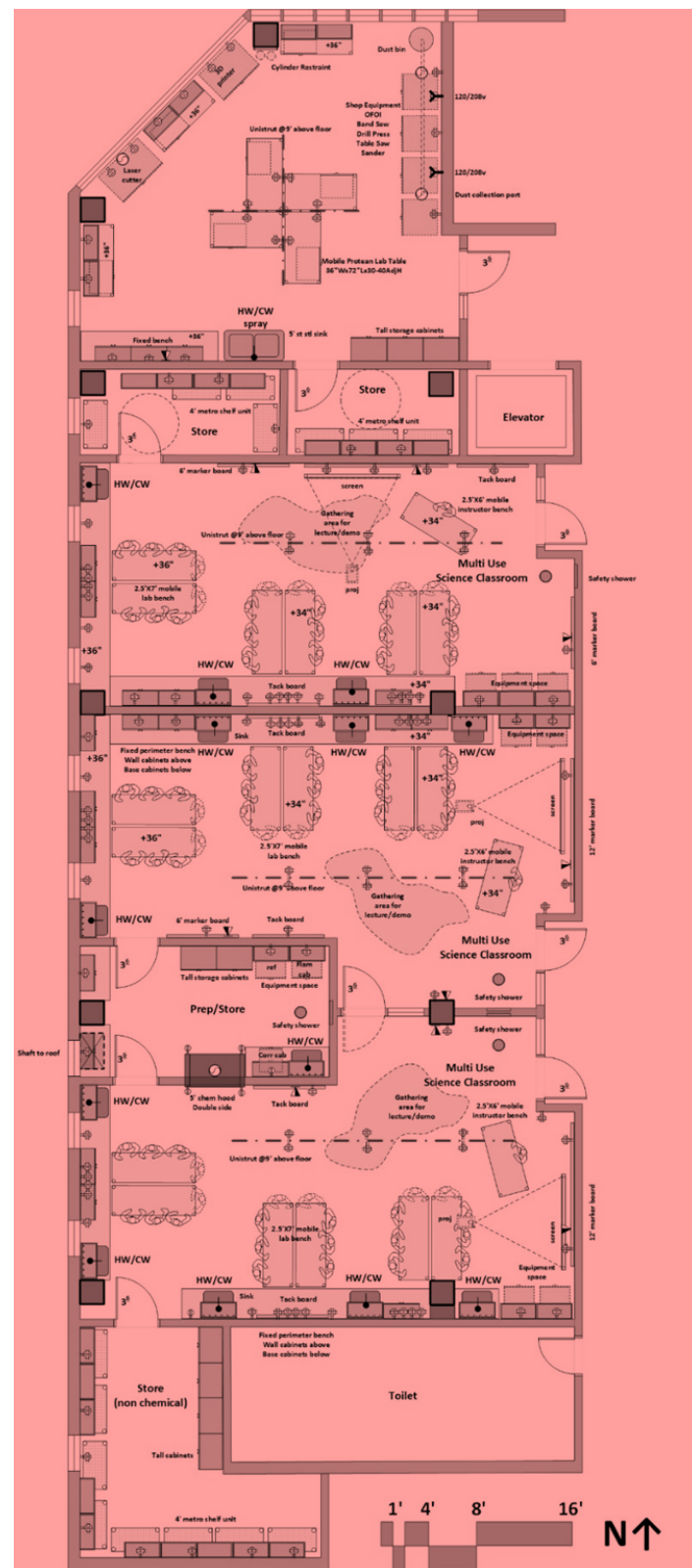


**SCIENCE CLASSROOM SKETCHBOOK**  
**SEED LA High School**  
**Los Angeles, California**  
**Design Development**  
**2019 Oct 29**



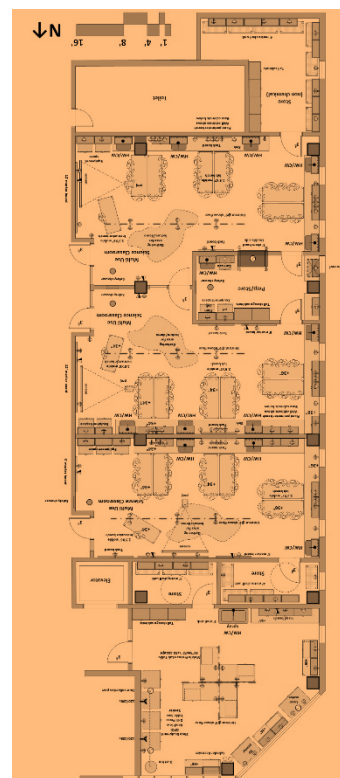
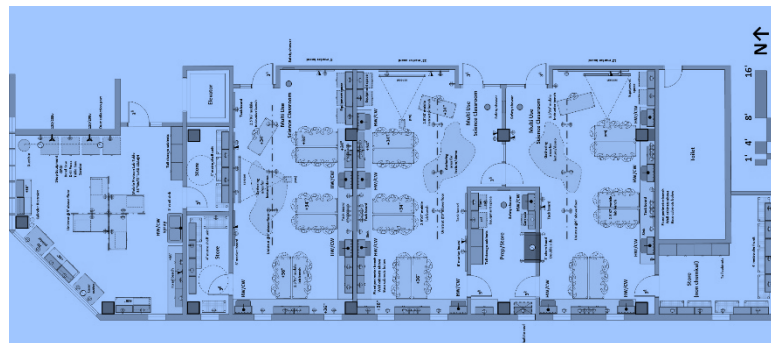
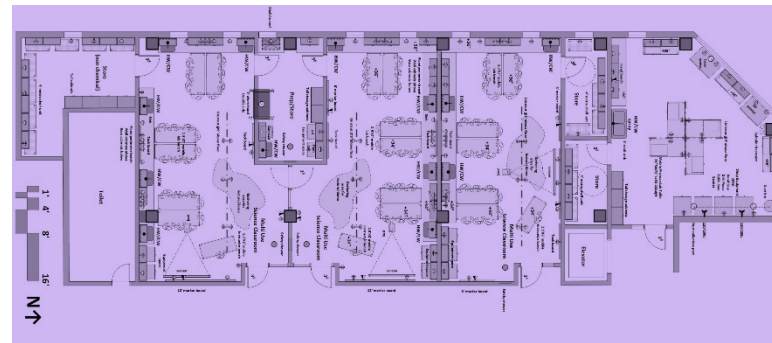
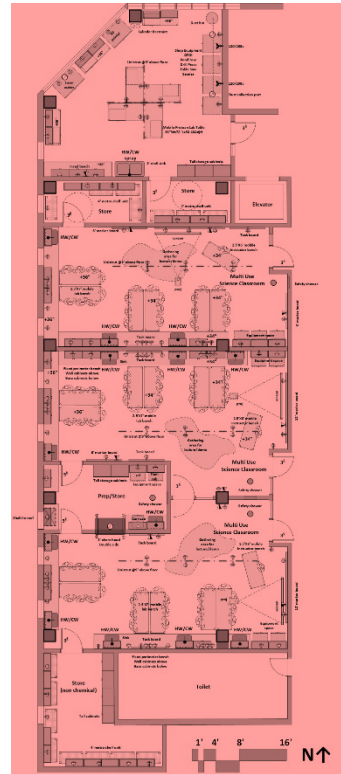
**HERA** laboratory planners  
 Health, Education + Research Associates, Inc.

# CONTENTS



Executive Summary . . . . .	3
First Floor- Quadrant 4 . . . . .	4
Symbol Legend . . . . .	5
Science Classrooms- Composite Plan. . . . .	6
Science Classrooms- Option B . . . . .	7
Science Classrooms- Option C . . . . .	8
Maker Space w/ 3D printer, Laser cutter . . . . .	9
Maker Space w/o 3D printer, Laser cutter . . . . .	10
Science Classroom 116 . . . . .	11
Science Classroom 115 . . . . .	12
Science Classroom 114 , , , , , , . . . . .	13
Section Details . . . . .	14
Equipment Cut Sheets . . . . .	26

# EXECUTIVE SUMMARY



This is the fifth draft of the science classroom design sketchbook for SEED LA in Los Angeles, California.

This document illustrates the Basis of Design for the science classrooms and maker space design.

Program requirement for architectural, structural, mechanical, plumbing, electrical, and equipment are noted.

This document serves as the third submittal for the Design Development phase for the SEED LA science classrooms.

The lab Revit model will be updated after design confirmation is received from the Owner.

Glen Berry, AIA

Laboratory Planning Consultant to Abode Communities

[glenb@herainc.com](mailto:glenb@herainc.com)

# FIRST FLOOR- QUADRANT 4

There are 4 science classrooms and adjacent prep and store rooms.  
From north to south, the room function and sizes are:

1. Maker Space 117- 783 s.f.
2. Storage 117A 108 s.f.
3. Storage 116A- 113 s.f.
4. Science Classroom 116- 820 s.f.
5. Science Classroom 115- 879 s.f.
6. Prep Room 115A- 224 s.f.
7. Science Classroom 114- 910 s.f.
8. Storage 1114A- 293 s.f.

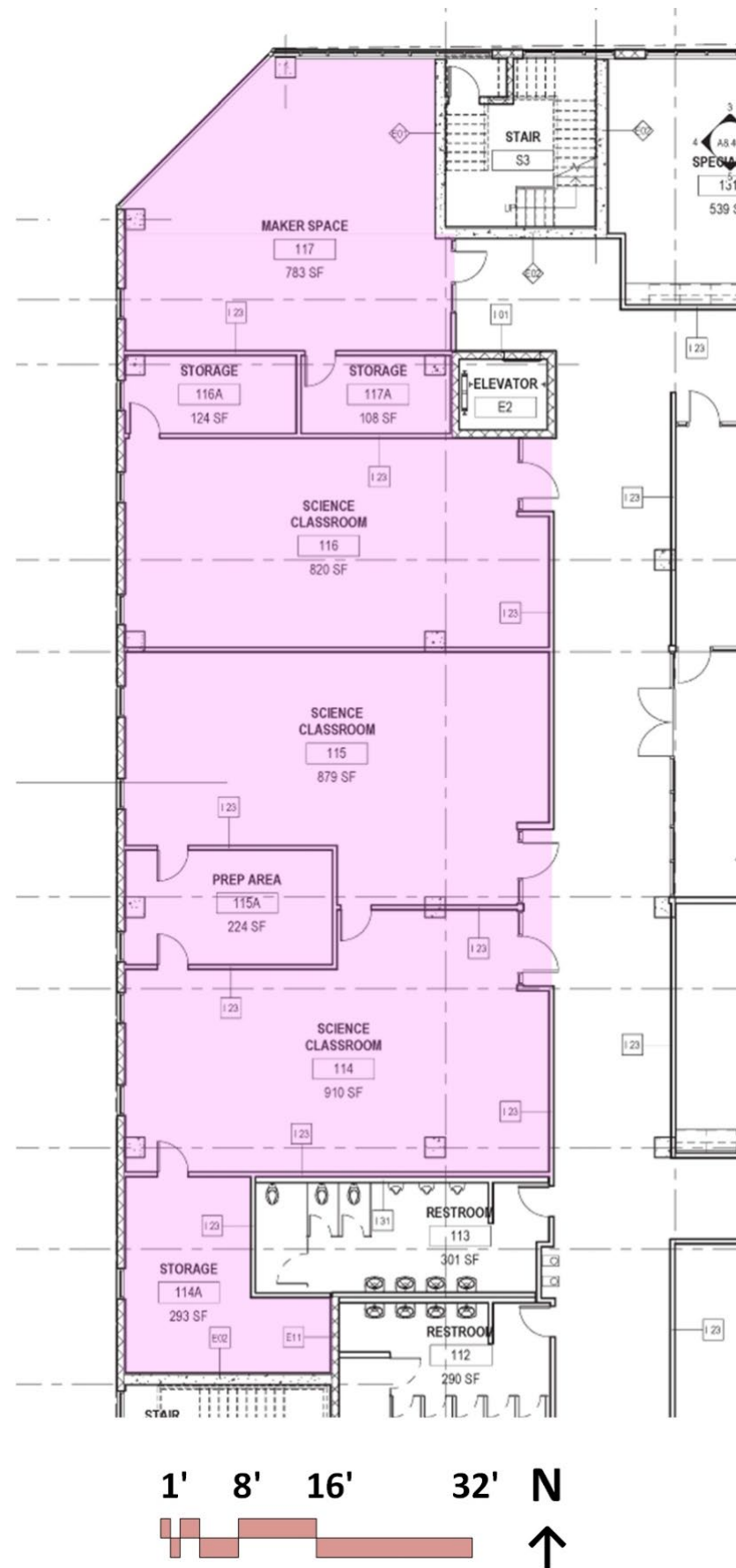
Total asf science classroom and prep/store: 4,130 s.f.

The Council of Educational Facility Planners International (CEFPI) recommends that science classrooms provide 50 ASF (assignable square footage) per student with an additional 20-25% allocation for Prep and Storage space. Or, 75-80 square feet (SF) per station. A station accounts for one person with internal circulation, teaching station, preparation, and storage space.



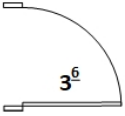






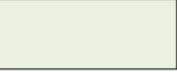


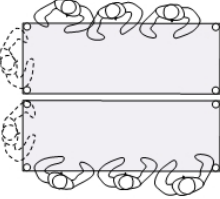


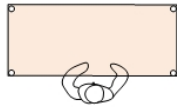



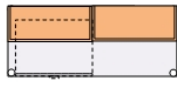



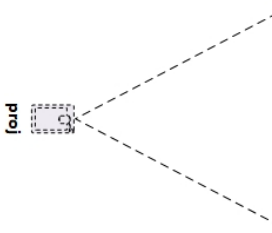

Per the National Fire Protection Association (NFPA), the science laboratory requires 50 square feet of net free space per student. The California Science Teachers Association (CSTA) represents California science educators from Kindergarten through the University level. To align with Title 5 of the California Code of Regulations, CSTA requires that instructional laboratories provide 1300 square feet for 24 students, including preparation, chemical storage and instrumentation spaces, or 54 s.f. per student.

The Fourth Edition of Guidelines for Laboratory Design-Health, Safety and Environmental Considerations states that 70 SF per student for lab, storage, and prep space is needed to offer flexibility and varied teaching styles and course activities.

HERA recommends that the science classroom student capacity not exceed 18 students (3 groups of 6 each) for each classroom. SEED LA may increase that number to 24 students by adjusting the teaching methodology to have 12 students at the lab bench at one time, with 12 students in the lecture area at one time.

