

**DOCKET ITEM #5*****Special Use Permit #2017-0035******111 Clermont Avenue (parcel address: 4601 Eisenhower) -
TitanOneZero***

Application	General Data	
Public hearing and consideration of a request for a research and testing laboratory use.	Planning Commission Hearing:	June 6, 2017
	City Council Hearing:	June 24, 2017
Address: 111 Clermont Avenue (parcel address: 4601 Eisenhower Avenue)	Zone:	OCM (100) / Office Commercial Medium
Applicant: TitanOneZero, LLC	Small Area Plan:	Eisenhower West

Staff Recommendation: APPROVAL subject to compliance with all applicable codes and ordinances and the recommended permit conditions found in Section III of this report.

Staff Reviewer: Madeleine Sims, madeleine.sims@alexandriava.gov
Alex Dambach, alex.dambach@alexandriava.gov



Special Use Permit #2017-0035
111 Clermont Avenue (parcel
address: 4601 Eisenhower Avenue)



I. DISCUSSION

The applicant, TitanOneZero requests SUP approval to operate a research and testing facility at 111 Clermont Avenue. The use will incorporate offices as well as desktop sized 3D printers for prototyping of products.

SITE DESCRIPTION

The parcel is one lot of record with 265 feet of frontage along Eisenhower Avenue, and 353 feet of frontage along Clermont Avenue, for a total lot area of 2.79 acres. The subject parcel is developed with the Bogle Business Center, a one and two-story building of 74,436 square feet of floor area. The building houses 16 separate units, including retail stores, catering facilities, and offices. The subject unit is located on the first floor and includes 804 square feet of office space and 2,310 square feet of warehouse and work area space in the rear. The warehouse space is serviced by a loading door, while the offices have frontage on Clermont Avenue. A 145-space parking lot surrounds the building. Commercial businesses surround the subject property, Restaurant Depot is located directly to the south, long term storage units border the east and west of the property and to the north is the Clermont Natural Park and land owned by Norfolk Southern Railroad.

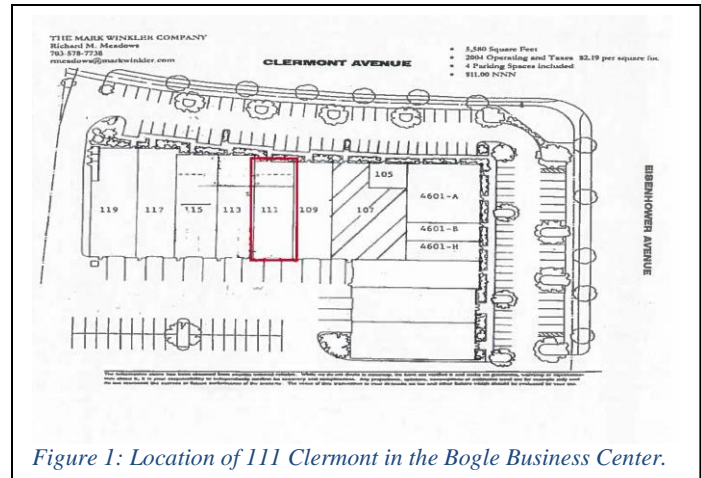


Figure 1: Location of 111 Clermont in the Bogle Business Center.

BACKGROUND

The Bogle Business Center was constructed under Site Plan #SIT85-0018, creating a 74,486 square foot warehouse and office space. City Council approved SUPs over the years for several businesses at neighboring units, including SUP #2675 which was approved for a catering business in 1993 at 111 Clermont Avenue.

PROPOSAL

The applicant proposes a research and testing facility at 111 Clermont Avenue. The applicant would operate a rapid prototyping (3D printing) business to research, create, and test various product prototypes for the business and public agencies. The applicant serves both the private and public sectors by providing engineering services to client and researches designs and systems which are then prototyped by a 3D printer. This business proposes to design and create these systems out of recyclable metal, plastic, and wood. Before sending the prototypes out for production at another facility, the applicant will test them by installing them on various vehicles and boats in this

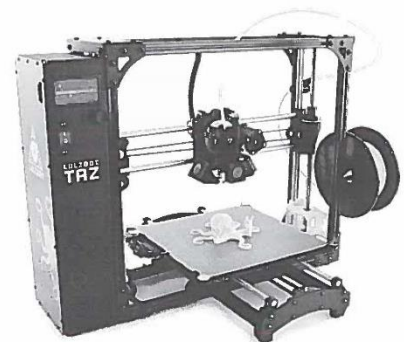


Figure 2: 3D printer example.

facility for testing on site or in the field. This business proposes to have 5 employees on site at any given time with operating hours between 6 a.m. and 8 p.m.

PARKING

Pursuant to Sec.8-200 (A)(17) and Sec. 8-200(B)(1), the applicant is required to provide eight parking spaces and one loading space. For this 3,114 square foot office and warehouse space, the applicant provides five designated parking spaces in the surface lot, and provides an additional three parking spaces within the warehouse area. There is also a loading space on site.

ZONING/MASTER PLAN DESIGNATION

Section 4-1003 (Z) of the Zoning Ordinance allows a research and testing business in the OCM (100) zone only with a special use permit approval. The property is located within the Eisenhower West Small Area Plan which designates the property for commercial uses. Production, wholesale and repair uses are also highly encouraged in this area, including “maker” spaces as identified in the Eisenhower West Small Area Plan that are located within warehouse and flex buildings.

II. STAFF ANALYSIS

Staff recommends approval of the proposed use. The applicant will fill a currently vacant space, and there are no anticipated impacts on the surrounding community. Standard conditions have been added, including Condition #4 which ensures the applicant complies with the City’s noise ordinance, to further mitigate the impacts of noise, the applicant proposes to install soundproofing materials in the warehouse area. Conditions have also been added to protect environmental standards including Conditions #5 through #8, ensuring the applicant disposes of waste properly and clears the site of litter. Subject to the conditions contained in Section III of this report, staff recommends approval of the Special Use Permit request.

III. RECOMMENDED CONDITIONS

Staff recommends **approval** subject to compliance with all applicable codes and ordinances and the following conditions:

The owner is responsible for ensuring that the following conditions are adhered to at all times. Violation of any of the conditions may result in fines and/or referral by the Director to public hearing by the Planning Commission and City Council.

1. The Special Use Permit shall be granted to the applicant only or to any corporation in which the applicant has a controlling interest. (P&Z)
2. The applicant shall conduct employee training sessions on an ongoing basis, including as part of any employee orientation process, to discuss all special use permit provisions and requirements. (P&Z)

3. Supply deliveries, loading, and unloading activities shall not occur between the hours of 11:00pm and 7:00am. (T&ES)
4. The use must comply with the city's noise ordinance. All loudspeakers shall be prohibited from the exterior of the building, and no amplified sounds shall be audible at the property line. (T&ES)
5. The applicant shall control odors, smoke and any other air pollution from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Department of Transportation & Environmental Services. (T&ES)
6. All waste products including but not limited to organic compounds (solvents and cleaners) shall be disposed of in accordance with all local, state and federal ordinances or regulations. (T&ES)
7. The applicant shall keep an updated list of all equipment and chemicals used at this location for inspection by City inspectors upon request. (T&ES)
8. Litter on the site and on public rights-of-way and spaces adjacent to or within 75 feet of the premises shall be picked up at least once a day and at the close of business, and more often if necessary, to prevent an unsightly or unsanitary accumulation, on each day that the business is open to the public. (T&ES)
9. The Director of Planning and Zoning shall review the special use permit after it has been operational for one year, and shall docket the matter for consideration by the Planning Commission and City Council if (a) there have been documented violations of the permit conditions which were not corrected immediately, constitute repeat violations or which create a direct and immediate adverse zoning impact on the surrounding community; (b) the Director has received a request from any person to docket the permit for review as the result of a complaint that rises to the level of a violation of the permit conditions, or (c) the Director has determined that there are problems with the operation of the use and that new or revised conditions are needed. (P&Z)

STAFF: Alex Dambach, Division Chief, Department of Planning and Zoning
Madeleine Sims, Urban Planner

Staff Note: In accordance with section 11-506(c) of the zoning ordinance, construction or operation shall be commenced and diligently and substantially pursued within 18 months of the date of granting of a special use permit by City Council or the special use permit shall become void.

IV. CITY DEPARTMENT COMMENTS

Legend: C - code requirement R - recommendation S - suggestion F - finding

Transportation & Environmental Services:

- R-1 Supply deliveries, loading, and unloading activities shall not occur between the hours of 11:00pm and 7:00am. (T&ES)
- R-2 The use must comply with the city's noise ordinance. All loudspeakers shall be prohibited from the exterior of the building, and no amplified sounds shall be audible at the property line. (T&ES)
- R-3 The applicant shall control odors, smoke and any other air pollution from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Department of Transportation & Environmental Services. (T&ES)
- R-4 All waste products including but not limited to organic compounds (solvents and cleaners) shall be disposed of in accordance with all local, state and federal ordinances or regulations. (T&ES)
- R-5 The applicant shall keep an updated list of all equipment and chemicals used at this location for inspection by City inspectors upon request. (T&ES)
- R-6 Litter on the site and on public rights-of-way and spaces adjacent to or within 75 feet of the premises shall be picked up at least once a day and at the close of business, and more often if necessary, to prevent an unsightly or unsanitary accumulation, on each day that the business is open to the public. (T&ES)
- C-1 The applicant shall comply with the City of Alexandria's Solid Waste Control, Title 5, Chapter 1, which sets forth the requirements for the recycling of materials (Sec. 5-1-99). In order to comply with this code requirement, the applicant shall provide a completed Recycling Implementation Plan (RIP) Form within 60 days of SUP approval. Contact the City's Recycling Program Coordinator at (703) 746-4410, or via e-mail at commercialrecycling@alexandriava.gov, for information about completing this form. (T&ES)
- C-2 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)
- C-3 Section 5-1-42- Collection by Private collectors. (c) Time of collection. Solid waste shall be collected from all premises not serviced by the city at least once each week. No collections may be made between the hours of 11:00 p.m. and 7:00 a.m. (6:00 a.m. from

May 1, through September 30) if the collection area is less than 500 feet from a residential area. (T&ES)

Code Enforcement:

C-1 A building permit, plan review and inspections are required for this project prior to renovations to existing site.

