Estate Gate™

By MAZZA DESIGNS, INC.
9737 W Nova Ave • Littleton CO 80127 • 303-948-5169

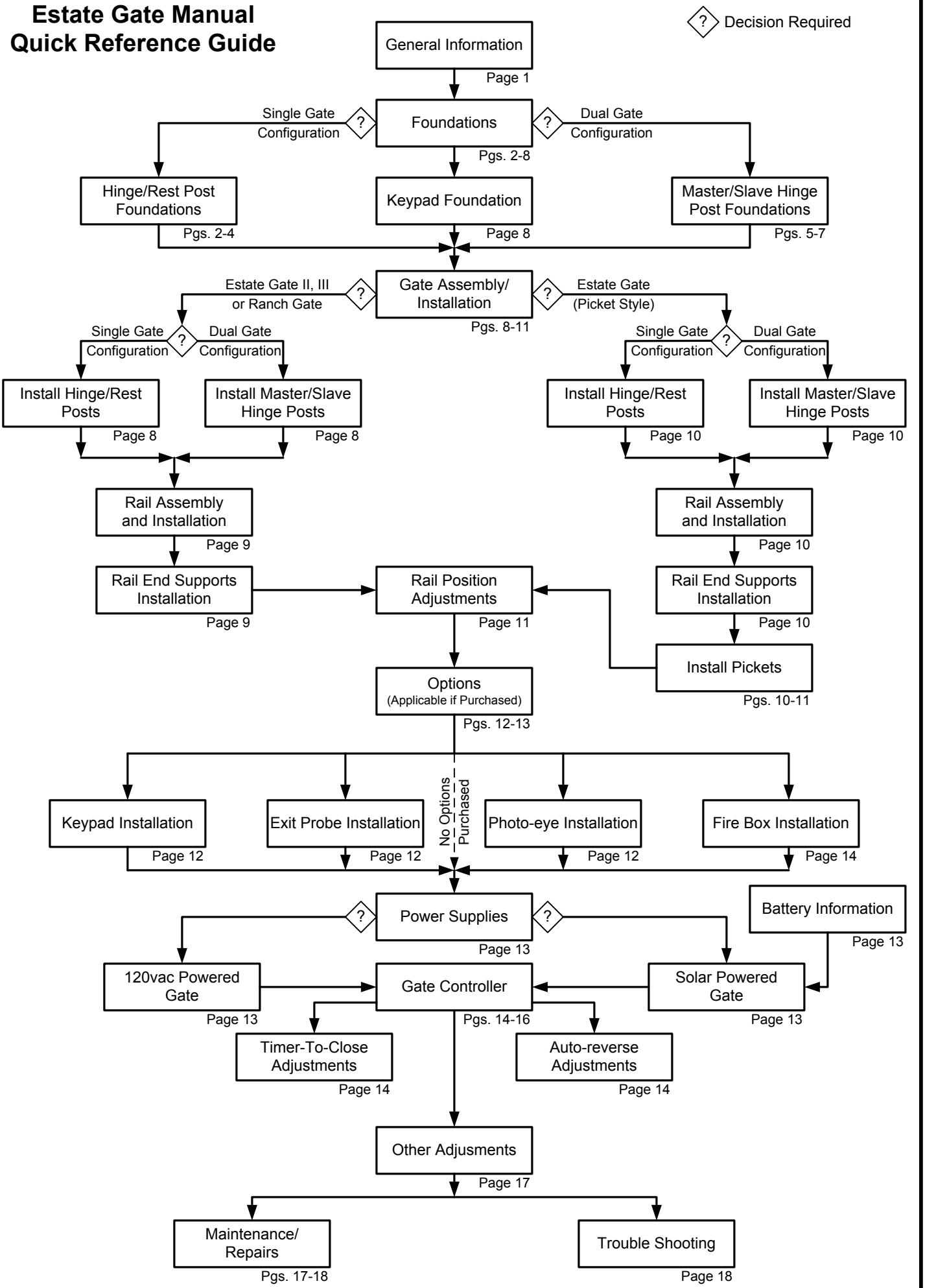
Estate Gate (Picket Style)

Estate Gate III

Ranch Gate

Owners Manual and Installation Instructions

Estate Gate Manual
Quick Reference Guide



BASIC INSTALLATION INSTRUCTIONS

1. Layout the foundations and complete per section 2.0.
2. Wait for the concrete to cure.
3. Bolt the hinge post and rest post to the foundations.
4. Ground the gate with a ground rod and wire to the lug on the hinge post.
5. **Install the battery** (Section 5.0).
6. **Install the rails.**

   A. Using the momentary switch in the gate, operate the gate while pulling the pivot arm down. Turn the gate off as soon as it stops. It will not go all the way down.

   B. Slide a rail on.

   C. Use the switch or the remote control transmitter to run the gate and stop it to allow the remaining rails to slide on.

   For Picket gates:

   A. Install the top rail by taking the first three picket bolts out and sliding the rail on.

   B. Replace the bolts and put the spacer between the rail and pivot arm.

7. Operate the gate to close it. Pull down on the rail to help it.
8. Finish the rail assembly per section 3.0.
9. Follow the instruction manual to complete the installation and electrical connections.

IMPORTANT: THE RAILS ARE PART OF THE MECHAMISM TO CLOSE THE GATE. THEY MUST BE ON THE PIVOT ARMS FOR THE GATE TO WORK.

REFER TO THE ESTATE GATE OWNERS MANUAL
FOR COMPLETE INSTRUCTIONS

Table Of Contents

Drawings

Figures/Illustrations

Important Information:

Shipping Address (for returns):
Mazza Designs, Inc.
9737 Nova Avenue
Littleton CO 80127

Phone Numbers (for service):
Toll Free: 1-877-948-5169
Local: 303-948-5169

A VERTICAL PIVOT GATE

Estate Gate™

SECURING YOUR PROPERTY AND YOUR PRIVACY

A complete gate and operator in one package

Estate Gate™ The aluminuum pickets provide beauty and security to your entry. Using either solar or AC power, the gate can be placed in any location. Custom styles are available. Maximum opening 14'

Offering a complete line of vertical pivot gates

Estate Gate III™ The 2x5 aluminum rails have the look of a three rail fence and can be powder coated to a variety of colors. Maximum span is 14'.

Ranch Gate™ Aluminum pipe 2" diameter has the look of the simple rail gate and is well suited for high wind locations. Maximum opening 18' and can be powder coated.

1.0 General Information

1.1 Introduction

Estate Gate is pleased to supply one of our quality gate products. This manual is provided for your convenience in the installation, operation and maintenance of your Estate Gate. Estate Gates are available in three models: 1) Estate Gate (Picket Style); 2) Estate Gate III; and 3) Ranch Gate. Each of the three models are available in either a Single- or Dual-Gate Configuration. This manual is inclusive for all three models in either configuration. While using the manual, please be sure to carefully determine that you are referring to the correct information relative to the particular model and configuration of your Estate Gate.

1.2 Warranty Information

Estate Gate products and optional control devices, purchased for residential use, are warranted for 24 months from the date of purchase. Estate Gate and products purchased for commercial use are warranted for 12 months. Home Owners Associations and residential gates that are owned by 4 residences or more are considered commercial properties. Labor charges incurred to repair or replace the failed part are not covered under this warranty. The owner will pay shipping costs to return the failed part. Estate Gate will pay shipping costs to return the replaced part.

Components not supplied by Estate Gate are not protected by this warranty. Damage caused as a result of a failure of a component not suplied by Estate Gate is not protected by this warranty.

1.3 Safety Information

DO:

- ❑ Read manual completely.
- ❑ Install the warning sign on your gate or next to it.

DO NOT:

- ⃠ Stand under the gate when it is closing.
- ⃠ Try to stop the gate when it is opening.
- ⃠ Allow children to play on or around the gate – it is dangerous!
- ⃠ Reach into the gate when it is operating – injury may result!
- ⃠ Paint the PVC rails – painting the rails will cause them to warp resulting in improper gate operation!

1.4 Package Contents

(Inspect the gate and all contents for damage during shipping)

- ❑ Hinge Post Assembly (Master Hinge Post Assembly for dual gate configurations).
- ❑ Rest Post Assembly (Slave Hinge Post Assembly for dual gate configurations).
- ❑ Anchor Bolt Cage Assemblies and Rail End Supports (in carton).
- ❑ Required Assembly Hardware & Instructions.
- ❑ Rails and/or Pickets (in separate carton).

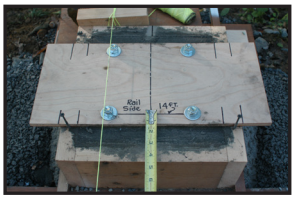
All are packaged on a pallet with a cardboard cover. Any optional equipment or accessories are shipped in the box with the hinge post.

2.0 Foundations

Caution! - The following instructions are for Single Gate configurations only. Refer to page 5 for foundation instructions for Dual-Gate configurations.

2.1 Single-Gate Configuration (Reference Figures 1, 2, & 3, page 3 and Figure 4, page 4)

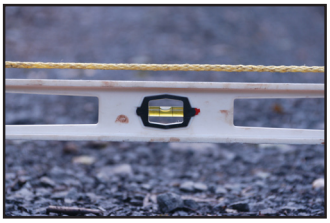
1. Determine the location for the gate assembly. Locate the hinge post on the side nearest the power source. If the hinge post is located on the opposite side from the power source, provisions must be made to relocate the power source to the intended hinge post side. **Important!** - Location of the hinge post determines right- versus left-hand installation. Refer to Fig. 4, page 4 for the impact of right- versus left-hand installations.
2. Layout the hinge post and the rest post centerlines based on the maximum or planned rail length.
3. Maximum span is 14-ft for Estate Gate III (2x5Aluminum rails), 18-ft for Ranch Gate (Aluminum pipe rails) and 14-ft for Estate Gate (Picket Style) Gates.
4. Layout the foundation for the hinge post (requires 16-in x 16-in x 30-in deep foundation).
5. Layout the foundation for the rest post (requires 12-in x 12-in x 24-in deep foundation).



Center to Center of inside anchor bolts = length of rails

Important! - Final gate height is determined by the height of the top of the concrete forms. See note on Fig. 4, page 4 to help decide on the top of form elevation before proceeding.

6. Excavate for the hinge and rest post and install the concrete forms (Fig. 1, pg. 3 and Fig. 4, pg. 4)
7. Prepare 2 plywood anchor bolt templates per Figures 2 and 3, page 3.
8. Set anchor bolts in plywood templates leaving a 1¼" projection.
9. Pour concrete into excavated holes for the hinge post and the rest post. Press the anchor bolt assembly into the concrete.
10. Position the anchor bolt cage assemblies per Fig. 1, page 3.
11. Level the anchor bolt cages as described in Fig. 1, page 3.
12. Level the anchor bolt cage on top of the bolts using a level (failure to do this may result in out-of-plumb posts and improper gate operation).
13. Align the anchor bolts using a string as shown in Figure 1, page 3 and in the pictures below.
14. Finish the top of concrete level with the top of forms using a trowel.
15. Allow concrete to cure a minimum of 24 hours before setting gate posts.



Use a string and level across the road to ensure gate is level after installation (Ref Fig. 1, pg. 3)

Adjust the back of the bolts so that they just touch the string (Ref Fig. 1, pg. 3)

Setting hinge and rest posts relative to rail length

Completed foundation

Foundation showing plywood template and wood form

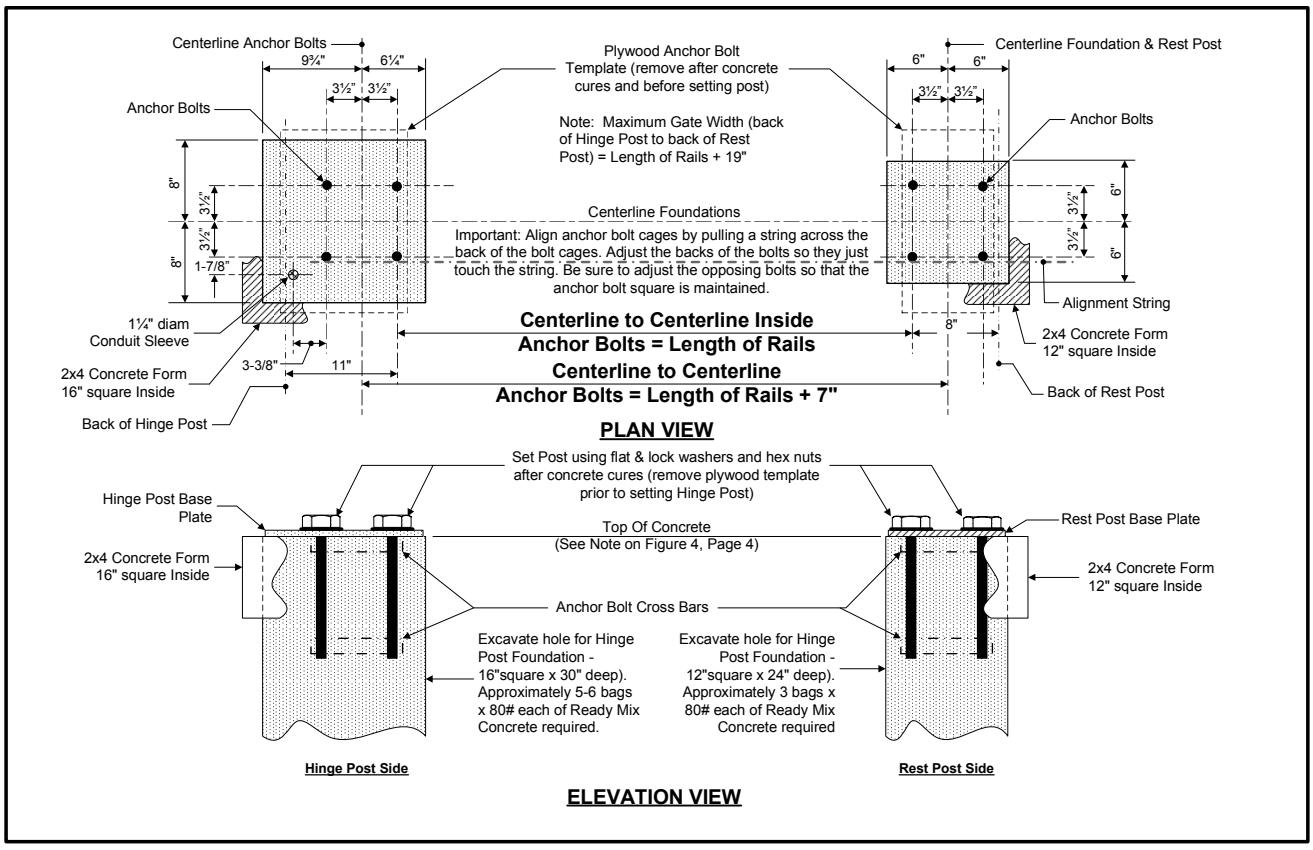


Figure 1. Single Gate Configuration Foundation Installation Details
(Left hand installation shown, See Figure 4, page 4 to adapt for right hand installation)