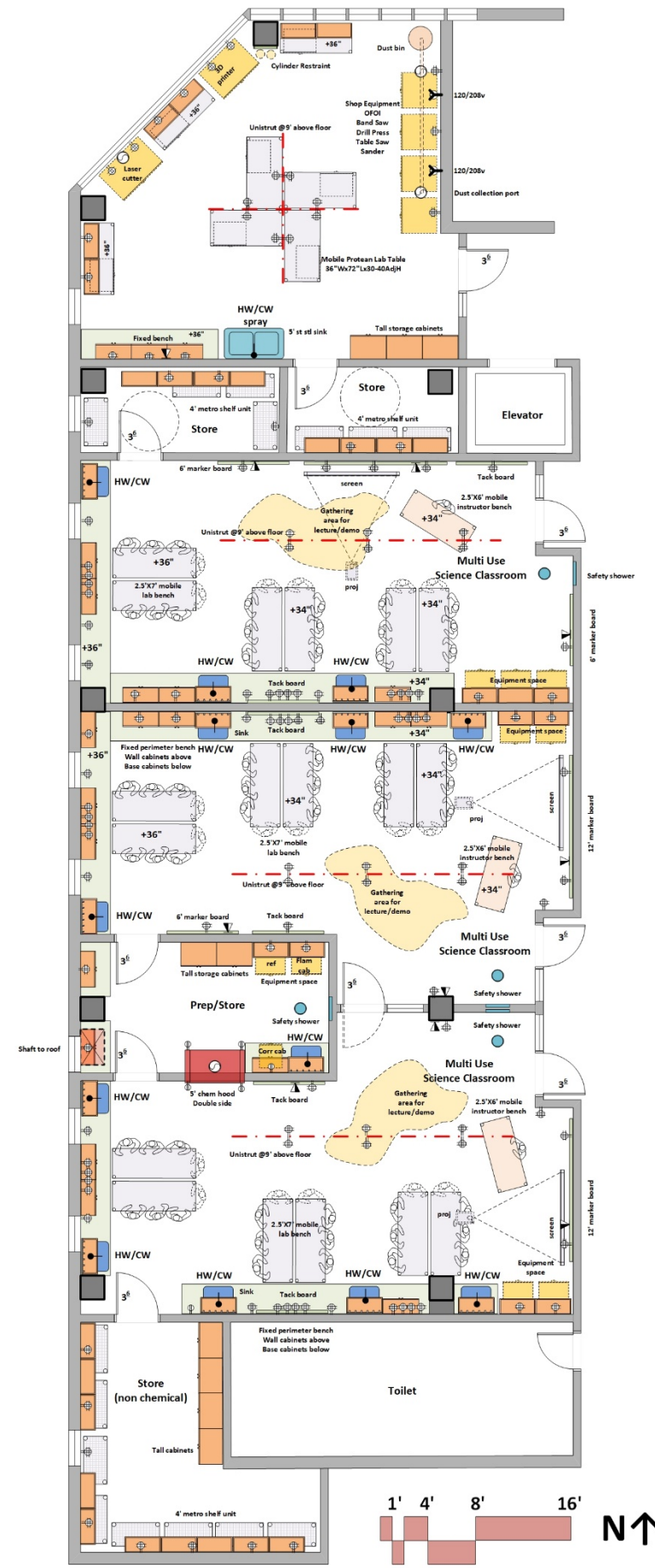


# SYMBOL LEGEND

	5' chemical fume hood Double sash 1200 cfm Constant volume		marker board at wall Vertical sliding panels 2 fourplex power, data		3'-6" wide door 8' height recommended 7' height minimum
	Sink station Drying rack and shelf above Hot/cold water		6' tack board for charts/photos Provide power and data at wall for future monitor		120/208v 20 amp single phase
			Equipment space Shelf above, open at floor Unistrut frame at wall Fourplex power dedicated circuit		115v fourplex power Maximum of two fourplex per circuit Dedicated circuits at equipment space Alternate circuits at lab bench
	Fixed lab bench at wall 30" deep 34" height at accessible bench 36" height at standard bench Standing height Duplex power at 24" on center		Metro shelf unit- 2'x4' Fourplex power dedicated circuit at wall		115v duplex power Maximum of four duplex per circuit Alternate circuits at lab bench
	(2) Mobile student bench 6 students per educational standards 2.5'x7' each bench 3 fourplex power at wall bench Heavy duty casters Adjustable height 30-40"		Tall storage cabinet 36"W x 24"D x 81"H		Data box and conduit Number of data ports at each box to be determined by SEED LA and AV consultant
	mobile instructor bench 2.5'x6' Heavy duty casters Adjustable height 30-40"		Wall cabinet Task light below 15" D x 36" H x 36"W	+36"	Standing height work surface 36" above floor
	Mobile lab bench 36"W x 72"L x 30-40" adj H		Safety shower/eyewash unit Eyewash recessed in wall Shower above Floor drain below	+34"	Accessible height work surface 34" above floor
	Mobile lab bench Integral shelves above- 2 rows 30"W x 72"L x 30-40" adj H		HW/CW Hot/Cold water mixing valve		Unistrut at ceiling plane For attachment of mobiles, models, demonstration equipment
			Equipment space For Owner furnished equipment		Projector and pull down screen
			Equipment exhaust		

# SCIENCE CLASSROOMS

## Composite Plan



The science classrooms are designed using a Protean design methodology. Protean = adaptable, flexible, versatile. The students are grouped in 3 groups of 6 each. The recommended maximum student capacity per classroom is 18 students. This is based upon the educational standards noted on page 4.

The science classrooms are designed to be multi-function. Various science disciplines can be taught in each classroom. The only limitation is that chemistry labs using volatile chemicals must be taught in the lower classroom that has the chemical fume hood.

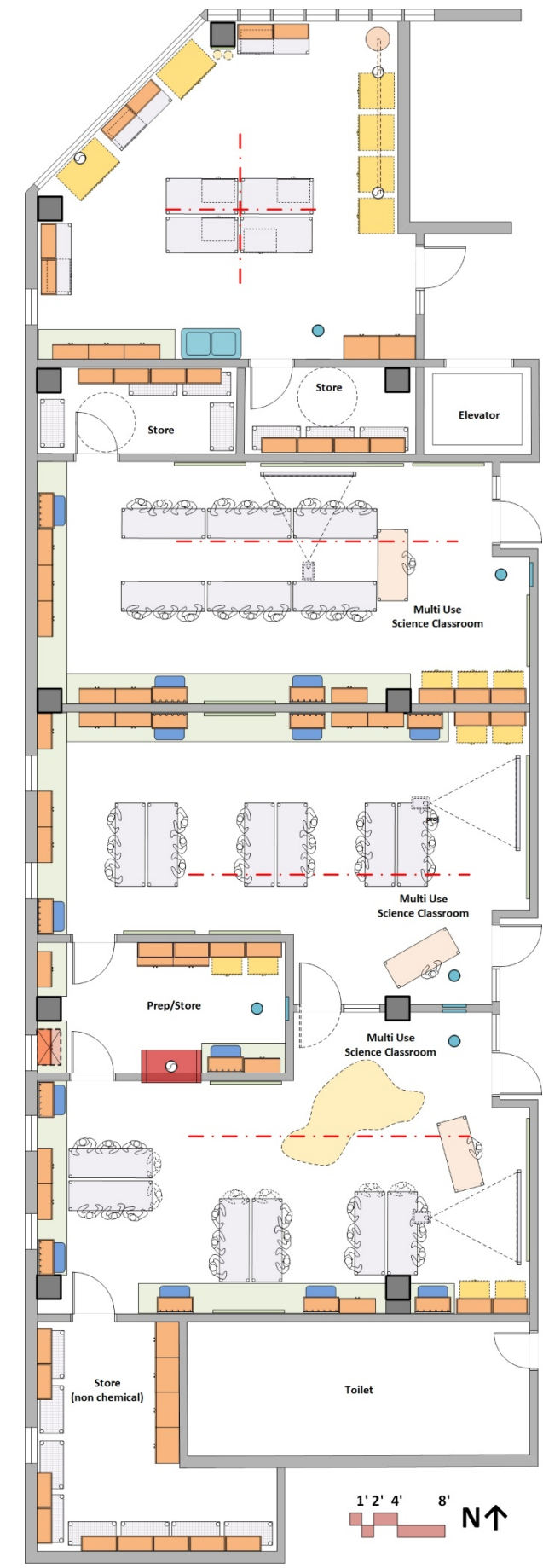
The classrooms can be used such that the top classroom (below maker space) is more physics/astronomy/engineering oriented; the middle classroom can be more biology/anatomy/physiology oriented; and the lower classroom can be more chemistry/biochemistry/environmental science oriented.

However, the classrooms are designed as multiple-use/multiple function science classroom prototypes, instead of custom designing each classroom for a specific and limited purpose.

# SCIENCE CLASSROOMS

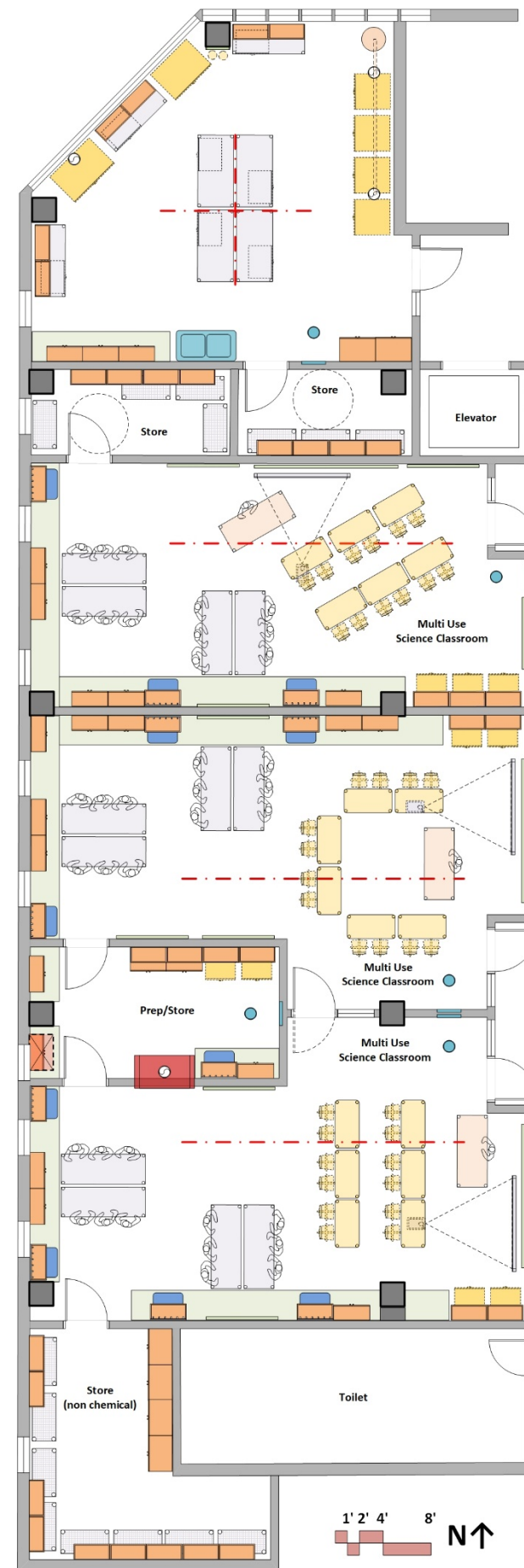
## Option B

The mobile lab benches can be reconfigured in various layouts to accommodate specific pedagogy needs and faculty preferences.



# SCIENCE CLASSROOMS

## Option C



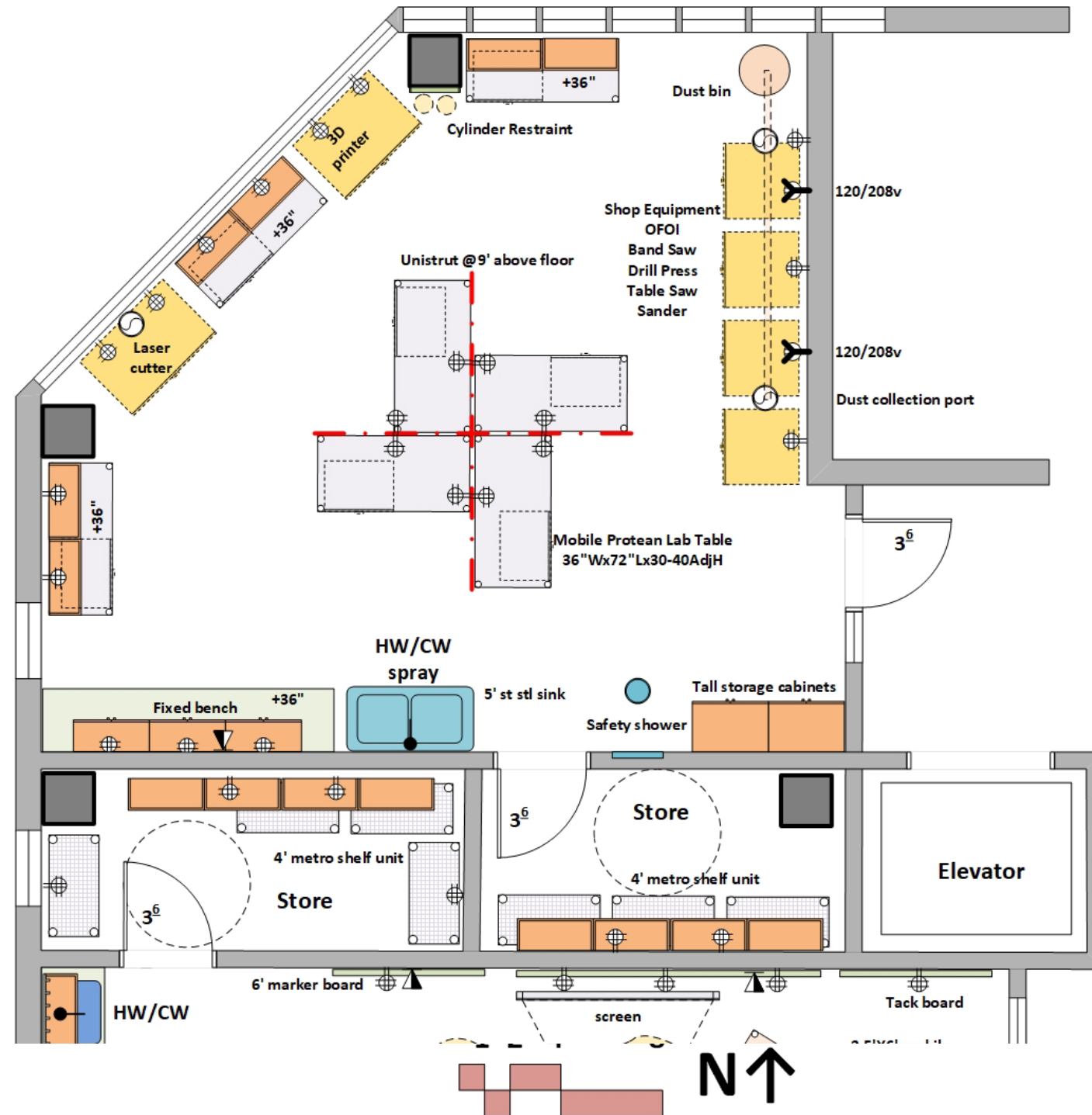
In order to address the student density in each classroom, and the high student ratio, one option is to adopt a lab/lecture model, where 12 students are assigned to work at the lab bench, and 12 students are assigned to work at the student desks to do write up assignments. This is one way to effectively address the desire to have up to 24 students in each classroom, but also address the square foot per student ratio limitations. This option is equivalent to a design for 12 students doing lab and lecture in the same room. This option requires that the science faculty accept the limitations this option will place on pedagogy. The sink density can be reduced in the lower lab, from 5 to 4 sinks, if this option is chosen. All other design features would remain the same.



# MAKER SPACE 117

## Program Requirements

With laser cutter and 3D printer



### ARCHITECTURAL

Occupancy: E  
 Number of Students: up to 12  
 Floor: sealed concrete  
 Walls: metal stud with gypsum board, enamel paint  
 Ceiling: open to structure-  
 consider ceiling clouds for light reflectance and sound attenuation  
 Doors: 3'-6"x8'-0" with view windows  
 Sound attenuation: NC 45 or less  
 Security: card key access

### STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

### MECHANICAL

Temperature: 70 deg F +/- 2 deg F  
 Humidity: ambient  
 6 air changes per hour while 3D printer is in use  
 On demand exhaust with on/off switch control 1200 cfm  
 Dedicated exhaust fan (at roof) for laser cutter- 500 cfm

### PLUMBING

Domestic tepid water at safety shower/eyewash  
 Floor drain at safety shower/eyewash  
 Hot/Cold water at lab sinks with vacuum breaker

### ELECTRICAL

115v20a1ph fourplex and duplex outlets  
 Maximum of 8 plugs per circuit  
 Fourplex outlets at overhead Unistrut  
 208v20amp1phase at equipment space  
 Hardwire and wireless data  
 Provide power and data at marker boards for future monitors  
 Lighting: LED at 600 LUX

### CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash  
 Lab casework, sinks, tops, fittings  
 Mobile benches for students  
 Metro Shelf Units  
 Dust collection system for shop equipment  
 Unistrut at ceiling plane