Fire:

No comments or concerns.

Health:

No comments received.

Parks and Recreation:

No comments received.

Police Department:

No comments received.



APPLICATION

SPECIAL USE PERMIT

SPECIAL USE PERMIT # 2017-0035

PROPERTY LOCATION: 111 Clermont Ave Alexandria, VA 22304 at 4601 Eisenhower Ave Alexandria VA 22304

TAX MAP REFERENCE: 069.01

ZONE: _____

APPLICANT:

Name: TITAN ONE ZERO, LLC

Address: 3911 Brenda Lane Annandale VA 22003

PROPOSED USE: Business Operations for TITANONEZERO, LLC.

Business Type: Professional Services - TITAN ONE ZERO is a Small Minority Owned Business, we are an IT/ Management and a Research and Development Engineering Firm.

☒ **THE UNDERSIGNED**, hereby applies for a Special Use Permit in accordance with the provisions of Article XI, Section 4-11-500 of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

☒ **THE UNDERSIGNED**, having obtained permission from the property owner, hereby grants permission to the City of Alexandria staff and Commission Members to visit, inspect, and photograph the building premises, land etc., connected with the application.

☒ **THE UNDERSIGNED**, having obtained permission from the property owner, hereby grants permission to the City of Alexandria to post placard notice on the property for which this application is requested, pursuant to Article IV, Section 4-1404(D)(7) of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

☒ **THE UNDERSIGNED**, hereby attests that all of the information herein provided and specifically including all surveys, drawings, etc., required to be furnished by the applicant are true, correct and accurate to the best of their knowledge and belief. The applicant is hereby notified that any written materials, drawings or illustrations submitted in support of this application and any specific oral representations made to the Director of Planning and Zoning on this application will be binding on the applicant unless those materials or representations are clearly stated to be non-binding or illustrative of general plans and intentions, subject to substantial revision, pursuant to Article XI, Section 11-207(A)(10), of the 1992 Zoning Ordinance of the City of Alexandria, Virginia.

Christopher Wu

Print Name of Applicant or Agent

3911 Brenda Lane

Mailing/Street Address

Annandale, VA 22003

City and State

Zip Code

[Signature]
Signature

20 March 2017

Date

2405488138

n/a

Telephone #

Fax #

chris@titanonezero.com

Email address

ACTION-PLANNING COMMISSION: _____ **DATE:** _____

ACTION-CITY COUNCIL: _____ **DATE:** _____

SUP #

3/27/17

PROPERTY OWNER'S AUTHORIZATION

As the property owner of Bogle Center located at 4601 Eisenhower Avenue, I hereby
(Property Address)

grant the applicant authorization to apply for the Research and Testing use as
(use)

described in this application.
4601 Eisenhower Associates, LLC

By: Bruce W. Henry, Manager
Name:

Phone 703-548-2100

Please Print
Address: 300 N Washington St, Ste 204, Alexandria VA 22314

Email: bwh@henrylaw.com

Signature: 

Date: 3/17/17

1. Floor Plan and Plot Plan. As a part of this application, the applicant is required to submit a floor plan and plot or site plan with the parking layout of the proposed use. The SUP application checklist lists the requirements of the floor and site plans. The Planning Director may waive requirements for plan submission upon receipt of a written request which adequately justifies a waiver.

☐ Required floor plan and plot/site plan attached.

☐ Requesting a waiver. See attached written request.

2. The applicant is the (check one):

☐ Owner

☐ Contract Purchaser

☒ Lessee or

☐ Other: _____ of the subject property.

State the name, address and percent of ownership of any person or entity owning an interest in the applicant or owner, unless the entity is a corporation or partnership, in which case identify each owner of more than three percent.

Bogle Industries, Inc. is the 100% owner of 4601 Eisenhower Associates, LLC. The Irrevocable Bogle Trust owns 100% of the voting stock of Bogle Industries, Inc.

TITAN ONE ZERO, LLC is owned by Christopher Wu and Anh "Jimmy" Le. Each owner has

a 50% interest in TITAN ONE ZERO, LLC

Christopher Wu - 750 Port Street APT 2029 Alexandria VA 22314 - 50% Owner
TITANONEZERO

Anh "Jimmy" Le - 3911 Brenda Lane Annandale VA 22003 - 50% Owner TITANONEZERO

OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Christopher Wu	750 Port Street APT 2029 Alexandria, VA 22314	50%
2. Anh "Jimmy" Le	3911 Brenda Lane Annandale, VA 22003	50%
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at 4601 Eisenhower Avenue (address), unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. 4601 Eisenhower Associates, LLC	4601 Eisenhower Avenue, Suite 201, Alexandria, VA 22314	100% (legal title)
2. Bogle Industries, Inc.	Same as above	100% (4601 Eisenhower Associates, LLC)
3. Irrevocable Bogle Trust	Same as above	100% (voting stock in Bogle Industries, Inc.)

3. Business or Financial Relationships. Each person or entity indicated above in sections 1 and 2, with an ownership interest in the applicant or in the subject property are required to disclose any business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the 12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review. All fields must be filled out completely. Do not leave blank. (If there are no relationships please indicate each person or entity and "None" in the corresponding fields).

For a list of current council, commission and board members, as well as the definition of business and financial relationship, [click here](#).

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. 4601 Eisenhower Associates, LLC	None	None
2. Bogle Industries, Inc.	None	None
3. Irrevocable Bogle Trust	None	None

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

20 March 2017

Christopher Wu

Date

Printed Name

Signature

SUP # _____

USE CHARACTERISTICS

4. The proposed special use permit request is for (check one):
☒ a new use requiring a special use permit,
☐ an expansion or change to an existing use without a special use permit,
☐ an expansion or change to an existing use with a special use permit,
☐ other. Please describe: _____
5. Please describe the capacity of the proposed use:
- A. How many patrons, clients, pupils and other such users do you expect?
Specify time period (i.e., day, hour, or shift).
5-10 Clients: Normal Day 0700-1800
- B. How many employees, staff and other personnel do you expect?
Specify time period (i.e., day, hour, or shift).
4-10 Employees: Normal Day 0600-2000
6. Please describe the proposed hours and days of operation of the proposed use:
- | | |
|---|---|
| Day:
<u>Monday Tuesday Wednesday Thursday Friday Saturday Sunday</u> | Hours:
<u>Normal Hours 0600-2000</u> |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
7. Please describe any potential noise emanating from the proposed use.
- A. Describe the noise levels anticipated from all mechanical equipment and patrons.
Machine (Power Equipment) noise level less than 70 db.
- B. How will the noise be controlled?
Noise will be controlled by installing sound barrier materials on walls near machines. This will ensure no noise over 70 decibels will be emanating from our space and will remain below the 75 db maximum threshold.

SUP.# _____

8. Describe any potential odors emanating from the proposed use and plans to control them:

Not Applicable

9. Please provide information regarding trash and litter generated by the use.

- A. What type of trash and garbage will be generated by the use? (i.e. office paper, food wrappers)
Office paper, Recyclable Material (Cardboard, Plastic Bottles).
- B. How much trash and garbage will be generated by the use? (i.e. # of bags or pounds per day or per week)
less than 10 pounds per day.
- C. How often will trash be collected?
Minimum 1 time a week.
- D. How will you prevent littering on the property, streets and nearby properties?
All work based on this permit will occur within the confines of the leased space. Littering will be prevented by ensuring our employees utilize the appropriate trash and recycling receptacles in the leased property.

10. Will any hazardous materials, as defined by the state or federal government, be handled, stored, or generated on the property?

☐ Yes. ☒ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

SUP # _____

- 11.** Will any organic compounds, for example paint, ink, lacquer thinner, or cleaning or degreasing solvent, be handled, stored, or generated on the property?

☒ Yes. ☐ No.

If yes, provide the name, monthly quantity, and specific disposal method below:

All Purpose Bathroom Cleaner, 1 bottle per month, storage and disposal will follow manufacturer MSDS guidelines.

- 12.** What methods are proposed to ensure the safety of nearby residents, employees and patrons?
A requirement for all employees is to undergo annual safety training, which will ensure proper procedures are utilized on site that will ensure safety of nearby residents, employees, and patrons.

ALCOHOL SALES

- 13.** A. Will the proposed use include the sale of beer, wine, or mixed drinks?

☐ Yes ☒ No

If yes, describe existing (if applicable) and proposed alcohol sales below, including if the ABC license will include on-premises and/or off-premises sales.

SUP # _____

PARKING AND ACCESS REQUIREMENTS

14. A. How many parking spaces of each type are provided for the proposed use:

125 _____ Standard spaces
_____ Compact spaces
4 _____ Handicapped accessible spaces.
_____ Other.

Planning and Zoning Staff Only

Required number of spaces for use per Zoning Ordinance Section 8-200A _____

Does the application meet the requirement?

☐ Yes ☐ No

B. Where is required parking located? (check one)

☒ on-site

☐ off-site

If the required parking will be located off-site, where will it be located?

