Type A2- no exhaust

Tissue Culture Rooms- Research Lab Suites A & B

PURIFIER[®] LOGIC+ CLASS II, TYPE B2 BIOSAFETY CABINETS

SPECIFICATIONS



Purifier Logic+ Class II, Type B2
Biosafety Cabinet 303481100



Performance Features

- Electronically Commutated Motor (ECM)
- Constant Airflow Profile[™] (CAP) Technology airflow monitoring system that communicates with the ECM to deliver the precise volume of air as required and automatically adjust as filters load without relying on airflow sensors
- Air-Wave[™] Entry System*
- Contain-Air[™] Negative Pressure Channel*
 - Smart-Start[™] System that allows the user to program start up and shut down operations
 - Built-in interval or elapsed timer for experiment monitoring, fluorescent light or UV light control (on models with UV light)
 - Digital clock
 - Removable towel catch located under work surface
 - Bright, 90-100 footcandle, glare-free fluorescent lighting located outside the contaminated work area
 - Five year warranty

Safety Features

- LCD information center with "Filter Life Remaining" bar graph, status line for alarm conditions and alerts to warn when filter life diminishes to 20% and 0%
- Electronic security lock (optional activation) that requires code to operate the cabinet
- Two electrical duplex receptacles, (single outlets on 230 volt models), located one on each side, with ground fault interruption (115 volt models)
- Intrinsically safe negative pressure design
- Fully-closing, clear 1/4" tempered safety glass sash with 8" (20 cm) working height opening
- Stainless steel inlet grille with Reserve-Air[™] Secondary Airflow Slots*
- Supply and exhaust 99.99% efficient HEPA filters. Contact Labconco for optional 99.999% efficient ULPA filters.
- Leak-tight stainless steel interior

Comfort Features

- Interior-mounted, line-of-sight, full color LCD information center with easy-to-understand MyLogic[™] OS
- 21.7" (54 cm) maximum sash opening height and 27.0" (69 cm) viewing height
- Curved inlet grille for forearm support
- Flush-mounted stainless steel electrical receptacle covers with dampened hinges
 - Removable, seamless type 304 stainless steel, dished work surface with lift out knobs
 - 10° Angled sash with counterbalanced, anti-racking mechanism for ease of lifting
 - ADA-compliant touchpad control on right-hand side post for manual activation of blower, light(s), timer, electrical receptacles, audible alarm mute and menu selection
 - Noise level < 63 dBA
 - Heat load 990 BTU/hour (4' models)

Specifications

- Nominal inflow velocity of 105 feet per minute (fpm) (0.5 m/sec)
- Nominal downflow velocity of 55 fpm (0.3 m/sec)
- 0% air recirculation
- Powder-coated steel exterior
- NSF International listed (Logic+ models). NSF International and modified ASHRAE 110 compliant (Cell Logic+ models).
- ETL listed
- CE conformity marking (230 volt models)
- Class 5 conditions per ISO 14644-1 and 2 (formerly Class 100)
- Overall depth x height: 31.2" x 61.7" (79.2 x 156.7 cm)
- 10" diameter exhaust outlet with air-tight damper
- 10' (3 m) power cord with plug

Options

- Non-welded, NSF-Approved, powder-coated steel telescoping base stand with fixed feet
- Accessory Package: 254 nm UV lamp, ADA-compliant service fixture(s) with ball-type valve(s), and NSF-Approved Vacu-Pass[™] Cord & Cable Portal
- Cell Logic+ Packages: Scope-Ready[™] Package consisting of 7.0" wide x 10.5" high (18 x 27 cm) sash cutout and Pure-Vu[™] Seal with powder-coated steel collar. **Stand-Still[™] Isolation Platform is required and sold separately. See page 16.** Temp-Zone[™] Package consisting of temperature-controlled work area, 10.5" wide x 12.0" deep (27 x 30 cm) located on the left side of the work surface. **Circulator is required (not included).** Circulator requirements: minimum flow rate of 0.4-0.5 GPM (1.5-1.9 LPM), typical volume of 6 liters, and temperature of 0-50° C (chiller/heater).

Required Accessory

- Supporting base if non-welded stand option is not selected

Exclusive Labconco feature *U.S. Patent No. 6,368,206

Complies with Americans with Disabilities Act Standard for height of controls and receptacles

See Dimensional Data on page 14, Accessories on pages 15-17, and Base Stands on pages 18-20.

BIOLOGICAL SAFETY CABINET CUT SHEET

Class II Type B2- 100% exhaust
Procedure Room

LOCAL EXTRACTOR



TERFU

Local extractor with friction joint for worksites where great flexibility is important, in 2" and 3" diameter

TERFU is a local extractor with friction joints designed for use in worksites where great flexibility is required, e.g. laboratories and the electronics industry.

The friction joints with ball bearings make positioning convenient and simple.

The TERFU is a very flexible local extractor that stays in position when adjusted, due to the easily adjustable joints, 360° swivel, brackets and support springs.

All necessary adjustments of joints etc. can easily be made with one hand. The smooth aluminum tubes and easily dismantled plastic joints facilitate cleaning the inside of the suction tubes. Should it be necessary, the complete extractor can easily be dismantled.

The standard TERFU is supplied with an air tight damper and delivered with white plastic joints & anodised aluminum tubes, for table, ceiling or wall mounting.

TERFU Ø3" diameter is available with recyclable polypropylene (PP) tubes. For the PP-design, all metal components that will be in contact with the air flow are made of stainless steel.

TERFU is also available in ESD design with ESD approval according to EN 100015-1.



Movex also offers a range of fans, accessories and automatic control devices for our local extractors

MOVEX®
EXTRACTORS

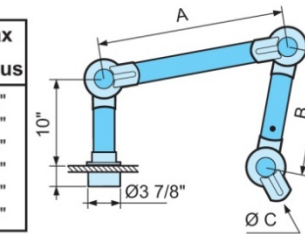
SNORKEL CUT SHEET

3" diameter; 3 joints; 50 c.f.m. at each snorkel hood-
100 c.f.m. for dual snorkel

TERFU for table mounting

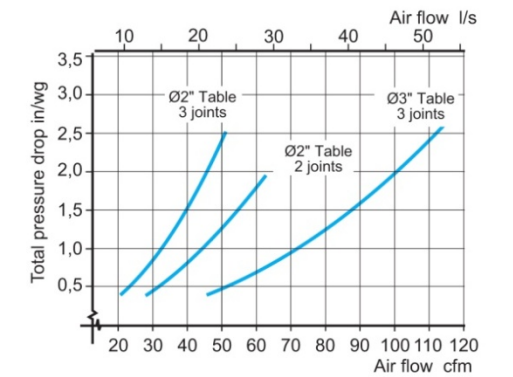
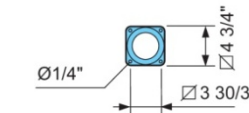
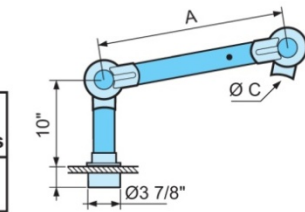
3 joints

Part	Measure inch			Max radius		
	Standard	PP	ESD			
B 1000-50	-	ESD	16"	12"	2"	40"
B 1300-50	-	ESD	22"	18"	2"	51"
B 1500-50	-	ESD	30"	18"	2"	60"
B 1000-75	PP	ESD	16"	12"	3"	40"
B 1300-75	PP	ESD	22"	18"	3"	51"
B 1500-75	PP	ESD	30"	18"	3"	60"



2 joints

Part	Measure inch			Max radius
	Standard	ESD	ESD	
B 650-50	ESD	12"	2"	28"
B 750-50	ESD	18"	2"	34"



Delivery design

Assembled, with plate for table mounting, without hood or suction nozzle.

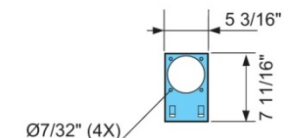
Flexible table bracket BF

Flexible bracket for mounting on table-top or shelf. Sold as accessory. Suitable for Ø2" and Ø3". Delivered complete with two "C" clamps. Also available in ESD-design.

Part BF, BF-ESD

Other information

Material Powder-coated sheet steel, white.
Weight 26 oz

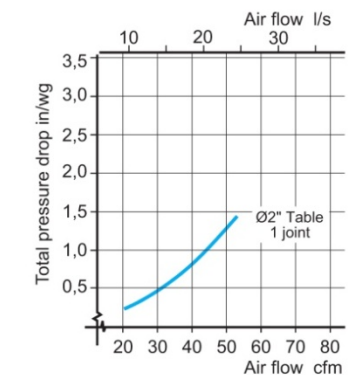
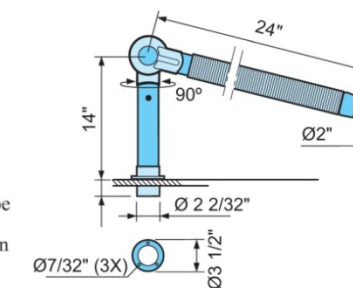


1 joint

Part
BC 700-50 ESD

Delivery design

Assembled, complete with flexible pipe FR600-50 ESD and plate for table mounting. Swivel function 90° between aluminum pipe and plastic joint. Connection Ø2 2/32".



