

Addendum 02

Classroom – Lab Equipment Guidelines

The attached booklet give you make and models of lab equipment, classrooms, desk, and links to owner provided items to assist GC in his responsibility to install them.

This is be used in conjunction with Sheet A1.3.

Note Mechanical sheets take preference over the guidelines due to special conditions of the school layout.

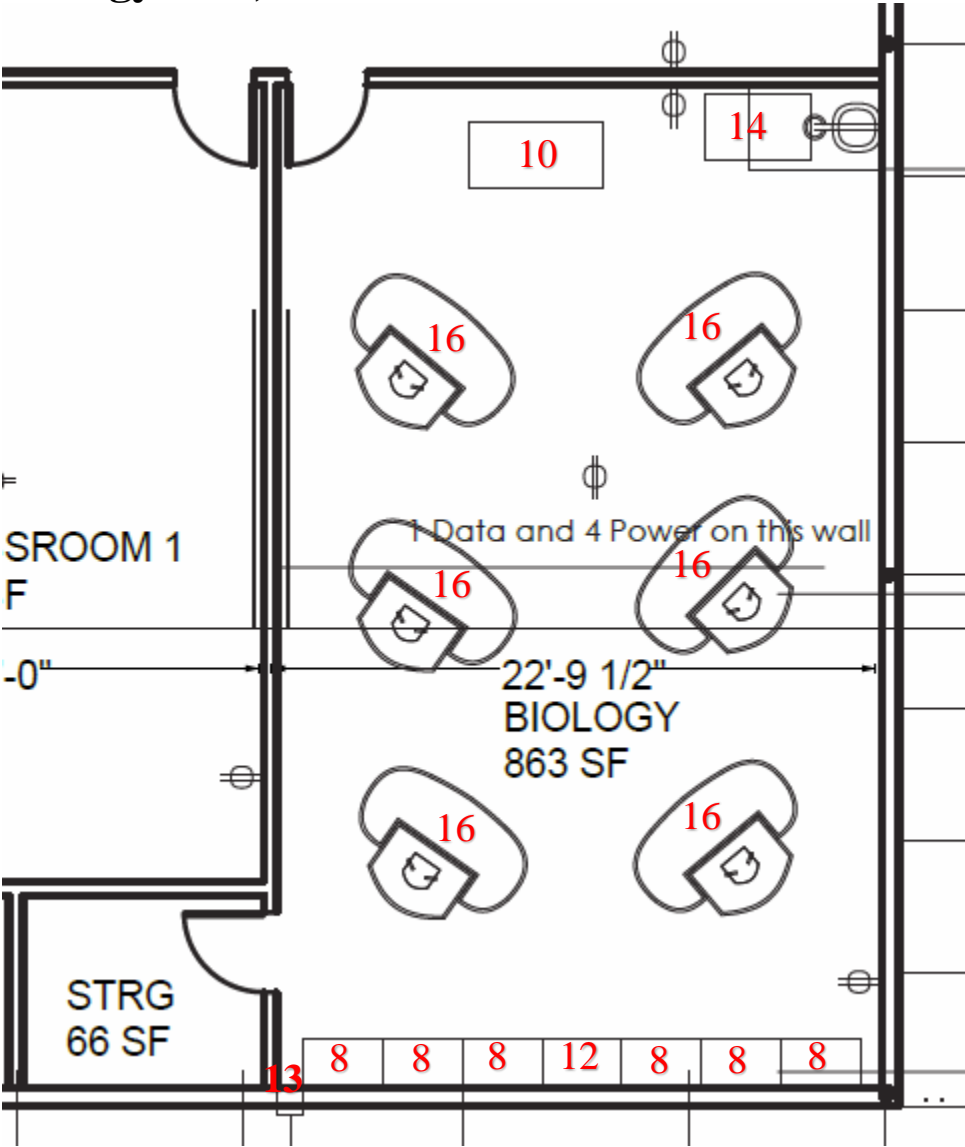


Lab Equipment & Furniture Spec For Waco Mid/High Project

General Information

- For the below labs all plumbing (rough in plumbing, water connections, faucets installation after the furniture installed), electrical work (rough in and final connections to furniture), HVAC work will be done by General Contractor.
- Power plugs on the walls shall be at 40" level
- Eye washer and shower location needs to have a proper slope for the floor drain.

Biology Lab;



- Teachers Desk (no #10 in the plans) (Owner Provided)

Quantity: 1

Overall Dimensions:

60" L X 30" D X 30" H

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- Cabinet (no #8 in the plans) (Owner Provided)

Quantity: 6

Brand/Model: Diversified Woodcrafts 358-3622
36" W Storage Cabinet With Glass Doors

Overall Dimensions:

36" W x 22" D x 84" H

<https://www.worthingtondirect.com/storage-furniture/3583622-36-w-storage-cabinet-with-clear-glass-doors.htm>

- Biology skeleton cabinets (no #12 in the plans) (Owner Provided)

Quantity: 1

Brand/Model: Diversified Woodcrafts 377-2422
Diversified Woodcrafts Roll-in Skeleton Cabinet

Overall Dimensions:

24" W x 22" D x 84" H

<http://www.worthingtondirect.com/science-tables/3132422-diversified-woodcrafts-rollin-skeleton-cabinet.htm>

- **Lab workstations (no #16 in the plans) (with cold and hot water and electricity, no gas) Furniture is owner provided and installed but all the plumbing pipping, faucets installation, electric rough in and connection will be done by General Contractor.**

Quantity: 6

Please see attached Exhibit 1 document for the detailed information.