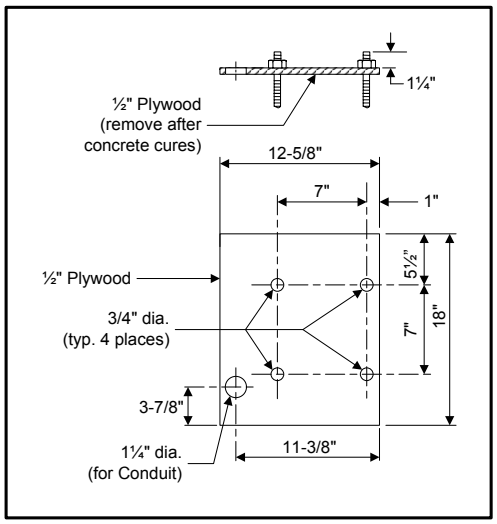


Figure 2. Hinge Post Anchor Bolt Template

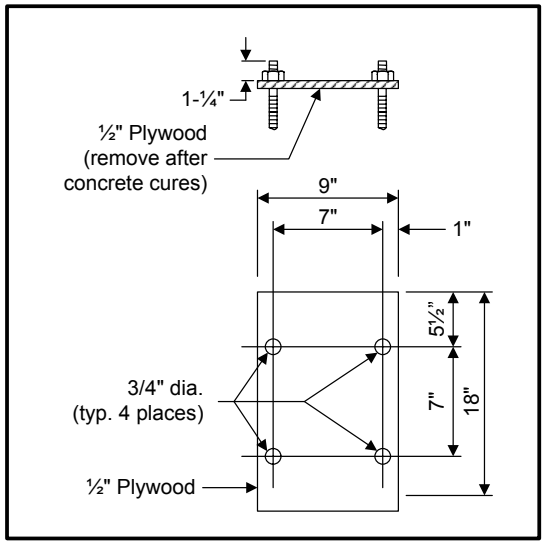
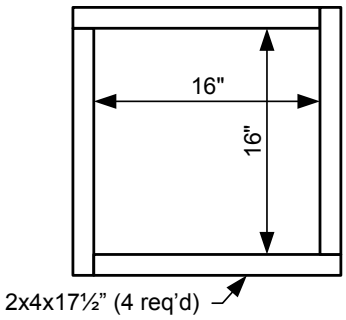
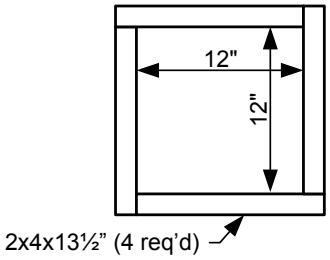


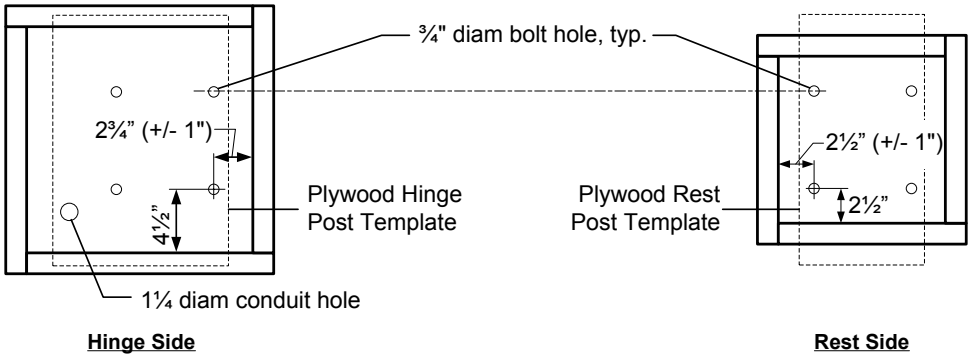
Figure 3. Rest Post Anchor Bolt Template



Hinge Post Form

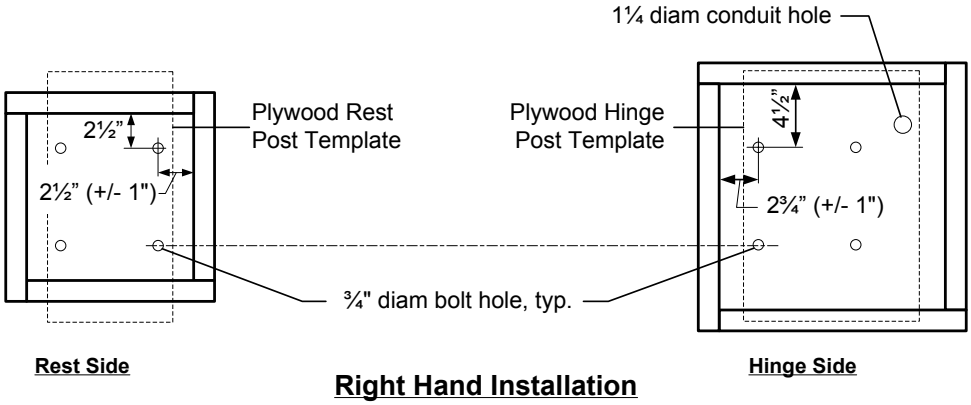


Rest Post Form



Left Hand Installation

(Hinge post on left side - note conduit position)



Right Hand Installation

(Hinge post on right side - note conduit position)

NOTE:

The 2x4 forms make a finished top for the gate. The forms must be set level to each other across the road (see Fig 1, pg 3 for method) and at the desired gate height. All Estate Gates are designed assuming that the top of the concrete forms will be set at the same level as the roadway crown, however, all model gates can be raised or lowered by increasing or decreasing the top of the forms relative to the roadway crown. For the Picket Style gate, when the top of the form is set at the same level as the roadway crown, the resulting space between the roadway and the bottom of the picket gate will be 3¾" (+/-). Setting the top of forms lower than the roadway crown will result in a reduction of this gap. Conversely, setting the forms higher will increase this gap.
CAUTION! - Setting the top of forms for the Picket Style Gate at an elevation less than 3" below the roadway crown may result in the pickets scraping on the roadway and may cause damage to the gate.
The other model gates have enough clearance below the bottom rail to allow for more flexibility and can be raised or lowered as desired.

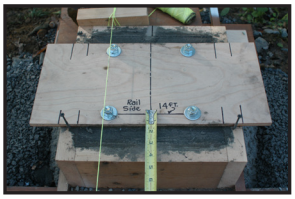
Figure 4. Single Gate Configuration Foundation Forms

(Work with Figure 1, page 3)

2.2 Dual-Gate Configuration (Reference Figures 5, 6 & 7, page 6 and Figure 8, page 7 and pictures on page 2)

Caution! - The following instructions are for Dual-Gate configurations only. Refer to page 2 for foundation instructions for Single-Gate configurations.

1. Determine the location for the gate assembly. Locate the master hinge post on the side nearest the power source. If the master hinge post is located on the opposite side from the power source, provisions must be made to relocate the power source to the intended master hinge post side. **Important!** - Location of the master hinge post determines right- versus left-hand installation. Refer to Fig. 8, page 7 for the impact of right- versus left-hand installations.
2. Layout the master hinge post and the slave hinge post centerlines based on the maximum or planned rail length (See Fig. 5, page 6)
3. Maximum span is 24-ft for Estate Gate III (2x5 Aluminum rails), 28-ft for Ranch Gate (Aluminum pipe rails) and 24-ft for Estate Gate (Picket Style) Gates.
4. Layout the foundation for the master hinge post (requires 16-in x 16-in x 30-in deep foundation).



Center to Center of inside anchor bolts = length of rails

5. Layout the foundation for the slave hinge post (requires 16-in x 16-in x 30-in deep foundation).

Important! - Final gate height is determined by the height of the top of the concrete forms. See note on Fig. 8, page 7 to help decide on the top of form elevation before proceeding.

6. Excavate for the master and slave hinge posts and install the concrete forms per Fig. 5, page 6 and Fig. 8, Page 7.
7. Prepare 2 plywood anchor bolt templates per Figures 6 and 7, page 6.
8. Set anchor bolts in plywood templates leaving a 1¼" projection.
9. Pour concrete into excavated holes for the master and slave hinge gate posts. Press the anchor bolt assembly into the concrete.
10. Position the anchor bolt cage assemblies per Fig. 5, page 6.
11. Level the anchor bolt cages as described in Fig. 5, page 6 (reference pictures on page 2).
12. Level the anchor bolt cage on top of the bolts using a level (failure to do this may result in out-of-plumb posts and improper gate operation).
13. Align the anchor bolts using a string as shown in Figure 1 (reference pictures on page 2).
14. Finish the top of concrete level with the top of forms using a trowel.
15. Allow concrete to cure a minimum of 24 hours before setting the gate posts.

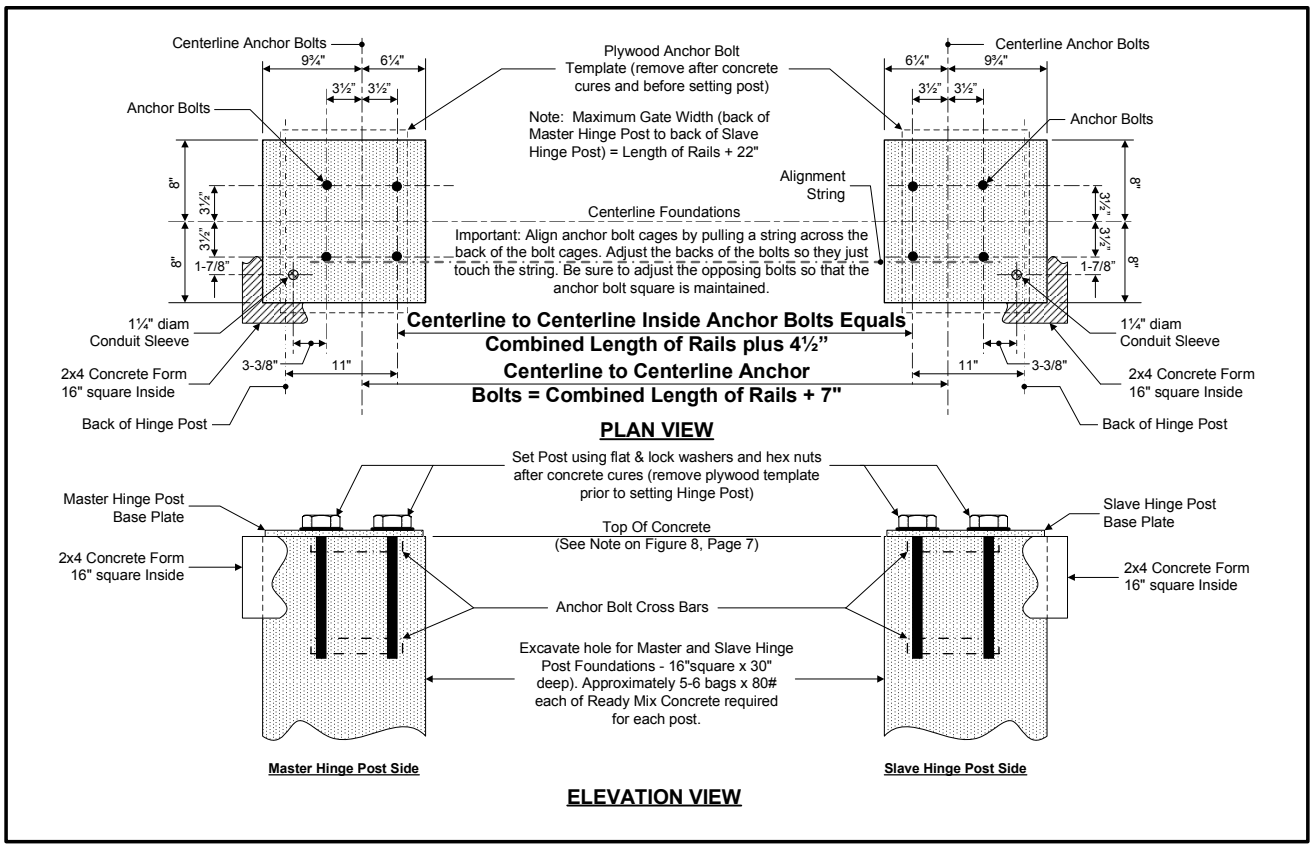


Figure 5. Dual Gate Configuration Foundation Installation Details
(Left hand installation shown, See Figure 8, page 7 to adapt for right hand installation)

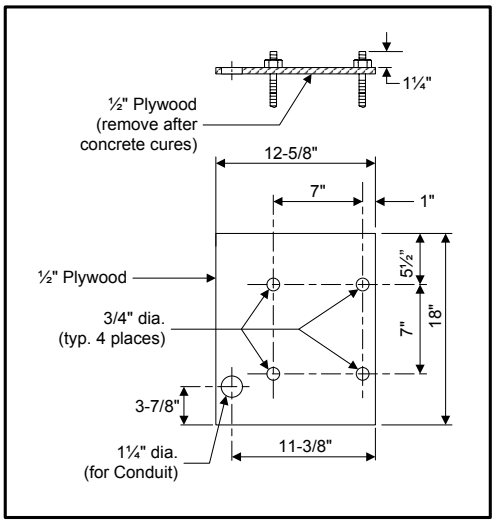


Figure 6. Master Hinge Post Anchor Bolt Template

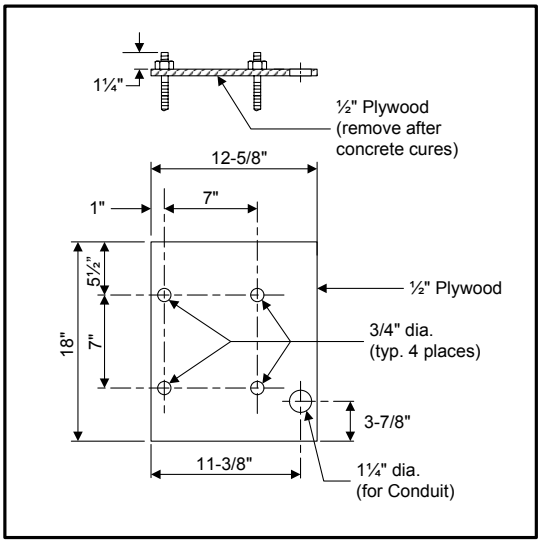
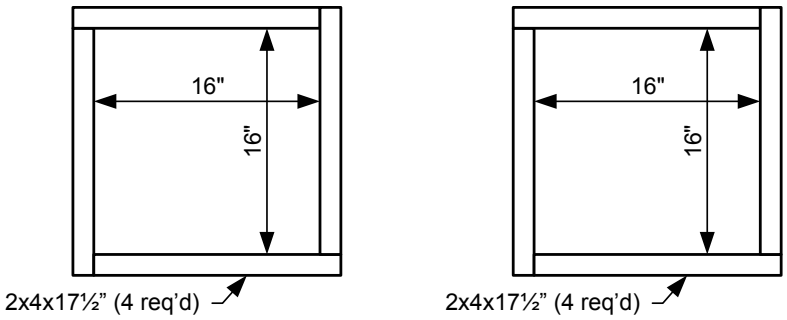
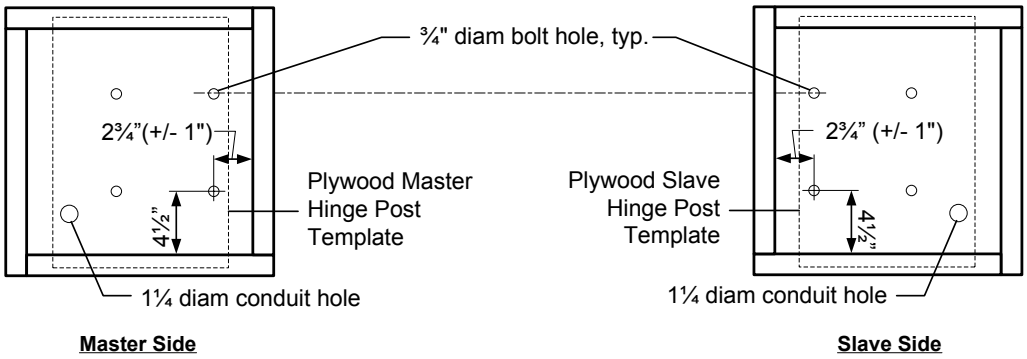


Figure 7. Slave Hinge Post Anchor Bolt Template



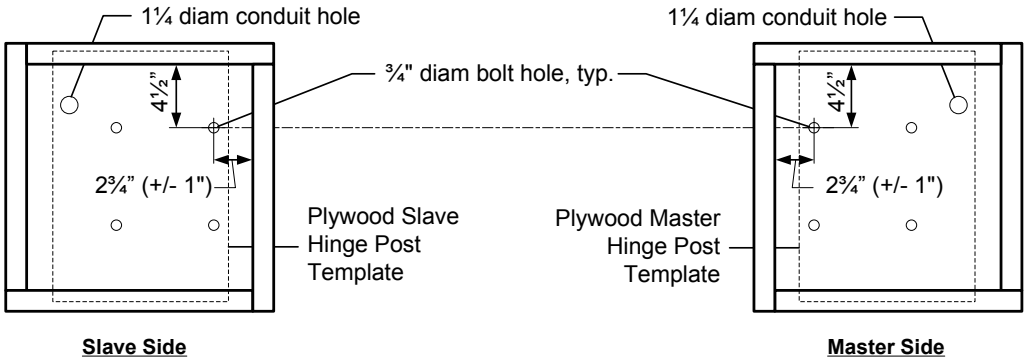
Master Hinge Post Form

Slave Hinge Post Form



Left Hand Installation

(Master Hinge post on left side - note conduit position)



Right Hand Installation

(Master Hinge post on right side - note conduit position)

NOTE:

The 2x4 forms make a finished top for the gate. The forms must be set level to each other across the road (see Fig 5, page 6 for method) and at the desired gate height. All Estate Gates are designed assuming that the top of the concrete forms will be set at the same level as the roadway crown, however, all model gates can be raised or lowered by increasing or decreasing the top of the forms relative to the roadway crown. For the Picket Style gate, when the top of the form is set at the same level as the roadway crown, the resulting space between the roadway and the bottom of the picket gate will be 3¾" (+/-). Setting the top of forms lower than the roadway crown will result in a reduction of this gap. Conversely, setting the forms higher will increase this gap.
CAUTION! - Setting the top of forms for the Picket Style Gate at an elevation less than 3" below the roadway crown may result in the pickets scraping on the roadway and may cause damage to the gate.
The other model gates have enough clearance below the bottom rail to allow for more flexibility and can be raised or lowered as desired.

