

By this time, you have researched and picked a robotic mower brand and model following our [buyers guide](#). The following installation planning and parts list is assuming you have chosen an auto mower capable of covering up to 1.25 acres and is based upon buried boundary wire technology. Although non-boundary-wire technologies started releasing into the market in 2019/2020, most implementations are still using buried wire. Until the wireless technology performs more consistently and meets broader use cases, we see the boundary wire-based installations representing most of the installations today.

For this guide, we will plan on preparing a 4-acre area of your commercial property.

## **STEP 1 - TERMINOLOGY**

We'll start with some terminology before we get into the installation parts.

### **Auto mower**

We like to refer to these robotic mowers as Goats.

### **Zone**

We refer to these 1-acre areas as Pens that our Goats graze.

### **Charging Station**

These are docking stations used by the Goats to automatically charge themselves while they work

### **Power Source**

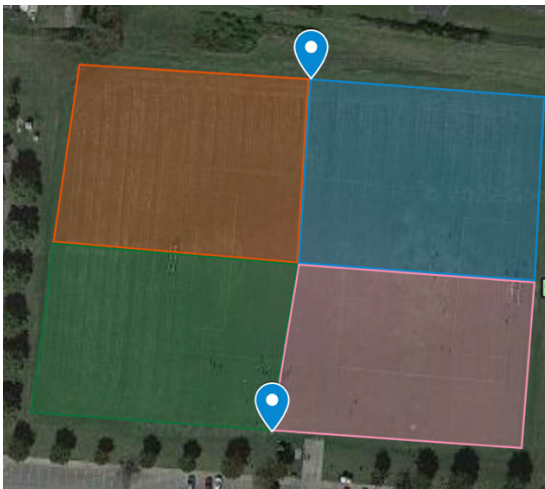
Each charging station (1 per pen) requires a standard 110V outlet within 6 feet of its planned location

### **Boundary Wire**

Buried wire that creates the Pen where the Goat will graze. This is an electrified perimeter that is like a pet fence

## **STEP 2 – MAPPING and PLANNING**

1. Identify and map out your 4-acre installation plot. Google My Maps is a great tool to draw four (4) 1-acre sections to guide you during your onsite installation. Here is an example of 4 pens (1-acre sections) of a soccer field.



2. The blue markers represent the location of charging stations. These “docking stations” provide a place for the Goats to recharge while they work. For traditional installations, a charging station is required for each Pen.

3. Electricity is required to power each charging station. Charging stations come with standard 110V plugs. In this example, the blue markers would provide at least two (2) 110 V outlets

4. Schedule an installation date that allows for two team members to allocate 3-4 hours to complete the installation, testing, and validation of each Pen (1 acre area)

**STEP 3 – PARTS and EQUIPMENT LIST**

Installation Tools and Supplies	Quantity	Purpose
Cable Layer/Digger	2	Buries boundary and guide wires for an automower installation. 2 diggers are recommended to speed up installation
Measuring Wheel	1	Measuring wheel measures the planned boundary wire length. Each automower vendor has limits on how much boundary wire can be used per pen to maintain signal strength for the Goat. 836 total linear feet around the perimeter of the pen equates to an acre and within the manufacturer specifications for a Goat capable of grazing an acre.
Wire Cutter	2	Each of the two team members will need a wire cutter to finish connections into the charging station, guide wire connections, and any cut wires during installation.
Wire Crimping Tool	2	Each of the two team members will need a wire crimping tool to attach terminals to the wires at the charging station
Wire Terminals	40	Typically five terminals are used to connect wires to each charging station. Extras are recommended since the terminals often do not attach after the first try.
Gel Connectors	50	At least 6 gel connectors are required to connect three guide wires to the boundary wire per pen. However, extras are needed to account for partial connections or additional cut wires during installation.
Wire Stakes	200	These plastic stakes help affix the final feet of the boundary and guide wires. They are also used to affix any wires not fully-buried in the ground (i.e., cut wires, guide-to-boundary wire connections)
Zip Ties	40	After the installation, zip ties are used to organize the wires at the charging station as well as the excess power cables and wires.
White Marking Spray Paint	8	Used to mark guide wires
Red Marking Spray Paint	8	Used to mark charging station location
Orange Marking Spray Paint	8	Used to mark boundary wires
Spray Paint Marking Wand	2	Used to make spraying lines easier and faster
Automowers/Goats	4	One robotic mower per pen is the most common solution in the market. My Goat has software enabling 2:1 and 4:1 ratios of pen to goat ratios to reduce cost.
Charging Stations	4	Each charging station requires a standard 110V outlet within 6 feet
Charging Station Power Bricks	4	Each charging station requires a power brick as well as a low voltage cables that connects between the power brick and the charging station
Charging Station Low Voltage Cables	4	Each charging station requires a power brick as well as a low voltage cables that connects between the power brick and the charging station
Wire Spools	7	Each 1-acre pen will use approximately 1.5 wire spools per pen. 1 extra wire spool is recommended to have on hand for excess needs
Goat Brushes	2	Thick brushes are used to brush off grass around the wheels, underside, and around critical sensors of each goat. Typically, a brushing is needed once to twice per week.
18-pack of Blades	2	36 total blades are needed to replace each of the three blades per automower once per week for the first 3 weeks
Wire Finder	1	The wire finder is used to locate cut boundary and/or guide wires