Lab Workstations adjustable to ADA height, all workstation will be adjusted to comply with the ADA height.

- **Shower and eyewash (no #14 in the plans) (Owner provided and installed by GC) All plumbing rough in, floor drain and proper slope for the floor drain and installation of the shower and eyewash needs to be done by GC.**

Quantity: 1

Brand/Model: Emergency Shower/Eyewash Combination, ADA-Compliant, SE1081

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=22895>

- **Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)**

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>

- **For the Biology Lab storage room;**

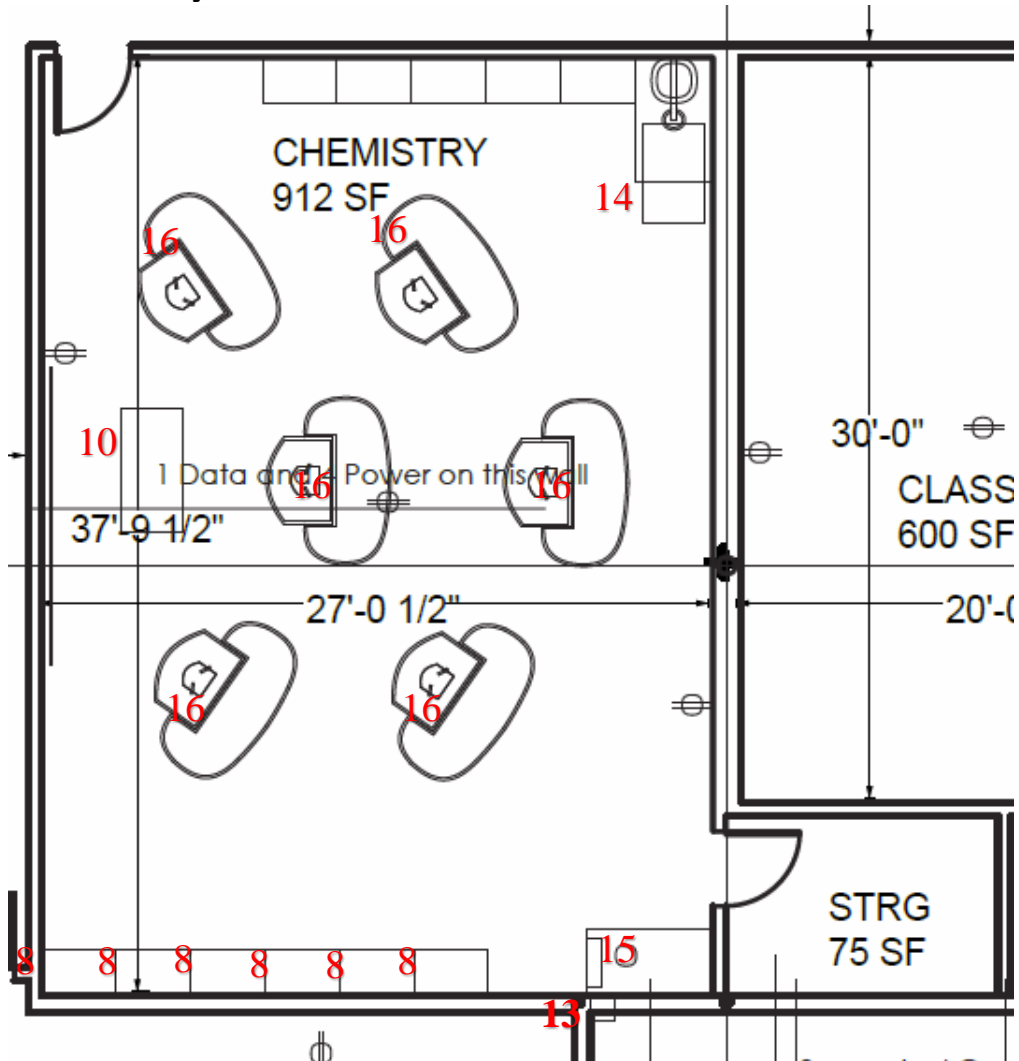
Chemical storage room safety regulations (GC to follow this regulation for the lab storage, GC shall provide and install separated AC system and ventilation that will comply the below requirements);

(Note: HVA's MEP engineer needs to specify the ac system and ventilation that will comply the below requirements in the plans)

For chemical storage rooms; separate AC system, ventilation and storage furniture (furniture will be provided by owner) should be maintained
In the chemical storage rooms;

- AC system should be separate that will operate non-stop with constant temperature.
- The ventilation system must exhaust the air to the outside using a continuous floor-to-ceiling method.
- The air is to be exhausted to the outside of the building and not allowed to be recirculated back into the room.
- It should be separated from main AC system.
- Recommended flow rate is 6 changes per hour
-

○ **Chemistry Lab;**



- Teachers Desk (no #10 in the plans) (Owner Provided)

Quantity: 1

Overall Dimensions:	60" LX 30" D X 30" H
----------------------------	----------------------

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- **Cabinet (no #8 in the plans) (Owner Provided)**

Quantity: 6

Brand/Model: Diversified Woodcrafts 358-3622
36" W Storage Cabinet With Glass Doors

Overall Dimensions:	36" W x 22" D x 84" H
----------------------------	-----------------------

<https://www.worthingtondirect.com/storage-furniture/3583622-36-w-storage-cabinet-with-clear-glass-doors.htm>

- **Lab workstations (no #16 in the plans) (with cold and hot water and electricity, no gas) Furniture is owner provided and installed. But all the plumbing pipping, faucets installation, electric rough in and connection will be done by General Contractor.**

Quantity: 6

Please see attached Exhibit 1 document for the detailed information.