Figure 8. Dual Gate Configuration Foundation Forms

(Work with Figure 5, page 6)

2.3 Keypad Foundation (skip if keypad option not purchased - ref Keypad Installation dwg. #2100-300 in the back of the manual)



Keypad Foundation & Finished Keypad Assembly

The keypad foundation requires (2) 80# bags cement, 2x4 form for the top of concrete and an anchor bolt template made from plywood.

Locate the keypad no more than 30 feet from the gate although the kit includes 45-feet of wire. The additional 15-feet of wire is needed to make the connections to the keypad and to the gate.

The anchor bolt assembly is supplied with the keypad kit. Excavate a hole measuring 10-inches square x 18-inches deep. Construct a 10-inch (outside dimension) square frame using 2 x 4 lumber. This will form the top of the concrete. Construct an anchor bolt template out of plywood and mount the anchor bolts leaving a 1" projection. Set the anchor bolt cage assembly in the plywood template. The template will keep the anchor bolts level and hold them in place while the concrete cures. Pour the concrete. Press the anchor bolt assembly into the concrete. Locate a plastic long radius conduit sleeve in the concrete centered on the anchor bolts. If a solid anchor bolt template is used, cut a hole in it to receive the conduit sleeve. Allow the concrete to cure a minimum of 24 hours before installing the keypad assembly.

3.0 Gate Assembly and Installation (Reference gate assembly drawings in the back of manual)

The following instructions apply to both single and dual gate configurations. Care should be taken to ensure that the proper steps are taken pertaining to the specific gate configuration that is being installed.

3.1 Estate Gate III or Ranch Gate

3.1.1 Gate Post Installation - Single Gate Configuration


Use a level to ensure that gate posts are plumb

1. Place the hinge and rest post over their anchor bolts respectively.
2. Using a level, check both posts for plumb.
3. If necessary, use flat washer shims as required to adjust posts to plumb.
4. Install the supplied flat washers and lock nuts and tighten to secure the posts on their foundation.

3.1.2 Gate Post Installation - Dual Gate Configuration

1. Place the master and slave hinge posts over their anchor bolts respectively.
2. Using a level, check both posts for plumb.
3. If necessary, use flat washer shims as required to adjust posts to plumb.
4. Install the supplied flat washers and lock nuts and tighten to secure the posts on their foundation.
5. Excavate and bury the #18/5-conductor tray cable a minimum of 12" deep under the roadway or driveway in protective conduit. The cable is direct burial type so conduit is not needed for the final distance to the gate posts.
6. Make the connections to both the master and slave control boards per dwg #2300-102 in the back of the manual before proceeding to step 3.1.3. Note that the wire color codes are different between the actuator and the Estatge Gate supplied cable.

3.1.3 Rail Assembly and Installation

1. Cut the rails to the required length (see Fig. 1, pg. 3 for single gate configurations or Fig. 5, pg. 6 for dual gate configurations to determine proper rail length). Cutting the rails may not be necessary if they are being installed for the maximum or shipped length.
2. Using the momentary switch, lower the pivot arms as required to install the rails.
3. Insert the rails over the pivot arms.
4. With the rails in place, lower the pivot arms.
5. For Dual Gate Configurations, repeat steps 1,2,3, and 4 to install the rails on the slave hinge gate post side.

Completed rail installation

3.1.4 Rail End Supports Installation (See Figure 9 - skip steps 1 & 2 if gate does not have PVC rails)

1. With the rails in the down position, install the rail assemblies per Fig 9 below.
2. Starting with the upper rail, install the rail assemblies in order from top to bottom.
3. Tighten the 5/16-18 Lock nut to be snug. Then loosen it approximately ¼ turn allowing the pivot arm to rotate freely.
4. Repeat the process for the lower and center rails making sure that the nuts on the upper and lower rails are on the side opposite of those on the center rail.
5. For Dual Gate Configurations, repeat steps 1,2,3, 4 and 5 to install the rail end supports on the slave hinge gate post side.

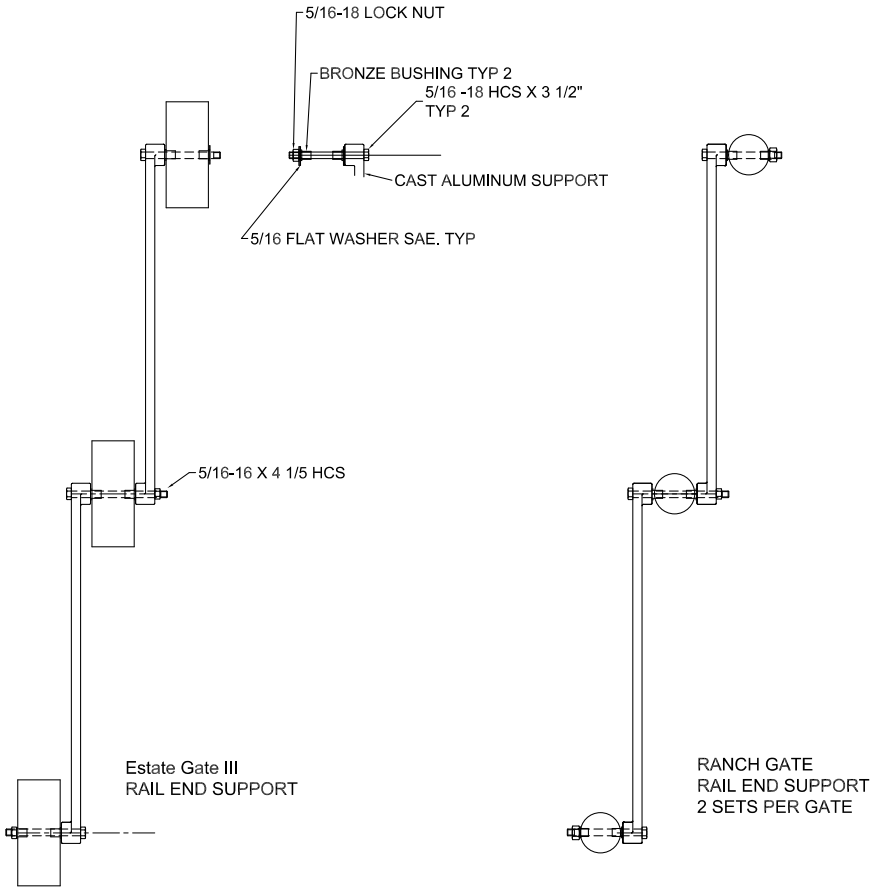


Figure 9. Rail End Assembly Details

3.2 Estate Gate (Picket Style)

3.2.1 Gate Post Installation - Single Gate Configuration

1. Place the hinge and rest post over their anchor bolts respectively.
2. Using a level, check both posts for plumb (See picture on page 8).
3. If necessary, use flat washer shims as required to adjust posts to plumb.
4. Install the supplied flat washers and lock nuts and tighten to secure the posts on their foundation.

3.2.2 Gate Post Installation - Dual Gate Configuration

1. Place the master and slave hinge posts over their anchor bolts respectively.
2. Using a level, check both posts for plumb (see picture on page 8).
3. If necessary, use flat washer shims as required to adjust posts to plumb.
4. Install the supplied flat washers and lock nuts and tighten to secure the posts on their foundation.
5. Excavate and bury the #18/5-conductor tray cable a minimum of 12” deep under the roadway or driveway in protective conduit. The cable is direct burial type so conduit is not needed for the final distance to the gate posts.
6. Make the connections to both the master and slave control boards per dwg #2300-102 in the back of the manual before proceeding to step 3.2.3. Note that the wire color codes are different between the actuator and the Estatge Gate supplied cable.
7. The Estate Gate (Picket Style) requires the pivot arm be pulled down by hand while pressing the momentary switch. This is required to overcome the spring force and place the pivot arm at a more favorable angle for installing the rails.
8. **CAUTION!! DO NOT TRY TO STOP THE RAILS WHEN THEY ARE MOVING UP TO THE OPEN POSITION AS THEY CANNOT BE STOPPED AND ATTEMPTING TO DO SO MAY RESULT IN INJURY.**

3.2.3 Rail Assembly and Installation

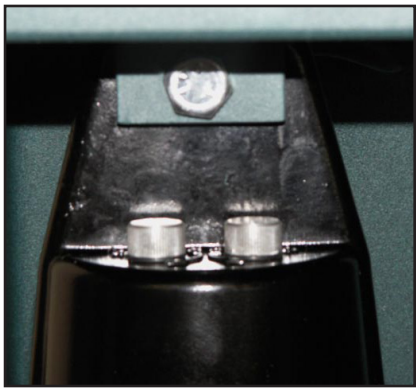
1. On the hinge post side, attach the upper rail assembly to the pivot arm. For dual gate configurations, there are two upper rail assemblies. Attach one to the pivot arm on the master hinge gate post and the other to the pivot arm on the slave hinge gate post side.
2. Using the momentary switch, lower the pivot arms as required to install the rails.
3. Insert the rails over the pivot arms. For dual gate configurations, insert the rails over the pivot arms on both the master and slave hinge gate posts.
4. With the rails in place, lower the pivot arms.

3.2.4 Picket Installation

1. Refer to drawing #2400-100S (Single Estate Gate (Picket Style) Gate Ass’y) and #2400-100D (Dual Estate Gate (Picket Style) Gate Ass’y) in the back of this manual when completing this step.
2. Remove pickets from shipping carton and make sure that all picket assemblies, back side support pickets, back side support pins and picket pivot pins, nuts and washers are available.
3. Attach the pickets to the front side of the upper and lower rails using picket pivot pins, washers and nuts as indicated on the assembly drawing.
4. For single gate configurations, install the 2 back side support pickets on the factory-installed support pins using the same method as described above for the front pickets. Locate the capped ends on top of the pickets.
5. For dual gate configurations, there are 4 back side support pickets. These are installed using the same method as described above.

3.3 Rail Position Adjustments (See Figure 10, This Page)

CAUTION!! THE RAILS MUST BE ON THE PIVOT ARMS BEFORE THE GATE WILL CLOSE.



NOTE: When performing the adjustments described below, the gate can be cycled (operated) by using the momentary pushbutton that is located in the top of the gate.

The location of the Apollo actuator simplifies the stroke adjustments. The two aluminum caps are threaded, and cover the adjusting screws. They also seal the motor compartment from the elements, so be sure to **ALWAYS** replace them after completing stroke adjustments. The aluminum caps can be removed with your fingers, or if necessary, with pliers. The left adjusting screw sets the **retracted** length, and the right adjusting screw sets the **extended** length.

The limits are set at the factory, but may require some adjustment. After the gate is installed, and the rails are on the pivot arms, cycle the gate. The rails, when fully closed, should just touch the rest post cross bar. If the rails hit the cross bar hard, the gate will sense the pressure, and reverse to open. This can be adjusted by the **RETRACT LIMIT SWITCH**. Making this adjustment will cause the position of the extension tube to be either *retracted* more or *retracted* less.

1. Remove the cap.
2. Using a short Phillips screw driver or a right angle Phillips, turn the adjusting screw slightly (1/4 turn) counter clockwise to make the gate stop sooner. Test by operating the gate. Repeat the screw adjustment and gate operation until the proper position is obtained.
3. If the gate stops above the rest post bar, adjust as noted above except turn the screw clockwise.

If the gate opens to high, or not high enough, use the right adjusting screw to set the **EXTENDED LENGTH.** Making this adjustment will cause the position of the extension tube to be either *extended* more or *extended* less.

1. Remove the cap.
2. Using the short Phillips screw driver, or a right angle Phillips, turn the adjusting screw slightly (1/4 turn) clockwise to stop the gate sooner.
3. If the gate does not go up high enough, turn the screw counter clockwise to make the gate stop at the desired height.
4. After each adjustment, operate the gate to ensure proper adjustment.

REPLACE THE CAP AND TIGHTEN TO SEAL. FAILURE TO INSTALL THE KNOB WILL ALLOW MOISTURE IN THE MOTOR AND VOID THE WARRANTY.

This completes the installation of the Estate Gate Assembly. Proceed with the installation of the battery charging system, remote control, safety system, and other operating devices.

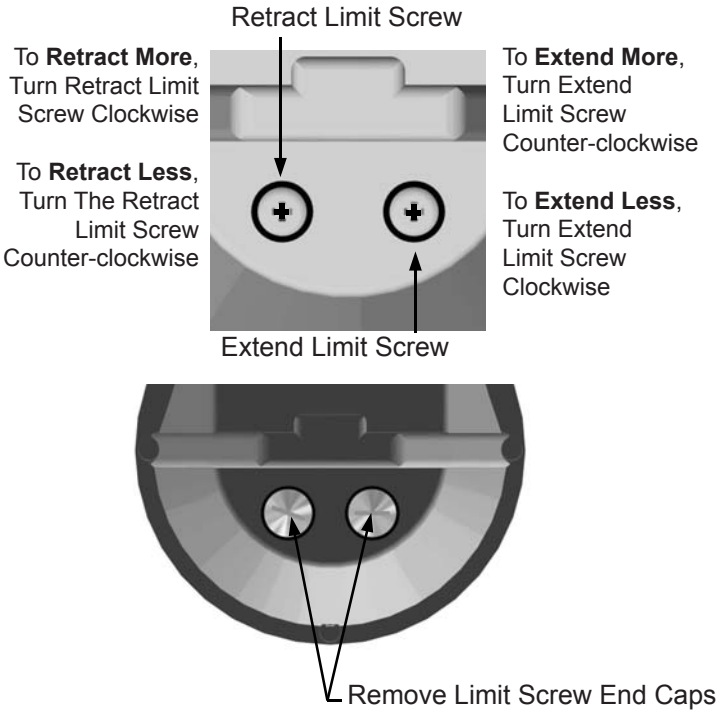
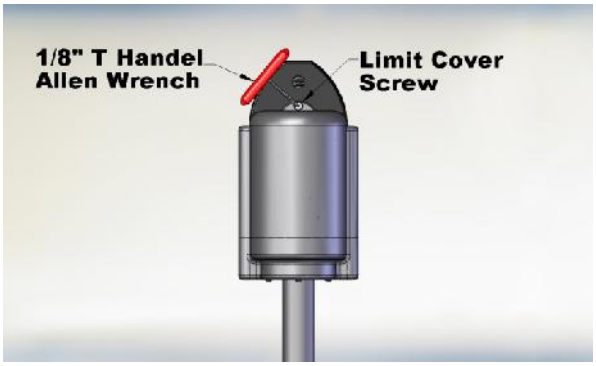


Figure 10. Rail Position Adjustments

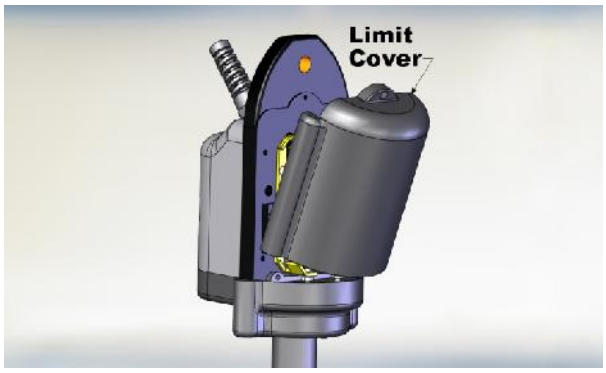
21939 Legend Point Dr
San Antonio, TX 78258
Tel: 210-878-9580
Fax: 800-637-3093

LIMIT ADJUSTMENT FOR THE AMERICAN ARMOR ACTUATOR FOR ALL ESTATE GATE OPERATORS

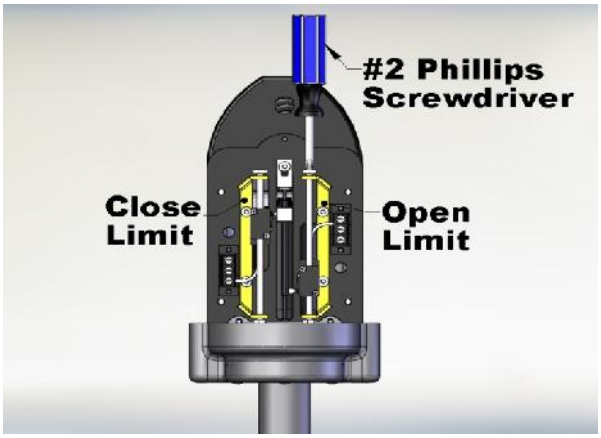
Using a 1/8” Allen Wrench (T-Handel Type Wrench is Recommended), Remove the button head cap screw that secures the limit cover to the main chassis.