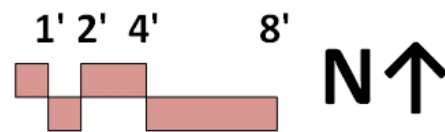
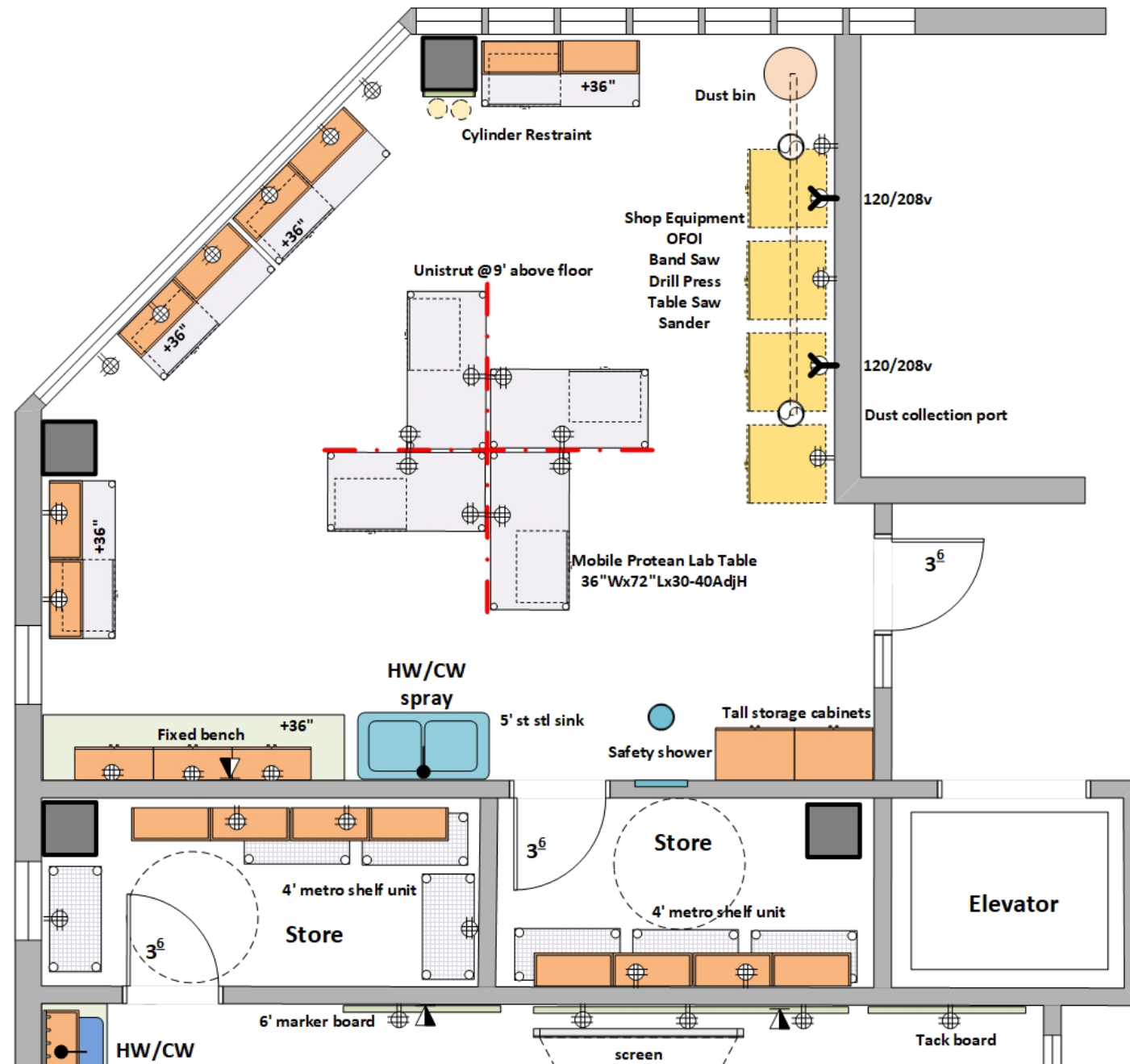
### SCHOOL FURNISHED EQUIPMENT

Benchtop instruments  
 Laser cutter  
 3D printer  
 Shop equipment  
 Chairs  
 Waste bins

# MAKER SPACE 117

## Program Requirements

Without laser cutter and 3D printer



### ARCHITECTURAL

Occupancy: E  
 Number of Students: up to 12  
 Floor: sealed concrete  
 Walls: metal stud with gypsum board, enamel paint  
 Ceiling: open to structure- consider ceiling clouds for light reflectance and sound attenuation  
 Doors: 3'-6"x8'-0" with view windows  
 Sound attenuation: NC 45 or less  
 Security: card key access

### STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

### MECHANICAL

Temperature: 70 deg F +/- 2 deg F  
 Humidity: ambient  
 On demand exhaust with on/off switch control 1200 cfm

### PLUMBING

Domestic tepid water at safety shower/eyewash  
 Floor drain at safety shower/eyewash  
 Hot/Cold water at lab sinks with vacuum breaker

### ELECTRICAL

115v20a1ph fourplex and duplex outlets  
 Maximum of 8 plugs per circuit  
 Fourplex outlets at overhead unistrut  
 Hardwire and wireless data  
 Provide power and data at marker boards for future monitors  
 Lighting: LED at 600 LUX

### CONTRACTOR FURNISHED EQUIPMENT

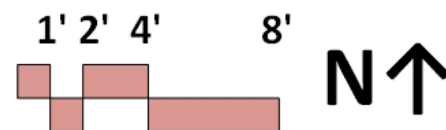
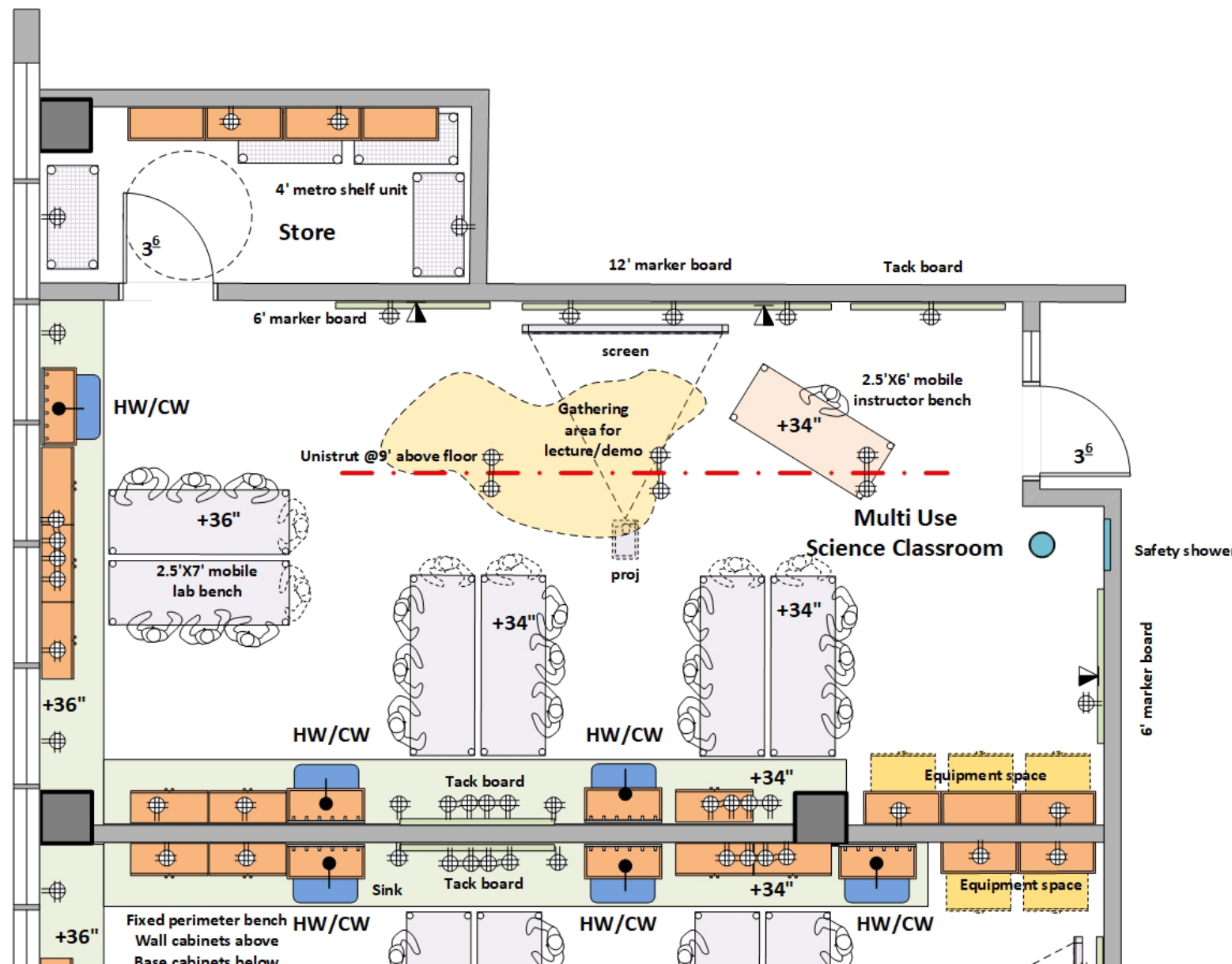
Safety shower/eyewash  
 Lab casework, sinks, tops, fittings  
 Mobile benches for students  
 Metro Shelf Units  
 Dust collection system for shop equipment  
 Unistrut at ceiling plane

### SCHOOL FURNISHED EQUIPMENT

Benchtop instruments  
 Shop equipment  
 Chairs  
 Waste bins

# SCIENCE CLASSROOM 116

## Program Requirements



### ARCHITECTURAL

Occupancy: E  
 Number of Students: up to 18 per educational standards  
 Up to 24 if Option C is used  
 Floor: Vinyl tile or sealed concrete  
 Walls: metal stud with gypsum board, enamel paint  
 Ceiling: open to structure-  
 consider ceiling clouds for light reflectance and sound attenuation  
 Doors: 3'-6"x8'-0" with view windows  
 Sound attenuation: NC 45 or less  
 Security: card key access

### STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

### MECHANICAL

Temperature: 70 deg F +/- 2 deg F  
 Humidity: ambient  
 On demand exhaust in each science classroom with on/off switch control  
 1200 cfm

### PLUMBING

Domestic tepid water at safety shower/eyewash  
 Floor drain at safety shower/eyewash  
 Hot/Cold water at lab sinks with vacuum breaker

### ELECTRICAL

115v20a1ph fourplex and duplex outlets  
 Maximum of 8 plugs per circuit  
 Fourplex outlets at overhead unistrut  
 Hardwire and wireless data  
 Provide power and data at marker boards for future monitors  
 Lighting: LED at 600 LUX

### CONTRACTOR FURNISHED EQUIPMENT

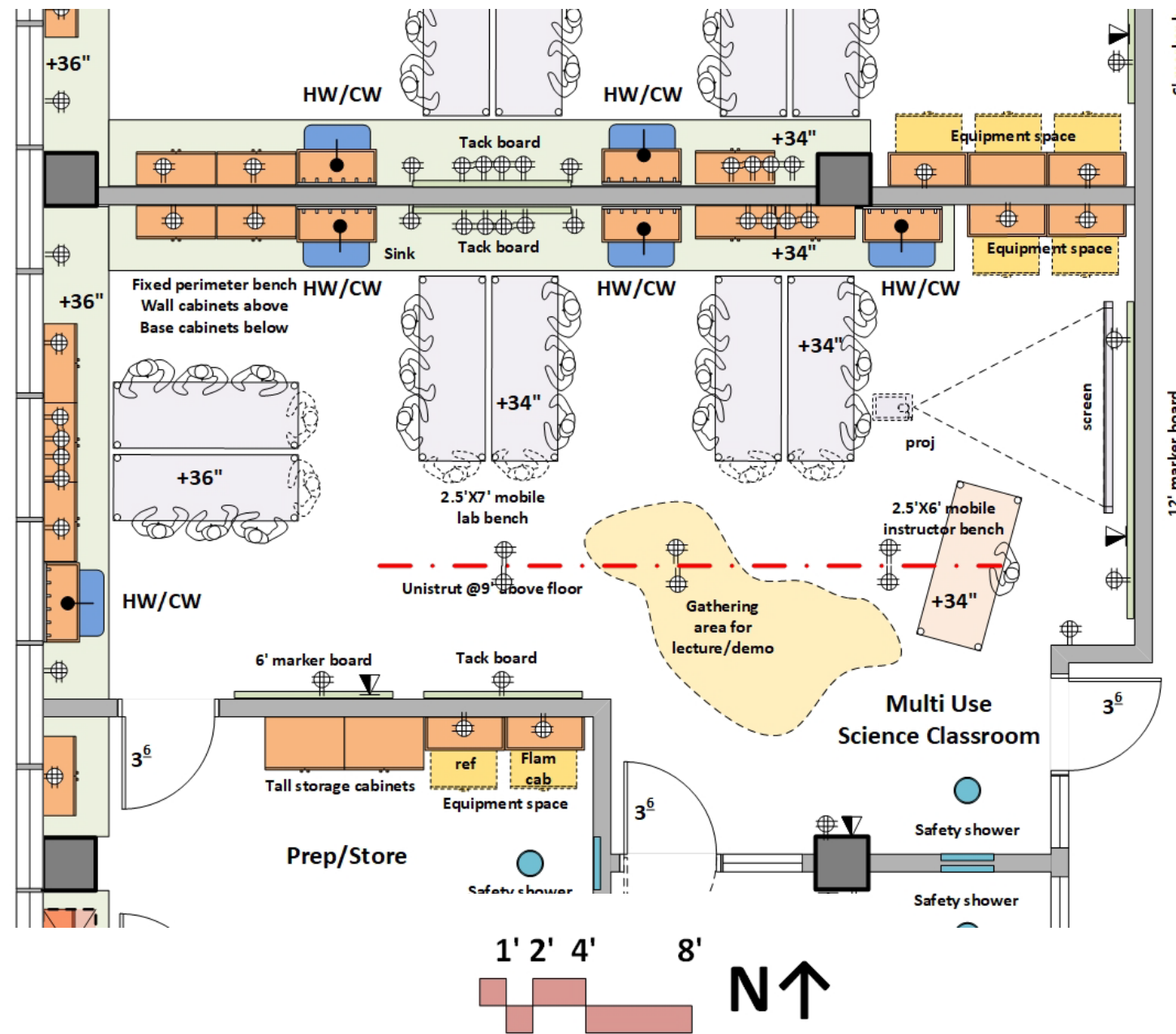
Safety shower/eyewash  
 Lab casework, sinks, tops, fittings  
 Mobile benches for students  
 Metro Shelf Units  
 Marker boards at walls  
 Mobile Instructor bench  
 Projector and screen  
 Unistrut at ceiling plane

### SCHOOL FURNISHED EQUIPMENT

Benchtop instruments  
 Refrigerator and/or freezer  
 Chairs  
 Waste bins

# SCIENCE CLASSROOM 115

## Program Requirements



### ARCHITECTURAL

Occupancy: E  
 Number of Students: up to 18 per educational standards  
 Up to 24 if Option C is used  
 Floor: Vinyl tile or sealed concrete  
 Walls: metal stud with gypsum board, enamel paint  
 Ceiling: open to structure-  
 consider ceiling clouds for light reflectance and sound attenuation  
 Doors: 3'-6"x8'-0" with view windows  
 Sound attenuation: NC 45 or less  
 Security: card key access

### STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

### MECHANICAL

Temperature: 70 deg F +/- 2 deg F  
 Humidity: ambient  
 On demand exhaust in each science classroom with on/off switch control  
 1200 cfm

### PLUMBING

Domestic tepid water at safety shower/eyewash  
 Floor drain at safety shower/eyewash  
 Hot/Cold water at lab sinks with vacuum breaker

### ELECTRICAL

115v20a1ph fourplex and duplex outlets  
 Maximum of 8 plugs per circuit  
 Fourplex outlets at overhead unistrut  
 Hardwire and wireless data  
 Provide power and data at marker boards for future monitors  
 Lighting: LED at 600 LUX