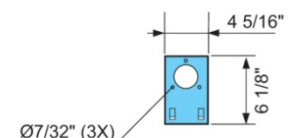
Flexible table bracket BFC

Flexible bracket for local extractor BC 700-50 ESD with Ø2 2/32" connection. Sold as accessory. Suitable for mounting on table-top or shelf. Delivered complete with two "C" clamps. Only ESD design.

Part BFC

Other information

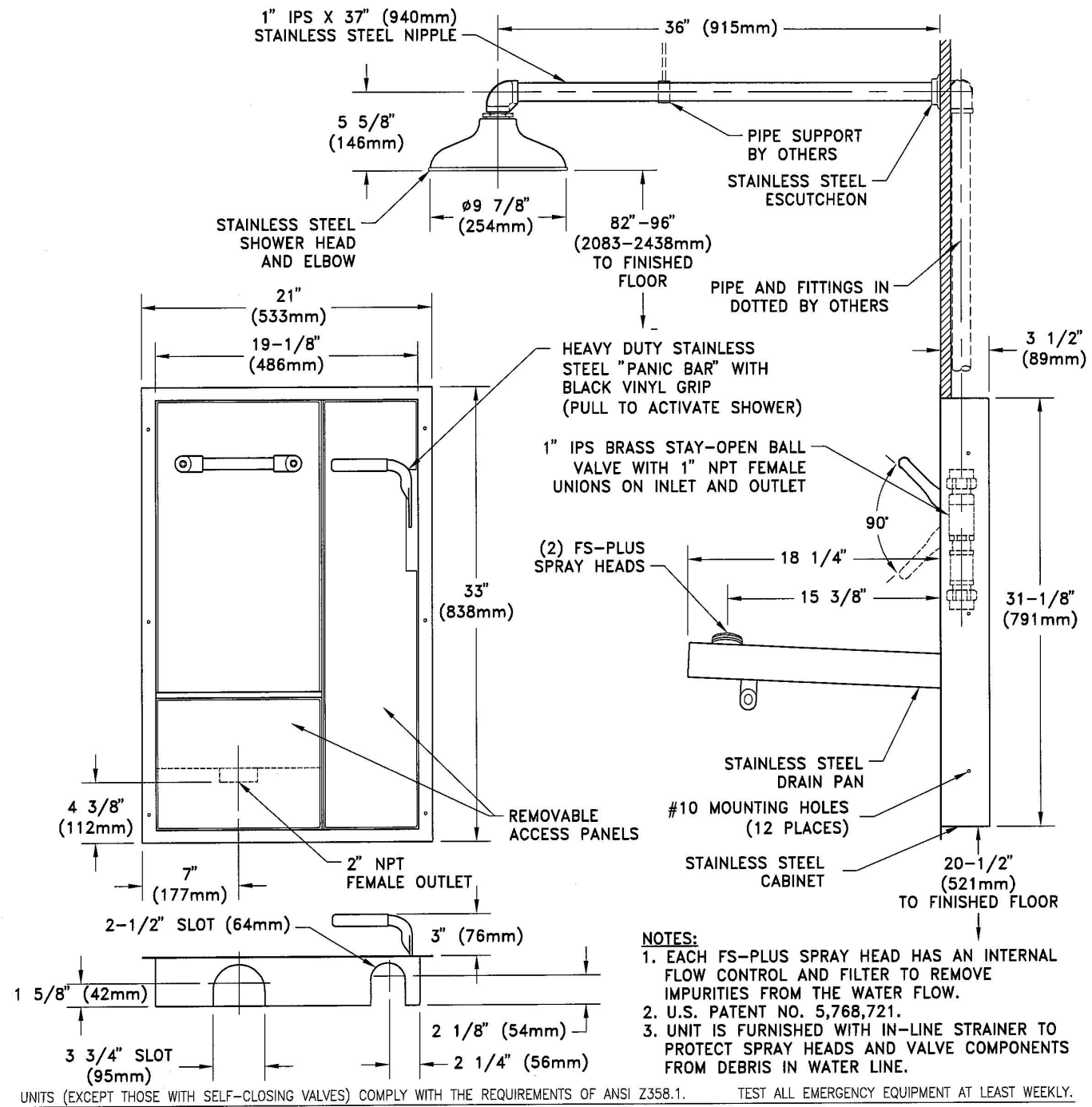
Material Powder-coated sheet steel, white.
Weight 23 oz



SAFETY SHOWER/EYEWASH CUT SHEET

Requires drain connection at eyewash
Provide floor drain below each eyewash

SSBF2170 RECESSED SAFETY STATION WITH DRAIN PAN



COLORTECH

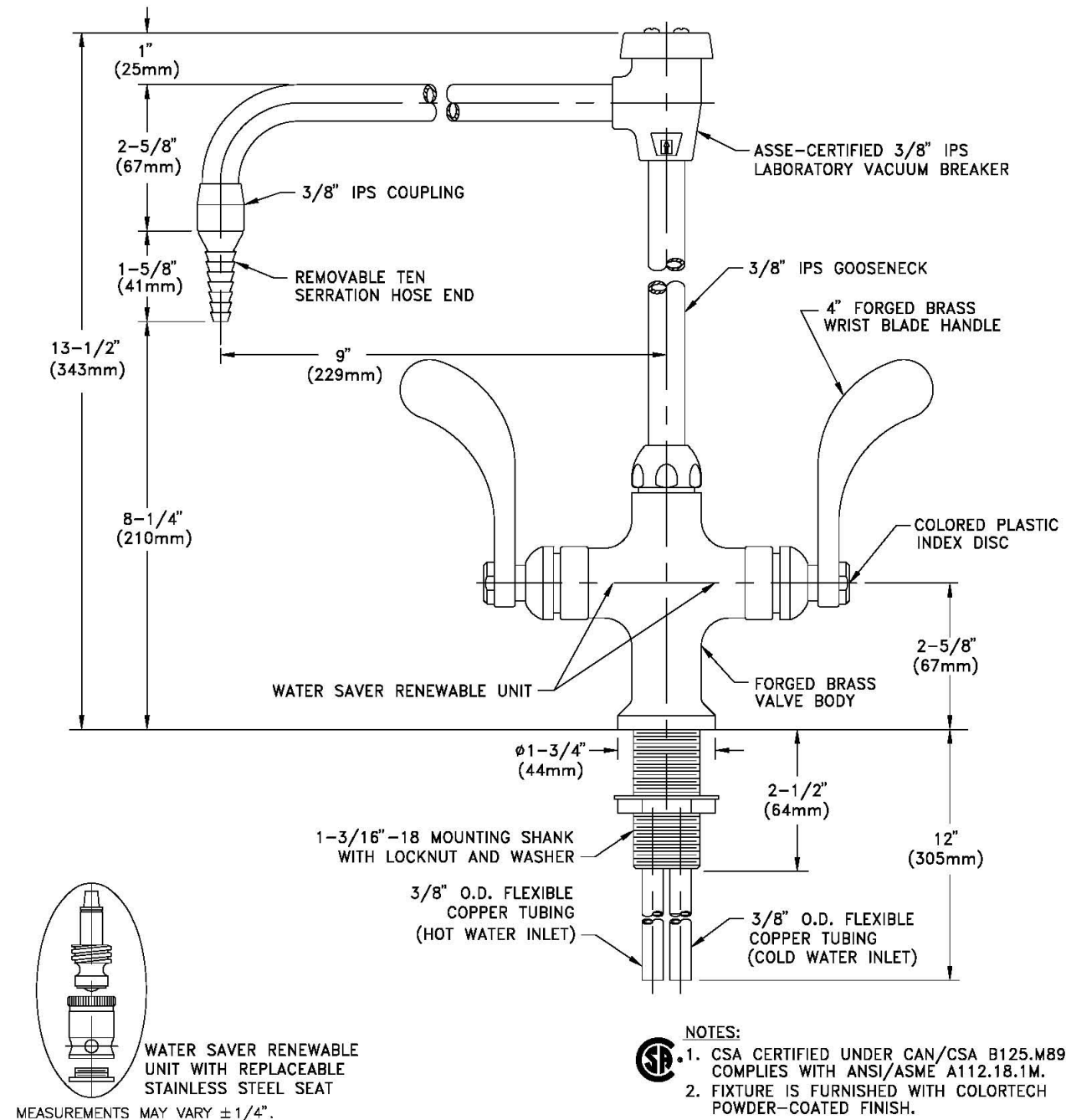
Laboratory Service Fixtures by
WaterSaver Faucet Co.

701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

HOT/COLD WATER FAUCET CUT SHEET Located at Environmental Room Sinks

CT414-9VB-BH

LABORATORY MIXING FAUCET, DECK MOUNTED, 9" RIGID/SWING VACUUM BREAKER GOOSENECK, WRIST BLADE HANDLES



Drawing Number: _____

Revision Number: 031803-KJS

COLORTECH

Laboratory Service Fixtures by
WaterSaver Faucet Co.