Once screw is removed, take off the limit cover by lifting to the up and out to access the limits.



Using a #2 Philips head screwdriver adjust the limits by turning the limit screw clockwise or counter clockwise as needed.



- The LEFT limit is the CLOSED limit and turning COUNTER CLOCKWISE will STOP the gate SOONER.
- The right limit is the open limit and turning counter clockwise will open the gate farther.

4.0 Options

4.1 Keypad Installation (skip if keypad option not purchased - ref Keypad Installation dwg. #2100-300 and Keypad Post Installation dwg. #2100-301 in the back of the manual for this step)

Remove the keypad, stand, wire, and bolt assembly from its shipping box. Install the foundation per drawing #2100-301. Assemble the keypad and stand.

Wire Connections (reference page 15): RED (+12vdc) connects to key pad red wire and battery red wire; BLACK (-12vdc) connects to keypad black wire and battery black wire; OTHER COLOR (operating signal) connects to keypad orange wire and gate optional device input “inp”; THE OTHER COLOR (operating signal) connects to keypad brown wire and gate control device input “gnd”. Wire manufacturers have different color codes for the other two wires but BLACK and RED are constant.

Bury the cable a minimum of 12-inches in conduit if installed in a pedestrian area or an area where animals will be present.

Pull the keypad signal wire through the long radius conduit elbow and into the stand. This is easier to do if the stand is lying down. Place the stand over the anchor bolts. Plumb the stand with a level and the insertion of washer shims placed under the mounting plate as needed. Tighten the keypad stand securely to the foundation using the supplied washers and lock nuts. Connect the wires as detailed in wire connections above.

Place the wire in the hinge gate post (master hinge gate post for dual gate configurations) through the square hole in the corner of the base. Thread the wires up to the top of the gate and slide them under the metal clips in the center of the gate post. Allow enough wire length to reach the terminal block and the control board.

Strip approximately 6” of the outer insulation. Strip the inner insulation exposing approximately ½” of bare wire. Locate the terminal strip between the battery and the control board. Connect the **RED** wire to the battery positive terminal and the **BLACK** wire to the battery negative terminal. Note the **RED** wires are connected to a set of teminals joined with a jumper. The **BLACK** wires are joined in the same manner. Connect the other two colored wires to one of the **three-pin connectors INP & GND**. The three-pin connector is not color specific and provides a momentary contact to operate the gate. **DO NOT USE THE 12V TERMINAL**.

Program the keypad per the manufacturer’s instructions.

4.2 Exit Probe Installation (skip if exit probe option not purchased - ref Exit Probe Installation dwg. #2200-500 in the back of the manual for this step)

The EMX exit probe is a magnetic sensing device that must be located inside the gate area. When the probe senses the passing of a vehicle, it will cause the gate to open. The exit probe input leads are connected to the control board 7-pin connectors (see page 15) at terminals 9 and 10. This circuit will only open the gate when it is closed. If the gate is open, or part way open, the probe will not cause the gate to operate.

Exit probe installation involves the excavation of a trench beside the driveway from the hinge post (master hinge post for dual gate configurations) location to the probe location. Excavate the trench, 12-inches deep if possible, for the probe input wire. Attach the wire to the white relay as shown in the manufacturer’s instructions. Install the wire in conduit and lay in the trench between the probe location and hinge post. The probe, 1-inch diameter x 12-inches long, must be buried 8-inches deep and close to the side of the drive. After the probe installation is complete, turn the gate power on and test the probe operation by driving past it. The relay sensitivity can be adjusted per the manufacturer’s instructions.

4.3 Photo-eye Installation (skip if photo-eye option not purchased - ref Photo Eye Installation dwg. #2100-200 in the back of the manual for this step)

The EMX Photo-eye is designed to hold the gate open if the beam is broken. It will stop the gate if it is closing and reverse the direction of the gate. Any object breaking the beam will cause the gate to stop and reverse. When this happens, the timer-to-close is reset to 0 and the time cycle will restart.

The photo-eye installs on the rest post side (slave hinge post side for dual gate configurations) of the gate. This requires that 12vdc power be available on this side of the gate. Excavate a trench across the driveway between both gate posts. A power cable designed for 12vdc current carrying capacity should be installed and buried in the trench inside of a 2-inch conduit. Alternate: utilize a 12-volt DC power supply with a 120vac input to 12vdc output transformer located on the rest (or slave for dual gate configurations) side of the gate This requires that 120vac power be available on the rest (or slave for dual gate configurations) side of the gate.

4.4 Fire Box (Padlock or KNOX Style)

Some fire departments require a KNOX lock for which they will supply the application. Contact the local Fire Marshal to determine if they use the KNOX lock system. If they do not have a KNOX code, you may use the padlock style box.The gate will open when the padlock is removed or cut. Connect the leads from the fire box to terminal strip # 9 & 10.

5.0 Power Supplies

5.1 120vac Powered Gate

All Estate Gates are 12vdc powered and require a battery to operate. The battery is maintained by a 120vac battery maintainer which requires a 120vac, 1 phase, 60 hertz, 20 amp service to be installed at the gate. This service must meet local electrical codes and specifications. A junction box is mounted inside the gate hinge post for the 120vac power connection to the battery maintainer. Customer must supply a battery equal to, or exceeding the following:

RECOMMENDED BATTERY: 12-volt deep cycle, 90 amp-hour, gel-cell or AGM type battery (available in most battery stores). A gel-cell or AGM type battery will not allow acid to escape and cause the gate to rust or fail. We use a Deca 8A27 or 8A24 AGM for all of our installations.

5.2 Solar Powered Gate

A 12-watt solar panel with a voltage regulator is recommended for most Estate Gate applications. The 12-watt panel will support 30 gate cycles per day on a system installed with a DKPL Keypad, an exit probe, a photo eye and the reciever. The voltage regulator is required to prevent the battery from over-charging. An AGM type battery is recommended to reduce maintenance and possible corrosion.

When a phone entry system is used in conjuction with a solar-powered gate, a 24-watt solar panel and voltage regulator must be used. This will provide sufficient power to operate the gate for 30 cycles per day on a system installed with a phone entry device, a DKPL Keypad, an exit probe, a photo eye and the reciever. When the total daily sunlight is limited, an 18-watt panel should be used instead of the 12-watt panel.

Solar Powered System Recommendations and Suggestions

1. Solar-powered systems are only as efficient as their design and installation.
2. Keep solar panels clear of snow or any other obstructions to their receiving sunlight.
3. Use adequate wire size to prevent power loss. Minimum is 18ga for 100-ft at 10 watts.
4. When using multiple panel arrays, the positive and negative leads can be tied together respectively with only one pair of lead wires to the battery. In this case, be sure that the battery lead wires are of sufficient gauge for the distance and total wattage of the system.
5. A voltage regulator should be utilized to prevent overcharging of the battery on all solar-powered systems.
6. Use an AGM or Gel-cell type battery only. These batteries will provide more power and do not require service.
7. Apply special consideration to the solar power requirements when installing high-current draw accessories.

6.0 Gate Controller

6.1 General Controller Information

Your Estate Gate product utilizes a gate controller manufactured by Apollo Gate Operators, Inc. The gate controller is preset at the factory for “PUSH-TO-OPEN” operation. Reference pages 14 and 15 for control board layout, presets, terminal connections, adjustments, etc.

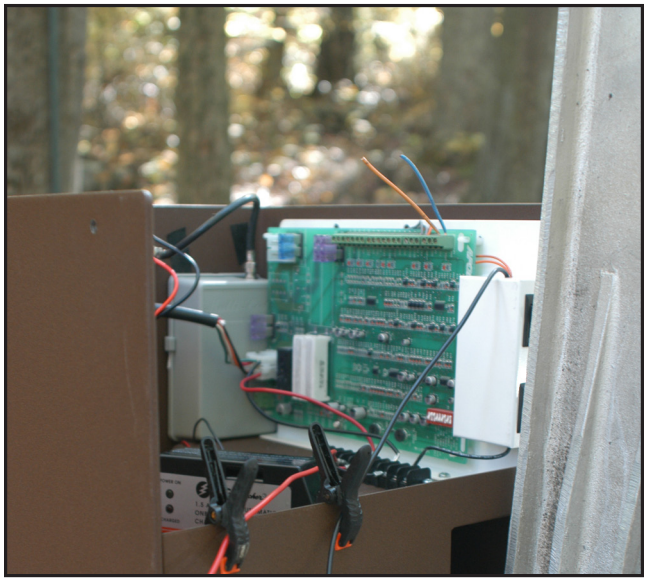
The electronic controls are located in the top of the gate hinge post (master hinge post for dual gate configurations). For dual gate configurations, the master control and slave control boards are connected with the 5-conductor control cable that is buried beneath the driveway or roadway. The remote control, battery charger and the exit probe can be located in the top of the gate. If more options are required, an additional enclosure will be required. The 120-volt battery charger is supplied with a single outlet plug.

A surge protector is available for lightning protection. It is recommended that all circuits in the gate system be protected with a surge protector. Suitable surge protectors are available for 12vdc, and 120vac systems.

Optional Device Input (see 3-pin connectors, page 15)

Three 3-pin connectors are located on the control board and are used for the remote control input, momentary switch, and other devices that require a non-regulated contact to operate the gate.

Connect the receiver, keypad, momentary switch, and other devices that require a contact to operate the gate. Use the GROUND & INPUT terminals to connect the operating wires and connect the power wires to the battery connections on the terminal strip.



Control board mounts in the top of the hinge gate post (Master hinge gate post for dual gate configurations)

6.2 Auto Reverse Adjustments

The auto reverse feature is set to the maximum strength at the factory. This must be done to overcome the spring load in the mechanism. If the auto reverse sensitivity control is set too low, the gate will cycle up and down. If cycling occurs, first check the auto reverse control to be at its maximum, clockwise setting. The gate should have a photo eye option (see section section 4.3, page 12) installed to make it auto reverse if the gate incounters an obstacle while closing. This feature is important to protect vehicles or pedestrians from a closing gate.

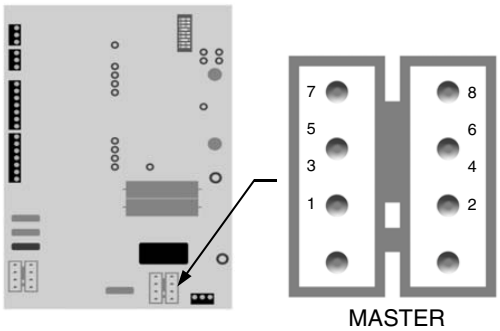
6.3 Timer-to-close Adjustments

The time-to-close is adjusted on the control board located in the top of the hinge post assembly. Reference page 16 to find where the timer is located on the control board. To adjust the timer, open the top of the hinge post assembly to expose the timer dial. Adjust the dial to increase or decrease the close time as desired. Drive through the gate to see if the time-to-close is suitable. Hint: Using a stop-watch, start with a 20-second close time setting and make adjustments from there.

6.4

CONTROL BOARD CONNECTIONS #633/634

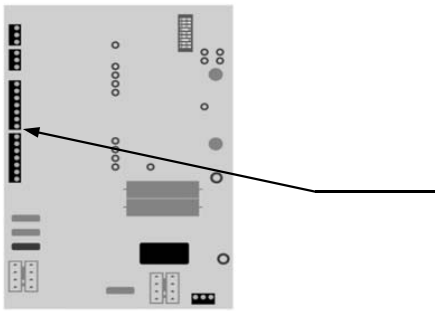
8 Pin White Connector (two on 634 Master & Slave)



1 ORANGE - Open Limit Input *(Normally open unless gate is opened)*
2 WHITE - Close Limit Input *(Normally open unless gate is closed)*
3 BLACK - Motor - Positive during open cycle, Negative during close cycle
4 RED - Motor - Negative during open cycle, Positive during close cycle
5 GREEN - Ground (Limit Switch Common)
6 Ground Not used

7 BLACK - Ground - Battery Negative
8 RED - Battery Positive (+12 VDC)

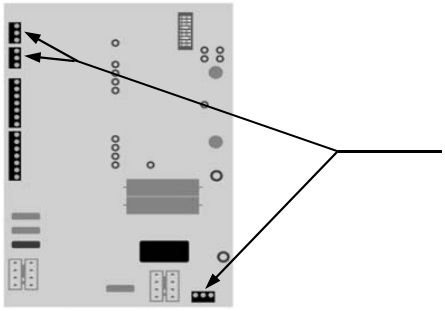
7-pin Connectors



1 Edge 1 Input
2 Edge 2 Input
3 Ground
4 Ground
5 Stop Input (N/C)
6 Close Input (N/O)
7 Open Input (N/O)

123 3 Button Control

8 Ground
9 Ground
10 Free Exit Input (Open only for telephone entry, probes, firebox, etc.)
11 Ground
12 Under Gate or Shadow Loop Input
13 Ground
14 Safety Loop or Photo Beam Input



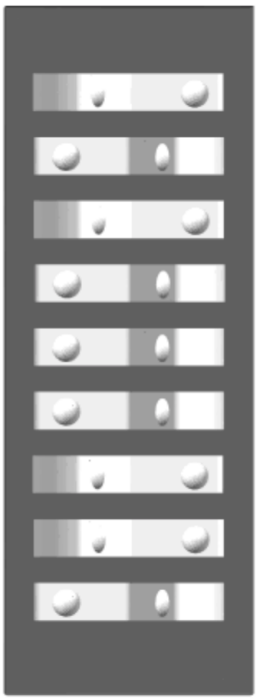
3-pin Connectors (3)

GND Ground
INP Input (Activates gate when momentarily connected to ground)
12V +12 Volt Output (For powering options - 2 Amps Max.)