PLEASE NOTE: Pursuant to Section 8-200 (C) of the Zoning Ordinance, commercial and industrial uses may provide off-site parking within 500 feet of the proposed use, provided that the off-site parking is located on land zoned for commercial or industrial uses. All other uses must provide parking on-site, except that off-street parking may be provided within 300 feet of the use with a special use permit.

C. If a reduction in the required parking is requested, pursuant to Section 8-100 (A) (4) or (5) of the Zoning Ordinance, complete the PARKING REDUCTION SUPPLEMENTAL APPLICATION.

☐ Parking reduction requested; see attached supplemental form

15. Please provide information regarding loading and unloading facilities for the use:

A. How many loading spaces are available for the use? 1 _____

Planning and Zoning Staff Only

Required number of loading spaces for use per Zoning Ordinance Section 8-200 _____

Does the application meet the requirement?

☐ Yes ☐ No

SUP # _____

- B. Where are off-street loading facilities located? Behind the building in the parking lot.
- C. During what hours of the day do you expect loading/unloading operations to occur?
Normal Business hours 0600-2000.
- D. How frequently are loading/unloading operations expected to occur, per day or per week, as appropriate?
One to two times a day.
16. Is street access to the subject property adequate or are any street improvements, such as a new turning lane, necessary to minimize impacts on traffic flow?
Current street access is adequate, no street improvements are necessary.

SITE CHARACTERISTICS

17. Will the proposed uses be located in an existing building? ☒ Yes ☐ No
- Do you propose to construct an addition to the building? ☐ Yes ☒ No
- How large will the addition be? _____ square feet.

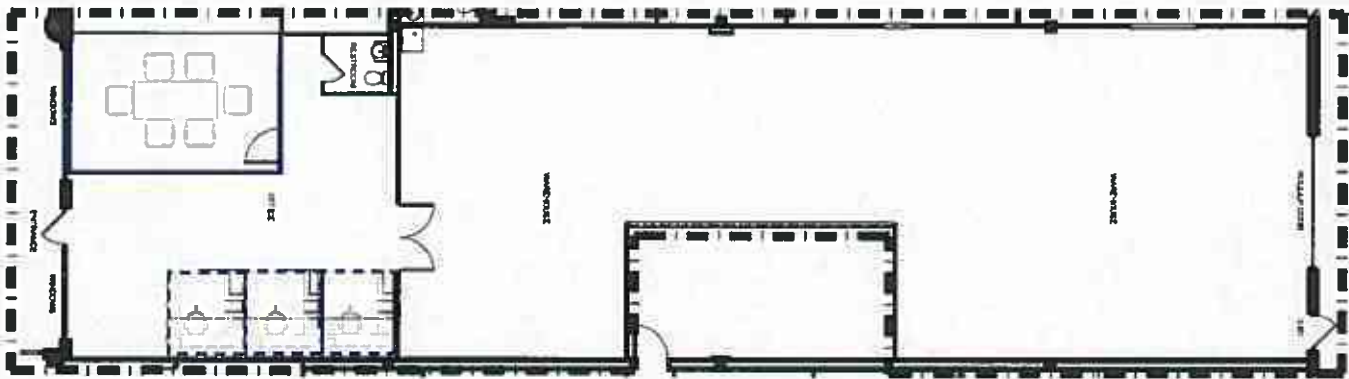
18. What will the total area occupied by the proposed use be?
- 3114 sq. ft. (existing) + 0 sq. ft. (addition if any) = 3114 sq. ft. (total)

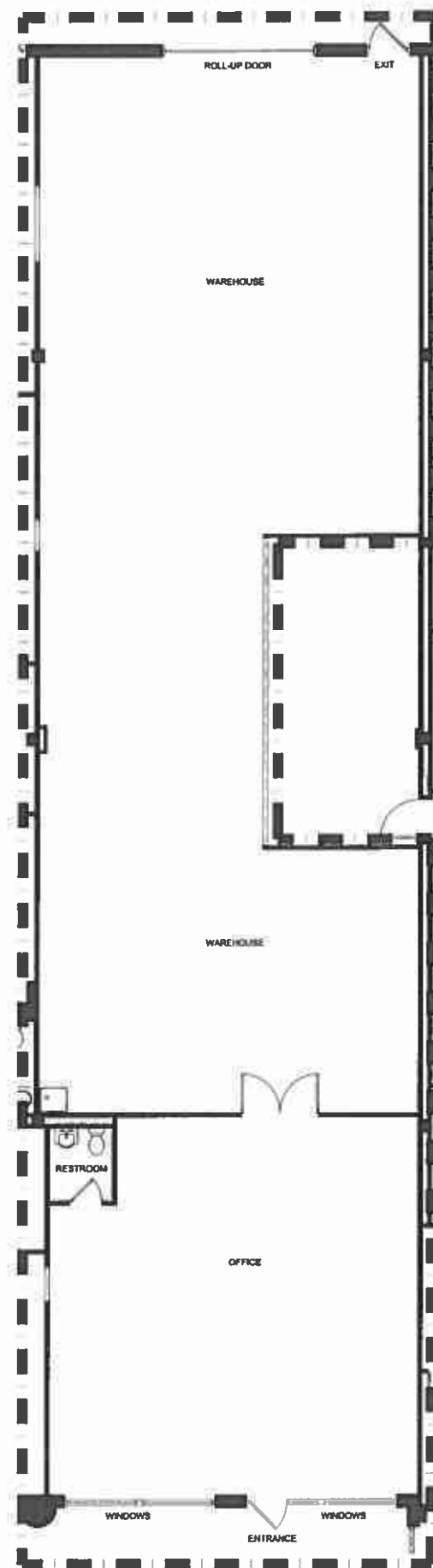
19. The proposed use is located in: (check one)
- ☐ a stand alone building
- ☐ a house located in a residential zone
- ☐ a warehouse
- ☐ a shopping center. Please provide name of the center: _____
- ☐ an office building. Please provide name of the building: _____
- ☒ other. Please describe: Office/Warehouse Building Park - Bogle Business Center

End of Application

Proposed Layout

Blue lines are proposed areas for
cubicle divider walls.





3,114 SF

TITANONEZERO
111 CLERMONT AVE.
ALEXANDRIA, VA 22034

FLOOR PLAN

03-08-17

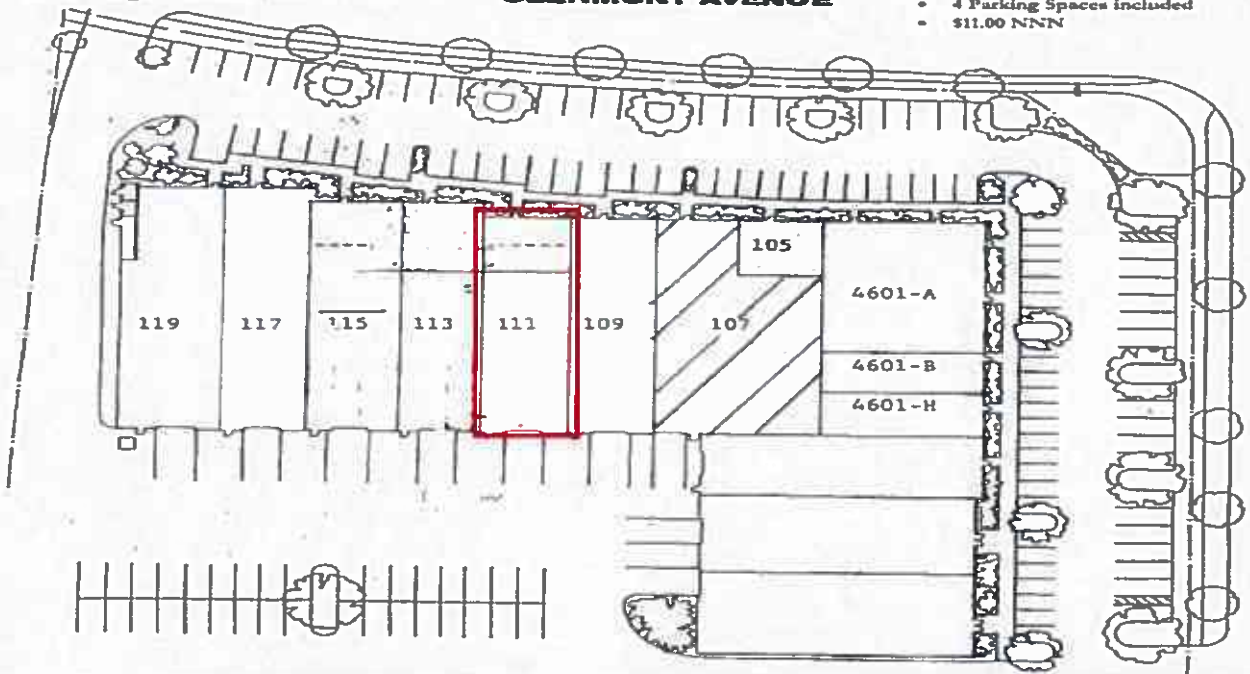
1/8" = 1'-0"

THE MARK WINKLER COMPANY
Richard M. Meadows
703.578-7738
rmeadows@markwinkler.com