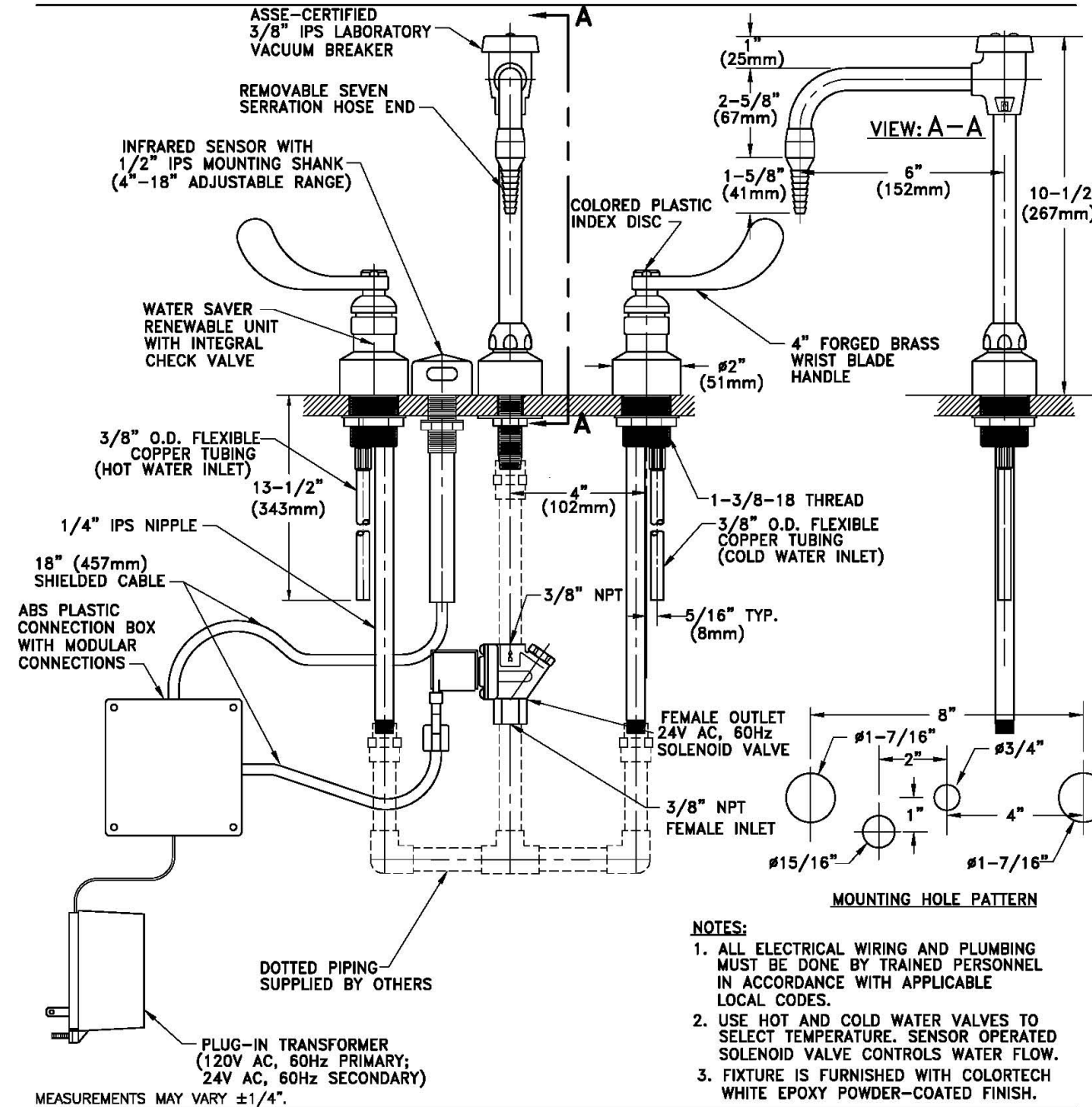
701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

HOT/COLD WATER FAUCET CUT SHEET

Hands Free infrared/manual control
requires power outlet below sink
Located at all lab sinks except Env Rooms

CT4554VB-BH

DECK MOUNTED SENSOR OPERATED AUTOMATIC MIXING FAUCET WITH 6" RIGID VACUUM BREAKER
GOOSENECK, WRIST BLADE HANDLES. AND MANUALLY OPERATED MIXING VALVES



Drawing Number: _____

Revision Number: 030806-KJS

PURE WATER FAUCET CUT SHEET

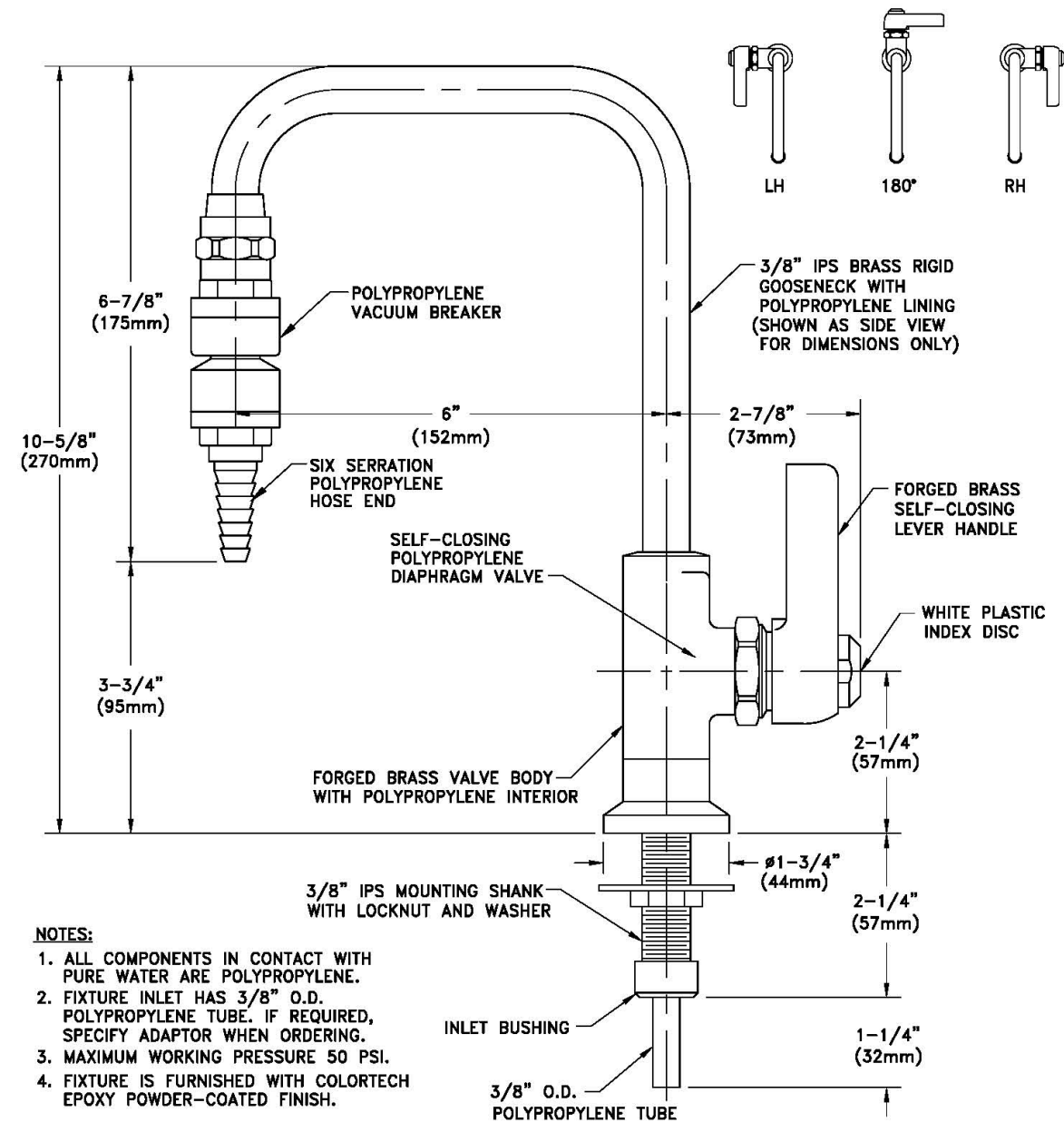
COLORTECH

701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

Laboratory Service Fixtures by
WaterSaver Faucet Co.

CT7853SC-7110-LE

DECK MOUNTED FIXTURE FOR DISTILLED, DEIONIZED AND ULTRA-PURE WATER WITH ALL-POLYPROPYLENE INTERIOR LINING, 6" RIGID GOOSENECK, SELF-CLOSING OPERATION, POLYPROPYLENE VACUUM BREAKER AND LEVER HANDLE



NOTES:

1. ALL COMPONENTS IN CONTACT WITH PURE WATER ARE POLYPROPYLENE.
2. FIXTURE INLET HAS 3/8" O.D. POLYPROPYLENE TUBE. IF REQUIRED, SPECIFY ADAPTOR WHEN ORDERING.
3. MAXIMUM WORKING PRESSURE 50 PSI.
4. FIXTURE IS FURNISHED WITH COLORTECH EPOXY POWDER-COATED FINISH.

MEASUREMENTS MAY VARY $\pm 1/4"$.