Lab Workstations adjustable to ADA height, all workstation will be adjusted to comply with the ADA height

- **Shower and eyewash (no #14 in the plans) (Owner provided and installed by GC) All plumbing rough in, floor drain and proper slope for the floor drain and installation of the shower and eyewash needs to be done by GC.**

Quantity: 1

Brand/Model: Emergency Shower/Eyewash Combination, ADA-Compliant, SE1081

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=22895>

- **Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)**

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>






- **Chemistry Lab fume hood and exhaust fan (no #15 in the plans) (All the listed items below for the fume hood is Owner provided and installed by GC)**

<https://sites.google.com/a/harmonyphysics.com/extaphysics/labs-and-safety/lab-safety/fumehood> (a sample PO is attached for Fumehood + installation- order Fumehood with its parts and Exhaust fan in this link)

Fume Hood and required accessories:

1. [Labconco Basic* Laboratory Hoods](#) Quantity : 1
2. [Labconco* Protector* Standard Storage Cabinets](#) Quantity : 1
3. [Labconco* Flat Work Surfaces](#) Quantity : 1
4. [Labconco Duplexes for Basic Hoods](#) Quantity : 1
5. [Brady Admittance Signs "Notice Authorized Personnel Only"](#) Quantity : 1

You may see more details from below PO description

Nbr	Qty	UN	Catalog Number	Description
1	1	EA	S51259MF	BASIC FUME HOOD MDL 47  Hood, Fume; Basic 47; 720cfm total exhaust; Automatic Bypass; Air Foil; Safety Glass Sash, Two-piece Baffle, 10 in. Dia. Duct Collar; Incandescent Lighting; 47 in. Wide; Cupsink with Turret; 1/3 hp Blower, 115V, 60Hz Vendor Catalog # 2247300/EMD This item is being sold as 1 per each
2	1	EA	16 305 80	STANDARD BASE CABINET 48IN W  Cabinets, Standard storage; Labconco Protector; Epoxy-coated steel; Manual-closing, non-locking door; 22D x 48W x 35.5 to 36.75 in. H (56 x 122 x 90 to 93cm); Depth w/std. filler panel: 30 in. (76 cm); Dual door; 260 lb. (118kg) Vendor Catalog # 9900000 This item is being sold as 1 per each
3	1	EA	16 304 118	FLAT WORK SURFACE 48IN WIDE  Work surface, Flat; Labconco Protector; For Precise and XPert weigh boxes; Solid epoxy resin; Black; No cutouts; Dimensions: 30 D x 48 in. W and 1.25 in. thick; Shipping wt.: 110 lb. (50kg) Vendor Catalog # 4882803 This item is being sold as 1 per each
4	1	EA	16 500 26	DUPLEX RECEPTACLE 115V EA  Kit, Duplex Electrical Receptacle; Standard; Labconco; With Junction Box, Cover Plate; Mounts Lower Right-side Panel of Basic Hoods; For 115V, 20A Vendor Catalog # 4844400 This item is being sold as 1 per each
5	1	EA	19 102214	SIGN PLS AUTH PERSONNEL 10X14  Signs, Admittance; Brady; Legend: NOTICE Authorized Personnel Only; Color: Black and Blue on White; Material: Plastic; Size: 10 x 14 in. Vendor Catalog # 22142 This item is being sold as 1 per each

- **Chemical storage furniture and AC/ventilation regulation**
[:https://sites.google.com/a/harmonyphysics.com/extaphysics/labs-and-safety/lab-safety/storage](https://sites.google.com/a/harmonyphysics.com/extaphysics/labs-and-safety/lab-safety/storage) (order shells, acid and flammable cabinets in this link)

- For the Chemistry Lab storage room;