CLERMONT AVENUE

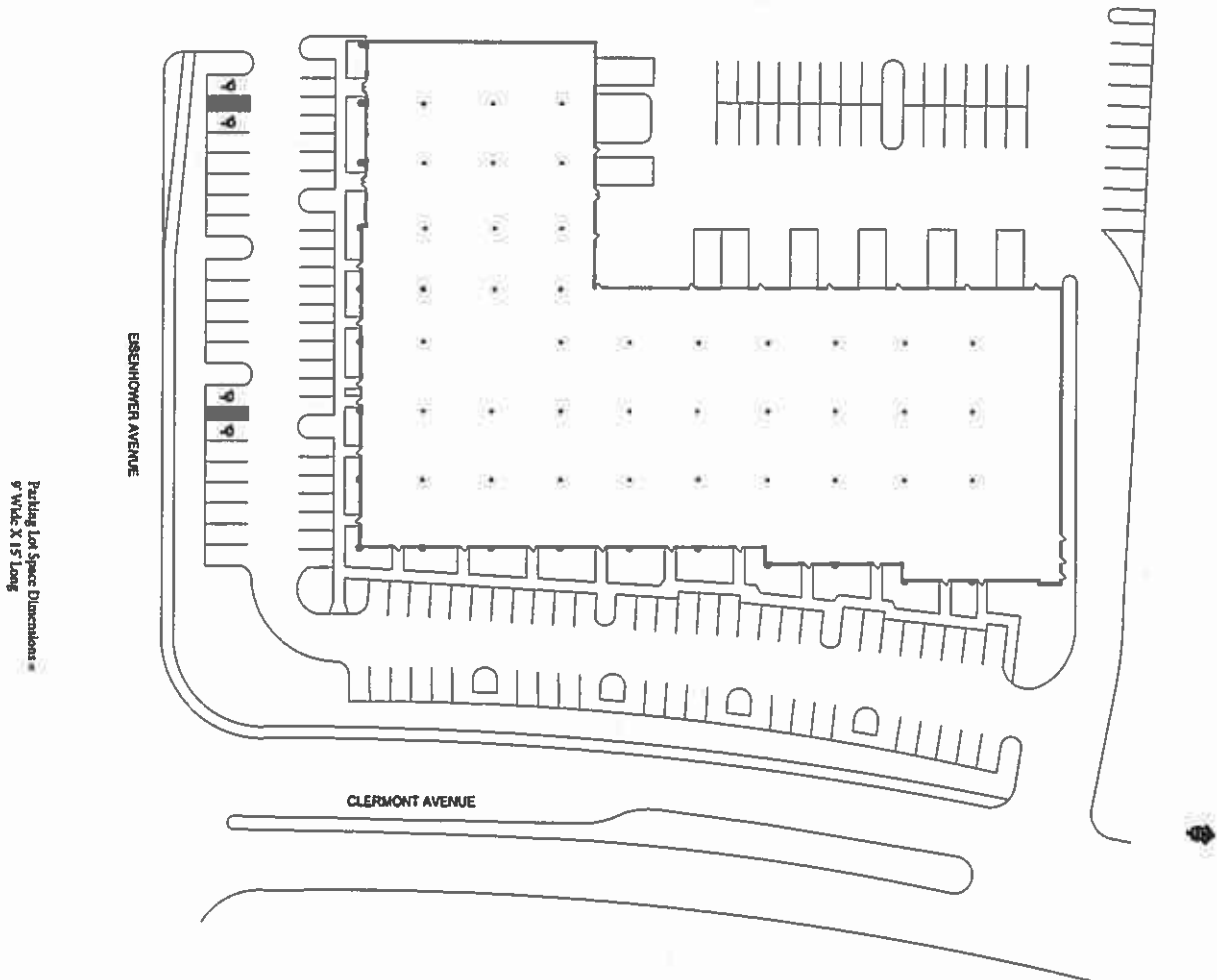
- 5,580 Square Feet
- 2004 Operating and Taxes \$2.19 per square foot
- 4 Parking Spaces included
- \$11.00 NNN

4601 EISENHOWER AVENUE, ALEXANDRIA, VIRGINIA



EISENHOWER AVENUE

The information shown has been obtained from sources believed reliable. While we do our best to ensure, we have not verified it and make no guarantee, warranty or representation about it. It is your responsibility to independently confirm its accuracy and completeness. Any projections, opinions, assumptions or estimates used are for example only and do not represent the current or future performance of the property. The value of this transaction is your records on tax and other matters which should be evaluated by your tax.

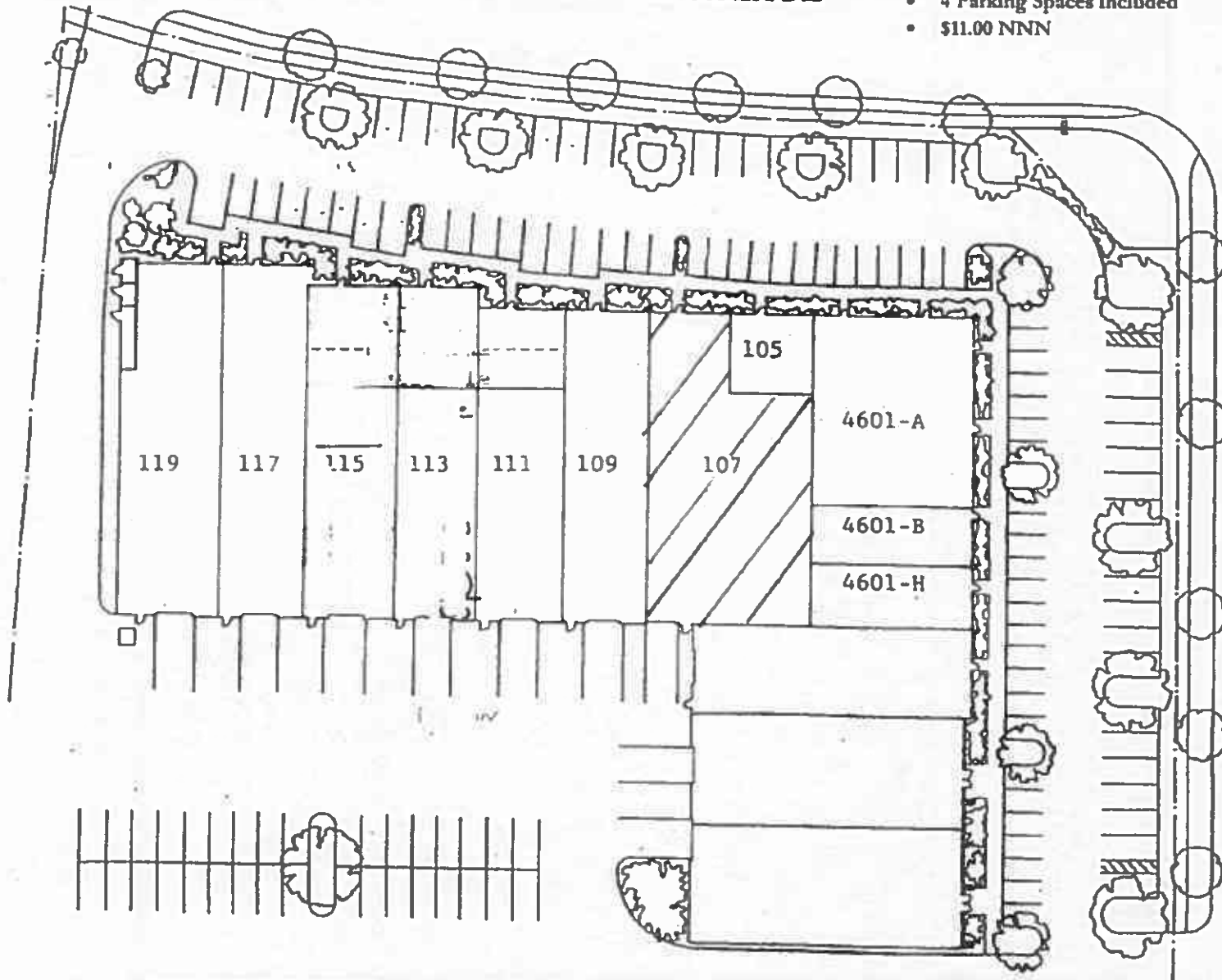


THE MARK WINKLER COMPANY
 Richard M. Meadows
 703-578-7738
 rmeadows@markwinkler.com

CLERMONT AVENUE

- 5,580 Square Feet
- 2004 Operating and Taxes \$2.19 per square foot
- 4 Parking Spaces included
- \$11.00 NNN

4601 EISENHOWER AVENUE, ALEXANDRIA, VIRGINIA



EISENHOWER AVENUE

The information above has been obtained from sources believed reliable. While we do not doubt its accuracy, we have not verified it and make no guarantee, warranty or representation about it. It is your responsibility to independently confirm its accuracy and completeness. Any projections, opinions, assumptions or estimates used are for example only and do not represent the current or future performance of the property. The value of this transaction to you depends on tax and other factors which should be evaluated by your tax advisor.

TITANONEZERO

Founded in 2014, TITANONEZERO is a Virginia-based, minority-owned, small business which provides mission critical systems and professional services in both the Commercial and Public Sectors.

TITANONEZERO reaches and supports its partners and clients anywhere and everywhere around the world by using technology to drive innovation and allow associates to conduct business more efficiently. The avant-garde Assess, Control, & Enhance (ACE) approach streamlines the conventional models to deliver sustainable and repeatable processes – with flexibility to adapt to changing requirements and new solutions. It offers leading edge solutions that present focused-end results which are crucial in today's world of adaptive applications and solutions such as cloud-based technologies and managed services.

In the office portion of the Eisenhower Office Space, TITANONEZERO employees will be supporting our professional services business in Computer & Network Engineering, Business Administration, Marketing Activities, and Research.

In the warehouse portion of the Eisenhower Office Space, TITANONEZERO employees will be supporting the Mission Critical Systems business which focuses on Rapid Prototyping and Engineering Design and Integration.