Drawing Number: _____

Revision Number: **090497-WK**



PRODUCT DIMENSIONS

DOMESTIC SIZES

SINK CUT SHEET

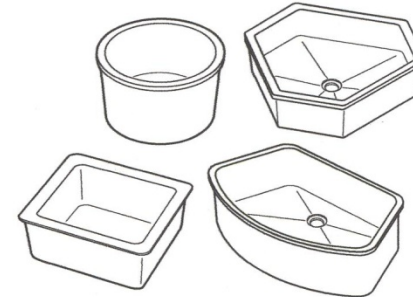
Standard lab sinks: D52- 24"L x 18"W x 11"D

Accessible lab sinks: A26- 18"L x 15"W x 5/11"D

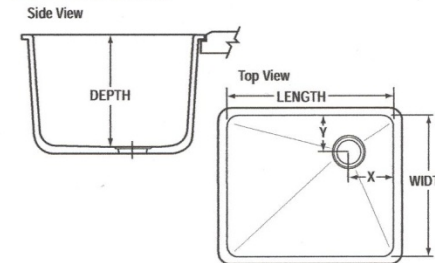
Standard Dropln® Sinks

Sink No.	Outlet	Wgt (lb)	Dimensions (in)				
			Inside Bowl			Outlet Location	
			Length	Width	Depth	X	Y
D01C	Center	9	9.0	6.0	5.8	4.5	3.0
D03C	Center	16	12.0	8.0	5.8	6.0	4.0
A05	Corner	18	14.0	10.0	5.0	3.5	3.5
D05	Corner	22	14.0	10.0	6.2	3.5	3.5
D05C	Center	24	14.0	10.0	6.2	7.0	5.0
D10	End	20	16.0	8.0	6.8	4.5	4.0
D10C	Center	22	16.0	8.0	6.8	8.0	4.0
D15	Corner	30	16.0	12.0	8.0	3.5	3.5
D15C	Center	31	16.0	12.0	8.0	8.0	6.0
D19	Corner	42	16.0	16.0	9.6	3.5	3.5
D20	Corner	32	16.0	16.0	7.5	3.5	3.5
D22C	Center	30	18.0	6.5	6.8	9.0	3.3
D24(C)	Center	30	18.0	14.0	10.5	9.0	6.8
A25	Corner	35	18.0	15.0	5.0	3.5	3.5
D25	Corner	39	18.0	15.0	7.9	3.5	3.5
D30	Corner	53	18.0	15.0	11.0	3.5	3.5
D30C	Center	50	18.0	15.0	10.8	9.0	7.5
D33E	End	59	21.0	17.0	9.8	4.5	8.5
D45	Corner	64	21.5	15.5	11.0	3.5	3.5
D50C	Center	48	24.0	16.0	8.0	12.0	8.0
D52	Corner	77	24.0	18.0	11.0	3.5	3.5
A55	Corner	47	25.0	15.0	4.8	3.5	3.5
D55	Corner	61	25.0	15.0	10.0	3.5	3.5
D59	Corner	61	28.0	15.0	11.8	3.5	3.5
DRS12	Center	18	12.0	Round	7.8	Center	

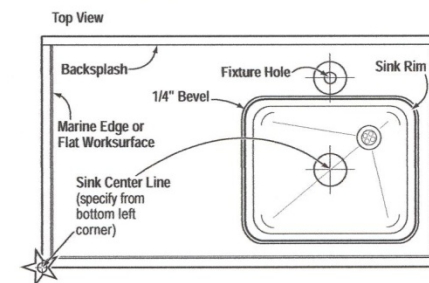
Dropln® Sink Styles



Dimensions Key



Installation Detail



Special Order Dropln® Sinks

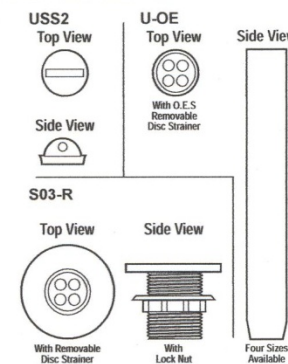
Sink No.	Outlet	Wgt (lb)	Dimensions (in)				
			Inside Bowl			Outlet Location	
			Length	Width	Depth	X	Y
D06*	Center	34	12.0	12.0	12.0	6.0	6.0
A07*	Corner	24	14.0	14.0	5.0	3.5	3.5
D08*	Corner	25	15.0	8.0	6.0	3.5	3.5
D09*	Corner	25	15.0	8.0	10.8	3.5	3.5
D21*	Corner	58	16.0	16.0	15.0	3.5	3.5
A26*	Corner	39	18.0	15.0	5/11	4.5	5.5
D32	Corner	49	18.0	15.0	15.8	3.5	3.5
D51*	Corner	60	24.0	16.0	9.6	3.5	3.5
D54*	Corner	45	25.0	15.0	8.0	3.5	3.5
D57*	Corner	71	25.0	15.0	13.6	3.5	3.5
D58*	Corner	79	25.0	15.0	17.8	3.5	3.5
D61	End	94	30.0	16.0	17.8	4.5	7.5
D65C*	Center	98	35.5	19.5	9.8	17.8	9.8
D68**	End	70	30.0	16.0	10.0	4.75	8.0
D70C*	Center	95	24.0	16.0	15.5	8.0	12.0
D100**	Center	29	22.5	Hexagon	5.0	Center	
D200**	End	64	30.9	Hexagon	7.0	15.5	8.0
DRS10*	Center	14	10.0	Round	7.8	Center	
DHC20*	End	82	30.0	Hexagon	7.0	Center	
D99*	End	56	32.0	Semi-Circle	10.0	11.5	4.5

All sinks are available at both plants unless they are Special Order Sinks, available as noted:
 * Available only from Taylor, TX, plant (colors: Black Onyx, Gray, Graphite, Tan, Forest Green and Steel Blue).
 ** Available only from Canton, MI, plant (colors: Black Onyx, Gray and Alpine White)

ADA compliant sinks are designated by this symbol.

All Dimensions are nominal. Exterior dimensions vary by MFG location. Cutsheets available upon request.

Outlets & Accessories



GAS/VACUUM VALVE CUT SHEET

Double Valve at open islands

Single Valve at islands with fixed divider shelf at center

Single Valve at wall

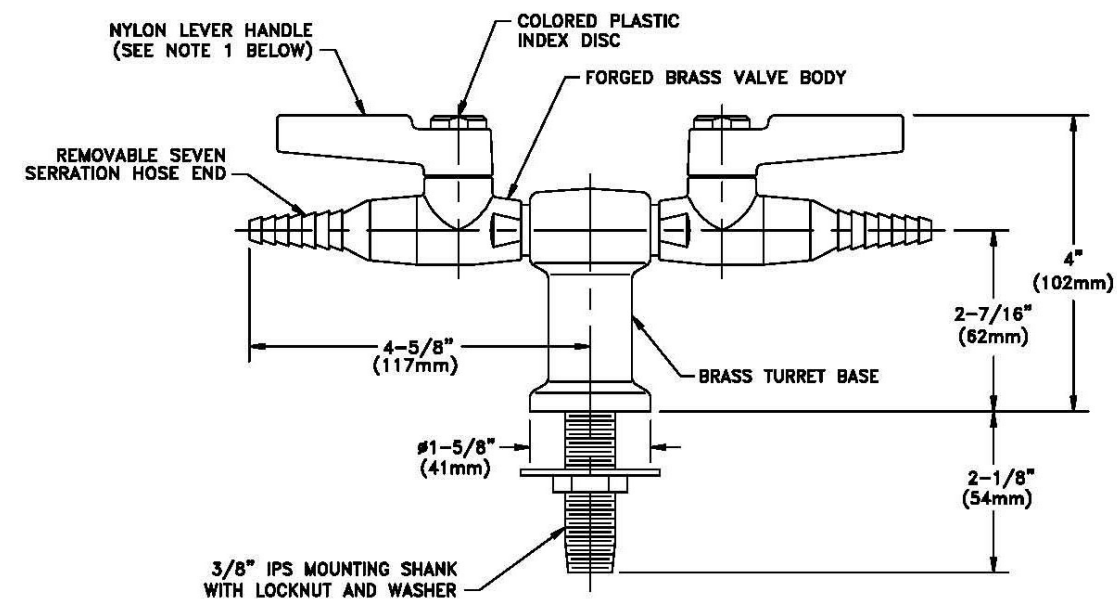
COLORTECH

Laboratory Service Fixtures by
WaterSaver Faucet Co.

701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

CT4200-232SWSA

DECK MOUNTED TURRET BASE WITH TWO LABORATORY BALL VALVES AT 180° AND MOUNTING SHANK



NOTES:

1. VALVE IS FURNISHED WITH A BLACK NYLON LEVER HANDLE AS STANDARD. A COLORED NYLON HANDLE AND A CHROME PLATED FORGED BRASS HANDLE ARE ALSO AVAILABLE.
2. VALVE IS FACTORY ASSEMBLED AND TESTED AT 125 PSI. MAXIMUM WORKING PRESSURE IS 75 PSI.
3. VALVE IS CERTIFIED FOR GAS SERVICE BY CANADIAN STANDARDS ASSOCIATION UNDER STANDARD ANSI Z21.15-1997/CGA9.1-M97.
4. FIXTURE IS FURNISHED WITH COLORTECH WHITE POWDER-COATED FINISH.

MEASUREMENTS MAY VARY $\pm 1/4"$.