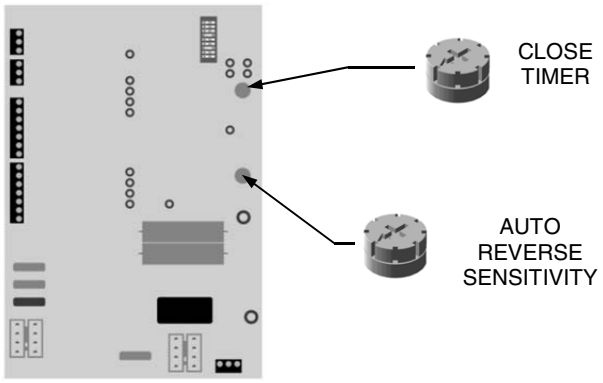
6.4

633/634 CONTROL BOARD ADJUSTMENTS

PROGRAM SWITCHES



	Factory Setting	Description
#1	ON	**TIMER TO CLOSE -** Automatically closes gate *ON - Close timer enabled OFF - Close timer disabled*
#2	OFF	**CURRENT SENSITIVITY OPTION -** Delays current sensing from start *ON - 4 second delay OFF - 2 second delay*
#3	ON	**TIMER TO CLOSE OPTION** *ON - timer to close works only when open limit switch is activated* *OFF - timer to close works from any open gate position*
#4	OFF	**DUAL CONTROL SLAVE OPTION** *ON - disables slave side of dual board* *OFF - enables slave side of dual board*
#5	OFF	**DUAL CONTROL MASTER OPTION** *ON - disables master side of dual board* *OFF - Enables master side of dual board*
#6	OFF	**MAXIMUM RUN TIMER OPTION** *ON - stops and reverses gate if run timer times out before closing* *OFF - stops gate if run timer times out before closing*
#7	ON	**MAXIMUM RUN TIMER VALUE** *ON - 40 seconds* *OFF -20 seconds*
#8	ON	**TIMER TO CLOSE VALUE** *ON - 20 to 70 seconds (adjustable)* *OFF - 10 to 35 seconds (adjustable)*
#9	OFF	**OPEN, STOP, CLOSE CONTROL ENABLE** *ON - allows for open, stop, close unit (optional) to operate gate* *OFF - normal operation* *(If 9 is on, terminals 4 & 5 must be normally closed for proper operation.)*

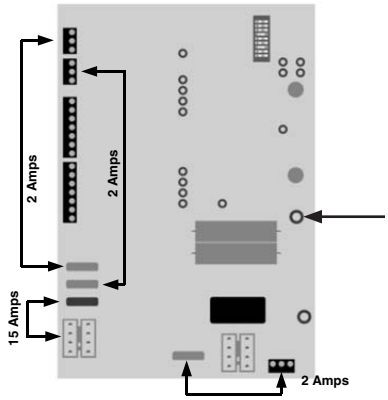


TIMER TO CLOSE ADJUSTMENT

Rotate clockwise to increase time before gate closes.
Rotate counter clockwise to decrease time before gate closes.
If program switch #3 is on, the gate must activate the open limit switch in order for the timer to close to operate.

AUTO REVERSE SENSITIVITY

Rotate clockwise to decrease sensitivity (more force).
Rotate counter clockwise to increase sensitivity (less force).



Fuses

There are 4 standard automotive type fuses on the 633/634 circuit board. The **EMERGENCY BY-PASS** plug is protected by a 15 Amp fuse. The remaining three fuses (one for each of the 12 Volt outputs) are 2 amp and may be replaced with 3 amp if necessary.

White Button (Trouble-shooting Button)

7.0 Other Adjustments

1. **Spring adjustment:** The spring is adjusted at the factory to assist the actuator in lifting the rails. The spring may require adjustment if the rails are shortened or extra weight is added to the rails. Make spring tension adjustments with the 9-inch long hex bolt located on the bottom of the spring mount plate. Increase the spring tension by reducing the space between the bottom of the spring and the support plate. Decrease the spring tension by increasing the distance between the bottom of the spring and the mount plate. The 9-inch long spring adjustment bolt must be removed completely if the gate mechanical parts need to be replaced.
2. **Rail Length Adjustment:** If the rails are too long for the roadway, they may be cut to the required length. Use a wood saw to cut the PVC rails and a hack saw to cut the aluminum tube rails. **CAUTION:** It is important to keep all three rails the same length! Refer to Figure 1, page 3 (single gate configurations) or Figure 5, page 6 (dual gate configurations) to determine the recommended rail length relative to the installed gate posts.
3. **Rail Position Adjustment:** Refer to Rail Position Adjustments (section 3.3, page 11) to make subsequent rail position adjustments.

8.0 Maintenance and Repairs

Recommended Routine Maintenance

1. Keep all debris out of the hinge post mechanism.
2. Check linkage nuts in the hinge post. If they appear loose, tighten them until snug and then loosen about 1/8 turn. Do this in both the master hinge post and the slave hinge post for dual gate configurations.
3. Check the main pivot bolts – they should be tight.
4. Check the battery fluid every 6 months. It should be over 12.5 vdc. Purchase Estate Gate voltage meter if needed.
5. Check and clean the battery terminals every 6 months.
6. Tighten the hold-down bolts on the bottom of the hinge and rest posts (master hinge and slave hinge posts for dual gate configurations).
7. Keep excess dust out of the battery and control board area. Dust can cause the gate to malfunction if it is allowed to build up.

Repairs

CAUTION: Before attempting any repair of the linkage or arms, completely remove the tension from the spring per step #2 below. Failure to do so may result in personal injury or damage to the gate.

The Estate Gate is easily repaired. Most damage caused by storms, vehicles, or other means can be repaired in the field. If the main steel channel or the hinge post is damaged, it must be replaced at the factory. When replacing parts of the operating mechanism, the following steps must be followed:

1. **Raise the rails to the open position. Pull the emergency pin if necessary.**
2. **Removing ALL tension from the spring:** A 5/8" hex bolt pulls the spring to its initial tension. The mechanism MUST be in the open position which places the spring in the shortest position. Remove the tension by turning the bolt to loosen it using a 15/16" socket and ratchet. The bolt is 9-inches long so be prepared for a few minutes of wrenching. Spray the bolt through with WD-40 or equivalent if necessary to loosen or remove corrosion making the bolt turn more easily. Remove the bolt completely and let the spring hang.
3. **Removing the Rails:** The rail end braces must be removed and then the rails can be removed from the rail pivot arms.
4. **Replacing the Pivot Arms:** Remove the ¾-inch pivot pin and the link pin on the inside of the gate. When replacing the arm, slide the link pin in the link first and then install the ¾-inch pivot pin. Before replacing the arm, test it to ensure proper fit between the replacement arm and the rails. If there is a problem with the fit, make adjustments by filing or grinding the arm until it properly accepts the rail.

5. **Replacing the Actuator:** Disconnect the actuator cable plug from the control board and power terminal located in the top of the gate. Pull the emergency pin in the bottom of the actuator if not already done. Remove the nut and bolt in the top of the actuator. The actuator can now be removed and replaced. Place the old actuator in the shipping box that the replacement came in and return it to Mazza Designs, Inc. See Table Of Contents page for shipping address.
6. **Replacing the Control Board:** Tag all wires with tape or by other means carefully noting the terminations to facilitate reconnection to the replacement board. Disconnect the actuator plug. Remove the board after the wires are tagged, disconnected and moved aside. The board is mounted with 4 plastic pins, each having a small holding device in the center. Press the holding device to allow the board to slide off the pin. Use a screw driver to press the pin as you gently pull the board. Slide the new board over the pins making sure the terminals are properly aligned and in the same location as before. Reconnect the wires. Place the old board in the shipping box that the replacement came in and return it to Mazza Designs, Inc. See Table Of Contents page for shipping address.

9.0 Trouble Shooting (reference pages 15 & 16 when performing these steps)

Gate Will Not Operate

Most common cause is a failure initiated by lightening or an electrical shortage.

Check the **RECEIVER**. If the gate will not open when the transmitter button is pressed, and the other devices all still operate the gate, replace the receiver.

If the gate is open and will not close, check the **PHOTO EYE**. A failed photo eye will cause the gate to open and not allow it to close. Use the LED button on the control board to determine what is holding the gate open. A red LED will light under the terminal that is holding the gate.

Check the **KEYPAD**. Does it make the proper “beeps” when the code is entered? If not, try to reset the board by opening the keypad and removing the white plug with the wires. Rock it gently while pulling and it should come off. Now hold the number buttons down for a few seconds and replace the plug. The keypad should make a beeping sound when power is restored. If no sound is made, the board must be replaced.

EXIT PROBE failure. The gate is going up, timing out, and then closing and reopening in a repetitive cycle. This is a sign that the **EXIT PROBE** is at fault. Usually the detector box located in the top of the gate is malfunctioning. The red LED will light when the probe detects. When the gate closes and the red LED turns on for 2-seconds, and then the gate opens, the controller has failed.

Once all the optional devices have been checked and they all seem to be okay, and the gate still does not operate properly, then the main circuit board may be at fault.

Gate Is Opening Slowly!

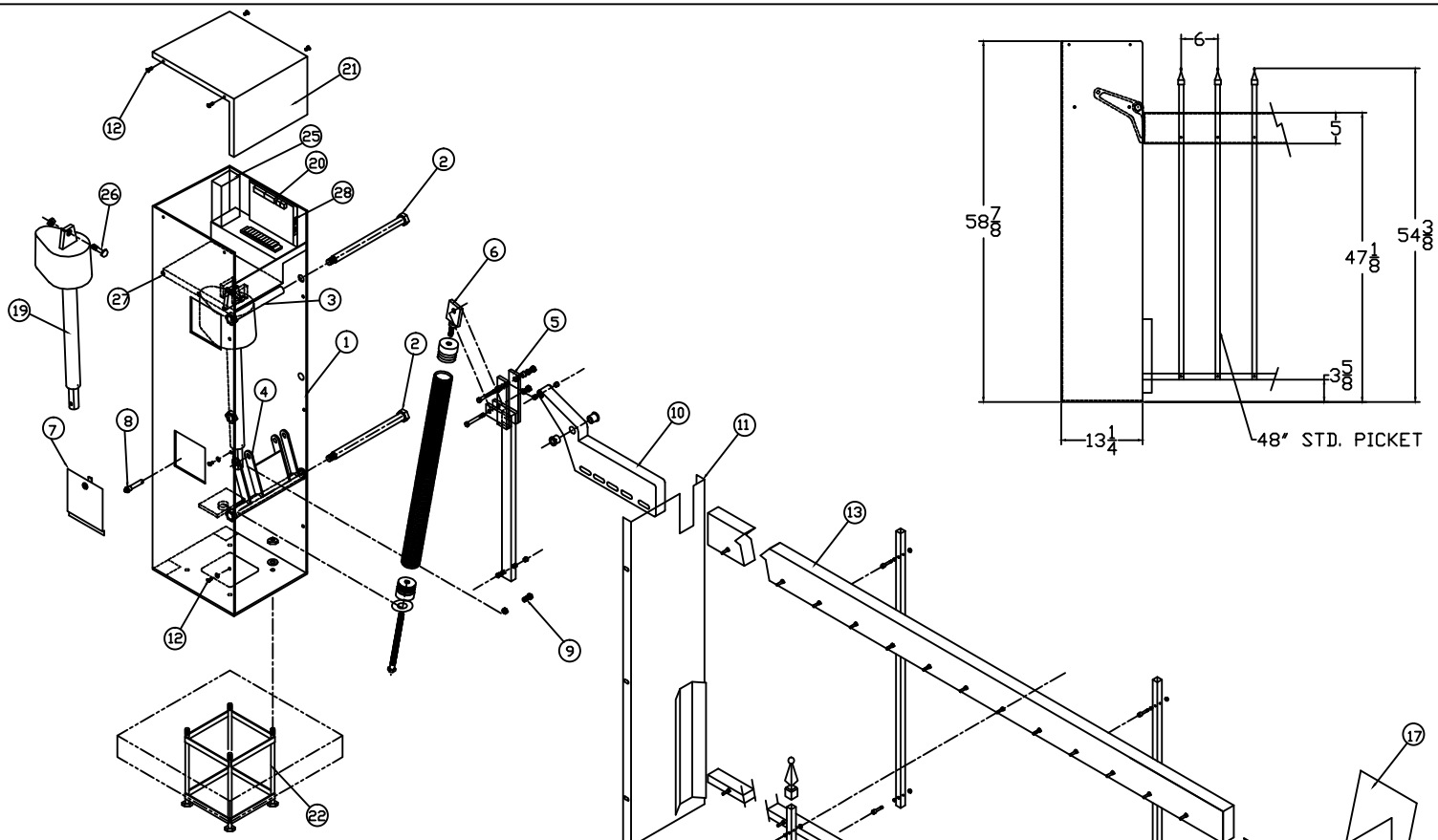
This condition is caused by a battery problem. Either the charging system has failed or the battery is in failure. The gate may operate normally after a few hours because the battery has recovered enough energy to move the gate. The 120v battery maintainer has a green LED to indicate the charger has power and a red LED to indicate the battery is charging. If no lights are on, check the 120v power supply. If a GFI plug is used to power the gate, check the reset button and allow 2-3 hours for the battery to recharge.

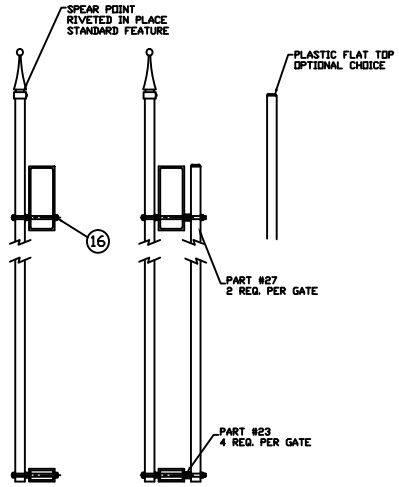
On a solar application, check the voltage regulator located on top of the battery. The red LED should be on. If not, check the voltage of the solar panel by disconnecting the solar panel wire from the regulator and measure the voltage from the two wires - it should read 19 to 21 vdc. Replace any failed components.

A failed battery will not hold a charge. It may show 12.5 volts but when the gate runs the voltage drops below 12 volts and the gate runs very slowly.

The solar panel and 120v battery maintainer are MAINTAINERS only. They will not charge a deeply discharged battery. If your battery voltage drops below 12vdc, charge it with a CHARGER. If the battery will not hold a charge then a replacement battery must be installed.