### CONTRACTOR FURNISHED EQUIPMENT

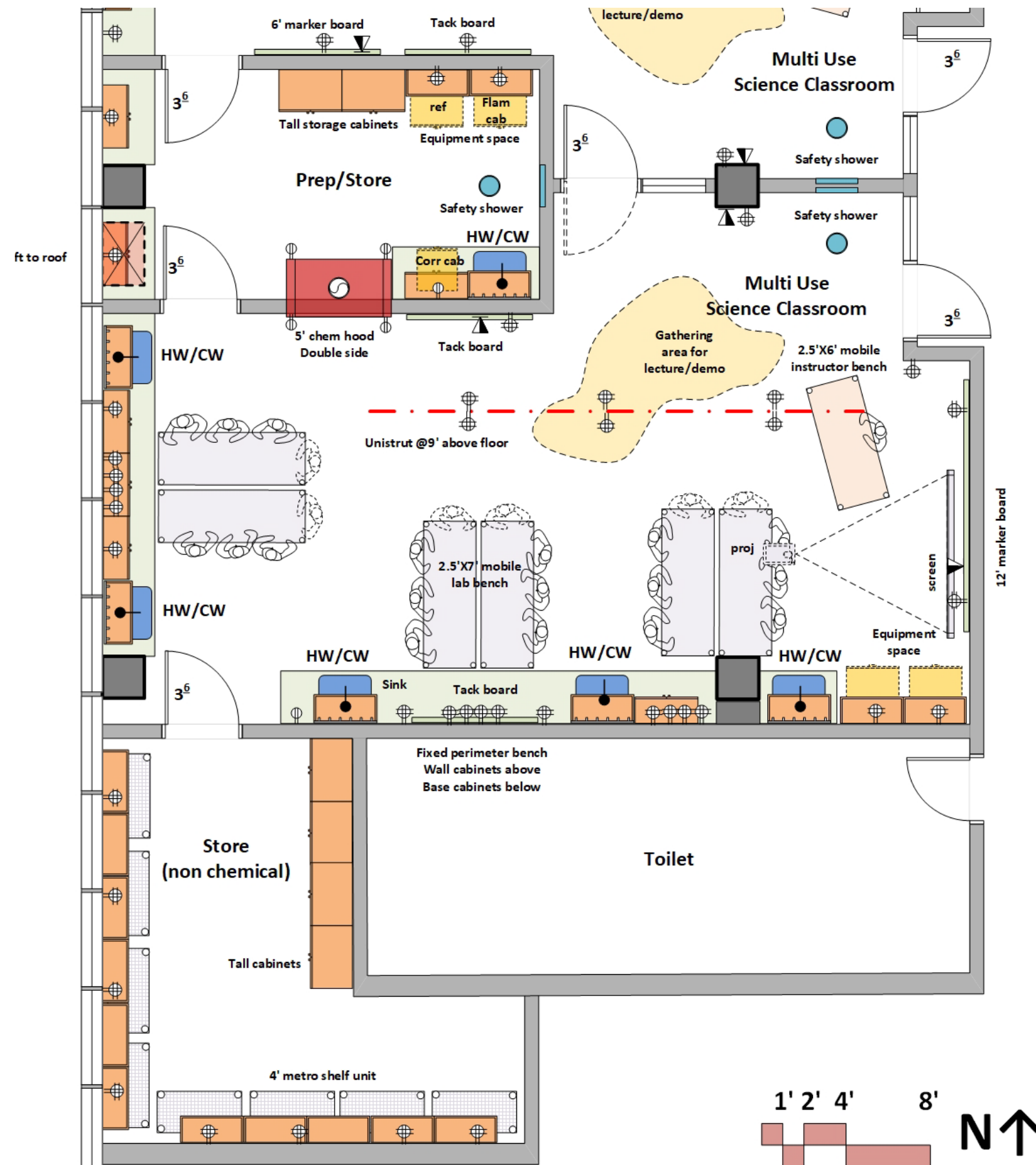
Safety shower/eyewash  
 Lab casework, sinks, tops, fittings  
 Mobile benches for students  
 Metro Shelf Units  
 Marker boards at walls  
 Mobile Instructor bench  
 Projector and screen  
 Unistrut at ceiling plane

### SCHOOL FURNISHED EQUIPMENT

Benchtop instruments  
 Refrigerator and/or freezer  
 Chairs  
 Waste bins

# SCIENCE CLASSROOM 114

## Program Requirements



### ARCHITECTURAL

Occupancy: E  
 Number of Students: up to 18 maximum per educational standards  
 Up to 24 if option C is used  
 Floor: Vinyl tile or sealed concrete  
 Walls: metal stud with gypsum board, enamel paint  
 Ceiling: open to structure-  
 consider ceiling clouds for light reflectance and sound attenuation  
 Doors: 3'-6"x8'-0" with view windows  
 Sound attenuation: NC 45 or less  
 Security: card key access

### STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

### MECHANICAL

Temperature: 70 deg F +/- 2 deg F  
 Humidity: ambient  
 On demand exhaust in each science classroom with on/off switch control  
 1200 cfm  
 On/Off control of chemical fume hood- 1200 cfm at 5' chem hood  
 100% exhaust at Prep/Store Room- 24/7/365  
 6 air changes per hour  
 Exhaust at Corrosive Storage cabinet in Prep/Store room

### PLUMBING

Domestic tepid water at safety shower/eyewash  
 Floor drain at safety shower/eyewash  
 Hot/Cold water at lab sinks with vacuum breaker

### ELECTRICAL

115v20a1ph fourplex and duplex outlets  
 Maximum of 8 plugs per circuit  
 Fourplex outlets at overhead unistrut  
 Hardwire and wireless data  
 Provide power and data at marker boards for future monitors  
 Lighting: LED at 600 LUX

### CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash  
 Lab casework, sinks, tops, fittings  
 Chemical fume hood with on/off control  
 Chemical storage cabinets- Corrosive (with exhaust); Flammable (no exhaust)  
 Mobile benches for students  
 Metro Shelf Units  
 Marker boards at walls  
 Mobile Instructor bench  
 Projector and screen  
 Unistrut at ceiling plane

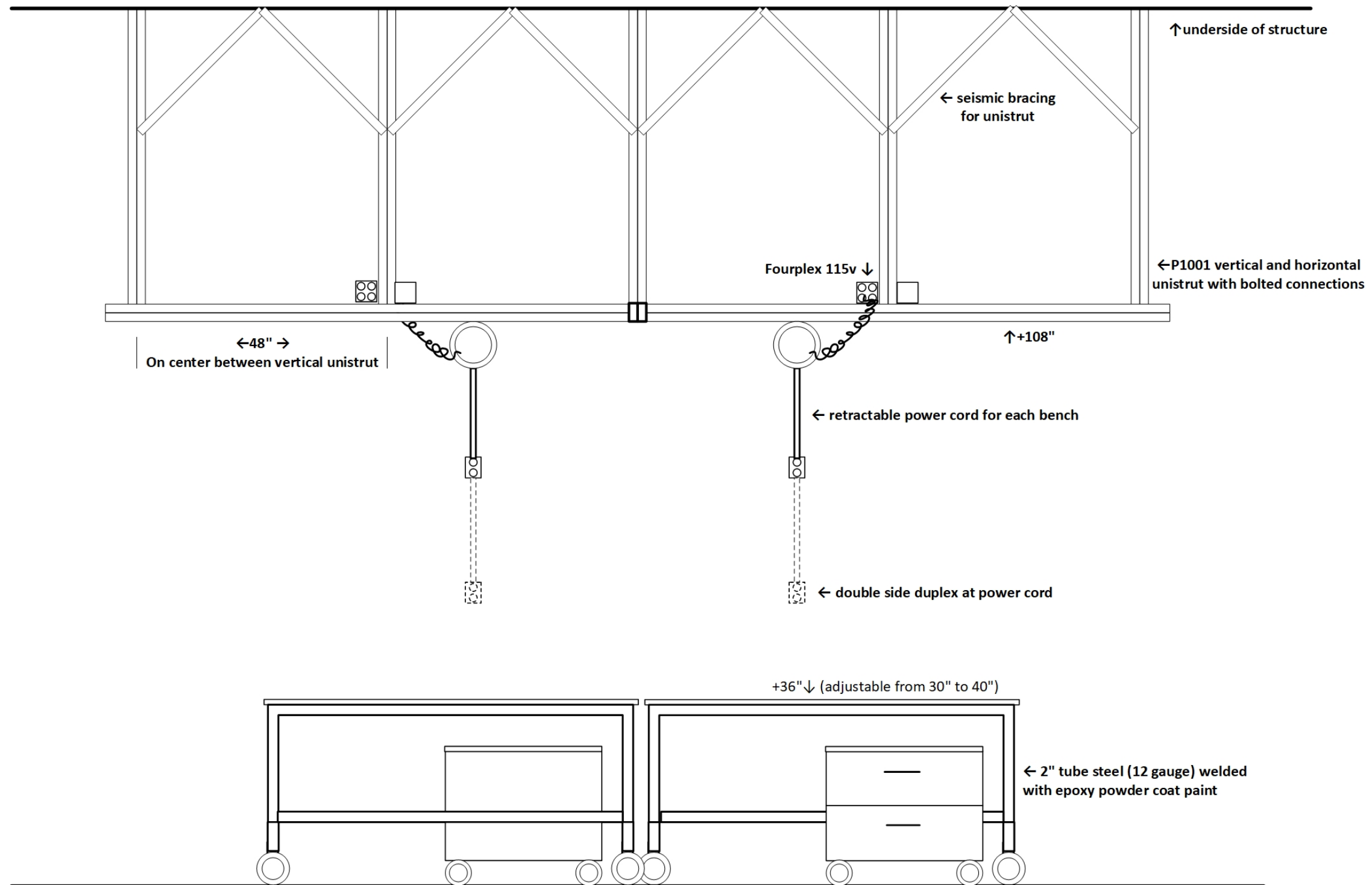
### SCHOOL FURNISHED EQUIPMENT

Benchtop instruments  
 Refrigerator and/or freezer  
 Chairs  
 Waste bins

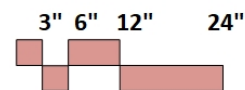
# SECTION DETAILS

# SECTION DETAIL 01

## Maker Space Lab Bench

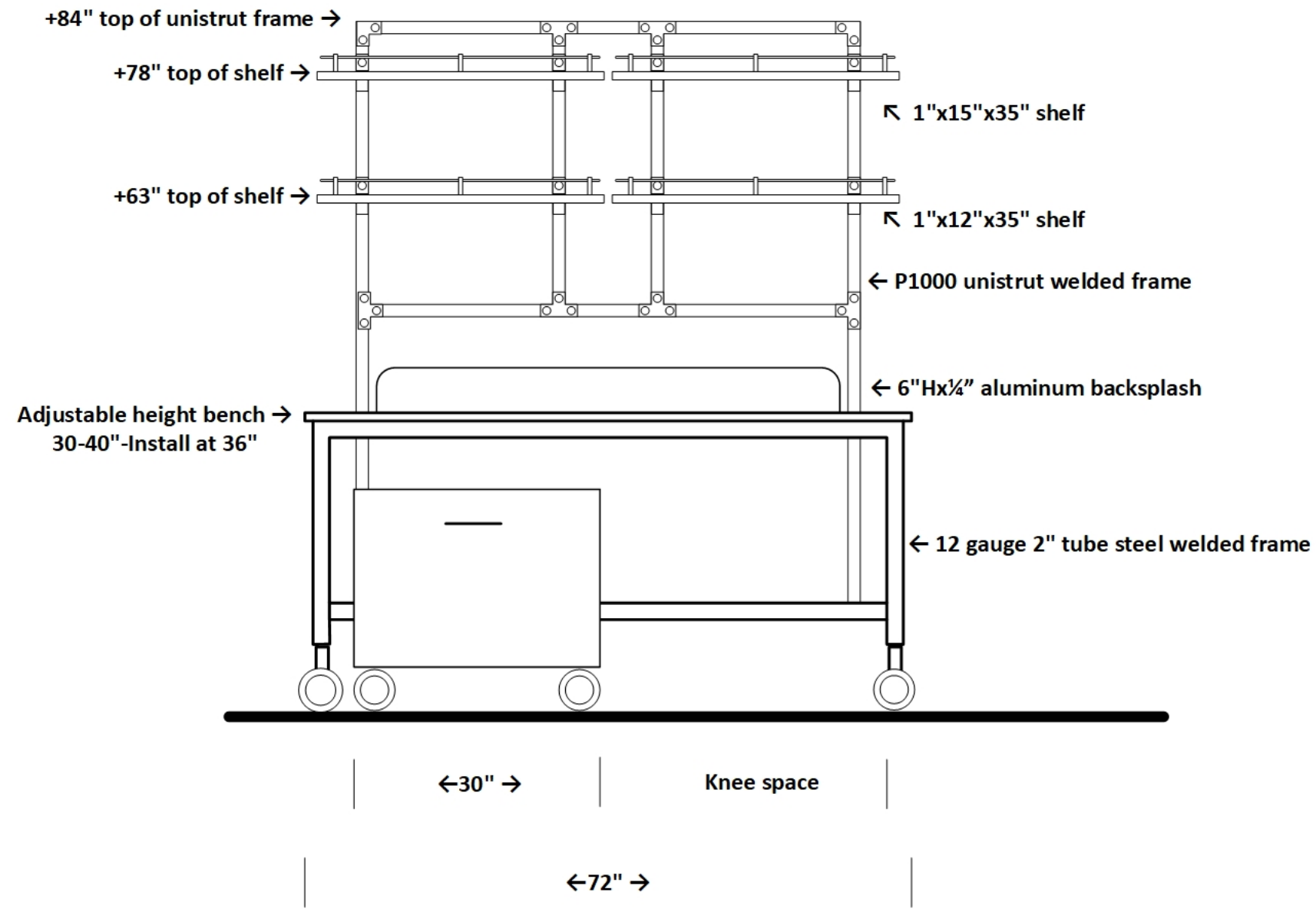


Mobile base cabinet on casters  
30" wide x 24" deep x 27" high

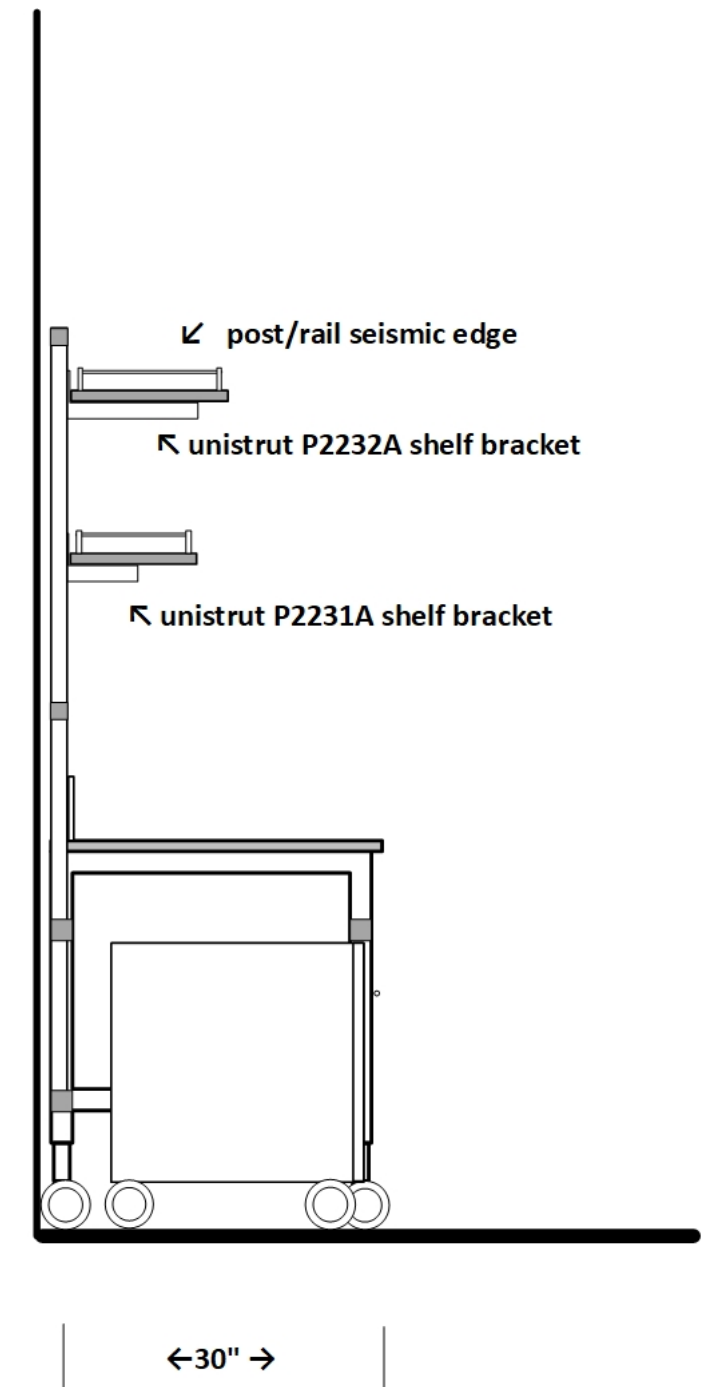
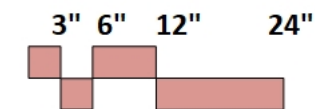


## SECTION DETAIL 02

### Maker Space Protean Lab Bench



Elevation

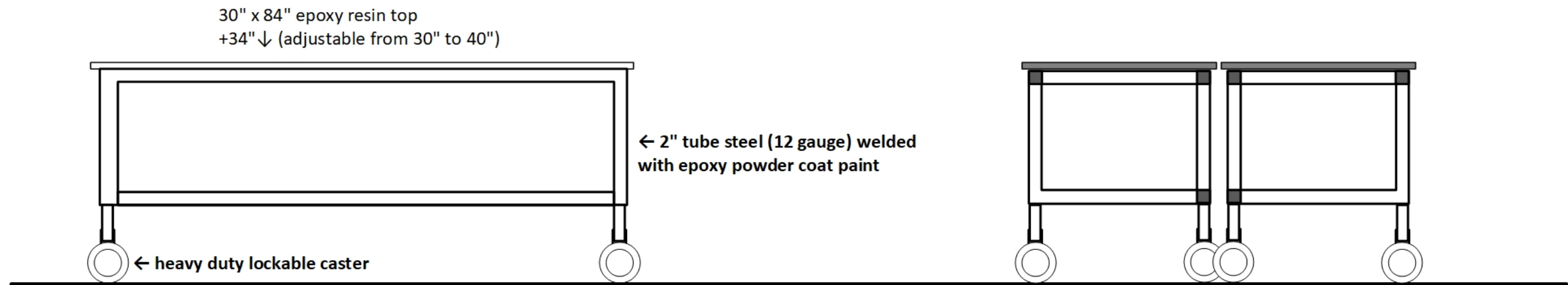


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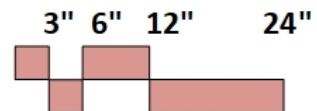