Drawing Number: _____

Revision Number: 082406-SJP

UNDERCOUNTER WASHER CUT SHEET

Provide softened feed water

FlaskScrubbers® Ordering Information

Undercounter FlaskScrubbers

24.0" w x 26.4" d x 34.3" h minimum to 36.3" h maximum (60.9 x 67.1 x 87.1 cm minimum to 92.1 cm maximum).
Shipping weight 142 lbs. (64 kg). Includes one 3/8" IPS inlet fitting for tap water, one fitting for 3/4" ID hose for purified water, 34 detachable spindles, 34 stainless steel spring clips, two Glassware Holders 44246-00, two Glassware Holders 44248-00, and leveling feet.

Catalog Number	Electrical Requirements	High Heat	Options Window	Required (not included)
44203-00	115 v, 60 Hz, 16 amps			hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44203-01	230 v, 50/60 Hz, 13 amps	♦		hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44203-10	115 v, 60 Hz, 16 amps		♦	hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44203-11	230 v, 50/60 Hz, 13 amps	♦	♦	hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap

Freestanding FlaskScrubbers

24.5" w x 26.7" d x 35.1" h minimum to 37.1" maximum (62.2 x 67.8 x 89.2 cm minimum to 94.2 cm maximum).
Shipping weight 189 lbs. (86 kg). Includes melamine-covered top, stainless steel front and side panels, epoxy-coated steel back panel, one 3/8" IPS inlet fitting for tap water, one fitting for 3/4" ID hose for purified water, 34 detachable spindles, 34 stainless steel spring clips, two Glassware Holders 44246-00, two Glassware Holders 44248-00, and leveling feet.

Catalog Number	Electrical Requirements	High Heat	Options Window	Required (not included)
44204-00	115 v, 60 Hz, 16 amps			hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44204-01	230 v, 50/60 Hz, 13 amps	♦		hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44204-10	115 v, 60 Hz, 16 amps		♦	hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap
44204-11	230 v, 50/60 Hz, 13 amps	♦	♦	hardwiring to a 20 amp dedicated circuit 1 1/2" vent trap or drain air gap

Versatile spindle and basket system washes and dries narrow-necked and general purpose glassware.

34 DETACHABLE SPINDLES WITH STAINLESS STEEL SPRING CLIPS
Large volumes of water stream into the bulb of each flask for high-powered, yet gentle, cleaning. Spring clips may be raised and lowered on the 24 tall spindles to accommodate flasks from 50 ml to 2000 ml. The 10 small spindles hold flasks from 1 ml to 25 ml. Spindles detach easily to customize rack for accessory inserts (sold separately). See page 13 for insert selection.

CE INTERNATIONAL ELECTRICAL CONFIGURATIONS AVAILABLE
All 230 volt models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

EASY INSTALLATION
To begin operation, hot tap water, purified water, a drain and electricity are required. Mobile models feature a quick-disconnect attachment for tap water and drain. Undercounter and freestanding models have straight line plumbing and electrical connections accessible from the front. Higher built-in drain location prevents self-draining and plumbing errors.

ETL LISTED
Washer carries the ETL Testing Laboratories seal in the U.S. and ETL-C seal in Canada, signifying it meets or exceeds all minimum requirements of UL Standard 3101-1 and CAN/CSA C22.2 No. 1010.1.



VERSATILE MULTI-PIN INSERT ACCESSORY
Accommodates a wide variety of miscellaneous glassware for added flexibility. The insert may be placed directly over the spindles or where spindles have been detached.

PATENTED VACUUM DRYING SYSTEM
Draws moisture from inside the flasks, replacing it with hot, dry air.

MELAMINE-COVERED TOP
On mobile and freestanding models, the high-density particle board top is melamine covered on all sides to repel moisture.

MIRROR BRIGHT TYPE 304 STAINLESS STEEL INTERIOR
The shiny, non-porous finish provides a corrosion-resistant surface which reduces contaminant carry over during wash and rinse cycles.

QUIET ENERGY EFFICIENT OPERATION AT 62 DECIBELS
Aluminum-backed, sound-deadening material is strategically placed throughout the washer to absorb noise. An insulation blanket optimizes internal tank temperature while conserving energy.



ADJUSTABLE GLASSWARE HOLDERS
Secure Erlenmeyer flasks and beakers over the spindles. The vinyl-coated fingers gently cradle the glassware. Two 4-inch and two 6-inch Glassware Holders are included.

DISPENSER FOR NEUTRALIZING SOLUTION
Allows addition of mildly acidic rinse solution to alter pH and eliminate alkaline detergent carry over.

SPINDLE RACK AND ROTATING LOWER WASH ARM
Distribute up to 60 gallons (227 liters) of water per minute. Wash arm cleans with a 360° motion.

DRY OR LIQUID DETERGENT DISPENSER
Detergent compartments release a premeasured amount (1.35 ounces or 40 ml) ensuring clean labware.

PARTICLE FILTER
One-piece stainless steel screen filters fine particles, protecting the pump from broken glass and debris.

FULL ONE YEAR WARRANTY
Is provided against defects in materials and workmanship.

DRAW LATCH
Securely locks the door energizing the electronic controls.

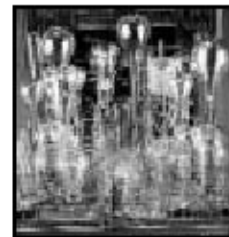
DUAL HEATERS
Boost water and glassware temperatures to enhance washing and drying results by applying heat during all cycles. Models for operation on 115 volts have 1450 watts of heating power; 230 volt models have 2150 watts. With a minimum inlet temperature of 120° F (49° C), the sump heater elevates water temperature approximately 20° F (11° C) on 115 volt models and 60° F (33° C) on 230 volt models.

TYPE 304 STAINLESS STEEL DOOR
Front door is sleek brushed stainless steel. Mobile and freestanding models also have brushed stainless steel sides and epoxy-coated steel backs.

STEAM GENERATOR
Produces hot vapor to penetrate and soften dried residue allowing detergent and hot water to work effectively.

BUILT-IN PURIFIED WATER PUMP
Draws from a storage tank or pressurized system to deliver purified water during final two rinses.

Exclusive feature





POLY ACID-CORROSIVE SAFETY STORAGE CABINET



EAGLE Poly Acid/Corrosive Safety Cabinet

Eagle's new non-metallic "Poly Acid Cabinets" are constructed of 100% polyethylene for excellent resistance to harmful acid vapors and spills, making these cabinets suitable for storing aggressive chemicals such as sulphuric, hydrochloric and nitric acids.

Independent upper and lower compartments allow for segregation of reactive chemicals. Includes two 3/8" threaded inserts on top sides for wall anchors. The base of the cabinet is flush to floor and sides. Bottom shelves remove for easy cleaning of sump areas. Available in blue, shown here, or [white](#).

CRAP-44 Poly Acid Safety Cabinet

EAGLE Poly Acid/Corrosive Cabinet					
Model	Capacity	Door Specs	Shelves	Size (WxDxH)	Weight
CRA-P44	44 gal.	4 Manual Closing	8	35" x 22" x 65"	130 lbs.
CRA-P44W	44 gal.	4 Manual Closing	8	35" x 22" x 65"	130 lbs.

[Home](#) • [About Us](#) • [C.L.A.W.S.](#) • [E-Mail](#)
[New Products](#) • [Safety Cans](#) • [Safety Cabinets](#) • [Spill Containment](#) • [Guards & Protectors](#)

FLAMMABLE STORAGE CABINET CUT SHEET

No exhaust

MODEL 4510 SAFETY CABINET

EAGLE Model 4510 Safety Cabinet

Constructed of 18-gauge steel, sides, top, bottom, and doors are double-walled with a 1 1/2" air space between walls. Both vents, with 2" threaded fittings, have fire baffle and cap. Cabinets come in yellow high gloss powder finish with red warning, plus grounding attachment, 3-point key lock, and 2" raised, leakproof door sill. Each shelf is adjustable, supported by 4 brackets, and can support 350 pounds. Features 2 self-closing doors. FM approved.

SPECIFICATIONS

CAPACITY: 45 gallons
SHELF DEPTH: 14.75"
SHELVES: 2
DIMENSIONS: 43" x 18" x 65"
WEIGHT: 353 lbs.



Model 4510 Safety Cabinet

MODEL 1923/2310 SPACE SAVER SAFETY CABINET

EAGLE Model 1923/2310 Space Saver Safety Cabinet

Only 23" wide, this cabinet features a 24 gallon capacity that will fit places a conventional cabinet can't - available in single door manual (Model 1923) and self closing (Model 2310) models.

Cabinets meet NFPA Code 30 and OSHA requirements.

SPECIFICATIONS

CAPACITY: 24 gallons
SHELF DEPTH: 14.75"
SHELVES: 3
DIMENSIONS: 23" x 18" x 65"
WEIGHT: 270 lbs.



Model 1923 Safety Cabinet

Scotsman

PRODIGY
smart thinking

C0330 – 300 lb Cube Ice Machine

Prodigy® Modular Cube Ice Maker



Shown on B530S bin with optional KLPBS legs.

Features

Prodigy® cubers use significantly less energy and water than other cube ice machines, exceeding California and Federal energy efficiency regulations.

AutoAlert™ indicator lights constantly communicate about operating status and actually signal your staff when it's time to descale, sanitize, and more—making upkeep practically foolproof.