DRAWINGS





PICKET GATE
PARTS AND ASSEMBLIES

NO	QTY	DESCRIPTION	PART #
1	1	HINGE POST ASS'Y.	2100
2	2	PIVOT PIN	2407
3	1	SPACER	2423
4	1	IDLER ARM ASSEMBLY	2403
5	1	LINK ASSEMBLY	2406
6	1	SPRING ASS'Y	2321
7	2	ACCESS DOOR	2120
8	1	DETENT PIN	2136
9	1	1/2-13 x 2 1/2 HCS, NUTS/W	2508
10	1	MACHINED ALUMINUM PIVOT ARM	2402
11	1	FRONT COVER	2418
12	10	1/4/20 HEX HD. SCREWS .5 LG.	2501
13	1	2x5 UPPER RAIL ASS'Y	2408
14	1	1x2 LOWER RAIL ASS'Y	2409
15	27	PICKET ASS'Y	2410
16	54	PICKET PIVOT PINS, NUT & WASH	2404
17	1	REST POST	2105
18	1	REST POST BOTTOM SUPPORT	2105-1
19	1	APOLLO ACTUATOR	2148
20	1	APOLLO CONTRTOL BOARD 635	2142
21	1	TOP COVER	2102
22	2	ANCHOR BOLT ASS'Y	2124
23	4	BACK SUPPORT PINS	2404
24	2	BACK SUPPORT PICKETS	2413
25	1	RECEIVER WITH 2 TRANSMITTERS	2157
26	1	1/2-13 HCS X 3" WASHER / LW	2509
27	6	5/16-18 HCS X 5/8 GR 8	2524
28			

Mazza Designs
9737 W. Nova Ave.
Littleton, CO 80127
303-948-3169

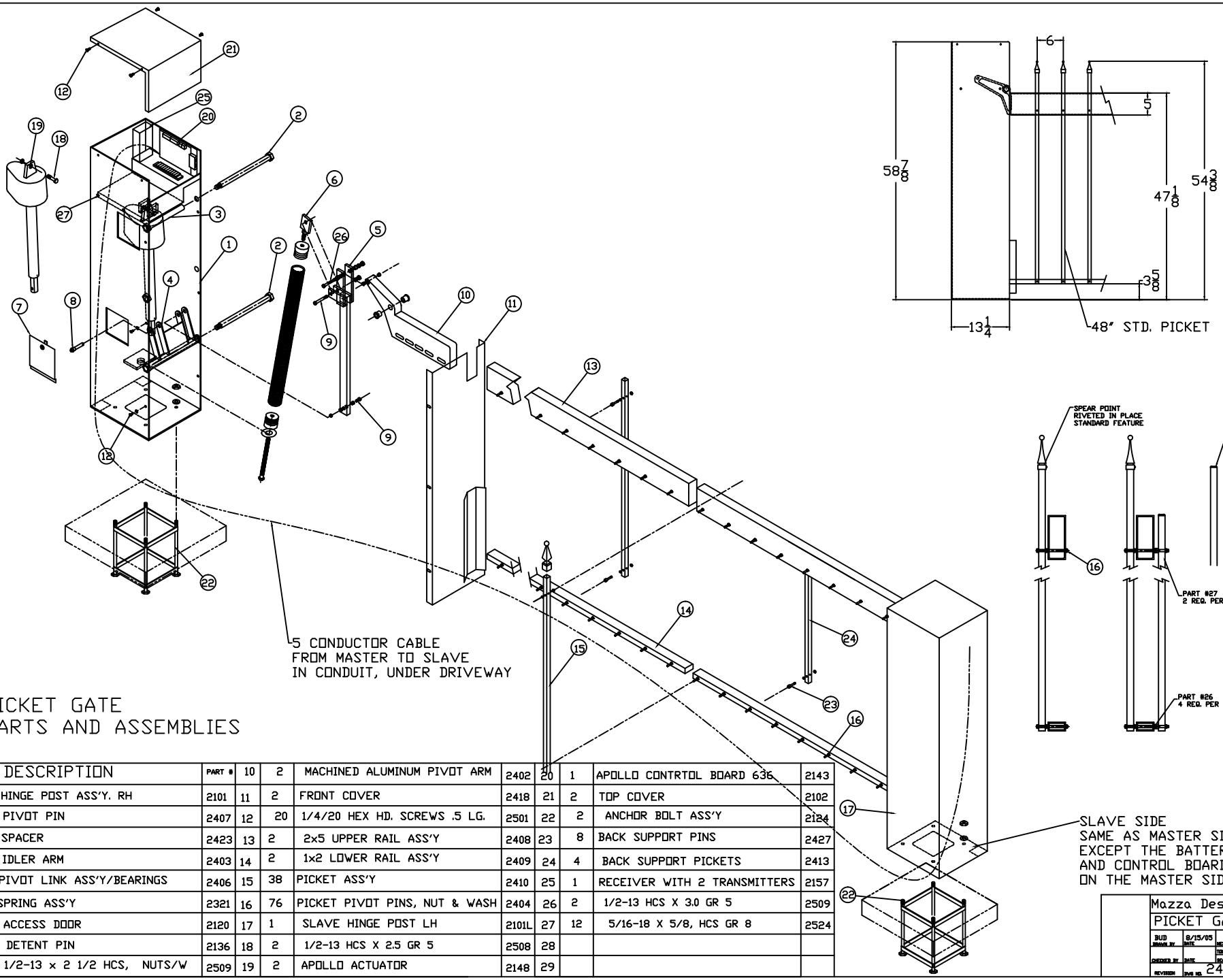
PICKET GATE ASS'Y

BUD — DRAWN BY — 5/14/07 — DATE — NEXT ASSEMBLY

TOLERANCE

CHECKED BY — DATE — SCALE

REVISION — DWG NO. 2400-100 S



PICKET GATE
PARTS AND ASSEMBLIES

NO	QTY	DESCRIPTION	PART #
1	1	HINGE POST ASS'Y. RH	2101
2	4	PIVOT PIN	2407
3	2	SPACER	2423
4	2	IDLER ARM	2403
5	2	PIVOT LINK ASS'Y/BEARINGS	2406
6	2	SPRING ASS'Y	2321
7	2	ACCESS DOOR	2120
8	2	DETENT PIN	2136
9	2	1/2-13 x 2 1/2 HCS, NUTS/W	2509
10	2	MACHINED ALUMINUM PIVOT ARM	2402
11	2	FRONT COVER	2418
12	20	1/4/20 HEX HD. SCREWS .5 LG.	2501
13	2	2x5 UPPER RAIL ASS'Y	2408
14	2	1x2 LOWER RAIL ASS'Y	2409
15	38	PICKET ASS'Y	2410
16	76	PICKET PIVOT PINS, NUT & WASH	2404
17	1	SLAVE HINGE POST LH	2101L
18	2	1/2-13 HCS X 2.5 GR 5	2508
19	2	APOLLO ACTUATOR	2148
20	1	APOLLO CONTRTOL BOARD 636	2143
21	2	TOP COVER	2102
22	2	ANCHOR BOLT ASS'Y	2124
23	8	BACK SUPPORT PINS	2427
24	4	BACK SUPPORT PICKETS	2413
25	1	RECEIVER WITH 2 TRANSMITTERS	2157
26	2	1/2-13 HCS X 3.0 GR 5	2509
27	12	5/16-18 X 5/8, HCS GR 8	2524
28			
29			

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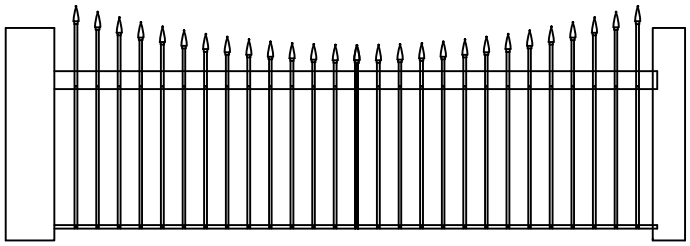
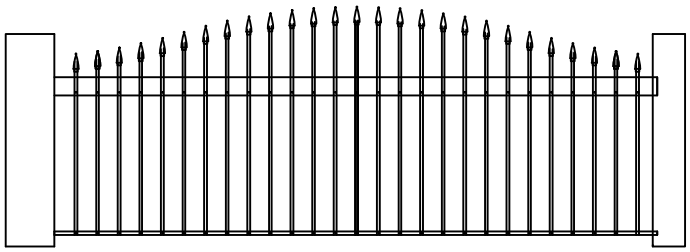
PICKET GATE ASS'Y

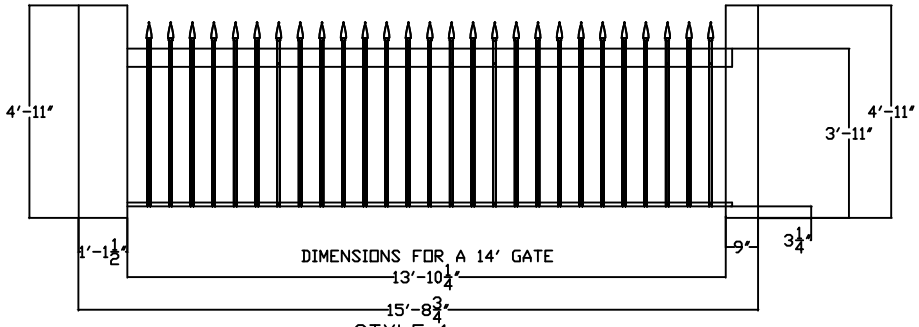
DRAWN BY	BJD	DATE	8/15/05
CHECKED BY		DATE	
REVISION		DWG NO.	2400-100 D
NEXT ASSEMBLY			
TOLERANCE			
SCALE			



STYLE 3

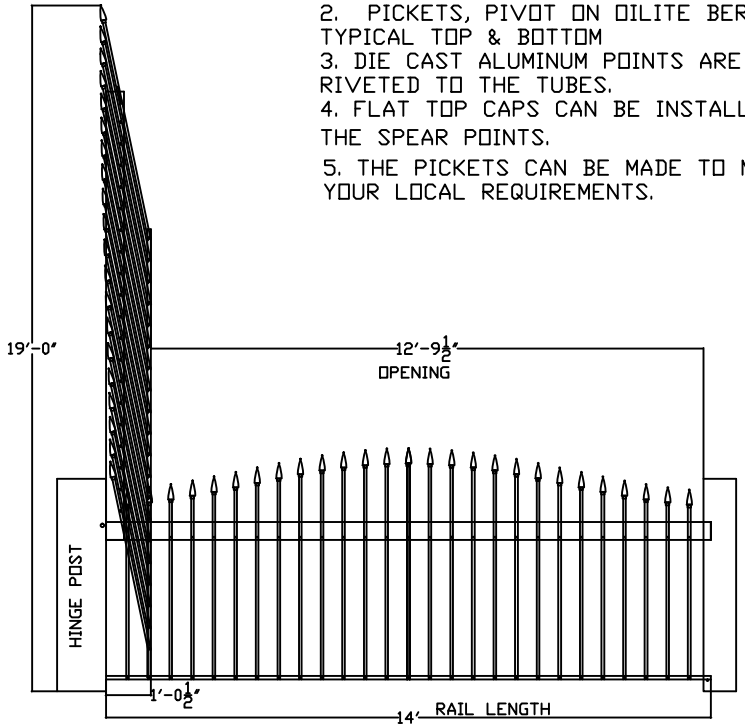


STYLE 2



STYLE 1

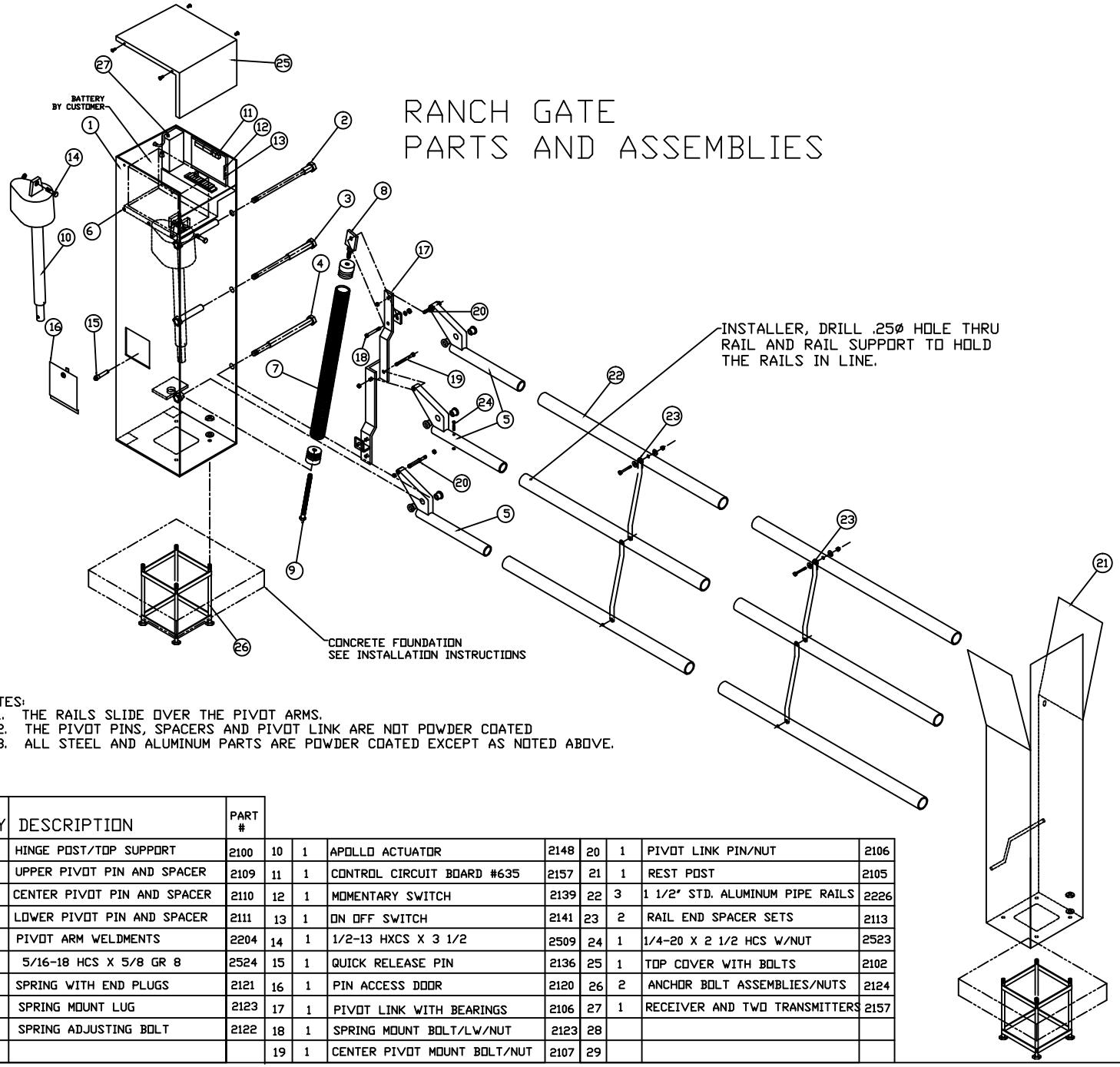
NOTES:
1. PICKETS ARE 3/4"SQ. ALUMINUM TUBE.
2. PICKETS, PIVOT ON OILITE BERARINGS TYPICAL TOP & BOTTOM
3. DIE CAST ALUMINUM POINTS ARE RIVETED TO THE TUBES.
4. FLAT TOP CAPS CAN BE INSTALLED IN PLACE OF THE SPEAR POINTS.
5. THE PICKETS CAN BE MADE TO MEET YOUR LOCAL REQUIREMENTS.

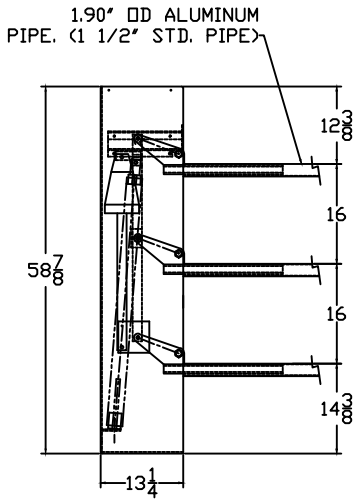


STANDARD 14' PICKET GATE.
SELECT THE PICKET AND POINT STYLE

Mazza Designs
PICKET TOP STYLES
2400

RANCH GATE
PARTS AND ASSEMBLIES





NOTES:
1. THE RAILS SLIDE OVER THE PIVOT ARMS.
2. THE PIVOT PINS, SPACERS AND PIVOT LINK ARE NOT POWDER COATED
3. ALL STEEL AND ALUMINUM PARTS ARE POWDER COATED EXCEPT AS NOTED ABOVE.

NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #
1	1	HINGE POST/TOP SUPPORT	2100	10	1	APOLLO ACTUATOR	2148	20	1	PIVOT LINK PIN/NUT	2106
2	1	UPPER PIVOT PIN AND SPACER	2109	11	1	CONTROL CIRCUIT BOARD #635	2157	21	1	REST POST	2105
3	1	CENTER PIVOT PIN AND SPACER	2110	12	1	MOMENTARY SWITCH	2139	22	3	1 1/2" STD. ALUMINUM PIPE RAILS	2226
4	1	LOWER PIVOT PIN AND SPACER	2111	13	1	ON OFF SWITCH	2141	23	2	RAIL END SPACER SETS	2113
5	3	PIVOT ARM WELDMENTS	2204	14	1	1/2-13 HXCS X 3 1/2	2509	24	1	1/4-20 X 2 1/2 HCS W/NUT	2523
6	6	5/16-18 HCS X 5/8 GR 8	2524	15	1	QUICK RELEASE PIN	2136	25	1	TOP COVER WITH BOLTS	2102
7	1	SPRING WITH END PLUGS	2121	16	1	PIN ACCESS DOOR	2120	26	2	ANCHOR BOLT ASSEMBLIES/NUTS	2124
8	1	SPRING MOUNT LUG	2123	17	1	PIVOT LINK WITH BEARINGS	2106	27	1	RECEIVER AND TWO TRANSMITTERS	2157
9	1	SPRING ADJUSTING BOLT	2122	18	1	SPRING MOUNT BOLT/LW/NUT	2123	28			
				19	1	CENTER PIVOT MOUNT BOLT/NUT	2107	29			

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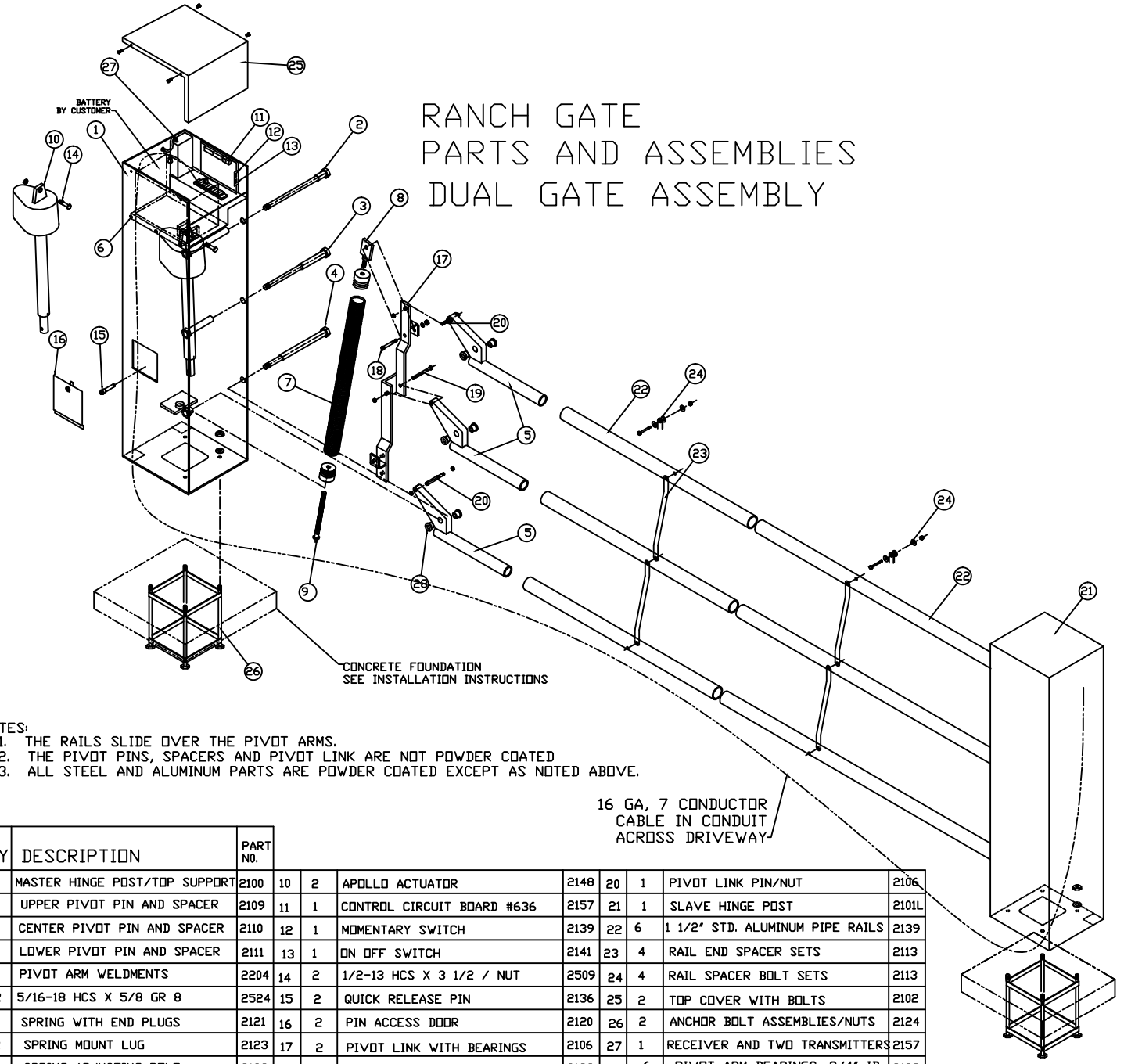
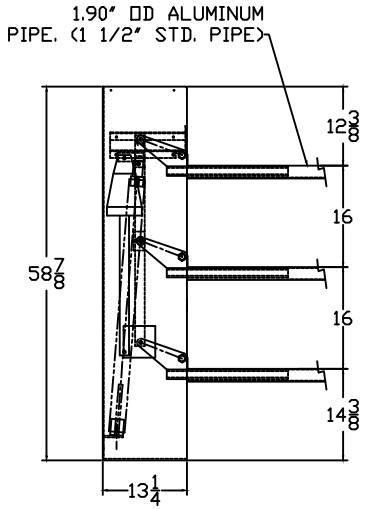
RANCH GATE ASSEMBLY

DRAWN BY: BJD	DATE: 5/14/07	NEXT ASSEMBLY	
CHECKED BY	DATE	TOLERANCE	
REVISION	DWG NO.	SCALE	2200-100 S

RANCH GATE
PARTS AND ASSEMBLIES
DUAL GATE ASSEMBLY





NOTES:
1. THE RAILS SLIDE OVER THE PIVOT ARMS.
2. THE PIVOT PINS, SPACERS AND PIVOT LINK ARE NOT POWDER COATED
3. ALL STEEL AND ALUMINUM PARTS ARE POWDER COATED EXCEPT AS NOTED ABOVE.

NO	QTY	DESCRIPTION	PART NO.	NO	QTY	DESCRIPTION	PART NO.	NO	QTY	DESCRIPTION	PART NO.
1	1	MASTER HINGE POST/TOP SUPPORT	2100	10	2	APOLLO ACTUATOR	2148	20	1	PIVOT LINK PIN/NUT	2106
2	2	UPPER PIVOT PIN AND SPACER	2109	11	1	CONTROL CIRCUIT BOARD #636	2157	21	1	SLAVE HINGE POST	2101L
3	2	CENTER PIVOT PIN AND SPACER	2110	12	1	MOMENTARY SWITCH	2139	22	6	1 1/2" STD. ALUMINUM PIPE RAILS	2139
4	2	LOWER PIVOT PIN AND SPACER	2111	13	1	ON OFF SWITCH	2141	23	4	RAIL END SPACER SETS	2113
5	6	PIVOT ARM WELDMENTS	2204	14	2	1/2-13 HCS X 3 1/2 / NUT	2509	24	4	RAIL SPACER BOLT SETS	2113
6	12	5/16-18 HCS X 5/8 GR 8	2524	15	2	QUICK RELEASE PIN	2136	25	2	TOP COVER WITH BOLTS	2102
7	2	SPRING WITH END PLUGS	2121	16	2	PIN ACCESS DOOR	2120	26	2	ANCHOR BOLT ASSEMBLIES/NUTS	2124
8	2	SPRING MOUNT LUG	2123	17	2	PIVOT LINK WITH BEARINGS	2106	27	1	RECEIVER AND TWO TRANSMITTERS	2157
9	2	SPRING ADJUSTING BOLT	2122	18	2	SPRING MOUNT BOLT/LW/NUT	2123	28	6	PIVOT ARM BEARINGS, 3/4" ID	2128
				19	2	CENTER PIVOT MOUNT BOLT/NUT	2107	29			

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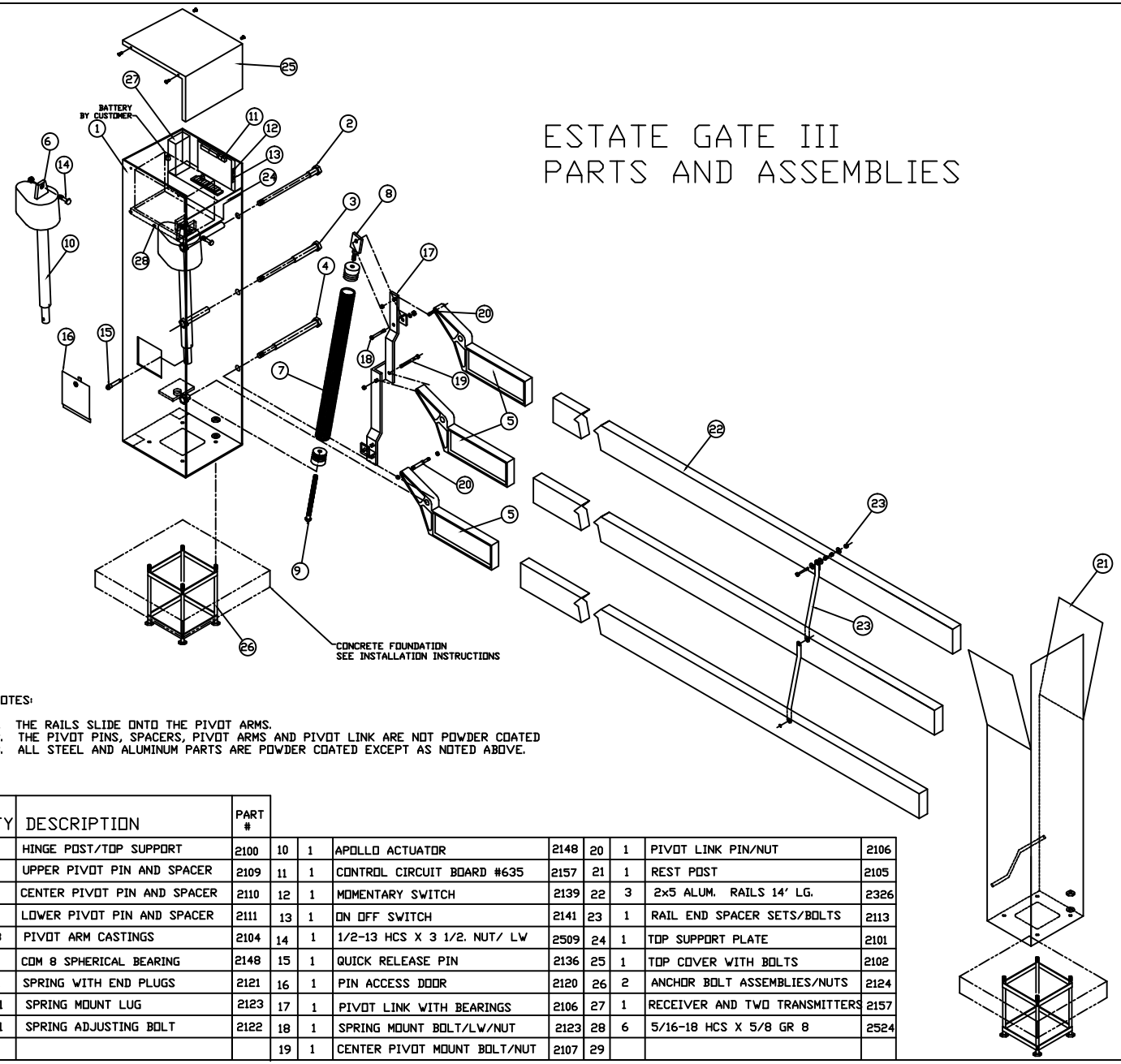
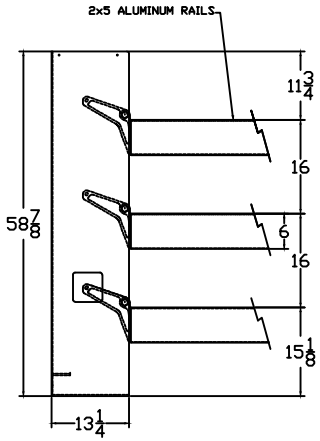
RANCH GATE DUAL ASSEMBLY

BUD 5/14/07
DRAWN BY DATE
NEXT ASSEMBLY
TOLERANCE
CHECKED BY DATE
QUALITY
REVISION DWG NO. 2200-100 D

ESTATE GATE III
PARTS AND ASSEMBLIES





NOTES:

1. THE RAILS SLIDE ONTO THE PIVOT ARMS.
2. THE PIVOT PINS, SPACERS, PIVOT ARMS AND PIVOT LINK ARE NOT POWDER COATED
3. ALL STEEL AND ALUMINUM PARTS ARE POWDER COATED EXCEPT AS NOTED ABOVE.

NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #
1	1	HINGE POST/TOP SUPPORT	2100	10	1	APOLLO ACTUATOR	2148	20	1	PIVOT LINK PIN/NUT	2106
2	1	UPPER PIVOT PIN AND SPACER	2109	11	1	CONTROL CIRCUIT BOARD #635	2157	21	1	REST POST	2105
3	1	CENTER PIVOT PIN AND SPACER	2110	12	1	MOMENTARY SWITCH	2139	22	3	2x5 ALUM. RAILS 14' LG.	2326
4	1	LOWER PIVOT PIN AND SPACER	2111	13	1	ON OFF SWITCH	2141	23	1	RAIL END SPACER SETS/BOLTS	2113
5	3	PIVOT ARM CASTINGS	2104	14	1	1/2-13 HCS X 3 1/2. NUT/ LW	2509	24	1	TOP SUPPORT PLATE	2101
6	1	COM 8 SPHERICAL BEARING	2148	15	1	QUICK RELEASE PIN	2136	25	1	TOP COVER WITH BOLTS	2102
7	1	SPRING WITH END PLUGS	2121	16	1	PIN ACCESS DOOR	2120	26	2	ANCHOR BOLT ASSEMBLIES/NUTS	2124
8	1	SPRING MOUNT LUG	2123	17	1	PIVOT LINK WITH BEARINGS	2106	27	1	RECEIVER AND TWO TRANSMITTERS	2157
9	1	SPRING ADJUSTING BOLT	2122	18	1	SPRING MOUNT BOLT/LW/NUT	2123	28	6	5/16-18 HCS X 5/8 GR 8	2524
				19	1	CENTER PIVOT MOUNT BOLT/NUT	2107	29			

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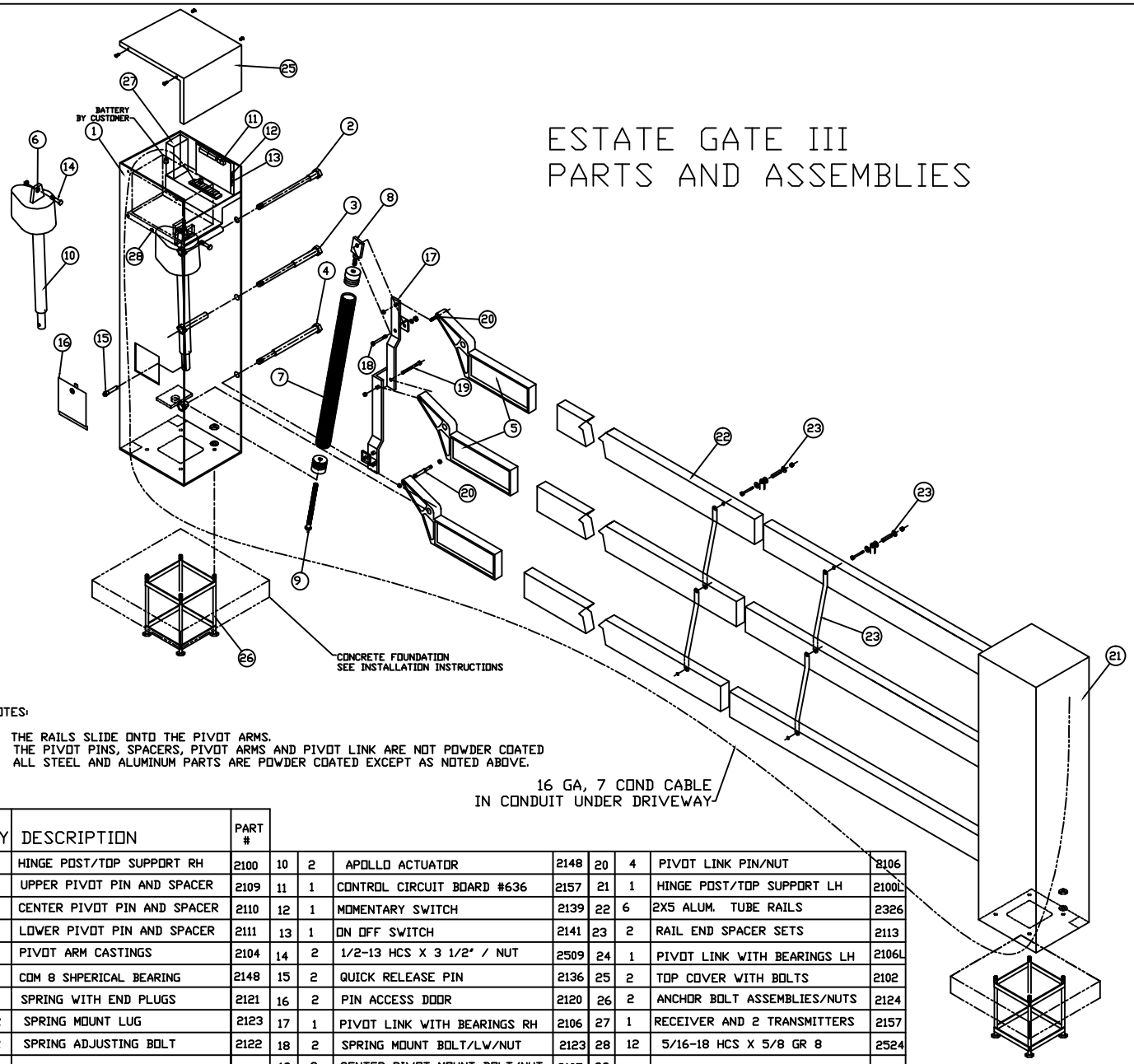
ESTATE GATE III, ASSEMBLY

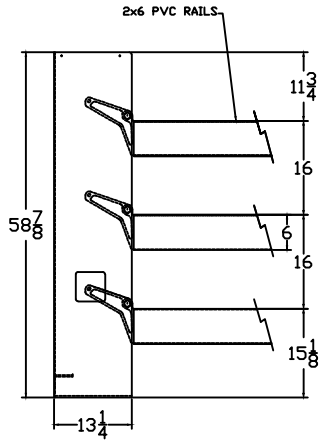
BUD 04/02/08 NEXT ASSEMBLY

CHECKED BY DATE SCALE 2300-100 S

REVISION DWG NO.