**SECTION DETAIL 03**  
**Student Mobile Bench**  
 Science Classrooms

↑ ceiling open to structure



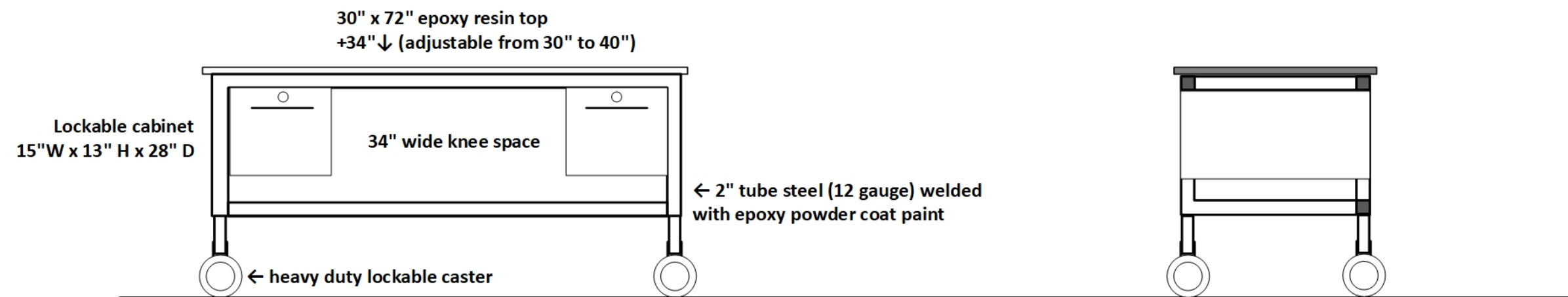
Elevation



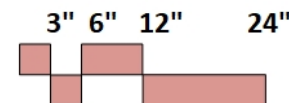
Section

**SECTION DETAIL 02**  
**Instructor Mobile Bench**  
 Science Classrooms

↑ ceiling open to structure above

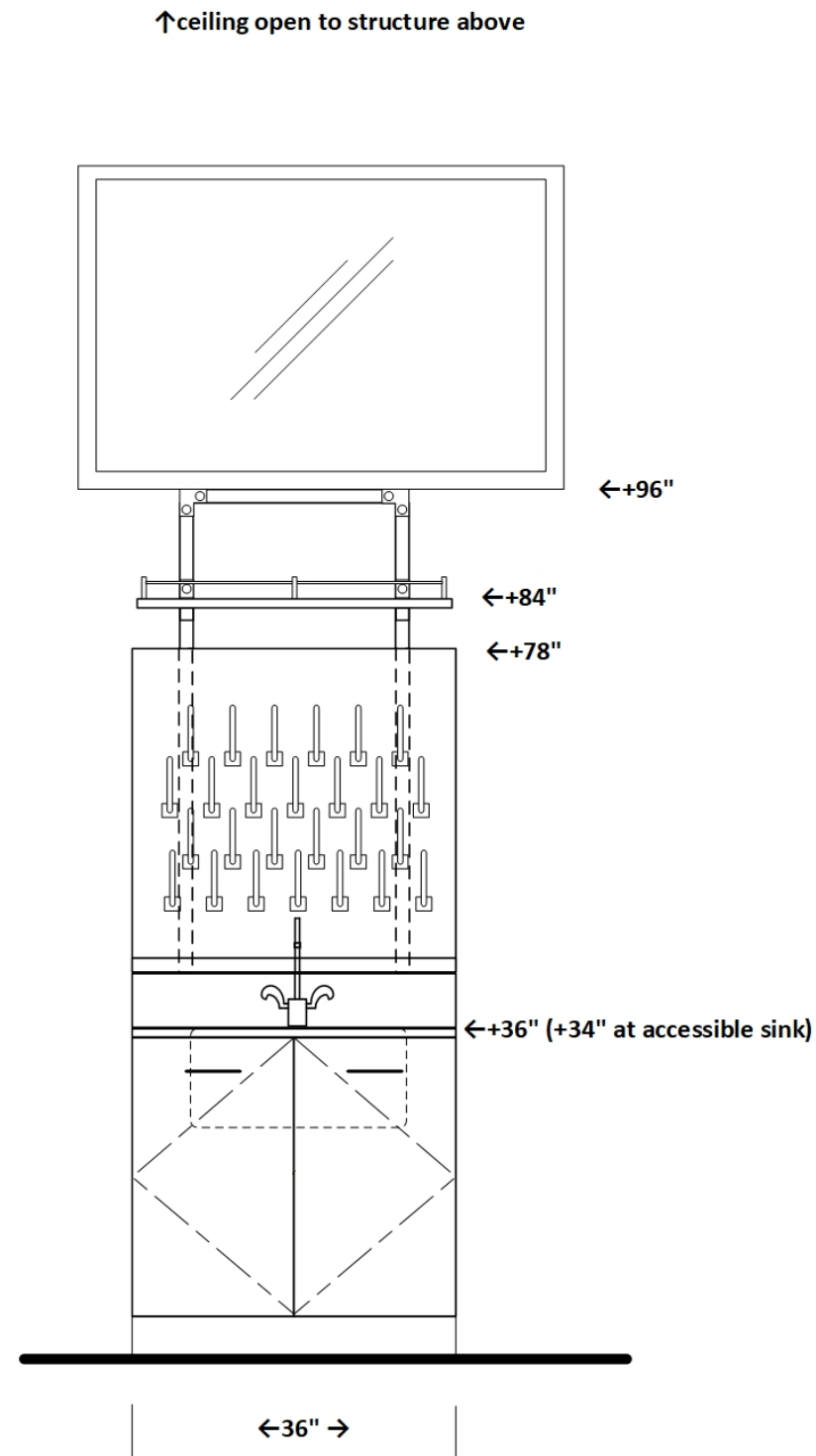


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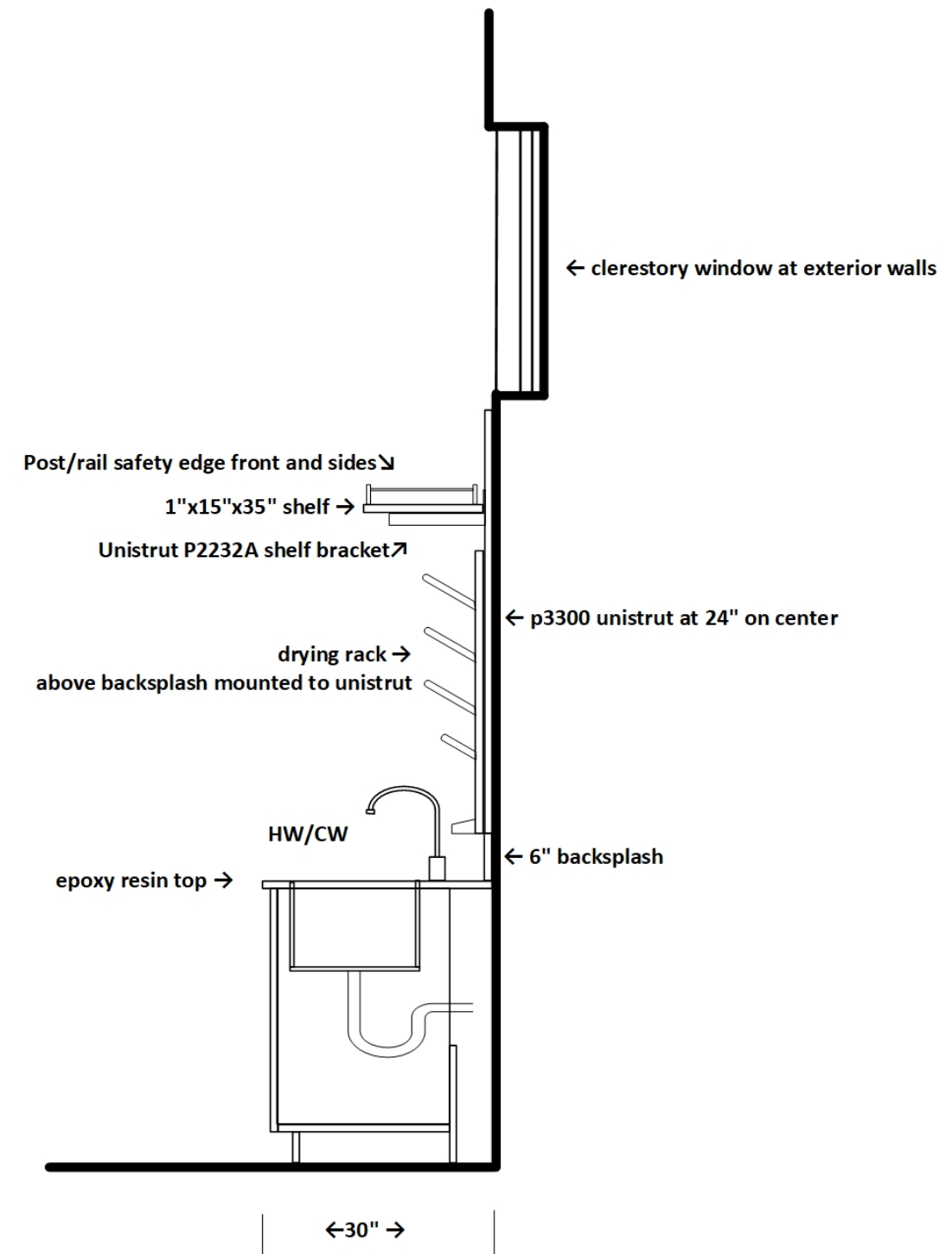


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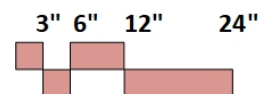
**SECTION DETAIL 03**  
**Sink at perimeter bench**  
 Science Classrooms



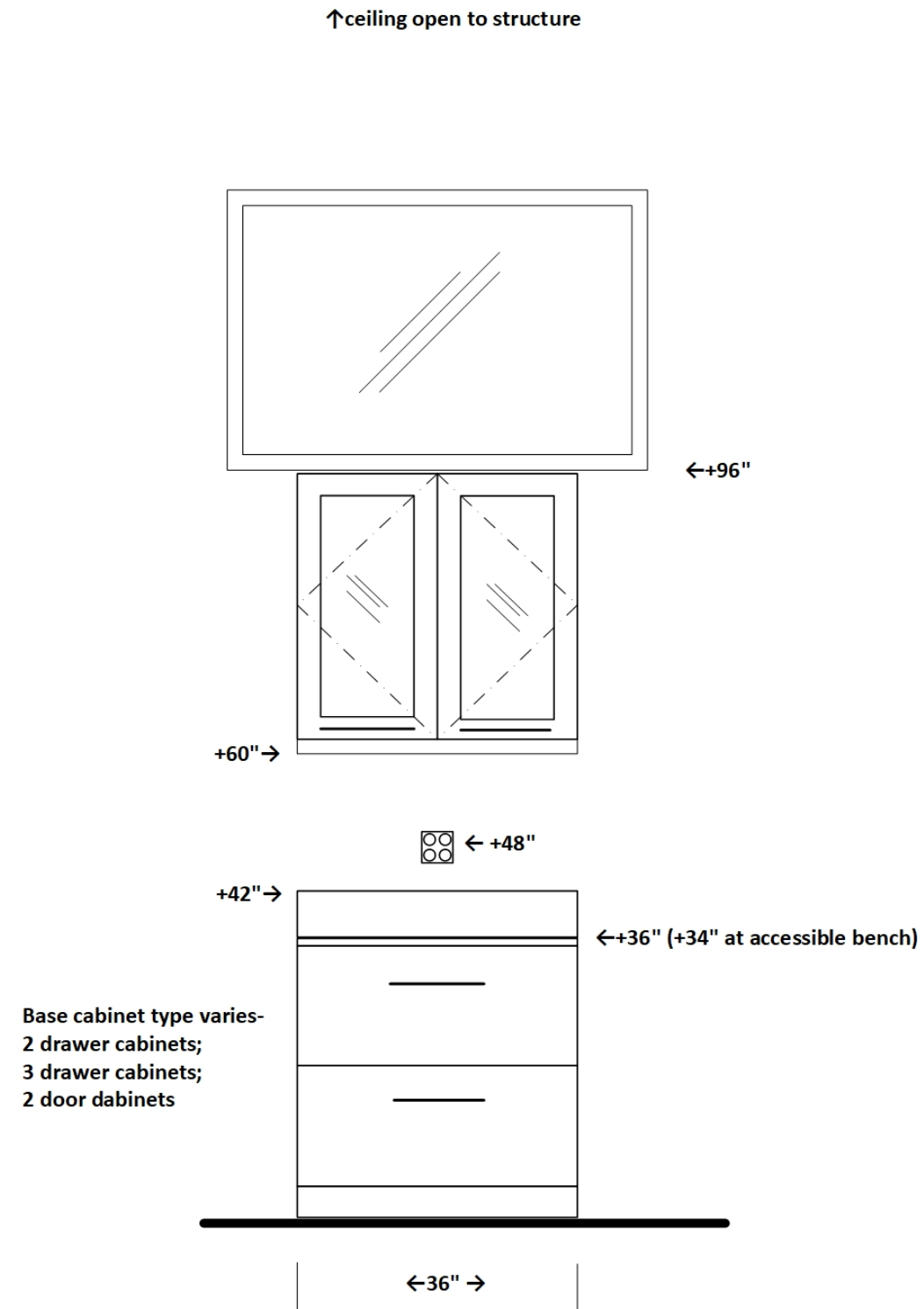
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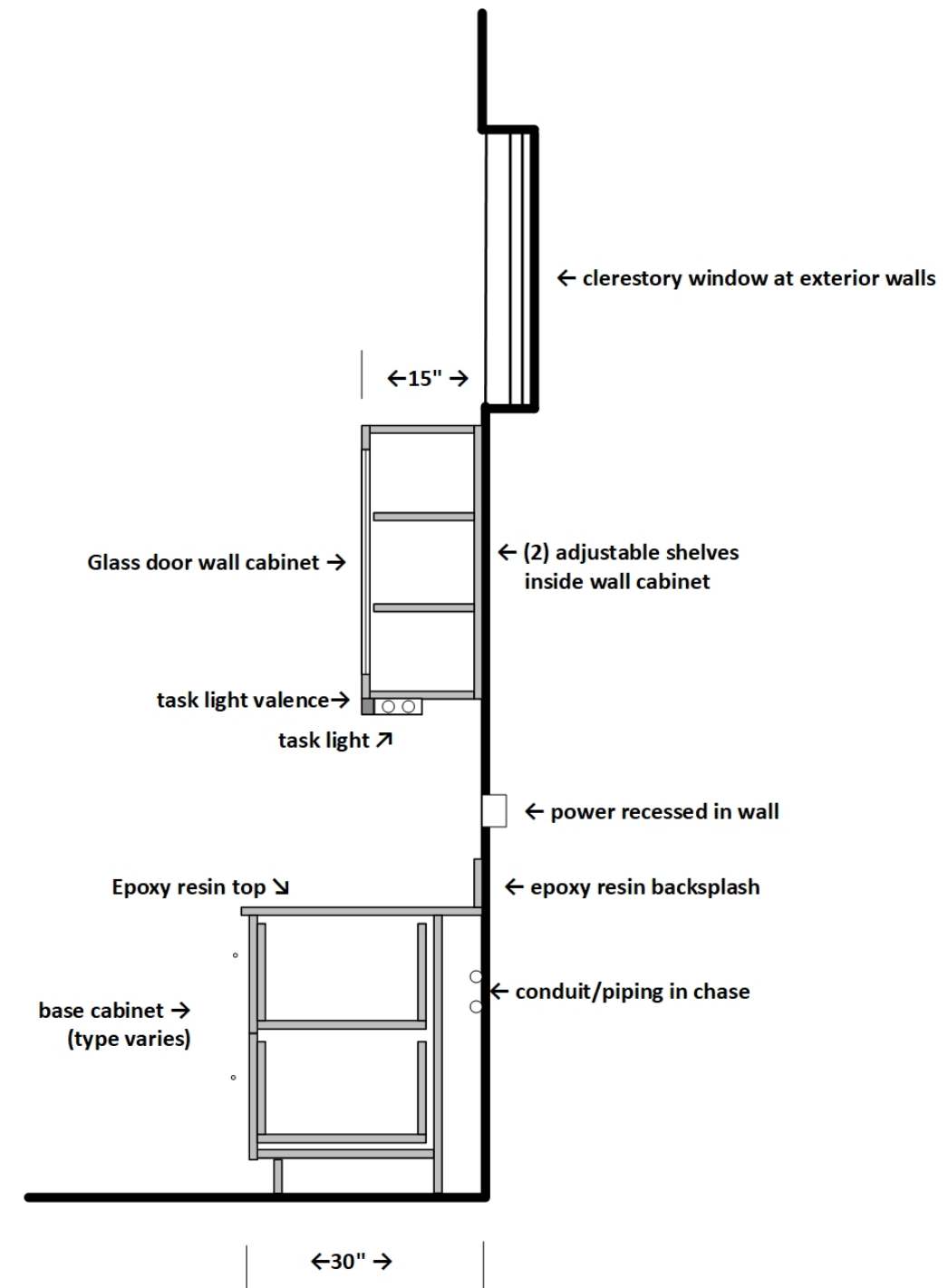
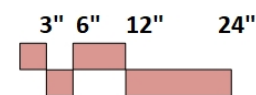
**Section**