Example Integration work:

TITANONEZERO would receive parts and hardware from various vendors and complete integration to build a final test system. Parts from vendors may include, small board embedded computers, power controllers, batteries, fans, propellers, antennas, monitors, etc. All of the work will be integration to form one test system or onto a vehicle or platform.

Example Prototyping work:

Prototyping work would involve creating an experimental program that would be loaded onto a computer or creating a simulation that would be loaded onto a computer. Additionally, prototyping would include creating test parts with a 3D printer or CNC Machine, which would then be sent out to a vendor to produce the final part to be integrated into a system.

How the two may come together:

In order to complete integration work, TITANONEZERO at times needs to build a new holder for a circuit board or computer and may prototype the holder with a 3D printer or CNC machine prior to sending it to a vendor to produce the final part for integration to ensure proper fit.

TITANONEZERO

TITANONEZERO Prototyping Explained

Computer Hardware Integration

The two (1 and 2) photos below show examples of computer hardware we may purchase and integrate into custom boxes (also procured) for rapid prototyping of computer systems, communications systems, or other test boxes.



Photo 1



Photo 2

The two (3 and 4) photos below show examples of hardware we will integrate into a custom box as well as us test fitting the computer board in a 3D printed box (one picture shows a white box and the other shows a black box). These boxes (white and black) were 3D printed to allow us to test fit the computer board. After we confirmed the right size box we sent this box out for official build at a partner business or vendor.

3D Printing for Test Fitting Parts



Photo 3



TITANONEZERO

Photo 4

Custom Integration

The photo below (5) shows a cable that we would create during our rapid prototyping when we need a cable to test our systems. We purchase various parts (connectors and cables) from various companies to create this.

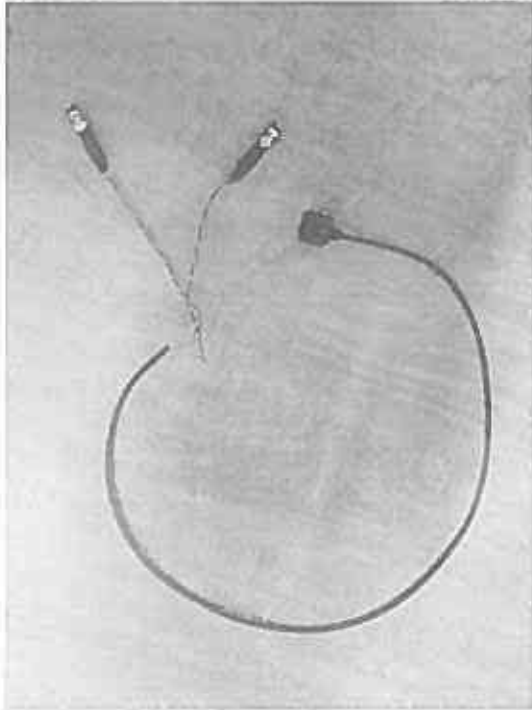


Photo 5

The photo below (6) shows integration of various hardware into a custom antenna mount that a vendor provided to us. The antenna is the white disk in the center of the carbon fiber mount. Additionally, our work is to program computers as show with the computer plugged into the small board computer.

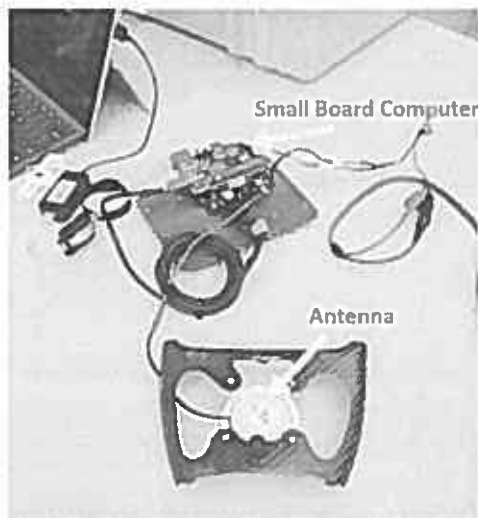


Photo 6

TITANONEZERO

This picture (7) shows two different things our company plans to do in the warehouse space. The unmanned system is the blue surfboard object which is a robot that operates in the ocean. We integrate payloads (computer and communications systems) into this robot. One thing we would integrate in is the antenna systems (white masts x2). Other things are computers built into the surfboard itself.

The other work depicted in this picture is the mount that the blue unmanned system (surfboard) is sitting on. At times we may work with systems that are new and new custom deployment systems (racks and cranes) may need to be installed onto trucks or small boats.



Photo 7

The photo (8) below shows integration work on board a small boat. We had to install a mount onto the small boat to be able to install our computer on top of it.

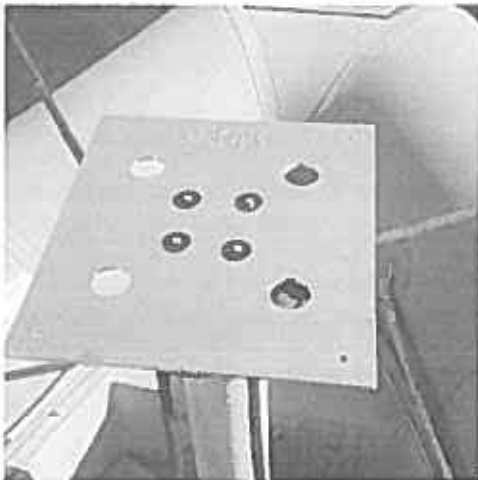


Photo 8

TITAN ONE ZERO

The below photos are examples of desktop machines we may use to prototype a part before sending the design to a vendor to create our final part. We first create our design in 3D software on computers and then prototype them with one of these desktop machines to test fit the parts.



Specification Sheets are attached.

- F1 – Applicant should provide the City with a complete list of equipment and chemicals to be used at this facility. A description of waste disposal from its operation should be included in the application as well.
- 1. Whiteboards
 - a. No chemicals or waste
- 2. Desktop Computers
 - a. No chemicals or waste
- 3. Laptop Computers
 - a. No chemicals or waste
- 4. Tablet Computers
 - a. No chemicals or waste
- 5. Cellular Phones
 - a. No chemicals or waste
- 6. Typewriter
 - a. No chemicals or waste
- 7. Plotter Printer
 - a. Chemicals
 - i. Recyclable Ink in Print Cartridges
 - b. Potential Material Waste
 - i. Recyclable Ink in Print Cartridges
 - ii. Recyclable Paper
- 8. Desktop Printer
 - a. Chemicals

TITAN ONE ZERO

- i. Recyclable Ink in Print Cartridges
 - b. Potential Material Waste
 - i. Recyclable Ink in Print Cartridges
 - ii. Recyclable Paper
 - 9. Coffee Machine
 - a. Chemicals
 - i. Caffeine
 - ii. Water
 - b. Potential Material Waste
 - i. Water
 - ii. Used Coffee Grinds
 - 10. Shopbot Desktop Max
 - a. No chemicals
 - b. Potential Material Waste
 - i. Recyclable Wood
 - ii. Recyclable Plastic
 - iii. Recyclable Aluminum
 - 11. Makerbot 3D Printer
 - a. No chemicals
 - b. Potential Material Waste
 - i. Recyclable Plastic
 - 12. Cross-cut Shredder
 - a. No chemicals
 - b. Potential Material Waste
 - i. Recyclable Paper
- F2 – Is there a requirement for ventilation and/or air and water pollution control devices associated with this operation?

There are no requirements for ventilation and/or air and water pollution control devices associated with any equipment for our operation.

MakerBot Replicator Z18 3D PRINTER

QUICK START GUIDE



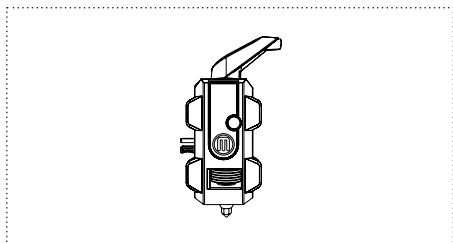
Go to **MakerBot.com/GetStarted**

- Download MakerBot Print to your computer.
- Download MakerBot Mobile to your Smart Phone.
- Download the Replicator Z18 User Manual and review safety information.
- If you're unable to go online, turn to the next page for offline setup.

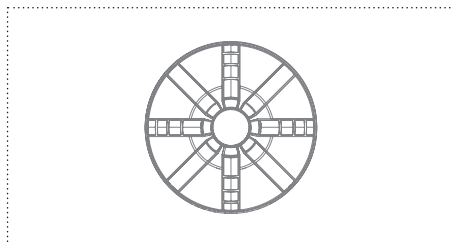


Make sure to read all safety information before operating your 3D printer.