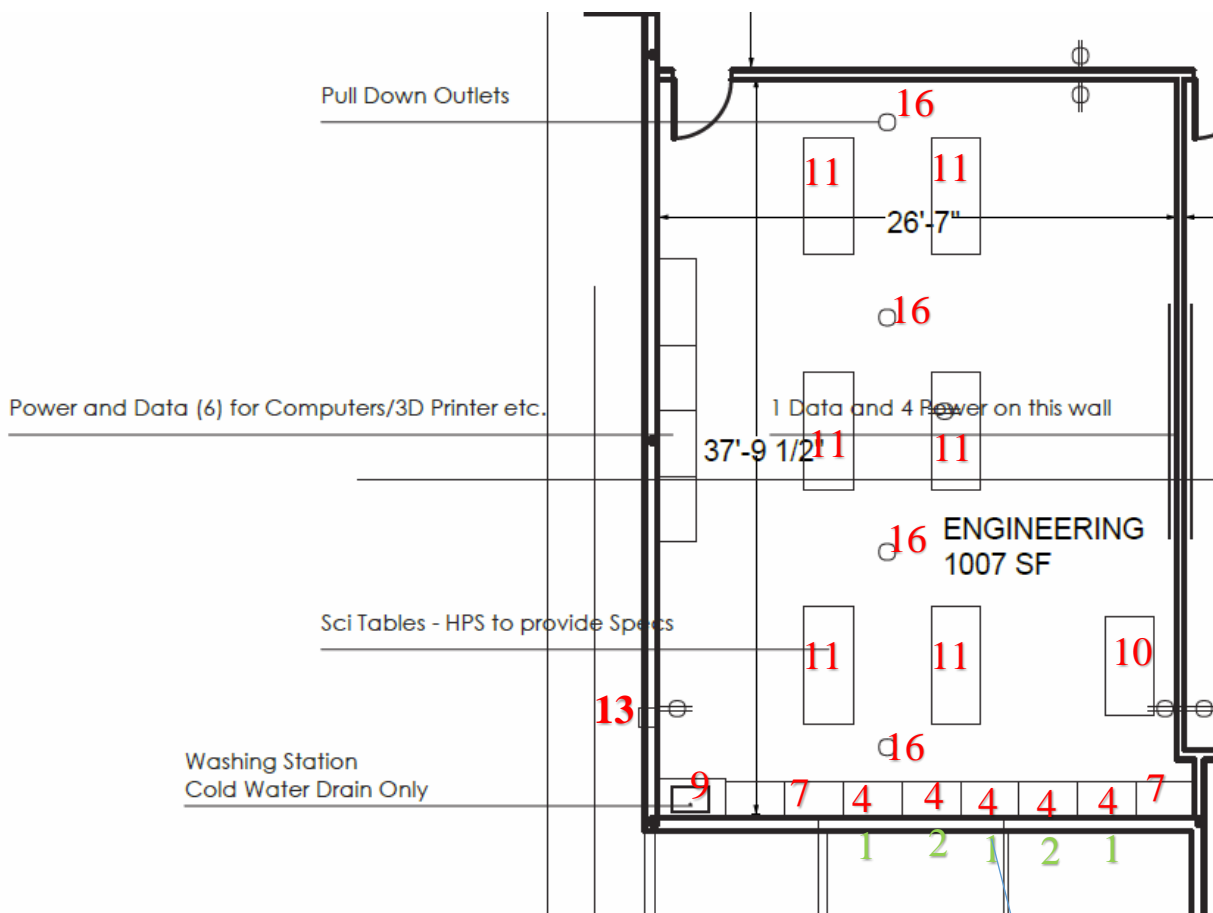
Chemical storage room safety regulations (GC to follow this regulation for the lab storage, GC shall provide and install separated AC system and ventilation that will comply the below requirements);

(Note: HVA's MEP engineer needs to specify the ac system and ventilation that will comply the below requirements in the plans)

For chemical storage rooms; separate AC system, ventilation and storage furniture (furniture will be provided by owner) should be maintained
In the chemical storage rooms;

- AC system should be separate that will operate non-stop with constant temperature.
- The ventilation system must exhaust the air to the outside using a continuous floor-to-ceiling method.
- The air is to be exhausted to the outside of the building and not allowed to be recirculated back into the room.
- It should be separated from main AC system.
- Recommended flow rate is 6 changes per hour.

Engineering Lab;



- Teachers Desk (no #10 in the plans) (Owner Provided)

6 POWER PLUG IS NEEDED BETWEEN THE FURNITURES 2 AND 4

Quantity: 1

Overall Dimensions:

60" L X 30" D X 30" H

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- **Cabinet (no #7 in the plans) (Owner Provided)**

Quantity: 2

Brand/Model: Diversified Woodcrafts 356-3622 Split Level Storage Cabinet With Veneer Doors (36" W)

Overall Dimensions:

36" W x 22" D x 84" H

<https://www.worthingtondirect.com/storage-furniture/356-3622-split-level-storage-cabinet-with-veneer-doors-36-w.htm>

- **Above Countertop Cabinet (no #4 in the plans) (Owner provided and installed)**

Quantity: 5

Brand/Model: Diversified Woodcrafts 356-3622 Split Level Storage Cabinet With Veneer Doors (36" W)

Overall Dimensions:

36" W x 12" D x 30" H

<https://www.worthingtondirect.com/science-tables/d063612-diversified-woodcrafts-oak-door-wall-cabinet.htm>

- **Base Cabinet (no #1 in the plans) (Owner Provided)**

Quantity: 3

Brand/Model: Diversified Woodcrafts 106-3622 Base Cabinet- 2 Drawers & 2 Doors

Overall Dimensions:

36" W 24" D x 35" H

<https://www.worthingtondirect.com/science-tables/1063622-base-cabinet-2-drawer-2-door-by-diversified-woodcPullrafts.htm>

- **Base Cabinet - 4 drawers (no #2 in the plans) (Owner Provided)**

Quantity: 2

Brand/Model: Diversified Woodcrafts 121-3622 Base Cabinet- 4 Drawers

Overall Dimensions:

36" W 24" D x 35" H

<https://www.worthingtondirect.com/science-tables/1213622-base-cabinet-4-drawers-by-diversified-woodcrafts.htm>

- **Countertop for 2 cabinets (no #3 in the plans) (Owner Provided)**

Quantity: 3

Brand/Model: Diversified Woodcrafts 214516F Phenolic Resin Top- 74"w For 2 Cabinets

Overall Dimensions:

36" W 24" D x 35" H

<https://www.worthingtondirect.com/science-tables/214516f-phenolic-resin-top-74w-for-2-cabinets-by-diversified-woodcrafts.htm>

- **Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)**

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>

- **Student Lab Desk (no #11 in the plans) (Owner Provided)**

Quantity: 6

Overall Dimensions:

30" D X 72" W X 36" H

Brand/Model: Diversified Woodcrafts P7154K30N Solid Phenolic Resin Top Hardwood Science Table (30" D X 72" W)

<https://www.worthingtondirect.com/tables/p7154k30n-solid-phenolic-resin-top-hardwood-science-table-30-d-x-72-w.htm> (at order area select 36"H to have same height with the benches)

- **Clean Up Sink (no #9 in the plans) (with cold water and no electricity, no gas) Furniture is owner provided and installed. But all the plumbing pipping, faucets installation will be done by General Contractor.**

Quantity: 1

Overall Dimensions:	55-1/2"W X 28"D X 36-1/2"H
---------------------	----------------------------

Brand/Model: Diversified Woodcrafts 3303K Stationary Clean Up Sink With Polyolefin Top)

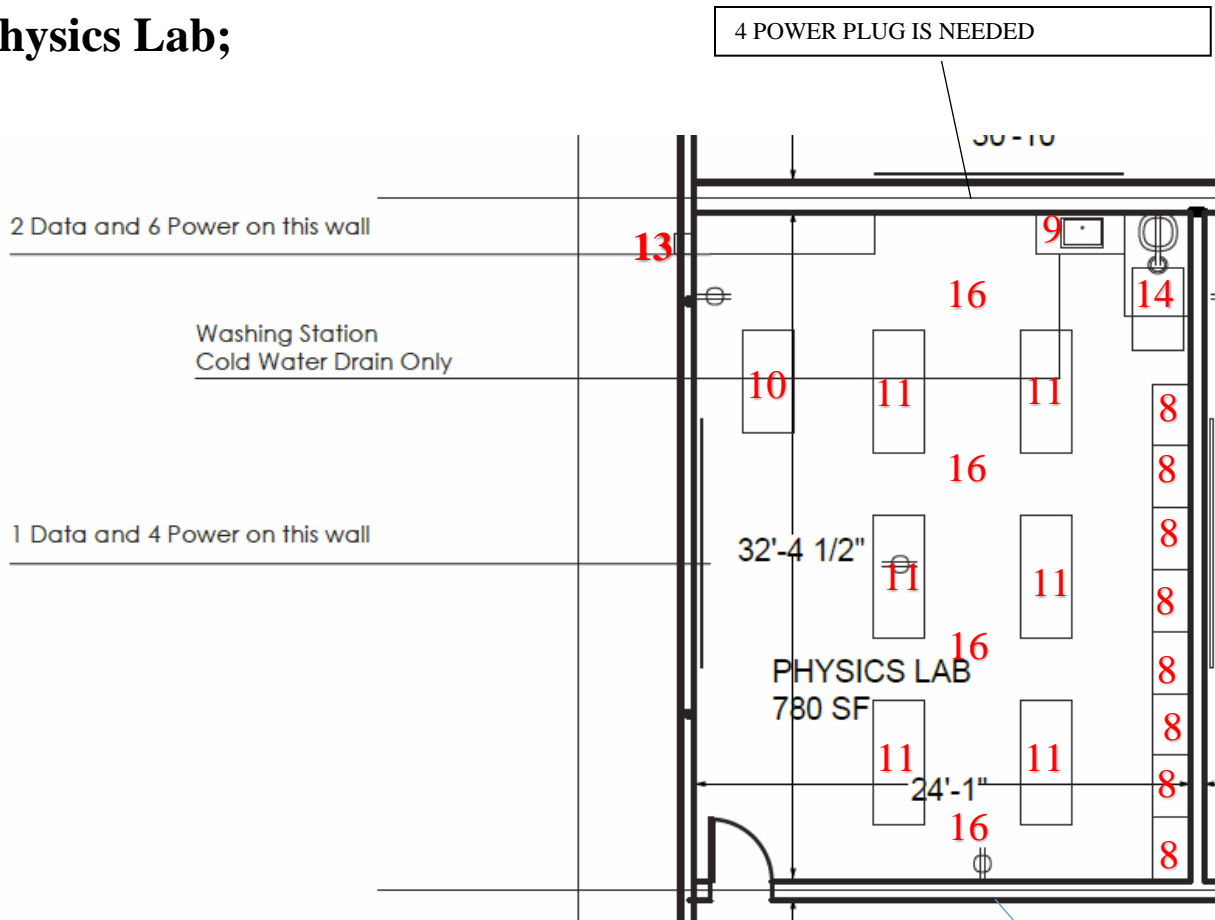
<https://www.worthingtondirect.com/tables/3303k-stationary-clean-up-sink-with-polyolefin-top.htm>

Pull-down Outlets (no #16 in the plans)

Quantity: 4

Brand/Model: HVA to specify and send a picture / specs to get approval from owner.