The patented WaterSense adaptive purge control delivers maximum reliability by reducing scale buildup for a longer time between cleanings.

Preventative maintenance is simpler than ever with easily-removed panels allowing clear access to internal components and a diagnostic code display insuring the right fix the first time. Reusable air filter is easily removable from the outside.

All external panel components are crafted for optimal aesthetic appeal through superior fit and finish.

An optional advanced feature Smart-Board™ provides NAFEM data protocol and additional operational data that can be displayed on-screen or transmitted remotely, resulting in early alert and fast diagnosis of operating issues.

An optional Vari-Smart™ ultrasonic ice level control sensor allows you flexibility to program ice levels, for up to 7 days, keeping just the right amount of freshly made ice in the bin.

24 Hour Volume Production

Air Cooled		
70°F/21°C	Air	ARI 90°F/32°C
50°F/10°C	Water	70°F/21°C
lb/kg		lb/kg
350/159		280/127

Water Cooled		
70°F/21°C	Air	ARI 90°F/32°C
50°F/10°C	Water	70°F/21°C
lb/kg		lb/kg
400/182		280/127



Modular Bin Options

Model Number	Dimensions W" x D" x H"	ARI Certified Bin Capacity lb/kg	Application Capacity lb/kg	Finish	Ship Weight lb/kg
B330P	30 x 34 x 30	270/123	344/156	Poly	130/59
B530S or P	30 x 34 x 44	420/191	536/244	SS or Poly	150/68



Cube Ice

Small Cube
3/8" x 3/8" x 3/8"
(2.22 x 2.22 x .95 cm)

Medium Cube
3/8" x 3/8" x 3/8"
(2.22 x 2.22 x 2.22 cm)

Common ice form, ideal for mixed drinks.

Warranty

- 3 years parts and labor on all components.
- 5 years parts and labor on the evaporator.
- 5 years parts on the compressor and condenser.

Warranty valid in North, South & Central America. Contact factory for warranty in other regions.

Scotsman Ice Systems
775 Corporate Woods Parkway
Vernon Hills, IL 60061

1-800-SCOTSMAN
Fax: 847-913-9844
E-mail: customer.service@scotsman-ice.com

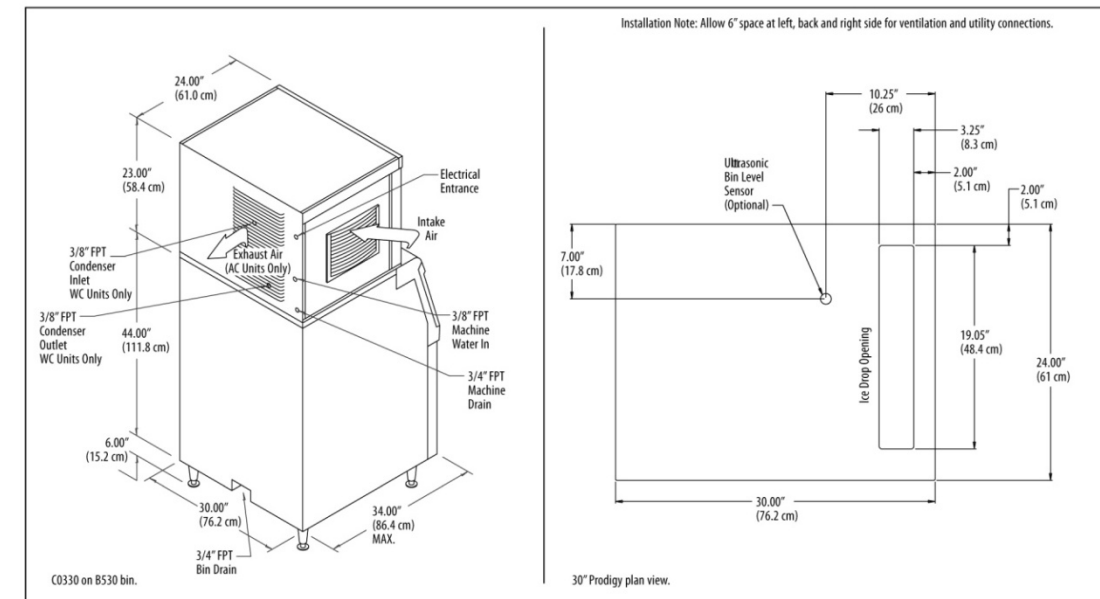
www.scotsman-ice.com

ICE MACHINE CUT SHEET

Owner Furnished

Scotsman

The smart choice in ice.™



Specifications

Model Number* Cube Size: medium or small	Condenser Unit	Basic Electrical Volts/Hz/Phase	Max. Fuse Size or HACR Circuit Breaker (amps)	Circuit Wires	Min. Circuit Ampacity	Energy Consumption kWh/100 lb (45.4 kg) 90°F(32°C)/70°F(21°C)	Water Usage Gallons/100 lb (liters/45.4 kg)	
							Potable 90°F(32°C)/70°F(21°C)	Condenser 90°F(32°C)/70°F(21°C)
C0330MA-1A	Air	115/60/1	15	2	12.7	6.0	19.0/72.0	-
C0330MW-1A	Water	115/60/1	15	2	11.9	5.2	18.5/70.2	163.0/618.0
C0330SA-1A	Air	115/60/1	15	2	12.7	6.0	19.0/72.0	-
C0330SW-1A	Water	115/60/1	15	2	11.9	5.2	18.5/70.2	163.0/618.0

* 208-230/60/1 Voltage - Substitute "-32" in place of "-1", i.e. C0330SA-32A. **E** = ENERGY STAR®

All Models

Dimensions (W x D x H):
Unit: 30" x 24" x 23"
(76.2 x 61.0 x 58.4 cm)

Shipping Carton:
33.5" x 27.5" x 28"
(85.1 x 69.9 x 71.1 cm)

Shipping Weight:
160 lb / 73 kg

BTUs per hour:
5,200

Accessories

Model Number	Description
KVS	Vari-Smart™ Ice Level Control - Program ice bin levels to match ice needs.
KSB	Smart-Board™ Advanced Control - Use additional operational data for fast diagnosis.
KSB-N	Smart-Board™ Advanced Control with Network - Network capable.

* Scotsman recommends all ice machines have water filtration. See Scotsman Sanitation Matrix for details.

Operating Requirements

	Minimum	Maximum
Air Temperatures	50°F (10°C)	100°F (38°C)
Water Temperatures	40°F (4.4°C)	100°F (38°C)
Remote Cond. Temps	-20°F (-29°C)	120°F (49°C)
Water Pressures	20 PSIG (1.4 bar)	80 PSIG (5.5 bar)
Electrical Voltage	-10%	+10%

Specifications and design are subject to change without notice.

Scotsman Ice Systems
775 Corporate Woods Parkway
Vernon Hills, IL 60061

1-800-SCOTSMAN
Fax: 847-913-9844
E-mail: customer.service@scotsman-ice.com

www.scotsman-ice.com

C0330 – 300 lb Cube Ice Machine

C0330 – 300 lb Cube Ice Machine



Item# _____

Job _____



TOP-TRACK HIGH DENSITY STORAGE SYSTEMS

FOR SUPER ERECTA AND SUPER ADJUSTABLE SUPER ERECTA SYSTEMS

- **High-Density/Cost-Effective Storage:** Mobile units are positioned between stationary units, and only a single aisle, which can be opened between any two units as needed, is required. This efficient utilization of space addresses the storage needs of growing operations, and may eliminate the need for facility expansion.
- **Super Adjustable:** For maximum storable density, Top Track can be configured using Super Adjustable Super Erecta shelves. These shelves feature shelf corners with a quick release lever that holds secure. Shelves can be rapidly adjusted, without the use of tools, to meet changing storage needs.
- **Easy Assembly/Cost-Saving Installation:** Units are easily assembled. The track does not require drilling or bolting to the floor as do most "floor-mounted" systems, saving time and money.
- **Versatile:** Super Erecta and Super Adjustable shelves are offered in various widths and lengths to fit any size area. Shelves are available in Brite™, chrome, and Metroseal II finishes. Super Erecta shelves are also available in stainless steel.
- **Sanitary and Safe:** Rollers guided by the overhead track eliminate dirt and debris accumulation and other sanitation problems often associated with floor-mounted track systems. Also, this overhead system allows for an unobstructed walking area within the system.
- **Accessible:** Unobstructed floor area within the system promotes easy aisle access for utility carts, simplifying material handling tasks.