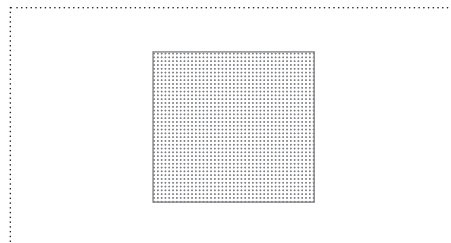
1 CHECK BOX CONTENTS



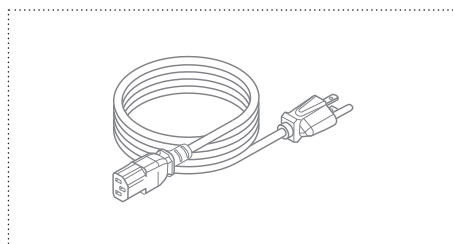
Smart Extruder+ for Replicator® Z18



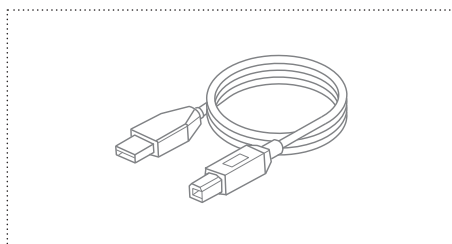
Large MakerBot® PLA Filament spool



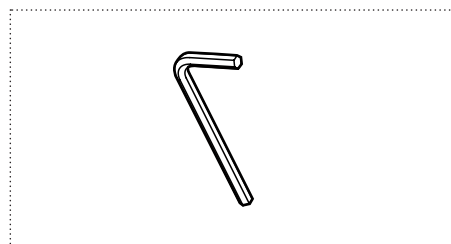
Build plate tape



Power cord

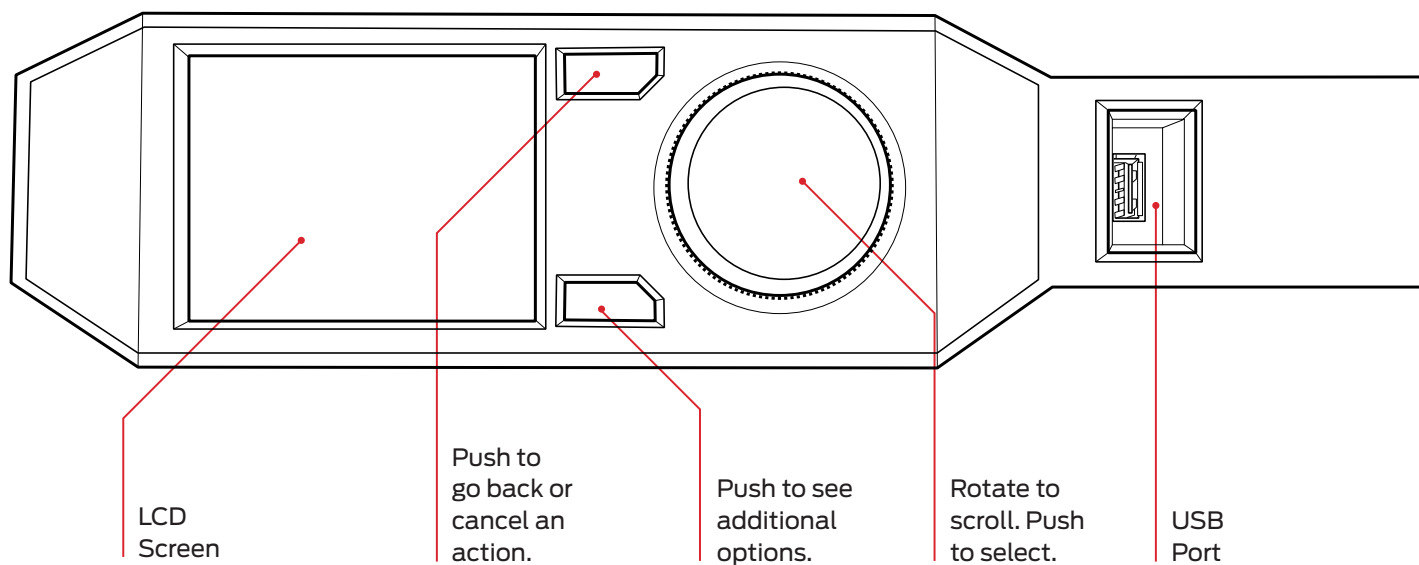


USB A-to-B cable



5 mm hex wrench

2 GET TO KNOW THE CONTROL PANEL

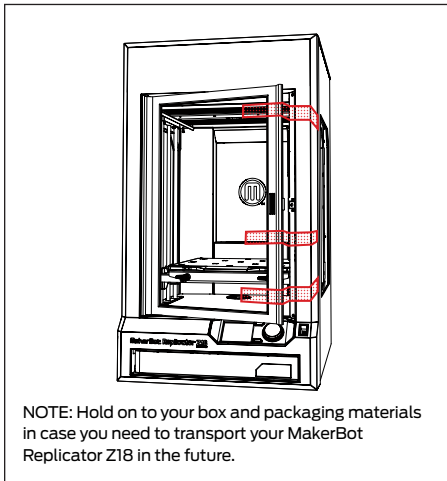


SUPPORT

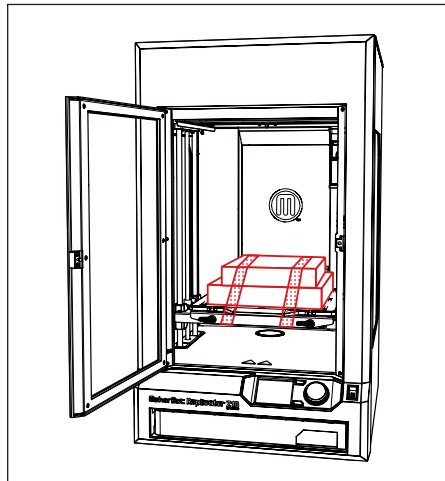
Visit our Support page for troubleshooting guides and advanced information.

support.makerbot.com

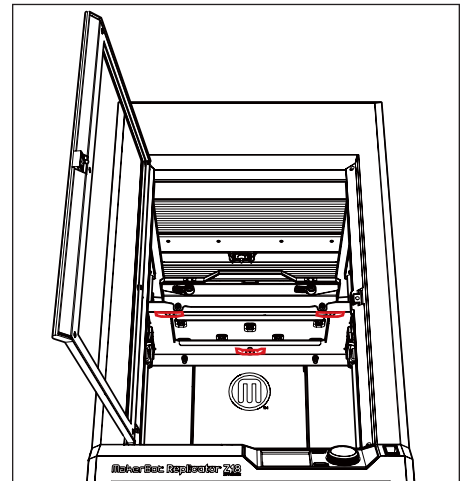
1. Remove tape



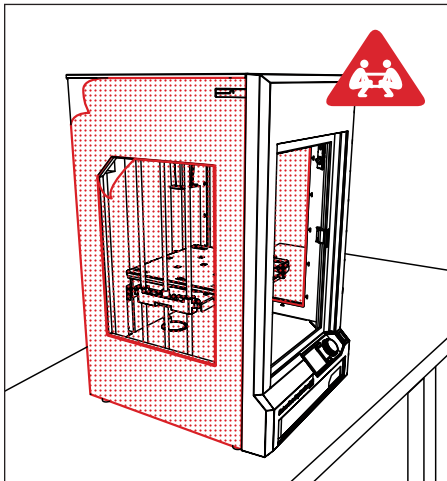
2. Remove filament and accessory box



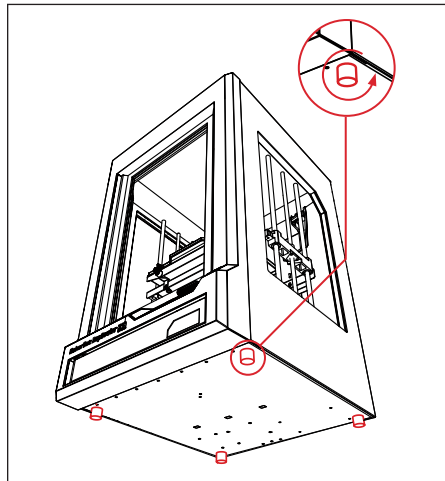
3. Remove tape from leveling knobs



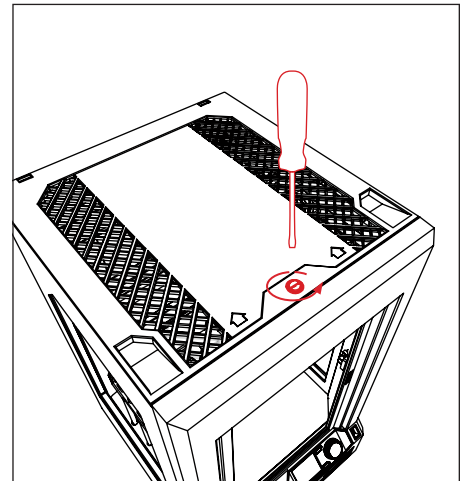
4. Place on a stable surface and remove the protective film