Physics Lab;



- Teachers Desk (no #10 in the plans) (Owner Provided)

6 POWER PLUG 2 DATA IS NEEDED

Quantity: 1

Overall Dimensions:

60" LX 30" DX 30" H

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- Cabinet (no #8 in the plans) (Owner Provided)

Quantity: 8

Brand/Model: Diversified Woodcrafts 358-3622
36" W Storage Cabinet With Glass Doors

Overall Dimensions:

36" W x 22" D x 84" H

<https://www.worthingtondirect.com/storage-furniture/3583622-36-w-storage-cabinet-with-clear-glass-doors.htm>

- **Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)**

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>

- **Student Lab Desk (no #11 in the plans) (Owner Provided)**

Quantity: 6

Overall Dimensions:

30" D X 72" W X 36" H

Brand/Model: Diversified Woodcrafts P7154K30N Solid Phenolic Resin Top Hardwood Science Table (30" D X 72" W)

<https://www.worthingtondirect.com/tables/p7154k30n-solid-phenolic-resin-top-hardwood-science-table-30-d-x-72-w.htm> (at order area select 36"H to have same height with the benches)

- **Clean Up Sink (no #9 in the plans) (with cold water and no electricity, no gas) Furniture is owner provided and installed. But all the plumbing pipping, faucets installation will be done by General Contractor.**

Quantity: 1

Overall Dimensions:

55-1/2"W X 28"D X 36-1/2"H

Brand/Model: Diversified Woodcrafts 3303K Stationary Clean Up Sink With Polyolefin Top)

<https://www.worthingtondirect.com/tables/3303k-stationary-clean-up-sink-with-polyolefin-top.htm>

Pull-down Outlets (no #16 in the plans)

Quantity: 4

Brand/Model: HVA to specify and send a picture / specs to get approval from owner.

- **Shower and eyewash (no #14 in the plans) (Owner provided and installed by GC)**
All plumbing rough in, floor drain and proper slope for the floor drain and installation of the shower and eyewash needs to be done by GC.