**SECTION DETAIL 04**  
**Wall/Bench at perimeter**  
 Science Classrooms

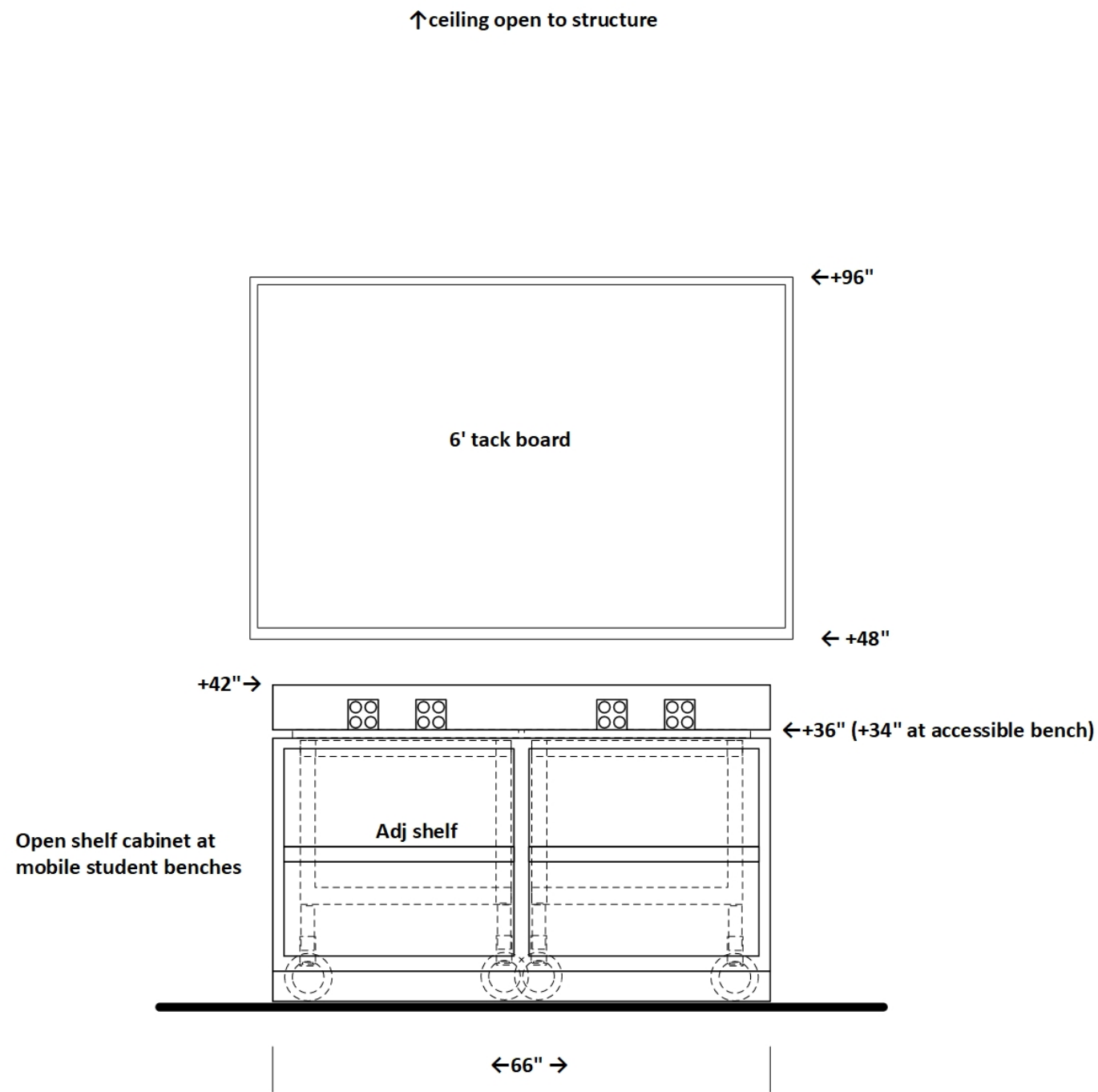


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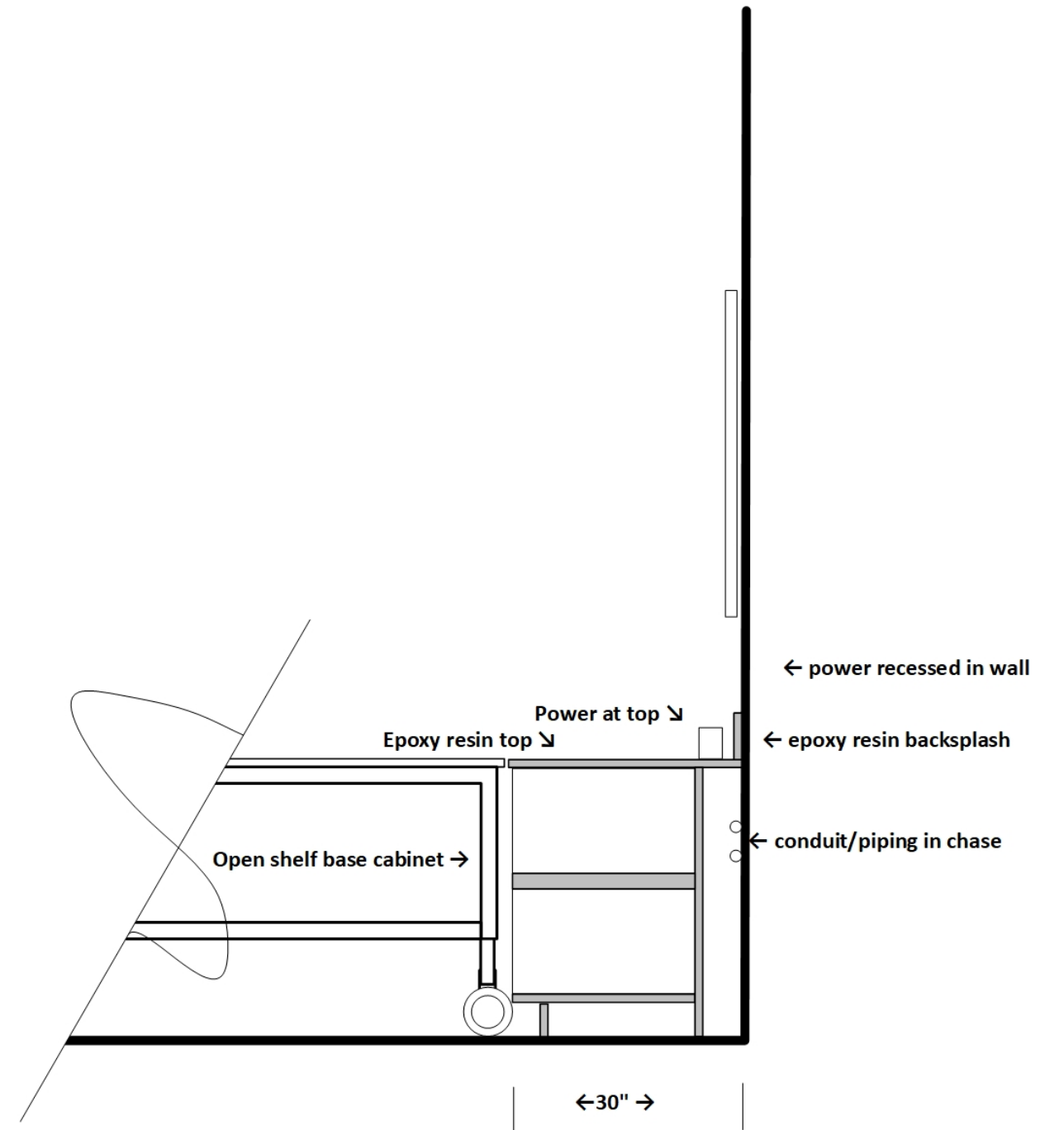
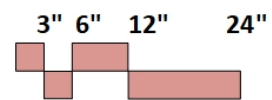