METRO InterMetro Industries Corporation
 North Washington Street
 Wilkes-Barre, PA 18705

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Top-Track™ High-Density Storage Systems

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Top-Track™ High-Density Storage Systems

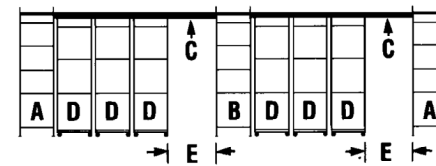
METRO SHELF HIGH DENSITY CUT SHEET

Job _____

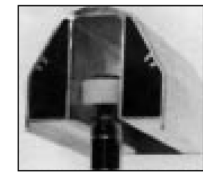
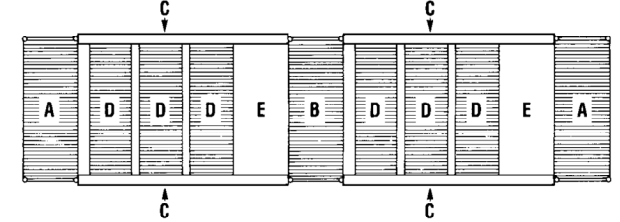


TOP-TRACK™ HIGH-DENSITY STORAGE SYSTEM

FRONT VIEW



OVERHEAD VIEW



Close-up of Roller Assembly in Overhead Track

SYSTEM COMPONENTS

- A = Stationary End Units
- B = Stationary Intermediate Unit (Optional)
- C = Track Set
- D = Mobile Units
- E = Open Aisle

STATIONARY END UNIT KITS	Shelf Width		Chrome-Plated	Metroseal II	Stainless Steel
	(in.)	(mm)			
Includes hardware necessary for connecting stationary end units to track. ONE KIT IS REQUIRED PER SINGLE SYSTEM.	18	455	TTE3C	TTE3K2	TTE3S
	21	530	TTE4C	TTE4K2	TTE4S
SHELVES AND POSTS SOLD SEPARATELY. 86" posts required.	24	610	TTE5C	TTE5K2	TTE5S
	30	760	TTE6C	TTE6K2	-
	36	910	TTE7C	TTE7K2	-

STATIONARY INTERMEDIATE UNIT KITS	Shelf Width		Chrome-Plated	Metroseal II	Stainless Steel
	(in.)	(mm)			
Includes hardware necessary for connecting intermediate unit to track on both sides. SHELVES AND POSTS SOLD SEPARATELY. 86" posts required.	18	455	TTA3C	TTA3K2	TTA3S
	21	530	TTA4C	TTA4K2	TTA4S
SHELVES AND POSTS SOLD SEPARATELY. 86" posts required.	24	610	TTA5C	TTA5K2	TTA5S
	30	760	TTA6C	TTA6K2	-
	36	910	TTA7C	TTA7K2	-

TRACK SETS	6'	7'	8'	9'	10'	11'	12'	13'
	(1830mm)	(2135mm)	(2440mm)	(2745mm)	(3050mm)	(3355mm)	(3660mm)	(3965mm)
Includes necessary sections of track for assembling track runs of 6'-21' (1830-6405mm). For track sizes within the even 1-foot increments, round up to the next foot.	TTS6N	TTS7N	TTS8N	TTS9N	TTS10N	TTS11N	TTS12N	TTS13N
	14'	15'	16'	17'	18'	19'	20'	21'
	(4270mm)	(4575mm)	(4880mm)	(5185mm)	(5490mm)	(5795mm)	(6100mm)	(6405mm)
	TTS14N	TTS15N	TTS16N	TTS17N	TTS18N	TTS19N	TTS20N	TTS21N

MOBILE UNIT KITS	Shelf Width		Chrome-Plated	Metroseal II	Stainless Steel
	(in.)	(mm)			
One kit required per mobile unit. Kit includes posts, casters/caster channels, donut bumpers, and roller bearing assemblies. SHELVES SOLD SEPARATELY.	18	455	TTM3AC	TTM3AK2	TTM3AS
	21	530	TTM4AC	TTM4AK2	TTM4AS
	24	610	TTM5AC	TTM5AK2	TTM5AS
	30	760	TTM6AC	TTM6AK2	-
	36	910	TTM7AC	TTM7AK2	-

- NOTES:**
- The stationary end and intermediate units must have a minimum of four shelves.
 - The standard Top-Track™ system requires the use of 86" (2184mm) posts (i.e., 86P, 86PK or 86PS) on the stationary end and intermediate units. **Posts and shelves for the stationary end and intermediate units are sold separately.**
 - The mobile unit kit includes special 74" (1880mm) posts with casters. **Shelves for mobile units are sold separately.**
 - Recommended maximum load rating for a mobile unit is 900 lbs. (400kg). Floor should be level, smooth, and free from large cracks and raised obstacles.
 - Under normal conditions, an aisle width of 30" - 36" (762-914mm) is recommended. The storage of very large objects within the system, however, may require an aisle width larger than 36" (914mm).
 - A stationary intermediate unit is required when track length exceeds 21 feet (6401mm). A stationary intermediate unit may be used at the discretion of the user when track lengths are less than 21 feet (6401mm).

METRO InterMetro Industries Corporation
 North Washington Street
 Wilkes-Barre, PA 18705

For Product Information, call 1-800-433-2232.

DRY ICE MACHINE CUT SHEET

Dry Ice Production

Dry Ice Mini Pelletizer A25P-D3

part no. 904901



The dry ice mini pelletizer A25P has been especially developed for the production of small quantities of dry ice pellets. It produces up to 25 kg dry ice pellets per hour. This compact mechanically driven machine features a push button for instant start of production and continuously converts liquid CO₂ into highly dense dry ice pellets.

Benefits of an in-house dry ice production:

- If for dry ice blasting: More efficient cleaning results, because: the fresher the dry ice, the more efficient the cleaning
- Shorter production stops
- Reduction of dry ice lost due to sublimation
- Decreased logistics expense connected with purchasing and disposing of dry ice
- Compact
- Very simple operation
- Reasonable investment
- Reduced dry ice storage costs and transport losses
- Precision technology based on more than 20 years of dry ice know-how



3 mm Pellets at the press of a button

for the growing dry ice blasting market where a high standard of dry ice quality and an immediate availability of freshly produced pellets are key to successful cleaning performance. Also winemakers use 3 mm pellets to control fermentation.

Specifications

Production capacity:	25 kg/hr at 17.5 bar CO ₂ inlet pressure
Voltage:	400 V / 50 Hz / 3 Ph + N + PE (other voltages on request)
Max. power consumption:	1.1 kW
Unit dimensions (L x W x H):	1'100 x 360 x 530 mm
Weight net:	approx. 77 kg
Weight packed:	approx. 100 kg
Dimensions packed (L x W x H):	1'240 x 440 x 700 mm
CO ₂ inlet:	G 1/4" BSP female
CO ₂ source:	CO ₂ storage tank, liquid phase (15 - 20 bar)



Industriestrasse 2 - CH-8590 Romanshorn / Switzerland - info@ascoco2.com - www.ascoco2.com



Special features of Dry Ice Mini Pelletizer A25P-D3:

Making your own dry ice is easy:

Just place the A25P on a suitable table and connect the CO₂ liquid line and power following the simple instructions and you are only 4 steps away from your own, fresh dry ice:



Step 1

Turn the main switch on and press the start button.



Step 2

Open the purge valve to cool down the CO₂ liquid line until liquid CO₂ is visible at the outlet of the unit.



Step 3

Adjust the operating pressure using the dry ice expansion valve to the value indicated.



Step 4

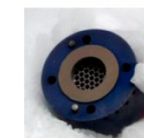
Check or adjust the operating pressure during the cool down time of the unit as well as during production if necessary.

Standardly included in the delivery of Dry Ice Mini Pelletizer A25P-D3:

Extruder plate for 3 mm pellets

for **blasting purposes**
Standard for the A25P-D3
For the production of 3 mm pellets an additional extruder chamber D3 (part no. 904973) is needed and standardly supplied

part no. 904955
+ part no. 904973



Tool kit

Standard for the A25P-D3
Containing all necessary tools for service and maintenance