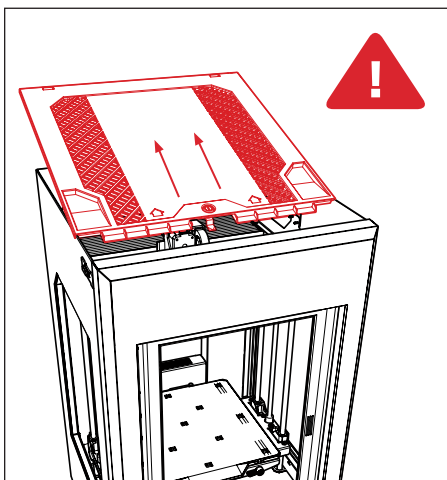
5. Adjust feet for stability



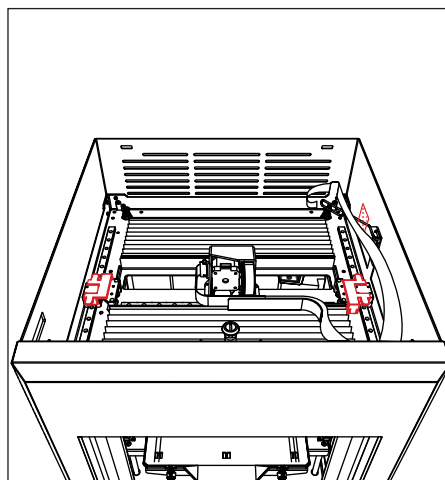
6. Unlock lid



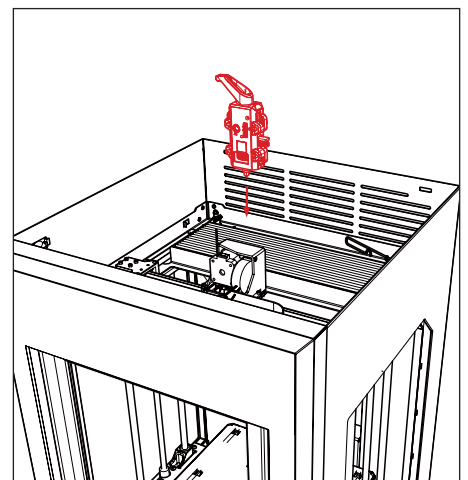
7. Remove lid



8. Remove clips and tape



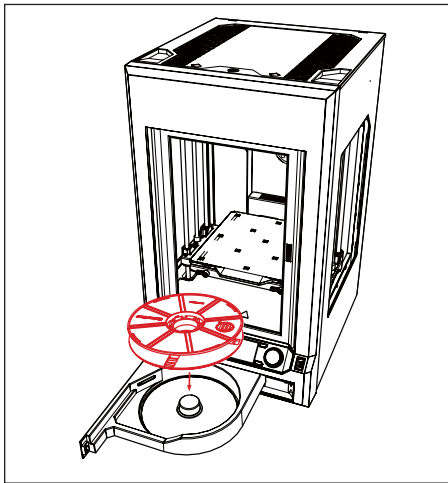
9. Install Smart Extruder+



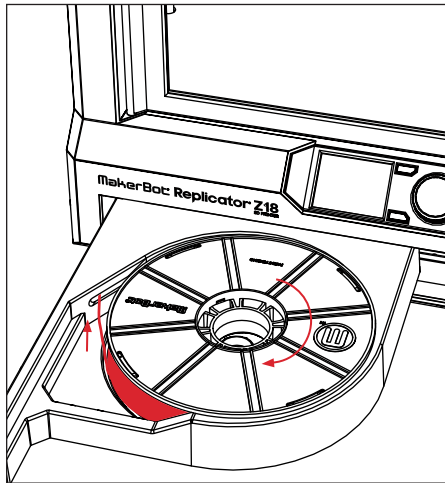
 Caution: Two people are required to lift the MakerBot Replicator Z18. Do not lift alone. To prevent injury, lift with your legs, not your back.

 Exercise caution when accessing the top compartment, and always keep it locked when your MakerBot Replicator Z18 is in use. It contains hot surfaces and moving parts.

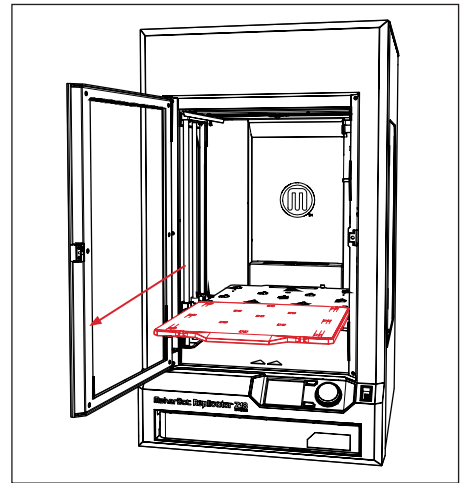
10. Load filament spool



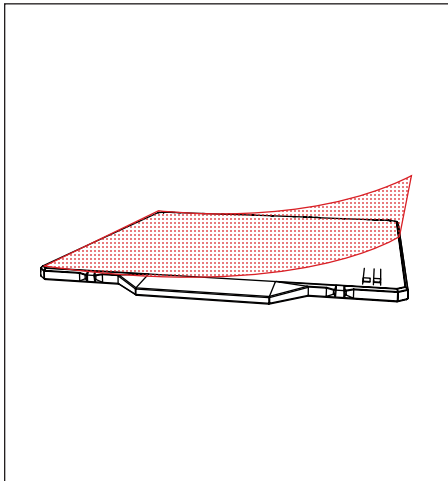
11. Feed filament by hand until it emerges in top compartment



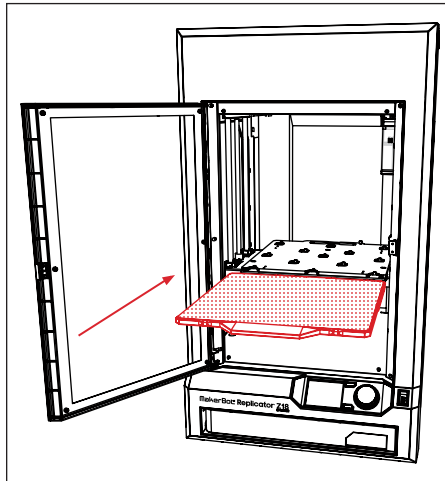
12. Rotate latches and remove build plate



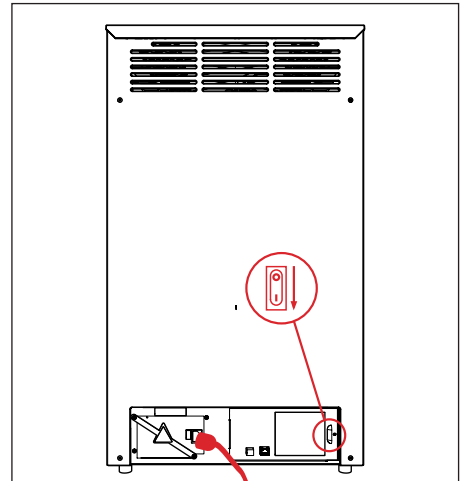
13. Apply tape to build plate



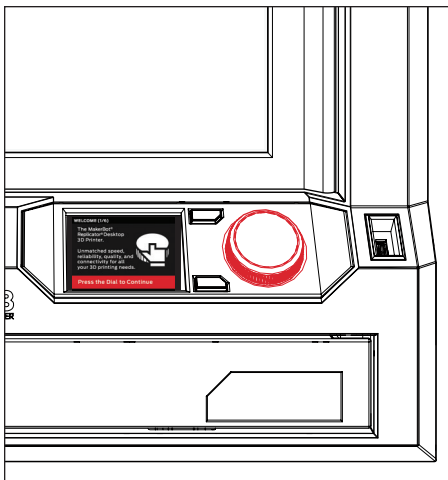
14. Replace build plate



15. Plug in and power on



16. Press dial and follow instructions



CONTINUE ON THE MAKERBOT APP
To continue setting up your MakerBot Replicator Z18,
install MakerBot on your desktop or mobile device.

MakerBot.com/GetStarted

The ShopBot Desktop MAX

The power and precision of the ShopBot Desktop – in a larger format.

With a tool bed measuring 36" x 24", the Desktop MAX is great for an endless variety of cutting, drilling, and carving operations on a variety of materials including: wood, MDF, plastics, foams, vinyl, and aluminum. It's great for rapid prototyping, and taking your projects all the way to finished products

Choose from the versatile easy-to-remove aluminum tool deck, enabling a variety of end-machining processes or the Universal Vacuum hold down deck kit for quick hold down of larger sheet goods.



SPECIFICATIONS

Desktop MAX with Industrial Spindle [HSD 1hp spindle]

- XYZ Movement: 38" x 25" x 5.5" (965.2mm x 635mm x 139.7mm)
- Cutting Volume: 36" x 24" x 3.5" (914.4mm x 609.6mm x 88.9mm) [e.g. with 2" long cutter]
- Footprint with Spindle: 48" x 39" x 30"(h) [Spindle VFD fits to right side of gantry]
- Weights:
 - 127 lbs [no deck, no cutter]
 - 171 lbs [total weight with aluminum deck and spindle]
 - 216 lbs [total weight with universal vacuum hold down deck kit and spindle]
- Crate dimensions: 44.5" x 55.75" x 37.5", weight: 217 lbs, loading dock, forklift or lift gate service is recommended
- Frame: Machined aluminum members that are bolted together
- Linear Bearings: Fully supported precision linear guides and blocks on each axis [THK]
- 2 Deck Options: Aluminum "T" slot extrusion, with MDF spoil board [optional, removable] OR Universal Vacuum Hold Down Deck with ShopBot Vacuube™ kit, with plywood plenum and MDF spoil board
- Drive System: 4 Motors with integral, teflon-coated precision lead screw with anti-backlash technology on each axis (2X, 1Y, 1Z)
- Integral Guard and Dustskirt
- Cut Speed: 4 inches per second (100mm/sec)
- Jogging Speed: 6 inches per second (150mm/sec)
- Resolution: 0.00025" (.00635mm)
- Electrical System Requirements: 120V @ 15Amps
- ShopBot Control System software to run your CNC
- Each new ShopBot comes bundled with two powerful software programs to create CNC projects
- Includes simple, quick start set-up guide

Model	Nominal Cutting Area*	Total Tool Movement Area*	Footprint**
#18001 Desktop MAX 36-24 with Aluminum Deck	36" x 24" x 3.5" .91m x .61m x .089m	38" x 25" x 5.5" .97m x .64m x .14m	Spindle 48" x39" x 30" 1.22m x .99m x .76m
#18005 Desktop MAX 36-24 with Universal Vacuum Hold Down Deck Kit	36" x 24" x 3.5" .91m x .61m x .089m	38" x 25" x 5.5" .97m x .64m x .14m	Spindle 48" x39" x 30" 1.22m x .99m x .76m

*Nominal Cutting area and Total Movement Area refer to the areas that can be covered using a single z-axis.