**Section**

**SECTION DETAIL 05**  
**Open base cabinet at mobile bench**  
 Science Classrooms



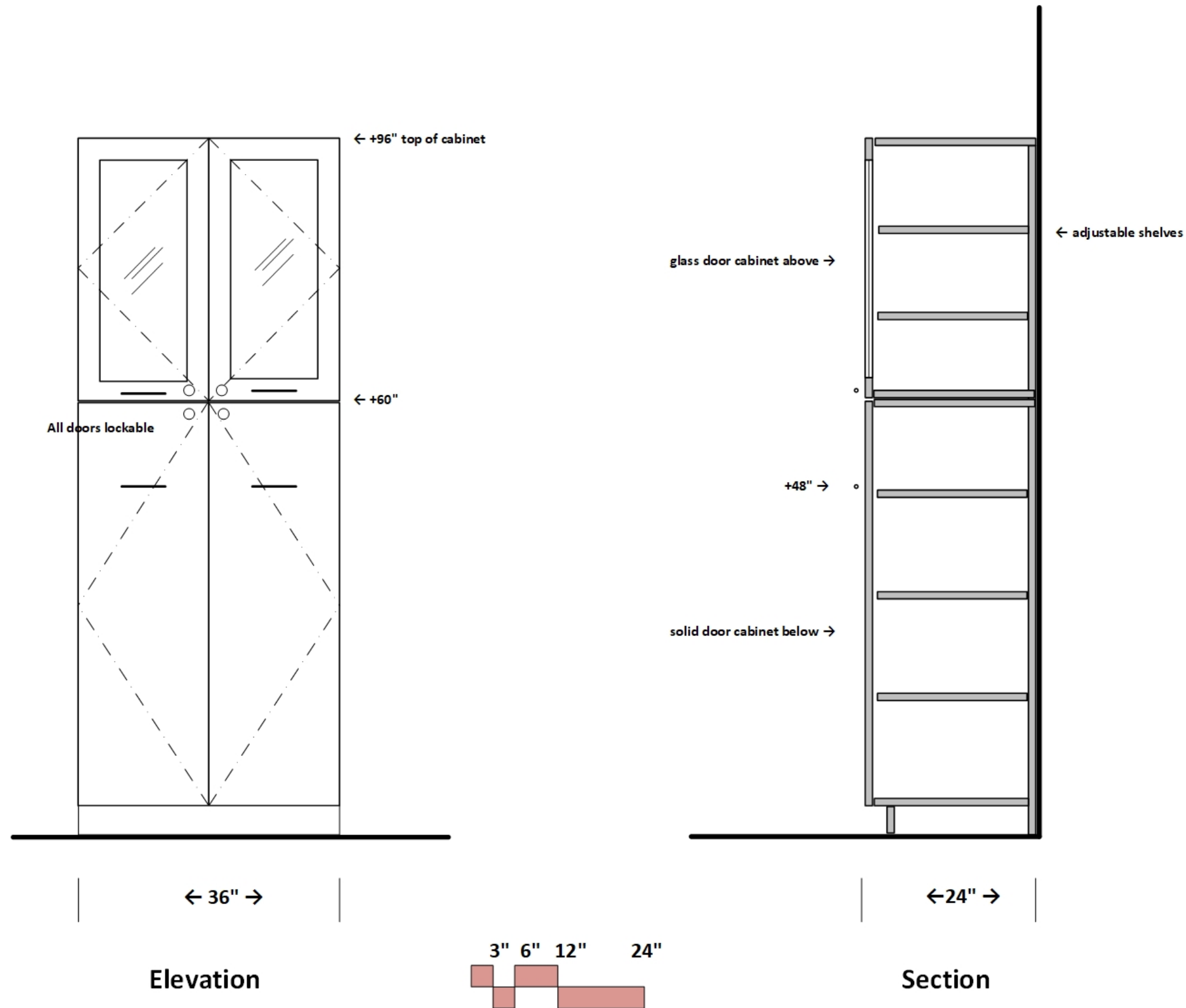
**Elevation**



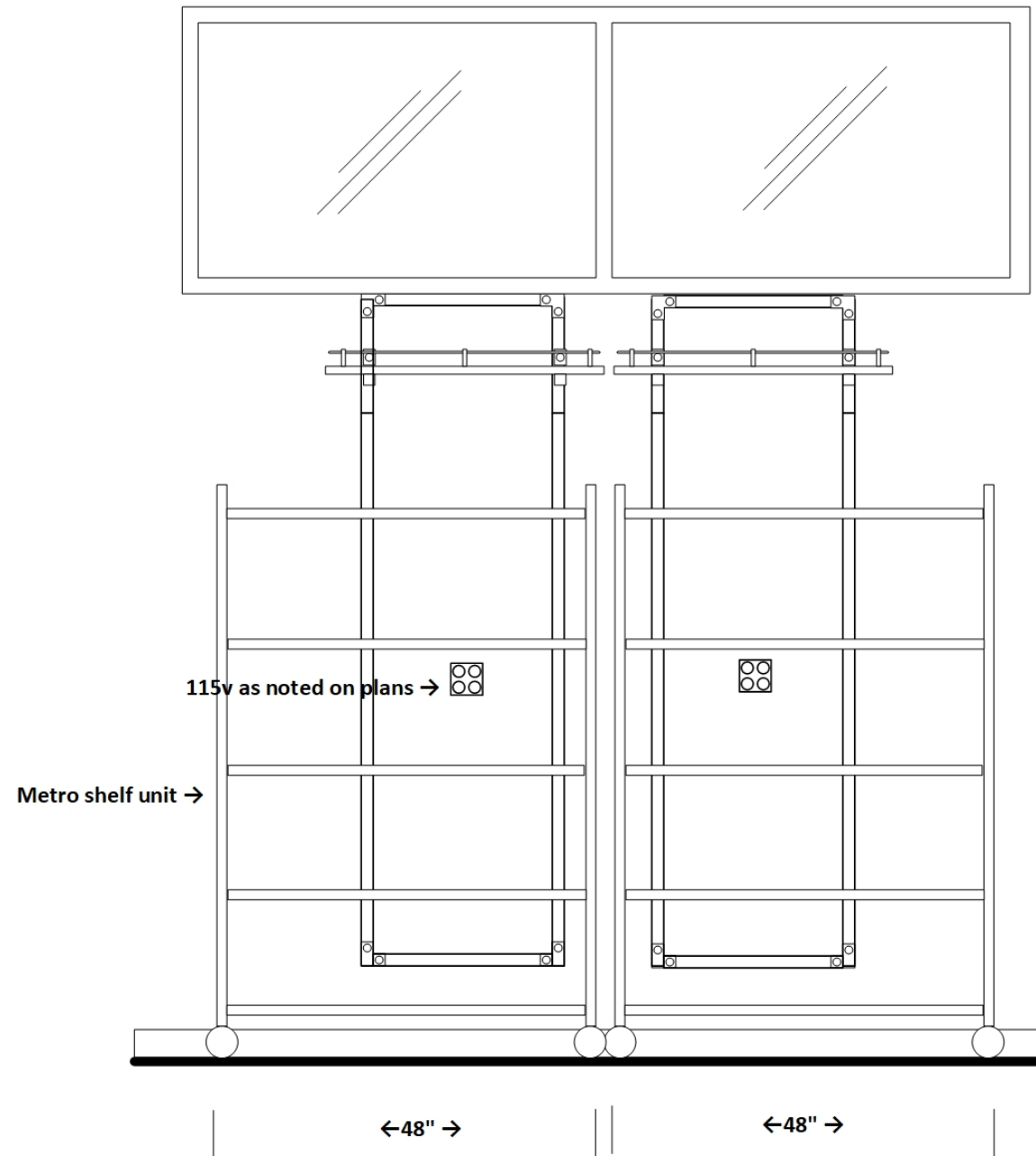
**Section**

# SECTION DETAIL 06

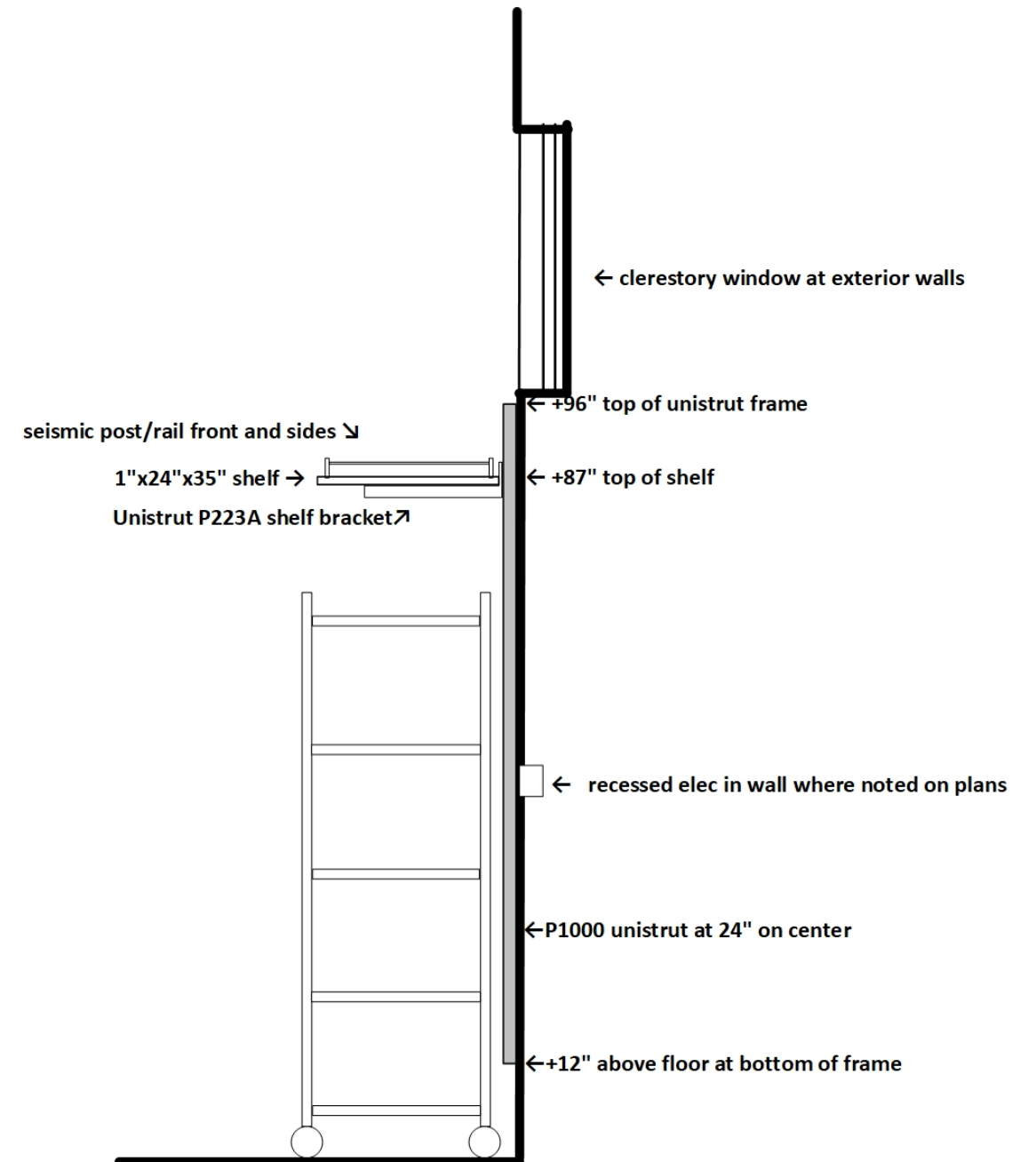
## Tall Storage Cabinet



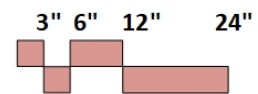
**SECTION DETAIL 07**  
**Metro Shelf Cabinet**  
 Storage Rooms



**Elevation**

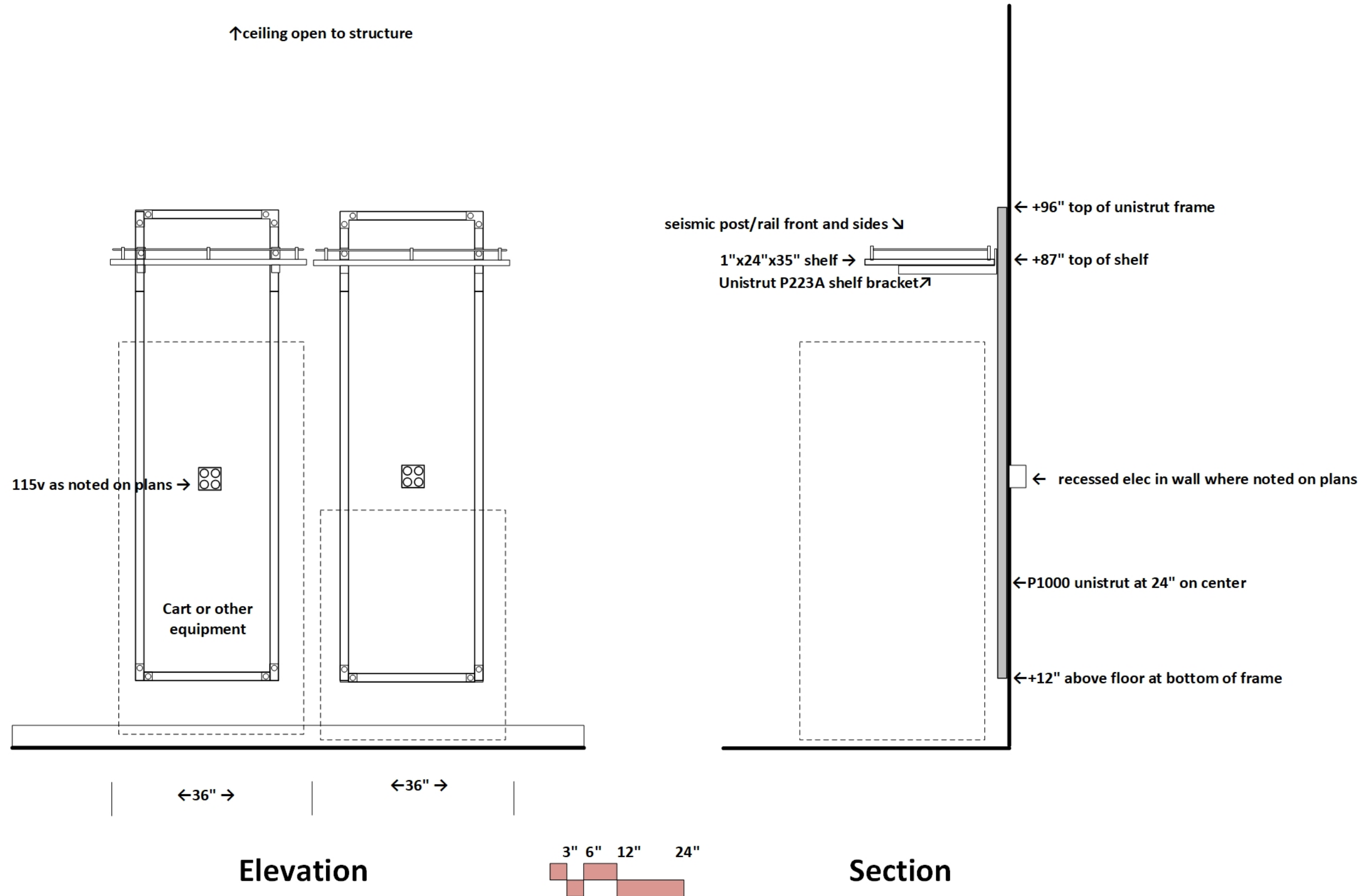


**Section**



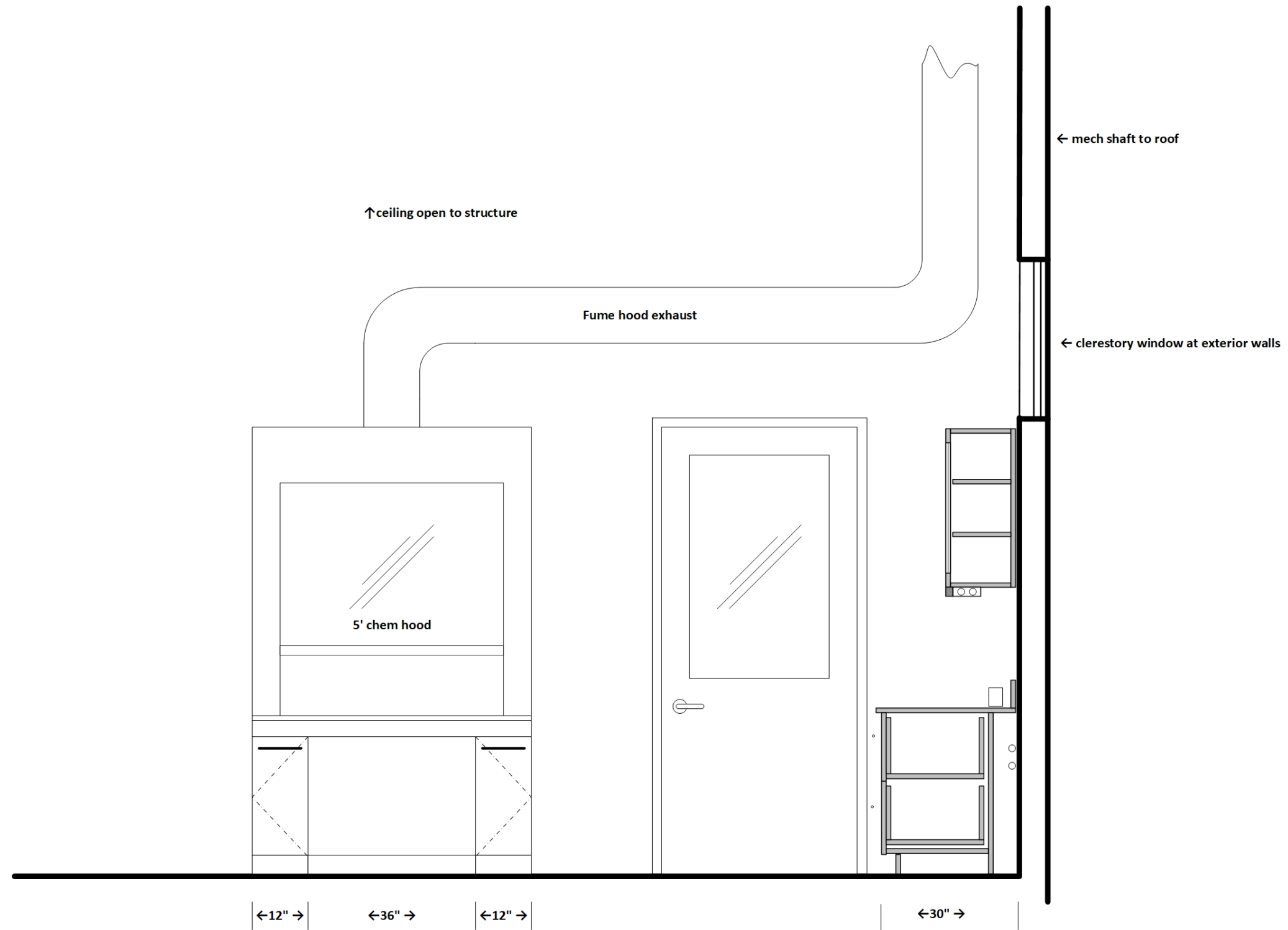
# SECTION DETAIL 08

## Equipment Space

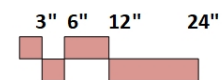




**SECTION DETAIL 09**  
**Mechanical Shaft to Roof**



**Elevation/Section**



# EQUIPMENT CUT SHEETS

# FUME HOOD CUT SHEET

## 5' glass side/back hood

### 4' Protector ClassMate Laboratory Hood



View online: <https://www.labconco.com/product/4-protector-classmate-laboratory-hood-10/6758>



### Overview

The patented Protector ClassMate Laboratory Hood is designed to meet the needs of instructional laboratories. Clear back and sides and taller front viewing window provide enhanced visibility for conducting chemistry demonstrations or observing students using the hood. The clear back also does not obstruct visibility when hoods are placed back-to-back in an island configuration.

Fully-featured with baffle and air foil, this high-performance by-pass hood maintains safe airflow while conserving energy. The Protector ClassMate Hood is benchtop design and offered in 4', 5', and 6' widths. Models with combination style sashes are also available.

Catalog Number: 160405102

### Specifications

- **Weight:** 435.0 lbs
- **Weight metric:** 197.3 kg
- **Dimensions:** 48.0" w x 32.7" d x 59.0" h
- **Dimensions metric:** 121.9 x 81.9 x 149.9 cm
- **Electrical:** 100-115V, 50/60 Hz, 10A
- **Product Subcategory:** Educational
- **Nominal Width:** 4'
- **Sash Movement Direction:** Combination (Vertical & Horizontal)
- **Region:** International, U.S. and Canada
- **Blower Requirements:** Remote blower required
- **Conformance:** ANSI Z9.5, ASHRAE 110, ASTM E84, CAN/CSA C22.2, CFR 29, NFPA 45, SEFA 1, SEFA 8 (Cabinet Surface Finish), UL 1805, UL 61010
- **Electrical Duplexes:** 1
- **Lighting:** LED
- **Service Fixtures:** 2
- **Style:** Benchtop

### Description

#### Features (All Models)

- SEFA 1 High Performance Hood.
- Patented design.
- By-pass airflow design.
- Glacier white powder-coated steel frame.
- Ergonomic air foil with aerodynamic Clean-Sweep airflow openings.
- Low-profile, ADA-compliant spill trough.
- Clear, 1/4" thick, tempered safety glass sides, back and removable baffle.
- 5° angled, 1/4" thick tempered safety glass stationary viewing panel and 3/16" thick chain-driven sash with anti-racking shaft and powder-coated steel frame that provides 37.5" high visibility.
- Powder-coated sash handle with aerodynamic Clean-Sweep airflow openings.
- High-performance, 3-piece glass baffle that pivots for cleaning.
- Cord-Keeper slots on left and right side of air foil.
- Pre-wired LED lighting, light switch and blower switch.
- Powder-coated stainless steel tissue screen located directly below exhaust outlet.
- Removable front panel, side panels and interior cover plates for access to plumbing and electrical wiring.
- Powder-coated stainless steel 12.81" ID exhaust connection.

#### Vertical-Rising Sash Models Feature

- Sash stop at 18" height from work surface (60% open). Can be field modified to 14" from work surface. Fully open sash is 28" from work surface.

#### Combination Sash Models Feature

- Combination horizontal-sliding/vertical-rising sashes that allow the operator to use the hood with the sashes half open either horizontally or vertically.
- Sash stop at 14" height from work surface (50% vertical opening). Can be field modified to 18" from work surface. Fully open sash is 28" from work surface.

#### Fixture Models May 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 GFCI electrical duplex receptacle on lower right side.

#### Required Accessories (Not Included)



Item # \_\_\_\_\_

Job \_\_\_\_\_

## SUPER ADJUSTABLE 2" SUPER ERECTA SHELF® WIRE SHELVING

Super Adjustable 2" Super Erecta Wire Shelving is the most advanced and innovative wire storage system available. The unique Corner Release System, which allows shelves to be adjusted quickly and easily without tools, has been re-engineered to provide increased rigidity. And Super Adjustable 2" Shelving works in conjunction with the entire Super Erecta System of shelves and accessories.