part no. 904970

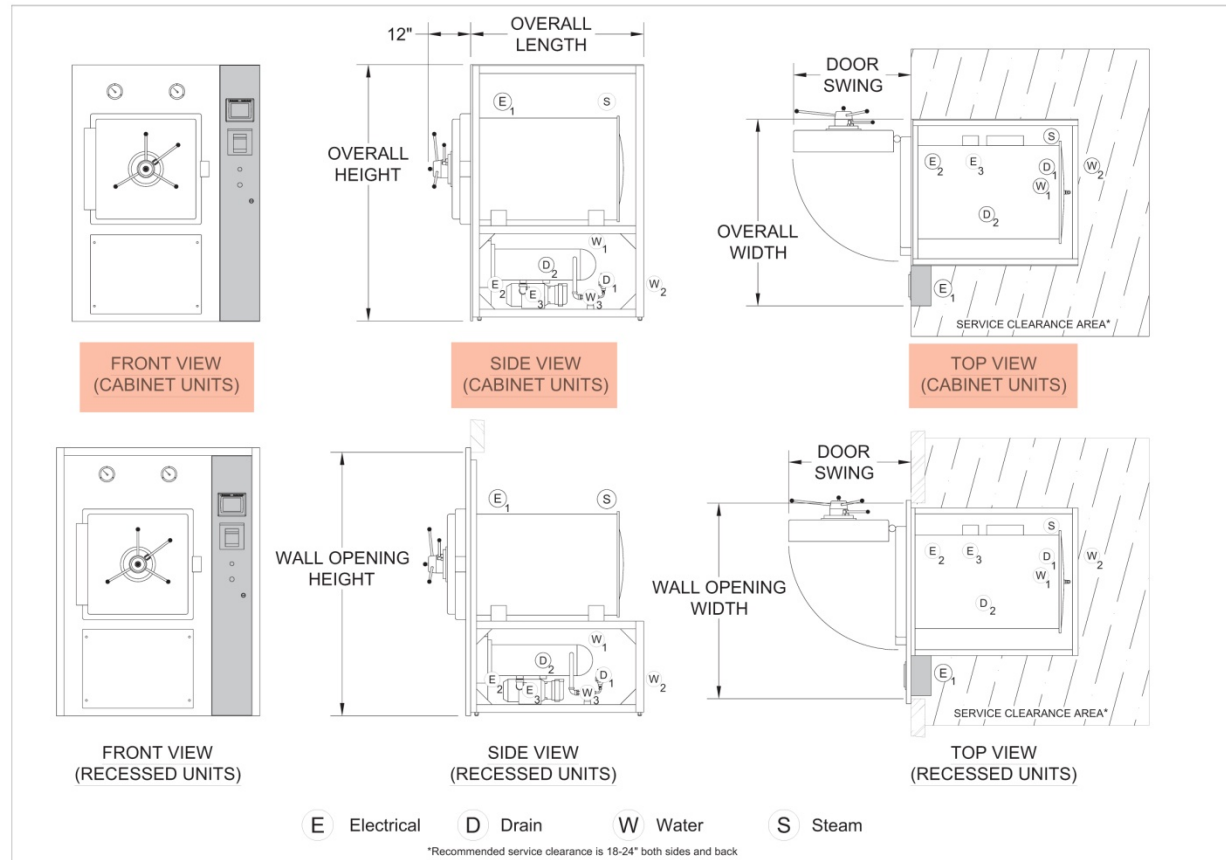


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AUTOCLAVE CUT SHEET

Electric Steam Generator



Notes

- Right side control housing, left side door hinge shown. Standard control location is opposite hinge. Opposite mounting is available upon request.
- The control housing is shipped detached from the sterilizer to allow passing through doorways, reducing overall pre-installation width by 10 3/8". When the sterilizer is installed, the control housing and electrical connections are easily attached.
- Alternative controller mounting options are available at no charge for installations into smaller wall openings. Contact Consolidated to arrange a solution.
- Standard plumbing and utility access is primarily located on the same side as the door hinge. If location of plumbing is important to your installation contact Consolidated to arrange a solution.
- CAD Blocks are available for insertion into plan drawings.

Table 1: Sterilizer Unit Dimensions¹

Model	SSR-2A	SSR-3A	SR-24A	SR-24B	SR-26A
Chamber Dimensions (w x h x f-b)	16" x 16" x 26" 40.6 x 40.6 x 66 cm	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	24" x 24" x 36" 61 x 61 x 91.4 cm	24" x 24" x 48" 61 x 61 x 122 cm	26" x 26" x 39" 66 x 66 x 99 cm
Volume	3.9 cu. ft 109 liters	8.8 cu. ft 249 liters	12 cu. ft 340 liters	16 cu. ft 453 liters	15.3 cu. ft 433 liters
Overall Width	38.375" 97.5 cm	38.375" 97.5 cm	46.375" 117.8 cm	46.375" 117.8 cm	48.375" 122.9 cm
Overall Height	71" 180.3 cm	71" 180.3 cm	71" 180.3 cm	71" 180.3 cm	71" 180.3 cm
Overall Length	32.375" 82.2 cm	42" 106.7 cm	42" 106.7 cm	44.5" 137.2 cm	44.5" 113 cm
Wall Opening Width ²	40.375" 102.6 cm	40.375" 102.6 cm	48.375" 122.9 cm	48.375" 122.9 cm	50.375" 128 cm
Wall Opening Height	72" 182.9 cm	72" 182.9 cm	72" 182.9 cm	72" 182.9 cm	72" 182.9 cm
Door Swing	22.5" 57.2 cm	27" 68.6 cm	33.5" 85.1 cm	33.5" 85.1 cm	35.5" 90.2 cm

¹ Additional options may require a larger footprint.

² Alternative controller mounting options are available at no charge for installations into smaller wall openings. Contact Consolidated or your Consolidated Sales Representative to arrange a solution.

NAME	DATE	CONSOLIDATED STERILIZER SYSTEMS
DRAWN	M. PETERS 6/10/2010	76 ASHFORD ST, BOSTON MA 02134
REVISED	M. PETERS 6/15/2010	TITLE
ENG APPR.		SMALL STERILIZER
MFG APPR.		CUT SHEET
DIA		ADV PB/PRO/PLUS
COMMENTS		SIZE DWG. NO. REV
		A 91015 1.A
		SCALE: N/A WEIGHT: --- SHEET 1 OF 2

Table 2: Power and Steam Usage³

Model	Chamber Dimensions (w x h x f-b)	Air Removal Method	Electrically Heated				Steam Heated			
			Generator Size (kw) ⁴	Generator Current (amps) ⁵	208V	240V	380V	480V	Peak (lb/hr)	Per Cycle (lb/cycle)
SSR-2A	16" X 16" X 26" 40.6 X 40.6 X 66 CM	Gravity	25	69	60	37	30	180	17	5
		Vacuum	25	69	60	37	30	180	25	5
SSR-3A	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	Gravity	25	69	60	37	30	180	20	7
		Vacuum	25	69	60	37	30	180	35	7
SR-24A	24" x 24" x 36" 61 x 61 x 91.4 cm	Gravity	25	69	60	37	30	180	30	7
		Vacuum	30	83	72	46	36	180	50	7
SR-24B	24" x 24" x 48" 61 x 61 x 122 cm	Gravity	25	69	60	37	30	180	35	9
		Vacuum	30	83	72	46	36	180	55	9
SR-26A	26" x 26" x 39" 66 x 66 x 99 cm	Gravity	25	69	60	37	30	180	35	9
		Vacuum	30	83	72	46	36	180	55	9

³ Assuming 30 Minute sterilizing time at 250°F (121° C) and 20 minute drying time.

⁴ If current draw for 25kW is too high contact consolidated for 20kW generator.

⁵ Current drawn by a three phase generator. Local codes and regulations may affect breaker size.

Table 3: Water Feed Requirements, Carbon Steel Steam Generators⁶

Characteristic	Recommended Condition	Maximum Condition
Temperature	As Supplied	140°F (60°C)
Total Hardness	0-17 mg/L	85 mg/L
Alkalinity	50-180 mg/L	350 mg/L
Total Dissolved Solids	0-150 mg/L	250 mg/L
pH	7.5-8.5	7.5-9.0
Total Silica	0.1-1.0 mg/L	2.5 mg/L
Resistivity	2,000-6,000 ohms/cm	26,000 ohms/cm ⁷

⁶ Stainless-steel generators require deionized water >1MΩ/cm.

⁷ If water supplied is greater than 26,000 Ω/cm contact Consolidated for recommendation.

Typical Utility Requirements

General

- Steam (S): 3/4" NPT, 50-80 psi dynamic
- Electrical (E): 110V AC, or 220V AC, single phase, 15 amps - dedicated and isolated
- Waste Water Cooling (W): 1/2" NPT, 45 psi dynamic minimum
- Drain (D): Open drain to funnel connection in floor, diameter 3" minimum, 2-1/2" air gap
- Backflow preventer not provided
- SteriNET Connex: Analog Phone line, dedicated, non-extension
- Optional Vacuum Systems (maximum one per unit)
 - Economy Post-Vac (W): 1/2" NPT, 45 psi minimum.
 - Hi-Vacuum with Water Ejector (W): 3/4" NPT, 45 psi minimum
 - Pump contactor (E): 110V/220V, single phase
 - Hi-Vacuum with Vacuum Pump (E): 1/2" NPT, 45 psi minimum, 208/240/480V, three phase
- Electric Steam Generator Utilities:
 - Power Supply (E): Available in 208/240/380/480V, single or three phase
 - Generator Feedwater (W): Water that complies with Table 3, 1/2" NPT, 45 psi dynamic minimum
 - Generator Drain (D): 3/4" NPT

Table 4: Shipping & Heat Loss Data

Model	Max. Ship Weight	Ship Dimensions (w x h x f-b)	Heat Source Options	Max. Operating Weight ⁸	Peak Heat Loss (BTU/hr at 70°F [21°C])		
					Cabinet To Room	Recessed Front of Wall	Recessed Back of Wall
SSR-2A	1150 lbs 523 kg	36" X 72" X 46" 91.4 X 182.9 X 116.8 cm	Steam	1210 lbs	4300	1600	2700
			Electric	1385 lbs	6050	2300	3750
SSR-3A	1650 lbs 750 kg	36" x 72" x 57" 91.4 x 182.9 x 144.8 cm	Steam	1800 lbs	7000	2500	4500
			Electric	1975 lbs	8750	3300	5450
SR-24A	2300 lbs 1045 kg	43" x 72" x 58" 109.2 x 185.4 x 147.3 cm	Steam	2500 lbs	8890	3000	5890
			Electric	2675 lbs	11140	3800	7340
SR-24B	2500 lbs 1136 kg	43" x 73" x 74" 109.2 x 185.4 x 188 cm	Steam	2750 lbs	11330	4000	7730
			Electric	2925 lbs	13580	4800	8780
SR-26A	2450 lbs 1113 kg	45" x 76" x 65" 114.3 x 193 x 165.1 cm	Steam	2700 lbs	11950	4300	7650
			Electric	2875 lbs	14200	5100	9100

⁸ Assuming chamber fully loaded with flasks filled 25% with water.

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		SCALE: N/A WEIGHT: --- SHEET 2 OF 2