**Spindle VFD fits to the right side of the gantry.

Desktop MAX with Aluminum Deck and Industrial Spindle

The Desktop MAX with Aluminum Deck (general purpose deck) comes standard with an attached MDF spoil board and is considered our most versatile deck option for a wide variety of machining options. Because the Desktop MAX is completely

open underneath and the aluminum deck can be partially or completely removed, you can add widely available dovetailing or end-milling attachments. See the *Hold Down at a Glance* chart to the right for more information on hold down.



Desktop MAX with Universal Vacuum Hold Down Deck and Industrial Spindle

The Desktop MAX with Universal Vacuum Hold Down Deck kit includes a plywood plenum, MDF spoil board, and the ShopBot Vacuube™ for quick hold down of sheet goods. This deck option is not optimal for cutting small parts. There is additional environmental noise due to the vacuum motor and hearing protection is highly recommended (82db). See the *Hold Down at a Glance* chart to the right for more information on hold down.



Desktop MAX Mini Enclosure

The Desktop MAX Mini Enclosure allows you to keep hands safely out of your Desktop cutting area, and help keep chips and dust off your floor. Easily attaches to ShopBot Desktop MAX (either deck option) with included hardware. Enclosure is made from Duraplex - Impact resistant acrylic. Color shown in product rendering is for display purposes only, actual product is clear.



For other Desktop MAX accessories, see the last page or visit our website.




Visit our website or call 888-680-4466
to order your Shopbot Desktop MAX

We make
the tools
for making the
future.

ShopBot®
888-680-4466 • ShopBotTools.com

Hold Down at a Glance

Use this chart for reference on hold down options for our Desktop MAX model tools that are best suited for your projects.

	Aluminum "T" Slot Deck (general purpose deck)	Universal Vacuum Hold Down Deck Kit	Gasketed Vacuum Hold Down System (mounts to Aluminum T-Slot Deck)
			
Flexibility	Most Flexible – Allows for multiple hold down options.	Somewhat Flexible – Allows for some other hold down options to be used in conjunction with vacuum hold down.	Specific Usage – Requires the use of special fixtures for any part to be cut.
Material Setup Speed	Slowest of Available Options – Material has to be manually attached each time. Production volume would remain low unless a specialized clamping fixture is fitted.	Pretty Fast – For the vast majority of items, a blank would be placed on the bed and then the vacuum would be turned on. Production volume can be relatively high and can have a decent variety of parts with one setup. (Various signs, furniture parts, anything with medium-to-large sized parts cut out of flat stock would require no special setup.)	Fastest – With the use of specialized fixtures, a blank would be placed on the bed and then the vacuum would be turned on. Production volume can be EXTREMELY high with this method.
Type of Hold Down	Screws, nylon nails, tabs in the toolpath, toggle clamps mounted in the t-slots, wedge clamps, and various other types of clamps.	Vacuum hold down, which can be supplemented with screws, tabs in toolpaths, and nylon nails for smaller parts that might break free.	Vacuum hold down. The addition of threaded holes to bolt down blanks for specific setups can be used if needed.
Type/Size of Parts	Small parts, large parts, and anything in-between, as long as there is an appropriate hold down method being used.	Optimal for large parts. Without the additional hold down from screws, nylon nails, or tabs, there is a size limitation of about 10 square inches for the smallest part. Anything smaller than that means that there is a risk of pieces breaking free of the vacuum seal. Ideal for larger items like signs or anything cut from flat stock.	Almost any size – as long as a fixture is used for it. Parts smaller than 2-3 square inches might require the addition of tabs or screws because parts of this size may break the vacuum seal.
Recommended Materials	Any material the machine is capable of cutting. (Woods, plastics, composites, non-ferrous metals.)	Recommended for cutting flat stock (sheets of wood, plastic, composites) ONLY. Not recommended for metal cutting without supplemental screws.	Any material the machine is capable of cutting. (Woods, plastics, composites, non-ferrous metals.)
Markets	Hobbyists, makers, maker pros, schools, woodworking, instrument making, furniture making, and prototyping. Can be used in production environments, but only with specialized clamping fixtures.	Anyone who uses mostly flat stock. Hobbyists, makers, maker pros, schools, woodworking, furniture making, or production environments. Particularly useful for signmakers.	Production environments with medium-to-large size runs of identical parts. Also appropriate for use when cutting identical-size blanks or when not cutting all the way through, i.e. Engraving/VCarving a variety of things on a standard set of blanks.
Miscellaneous	No additional environmental noise with this deck option.	A fairly significant amount of additional environmental noise is produced due to the vacuum motor. Hearing protection is HIGHLY recommended.	A small amount of additional environmental noise generated due to the vacuum pump. It is typically not much louder than the sound a spindle cutting makes.

SOFTWARE

No computer degree is needed to run a ShopBot! **Each new ShopBot includes** design software packages selected and bundled for project designing and tool-pathing. If you are primarily working in sheet goods, want to do v-carvings, and/or new to CNC? You may want to start with **VCavePro ShopBot Edition**. If you are primarily working in solids or blocks, already experienced with CAD, and/or have an engineering background? You may want to start with **Fusion 360**. These two powerful software packages include CAD/CAM to take your ideas to project designs to tool-pathing. The ShopBot Control System software that runs your CNC is also included.

We also offer software packages for use in signmaking, cabinet making and more. **Aspire by Vectric** is one of our most popular—great for designing and machining carved decorative panels and doors, custom millwork, moldings, signage, dimensional logos, jewelry, custom gifts and much more.

ShopBot Design Software Suite is compatible with many software programs, including: • AutoCAD • Rhino 3D • SketchUp • ArtCAM • Vector Art 3D • Cabinet Vision • EnRoute • KCDw • MasterCAM • MillWizard • OneCNC • Shape 3D • Vector CAD CAM • Visualmill • CabinetParts Pro • DeskProto • eCabinet System

FREE TECHNICAL SUPPORT

Whether you're new to digital fabrication or a veteran user of CNC technology, ShopBot is here to support your efforts. We provide **free technical support 7 days a week** from our headquarters in Durham, North Carolina. We also have a vibrant online community at talkshopbot.com, sharing tips and advice with other users of digital fabrication technology.

To contact tech support:
support@shopbottools.com

YOUR BUSINESS NETWORK

Digital fabrication and online communication — together they are playing an important role in reshaping manufacturing in the U.S. and around the world. The *distributed manufacturing* model, which brings on-demand production and the end user closer together, is also growing fast. ShopBot Tools is a leader in supporting these developments.

Our free online community, 100kGarages.com, can connect you with business opportunities around the country and the globe.

100kGarages.com
connect. collaborate. create.

ACCESSORIES

- The **Plotter Pen Bit** allows you to draw like a plotter. Draw signatures, logos or other images. Print large parts to scale before cutting expensive material.
- The **Drag Knife Bit** enables you to cut adhesive-backed sign vinyl, paper, cardboard and thin plastics (up to 1/32"). Create vehicle graphics, professional-quality signs, banners, magnets or parts from thin plastics.
- The **Diamond Drag Engraving Bit** allows you to engrave plastic, metal, glass and stone. Engrave signatures, logos or artwork. Create custom brass name tags for trophies/plaques or permanently engrave serial numbers and ID.
- You can also add **ShopBot's 3D Digitizing Probe** to make a copy of an object in 3D. Duplicate an existing 3D shape or a piece of decorative trim or molding. Very useful for luthiers, furniture makers and restoration work.
- The **Desktop Rotary Indexing Head** is similar to a lathe in that it allows you to horizontally rotate a part being cut or machined, except that it allows fully indexed control of the rotation. This way, you can carve anything you want in the round (resolution = 0.03 degrees)
- The **Vacuum Pump .3hp Kit** is a high pressure, low volume system that is ideal for repetitive projects made of non-porous materials. A closed gasketed setup without leaks is essential for best hold-down performance.

Visit our website or call 888-680-4466
to order your Shopbot Desktop MAX

We make
the tools
for making the
future.

ShopBot®
888-680-4466 • ShopBotTools.com

Re: Planning Commission

REVISED

Christopher Wu <chris@titanonezero.com>

Fri 5/19/2017 4:49 PM

To: Madeleine Sims <Madeleine.Sims@alexandriava.gov>;

Cc: Ann Horowitz <ann.horowitz@alexandriava.gov>; Jimmy Le <jimmy@titanonezero.com>;

Madeleine,

We have the capability to park 8-10 vehicles inside of our warehouse, this is in addition to the 5 reserved spaces in the open lot in front of and behind the unit we are potentially leasing. Also there is a lot with first come first served spaces available for tenants to use.

Thank you,
Chris

On May 19, 2017, at 9:19 AM, Madeleine Sims <Madeleine.Sims@alexandriava.gov> wrote:

Chris,

This email serves a reminder that your presence is required at the June 6, Planning Commission meeting at 7 p.m. at the City Hall Council Chambers, and the City Council meeting on June 24, at 9:30 a.m.

Please confirm via email your provided parking in the surface lot and how many vehicles can be parked in your warehouse space so that it can be included in your application. Failure to provide this information will result in the application being deferred to September. The Zoning Ordinance requires one parking space for every 400 square feet of space for your use (Sec.8-200(A)(17)). This information must be included in your application to be included in the report and presented to the Planning Commission and City Council. I need this information today.

Best,

Madeleine

Madeleine Sims | Urban Planner
Alexandria Department of Planning & Zoning
[301 King Street | Room 2100](#)
[Alexandria, Virginia 22314](#)