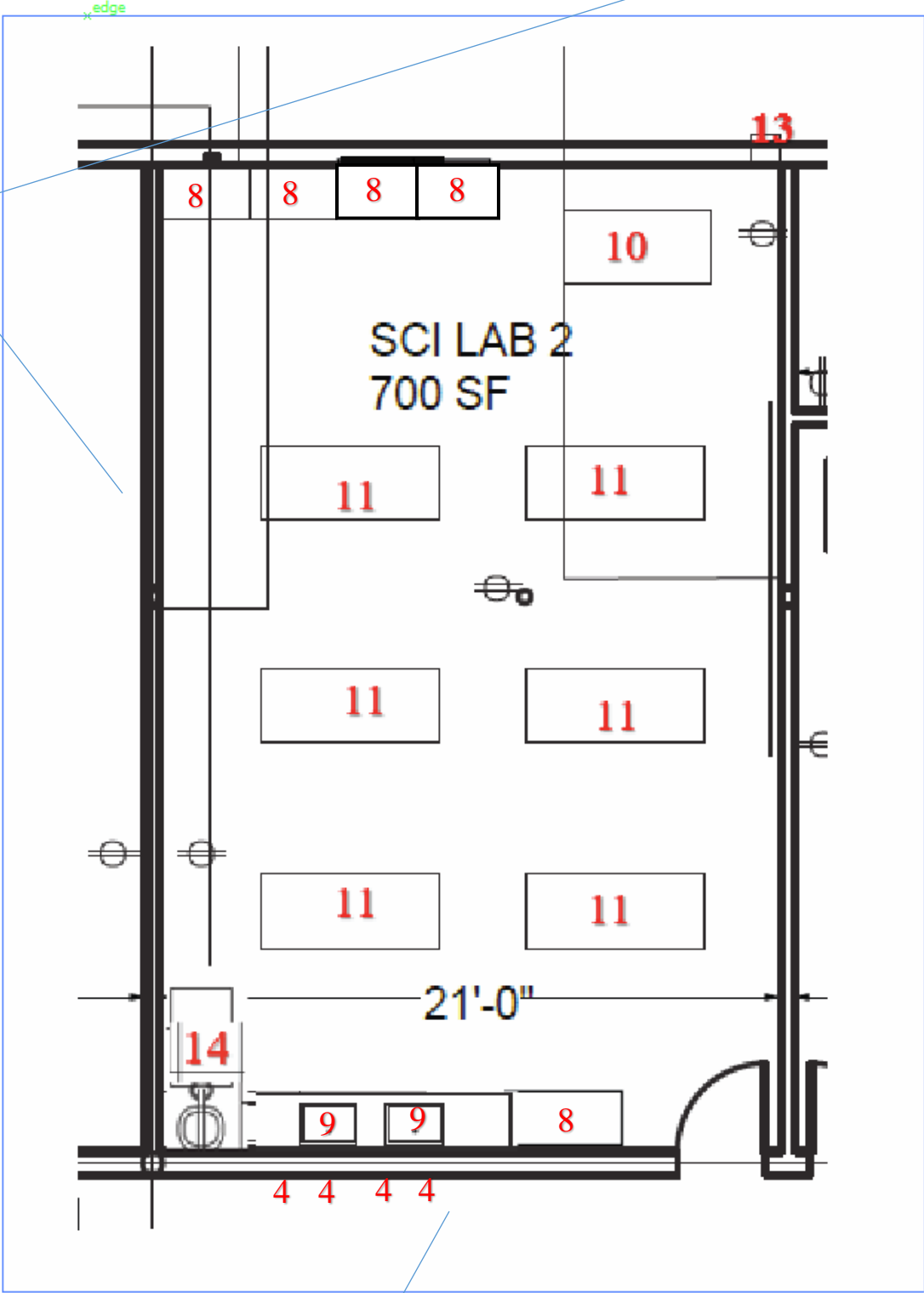
Quantity: 1

Brand/Model: Emergency Shower/Eyewash Combination, ADA-Compliant, SE1081

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=22895>

Science Classroom;

4 POWER PLUG IS NEEDED



4 POWER PLUG IS NEEDED

- Teachers Desk (no #10 in the plans) (Owner Provided)

Quantity: 1

Overall Dimensions:

60" L X 30" D X 30" H

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- Cabinet (no #8 in the plans) (Owner Provided)

Quantity: 4

Brand/Model: Diversified Woodcrafts 358-3622
36" W Storage Cabinet With Glass Doors

Overall Dimensions:

36" W x 22" D x 84" H

<https://www.worthingtondirect.com/storage-furniture/3583622-36-w-storage-cabinet-with-clear-glass-doors.htm>

- Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>

- Student Lab Desk (no #11 in the plans) (Owner Provided)

Quantity: 6

Overall Dimensions:

30" D X 72" W X 36" H

Brand/Model: Diversified Woodcrafts P7154K30N Solid Phenolic Resin Top Hardwood Science Table (30" D X 72" W)

<https://www.worthingtondirect.com/tables/p7154k30n-solid-phenolic-resin-top-hardwood-science-table-30-d-x-72-w.htm> (at order area select 36"H to have same height with the benches)

- **Clean Up Sink (no #9 in the plans) (with cold water and no electricity, no gas) Furniture is owner provided and installed. But all the plumbing pipping, faucets installation will be done by General Contractor.**

Quantity: 2

Overall Dimensions:

55-1/2"W X 28"D X 36-1/2"H

Brand/Model: Diversified Woodcrafts 3303K Stationary Clean Up Sink With Polyolefin Top)

<https://www.worthingtondirect.com/tables/3303k-stationary-clean-up-sink-with-polyolefin-top.htm>

Pull-down Outlets (no #16 in the plans)

Quantity: 4

Brand/Model: HVA to specify and send a picture / specs to get approval from owner.

- **Shower and eyewash (no #14 in the plans) (Owner provided and installed by GC) All plumbing rough in, floor drain and proper slope for the floor drain and installation of the shower and eyewash needs to be done by GC.**

Quantity: 1

Brand/Model: Emergency Shower/Eyewash Combination, ADA-Compliant, SE1081

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=22895>

- Above Countertop Cabinet (no #4 in the plans) (Owner provided and installed)

Quantity: 4

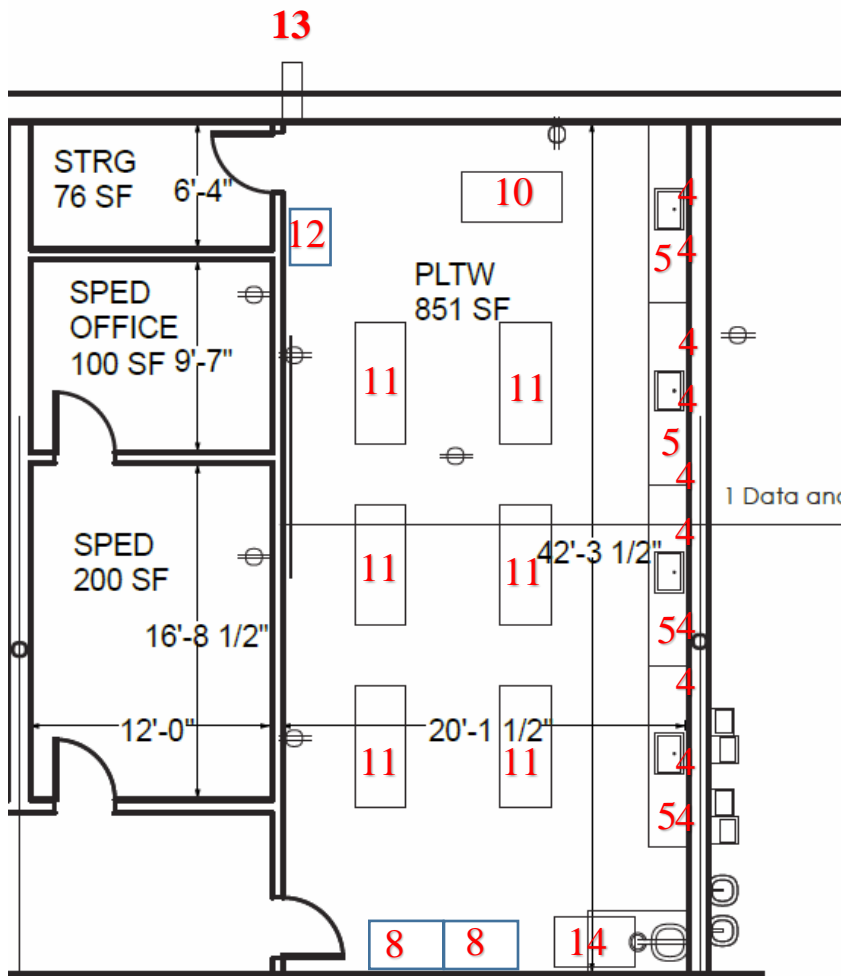
Brand/Model: Diversified Woodcrafts 356-3622 Split Level Storage Cabinet With Veneer Doors (36" W)