- **Maximum Space Utilization:** The Corner Release System encourages repositioning of shelves during initial assembly to reclaim wasted vertical space. In some cases, reclaimed vertical space will allow an extra shelving tier to be added to the storage unit resulting in a 25% increase in storage capacity!
- **Easily Assembled:** The unique Corner Release System enables quick and easy repositioning of shelves during the initial set up to accommodate different package or container sizes. "Total Assembly" is complete only after the shelves are properly spaced to maximize storage. SiteSelect™ Posts, with the double-groove visual guide feature, have circular grooves at 1" (25mm) increments and are numbered at 2" (51mm) intervals to easily identify proper shelf locations.
- **Easily Adjustable:** The unique shelf design and SiteSelect™ Posts enable "tool-free", quick adjustment at 1" (25mm) increments along the entire height of the post.
- **Improved Rigidity:** An enhanced Corner Release System has made Super Adjustable 2" the most rigid, easily adjustable shelving system ever.
- **Strong:** Super Adjustable 2" shelves hold as much weight as traditional Super Erecta wire shelving. Stationary units hold a maximum of 2,000 lb. (910kg). Maximum weight capacity per shelf (48" [1219mm] or shorter = 800 lb. [364kg]; longer than 48" [1219mm] = 600 lb. [273kg])
- **Choice of Finishes:** Super Adjustable 2" Super Erecta shelving is available in a variety of finishes: Super Erecta Brite and chrome-plated for dry storage; Metroseal 3™ with antimicrobial product protection and stainless steel for corrosive environments; and attractive black epoxy for merchandising applications.

### Super Adjustable 2" Advantage . . .

Easily reposition Super Adjustable 2" shelves during initial assembly to increase storage capacity by as much as 25%.



Corner Release System



Dry Storage — Chrome or Super Erecta Brite™



All Environments — Metroseal 3™ with \*Microban® Antimicrobial Product Protection



Mobile Stem Caster Cart



Mobile Dolly Truck

**METRO** SUPER ADJUSTABLE 2" SUPER ERECTA SHELF®  
**Adjustable Wire Shelving**

Shelf units to be 24" wide x 48" long x 72" high.

Metro shelf units to be specified with heavy duty, locking casters, Super Adjustable shelf clips.

\*MICROBAN® and the MICROBAN® symbol are registered trademarks of the Microban Products Company, Huntersville, NC.



InterMetro Industries Corporation  
North Washington Street  
Wilkes-Barre, PA 18705  
www.metro.com



**10.01A**



# PRODUCT DIMENSIONS

DOMESTIC SIZES

## LAB SINK CUT SHEET

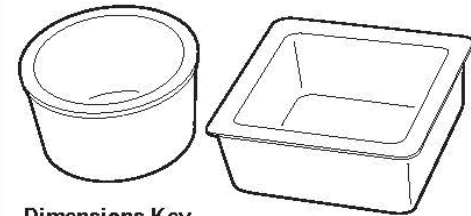
### Standard Dropln® Sinks

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
D24C	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	

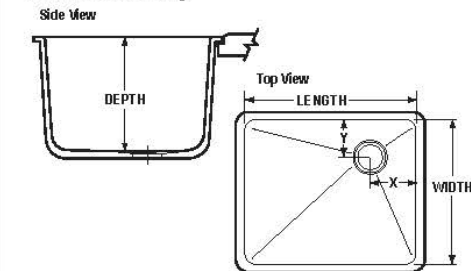
ADA compliant sinks are designated by this symbol.

All Dimensions are nominal and may vary by manufacturing location.  
Cutsheets available upon request.

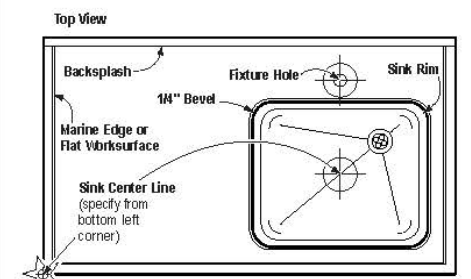
### Dropln® Sink Styles



### Dimensions Key



### Installation Detail



Typical Lab Sink: D61  
30" long x 16" wide x 17.8" deep

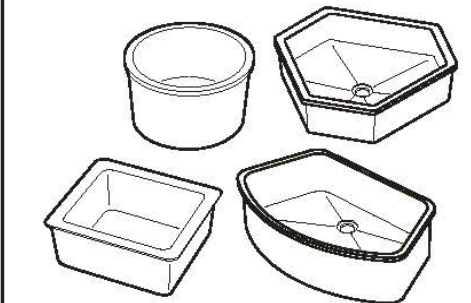
Accessible Lab Sink: A26.  
18" long x 15" wide x 5/11" deep

### Special Order Dropln Sinks

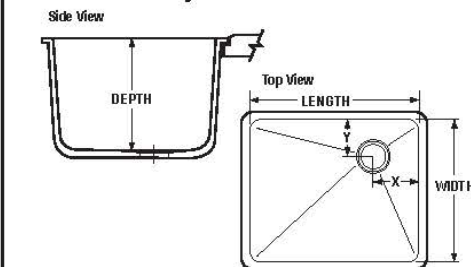
Sink No.	Outlet	Wgt (lb)	Dimensions (in)				
			Inside Bowl			Outlet Location	
			Length	Width	Depth	X	Y
D06*	Center	34	12.0	12.0	12.0	6.0	6.0
A07*	Corner	24	14.0	14.0	5.0	3.5	3.5
D08*	Corner	25	15.0	8.0	6.0	3.5	3.5
D09*	Corner	25	15.0	8.0	10.8	3.5	3.5
D21*	Corner	58	16.0	16.0	15.0	3.5	3.5
A26*	Corner	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
D64*	Corner	45	25.0	15.0	8.0	3.5	3.5
D67*	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	8.0	4.75
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*	Center	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 otherwise 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 manufacturing location. Cutsheets available upon request.

### Dropln® Sink Styles



### Dimensions Key

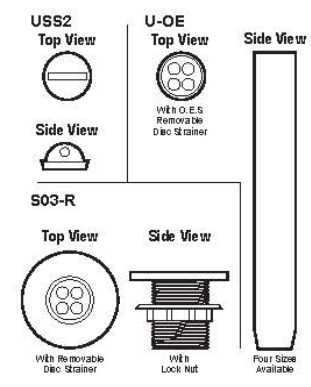


### Sink Outlets & Accessories

Part No.	Description	Color Availability						Dimensions (in)				
		Black Onyx	Gray	Graphite	Forest Green	Steel Blue	Tan	Alpine White	Palo Duro	Table Rock	Inside Pipe/Outlet Diameter	Outside Rim Diameter
Polypropylene												
SO3-R	Sink Outlet*	✓	✓	✓	✓	✓	✓	✓	✓	1.4	3.3	3.0
USS2	Sink Stopper	✓	✓	✓	✓	✓	✓	✓	✓	—	1.4	—
U-OE	Open End Overflow	✓	✓	✓	✓	✓	✓	✓	✓	—	1.4	4, 6, 8, 10
O.E.S.	U-OE Strainer Cap	✓	✓	✓	✓	✓	✓	✓	✓	—	1.4	—
Epoxy Resin												
SO3	Sink Outlet*	—	—	✓	✓	✓	✓	—	—	1.4	3.3	3.0

\*A plastic disc strainer is included with each sink outlet.

### Outlets & Accessories



206 Allison Drive • Taylor, TX 76574 • Phone: 512.595.8000 • Fax: 512.595.8400 • E-mail: sales@durcon.com

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Rev. 02/08

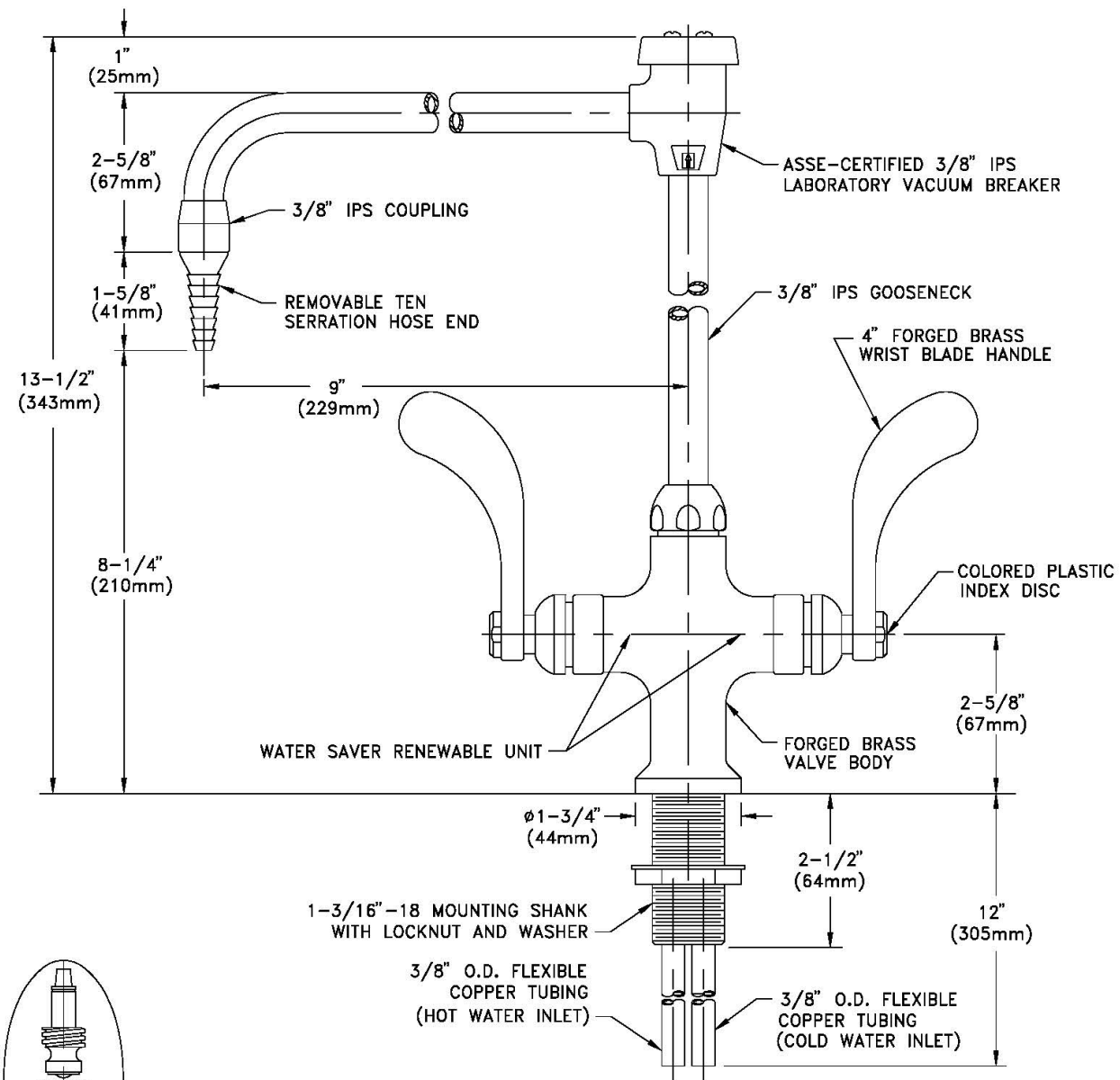
# HOT/COLD WATER VALVE CUT SHEET

# COLORTECH

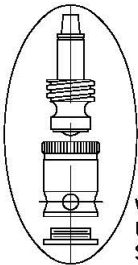
701 West Erie Street Phone 312 666 5500  
Chicago, Illinois 60610 Fax 312 666 8597

Laboratory Service Fixtures by  
WaterSaver Faucet Co.

CT414-9VB-BH  
LABORATORY MIXING FAUCET, DECK MOUNTED, 9" RIGID/SWING VACUUM BREAKER GOOSENECK, WRIST BLADE HANDLES



Satin Chrome finish with clear epoxy.



WATER SAVER RENEWABLE UNIT WITH REPLACEABLE STAINLESS STEEL SEAT

MEASUREMENTS MAY VARY ± 1/4".

- NOTES:
1. CSA CERTIFIED UNDER CAN/CSA B125.M89. COMPLIES WITH ANSI/ASME A112.18.1M.
  2. FIXTURE IS FURNISHED WITH COLORTECH POWDER-COATED FINISH.

Drawing Number: \_\_\_\_\_

Revision Number: 031803-KJS



## Recessed Laboratory Units

**Application:** ColorTech recessed laboratory units are recess mounted into a finished wall. They conserve valuable floor space, while eliminating the clutter and obstruction created by conventional eye wash and shower equipment. Units can be installed in either a corridor or a lab room, close to where accidents might occur. In an emergency, units are easily located and activated.

**ADA Compliance:** When installed at recommended mounting heights, units comply with ADA requirements for accessibility by handicapped persons (maximum height and reach, minimum knee clearance and distance from obstructions).

**Certification:** All ColorTech safety equipment is third-party certified to meet the requirements of ANSI Z358.1 - 1998 ("Emergency Eye Wash and Shower Equipment").

**Finish:** Units are supplied with a powder coated finish on all exposed brass components. Specify finish when ordering: white, gray, tan, polished chrome with clear epoxy or satin chrome with clear epoxy.

**Shower Head:** 8" diameter cast brass. Furnished with vertical supply pipe and ceiling escutcheon for mounting shower head at desired height below finished ceiling.

**Shower Valve:** 1" IPS brass stay-open ball valve with stainless steel "panic bar". Pulling bar down activates shower; shower remains in operation until bar is returned to original closed position. Furnished with stainless steel access panel and 1" IPS unions for valve.

**Cover/Drain Pan:** Eye/face wash section of unit has stainless steel cover. Opening cover pulls outlet head assembly down from vertical to horizontal position and activates water flow. Horizontal grab bar is easily grasped and pulled in an emergency. While unit is in operation, waste water is collected by drain pan and returned into unit for drainage. Unit remains in operation until cover is returned to closed position.

**Outlet Head Assembly:** Two FS-Plus spray heads mounted on supply arms. Each spray head has internal flow control and filter to remove impurities from water.

**Eye/Face Wash Valve:** 1/2" IPS brass stay-open ball valve.

**Mounting:** Entire unit is contained in an 18 gauge stainless steel cabinet with flanged rim for recessed mounting in wall. Combination cover and drain pan is 18 gauge stainless steel. Unit fits in standard 3-1/2" deep wall.

**Pipe and Fittings:** All pipe and fittings are brass.

**Supply:** 1" IPS female inlet.

**Waste:** 1-1/2" OD chrome plated brass tube.

**Sign:** Furnished with ANSI-compliant identification sign.

**Quality Assurance:** Unit is completely assembled and water tested prior to shipment.

**U.S. Patent:** 5,768,721

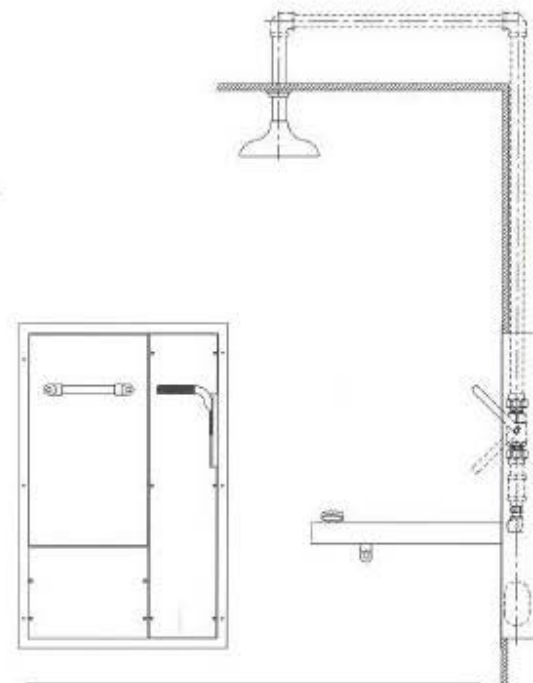
**Available Options:**

**AP280-220 Electric Light and Alarm Horn.** Flashing light is mounted on wall above unit. Alarm horn is recess mounted in wall next to light. Light is illuminated and horn sounds when either eye/face wash or shower is activated. See page 87 for complete information.

**AP3800 Thermostatic Mixing Valve.** Mixing valve precisely blends hot and cold water to deliver warm (tepid) water to eye/face wash and shower station as required by ANSI Z358.1 - 1998. Warm water prevents possibility of thermal shock. See page 86 for complete information.

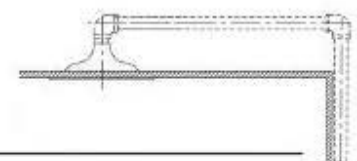
### CTSSBF2150

Recessed Safety Station with Drain Pan



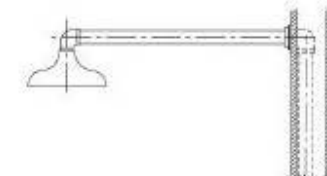
### CTSSBF2160

Same as above except with recess mounted shower head.



### CTSSBF2170

Same as above except with wall mounted shower head.



Model 2150 to be specified.  
Requires tempered water per Div. 22.  
Provide large floor drain below per Div. 22.  
Requires drain inside wall cavity for eyewash.