Overall Dimensions:

36" W x 12" D x 30" H

<https://www.worthingtondirect.com/science-tables/d063612-diversified-woodcrafts-oak-door-wall-cabinet.htm>

Bio-Medical Lab;



- Teachers Desk (no #10 in the plans) (Owner Provided)

Quantity: 1

Overall Dimensions:	60" L X 30" D X 30" H
---------------------	-----------------------

Brand/Model: Diversified Woodcrafts 1131K Teacher's Work Desk (60" X 30" High-pressure Laminate Top)

<https://www.worthingtondirect.com/tables/1131k-teachers-work-desk-60-x-30-highpressure-laminate-top.htm>

- Above Countertop Cabinet (no #4 in the plans) (Owner provided and installed)

Quantity: 10

Brand/Model: Diversified Woodcrafts 356-3622 Split Level Storage Cabinet With Veneer Doors (36" W)

Overall Dimensions:	36" W x 12" D x 30" H
---------------------	-----------------------

<https://www.worthingtondirect.com/science-tables/d063612-diversified-woodcrafts-oak-door-wall-cabinet.htm>

- Cabinet (no #8 in the plans) (Owner Provided)

Quantity: 2

Brand/Model: Diversified Woodcrafts 358-3622
36" W Storage Cabinet With Glass Doors

Overall Dimensions:	36" W x 22" D x 84" H
---------------------	-----------------------

<https://www.worthingtondirect.com/storage-furniture/3583622-36-w-storage-cabinet-with-clear-glass-doors.htm>

- **Laboratory Exhaust System (no #13 in the plans) (GC provided and installed)**

Quantity: 1

Brand/Model: Flinn Dilutit™ Laboratory Exhaust System, AP1690

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=14380>

- **Student Lab Desk (no #11 in the plans) (Owner Provided)**

Quantity: 6

Overall Dimensions:	30" D X 72" W X 36" H
---------------------	-----------------------

Brand/Model: Diversified Woodcrafts P7154K30N Solid Phenolic Resin Top Hardwood Science Table (30" D X 72" W)

<https://www.worthingtondirect.com/tables/p7154k30n-solid-phenolic-resin-top-hardwood-science-table-30-d-x-72-w.htm> (at order area select 36"H to have same height with the benches)

- **Biology skeleton cabinets (no #12 in the plans) (Owner Provided)**

Quantity: 1

Brand/Model: Diversified Woodcrafts 377-2422 Diversified Woodcrafts Roll-in Skeleton Cabinet

Overall Dimensions:	24" W x 22" D x 84" H
---------------------	-----------------------

<http://www.worthingtondirect.com/science-tables/3132422-diversified-woodcrafts-rollin-skeleton-cabinet.htm>

- **Bio Medical Lab - Wall Service Bench (no #5 in the plans) (with cold and hot water and electricity, no gas) Furniture is owner provided and installed. But all the**

plumbing pipping, faucets installation, electric rough in and connection will be done by General Contractor.

Quantity: 4

Brand/Model: Diversified Woodcrafts 3214K Wall Service Bench W/ Storage Cabinets - Doors Only (Phenolic Resin Top)

Overall Dimensions:

108"L x 24" D x 36" H

<https://www.worthingtondirect.com/science-tables/3214k-wall-service-bench-w-storage-cabinets-phenolic-resin-top.htm>

- **Shower and eyewash (no #14 in the plans) (Owner provided and installed by GC) All plumbing rough in, floor drain and proper slope for the floor drain and installation of the shower and eyewash needs to be done by GC.**

Quantity: 1

Brand/Model: Emergency Shower/Eyewash Combination, ADA-Compliant, SE1081

<http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=22895>

- **For the Bio-Medical Lab storage room;**

Chemical storage room safety regulations (GC to follow this regulation for the lab storage, GC shall provide and install separated AC system and ventilation that will comply the below requirements);

(Note: HVA's MEP engineer needs to specify the ac system and ventilation that will comply the below requirements in the plans)

For chemical storage rooms; separate AC system, ventilation and storage furniture (furniture will be provided by owner) should be maintained
In the chemical storage rooms;

- AC system should be separate that will operate non-stop with constant temperature.
- The ventilation system must exhaust the air to the outside using a continuous floor-to-ceiling method.
- The air is to be exhausted to the outside of the building and not allowed to be recirculated back into the room.

- It should be separated from main AC system.
- Recommended flow rate is 6 changes per hour.