ESTATE GATE III
PARTS AND ASSEMBLIES





NOTES:

1. THE RAILS SLIDE ONTO THE PIVOT ARMS.
2. THE PIVOT PINS, SPACERS, PIVOT ARMS AND PIVOT LINK ARE NOT POWDER COATED
3. ALL STEEL AND ALUMINUM PARTS ARE POWDER COATED EXCEPT AS NOTED ABOVE.

NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #	NO	QTY	DESCRIPTION	PART #
1	1	HINGE POST/TOP SUPPORT RH	2100	10	2	APOLLO ACTUATOR	2148	20	4	PIVOT LINK PIN/NUT	8106
2	2	UPPER PIVOT PIN AND SPACER	2109	11	1	CONTROL CIRCUIT BOARD #636	2157	21	1	HINGE POST/TOP SUPPORT LH	2100L
3	2	CENTER PIVOT PIN AND SPACER	2110	12	1	MOMENTARY SWITCH	2139	22	6	2X5 ALUM. TUBE RAILS	2326
4	2	LOWER PIVOT PIN AND SPACER	2111	13	1	ON OFF SWITCH	2141	23	2	RAIL END SPACER SETS	2113
5	6	PIVOT ARM CASTINGS	2104	14	2	1/2-13 HCS X 3 1/2" / NUT	2509	24	1	PIVOT LINK WITH BEARINGS LH	2106L
6	2	COM 8 SHPERICAL BEARING	2148	15	2	QUICK RELEASE PIN	2136	25	2	TOP COVER WITH BOLTS	2102
7	2	SPRING WITH END PLUGS	2121	16	2	PIN ACCESS DOOR	2120	26	2	ANCHOR BOLT ASSEMBLIES/NUTS	2124
8	2	SPRING MOUNT LUG	2123	17	1	PIVOT LINK WITH BEARINGS RH	2106	27	1	RECEIVER AND 2 TRANSMITTERS	2157
9	2	SPRING ADJUSTING BOLT	2122	18	2	SPRING MOUNT BOLT/LW/NUT	2123	28	12	5/16-18 HCS X 5/8 GR 8	2524
				19	2	CENTER PIVOT MOUNT BOLT/NUT	2107	29			

DUAL GATE ASSEMBLY

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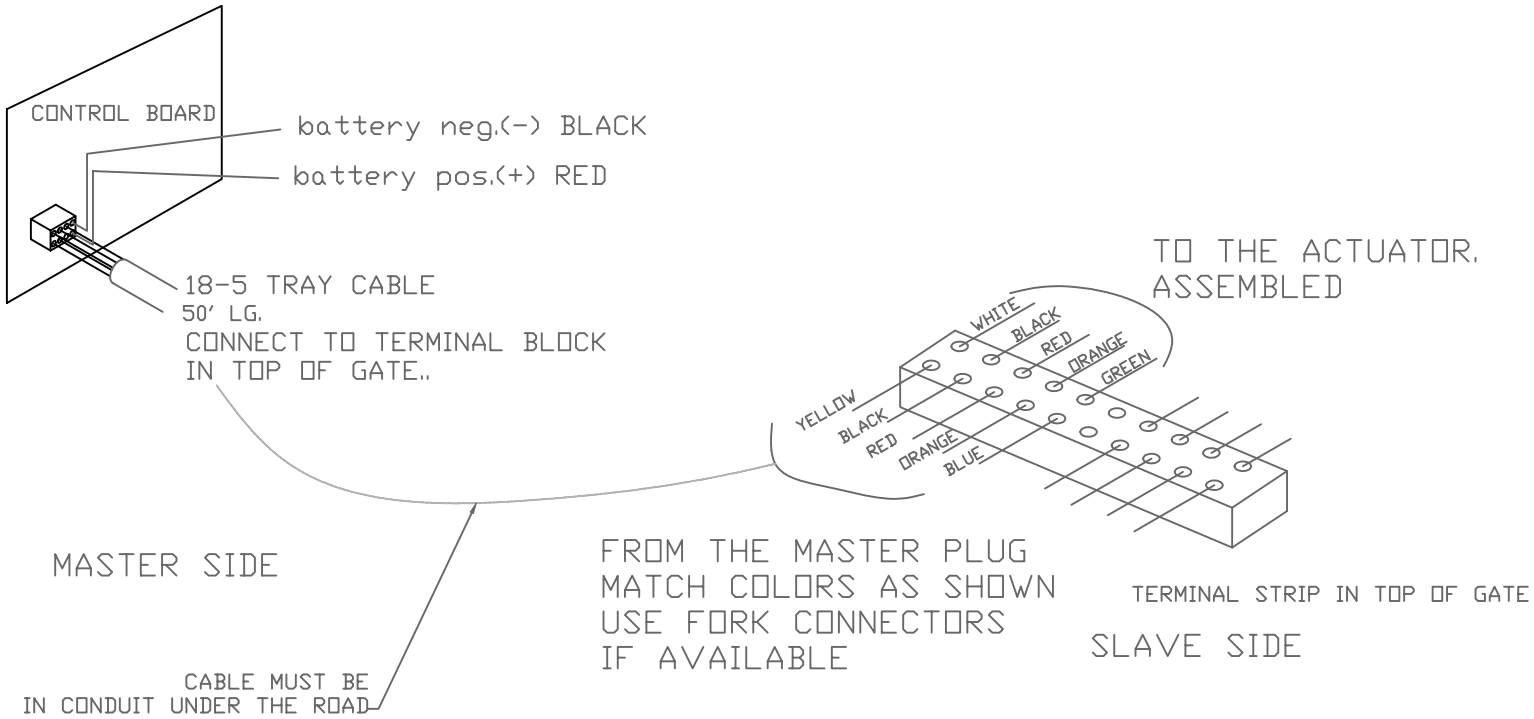
ESTATE GATE III, ASSEMBLY

DRAWN BY: BJD	DATE: 04/02/02	NEXT ASSEMBLY
CHECKED BY	DATE	TOLERANCE
REVISION	DWG NO. 2300-100 D	SCALE



DUAL GATE SLAVE ACTUATOR CONNECTIONS

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Littleton, CO 80127
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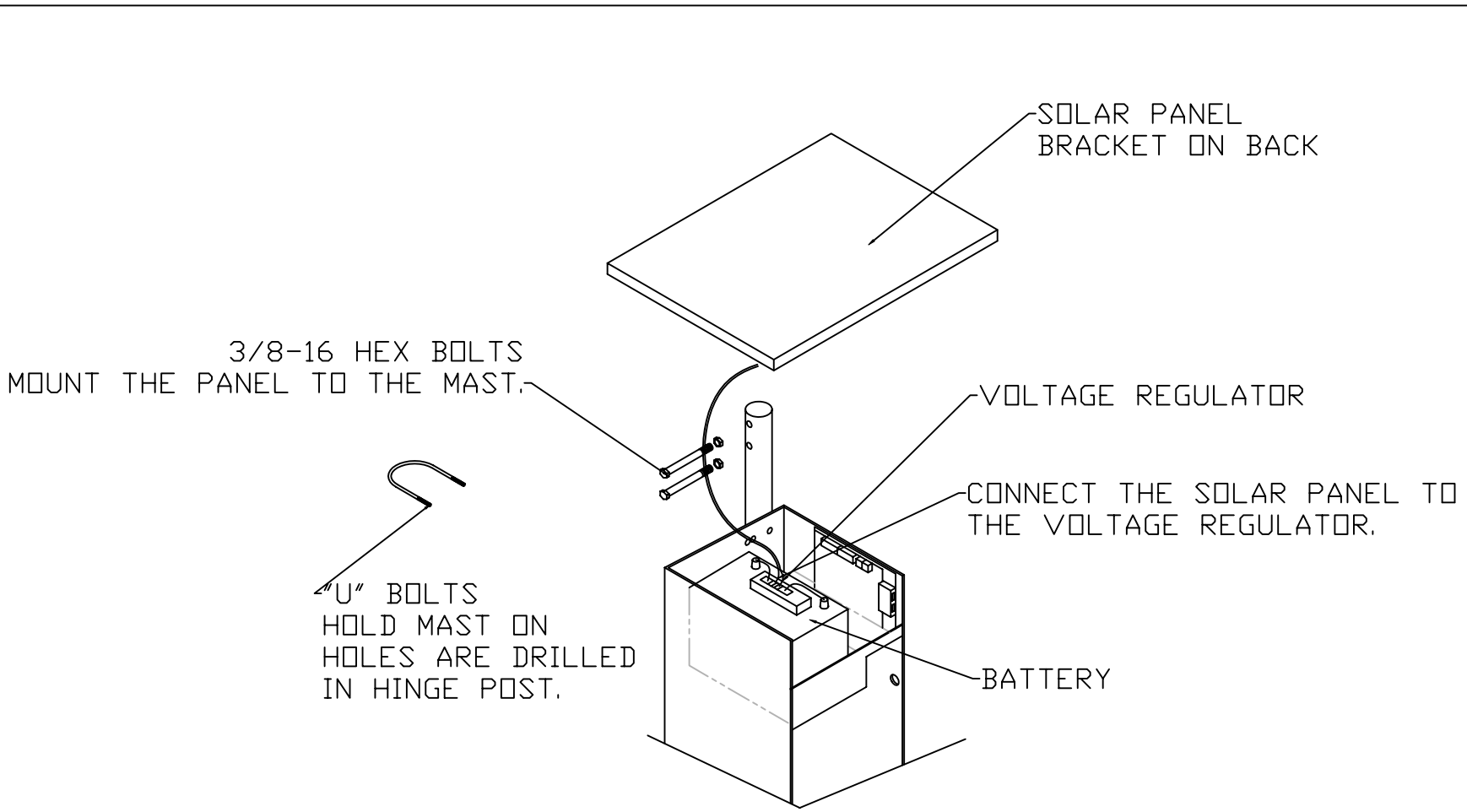
Slave Motor Connection

BUD	5/15/02		
DRAWN BY	DATE	NEXT ASSEMBLY	
		TOLERANCE	
CHECKED BY	DATE	SCALE	1/16"= 1'
REVISION		DWG NO.	2300-102



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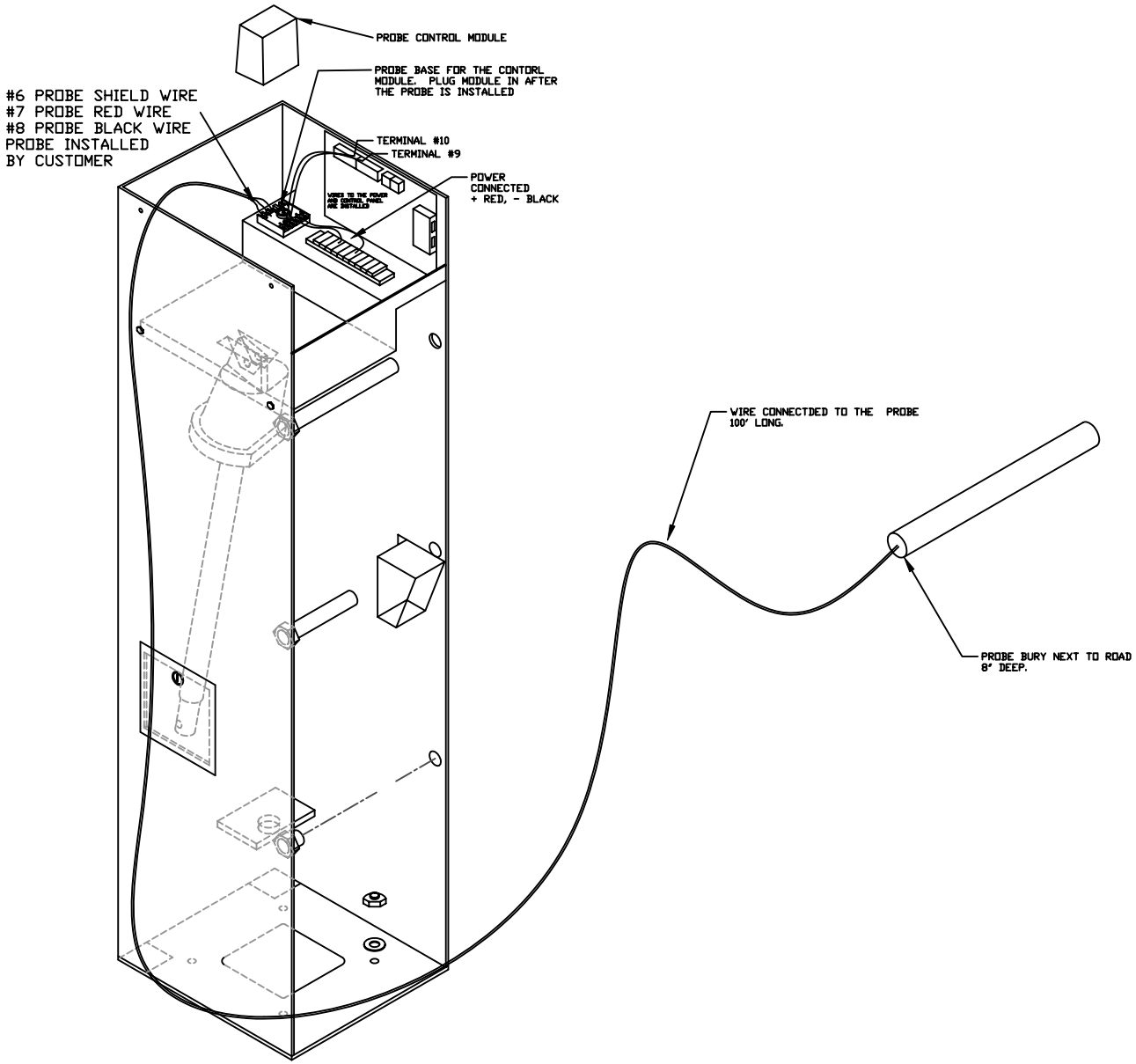
Littleton, CO 80127
303-948-5169

Solar Panel Mount

BUD DRAWN BY	11/7/03 DATE	NEXT ASSEMBLY
		TOLERANCE
CHECKED BY	DATE	SCALE:
REVISION	DWG NO.	2200-400



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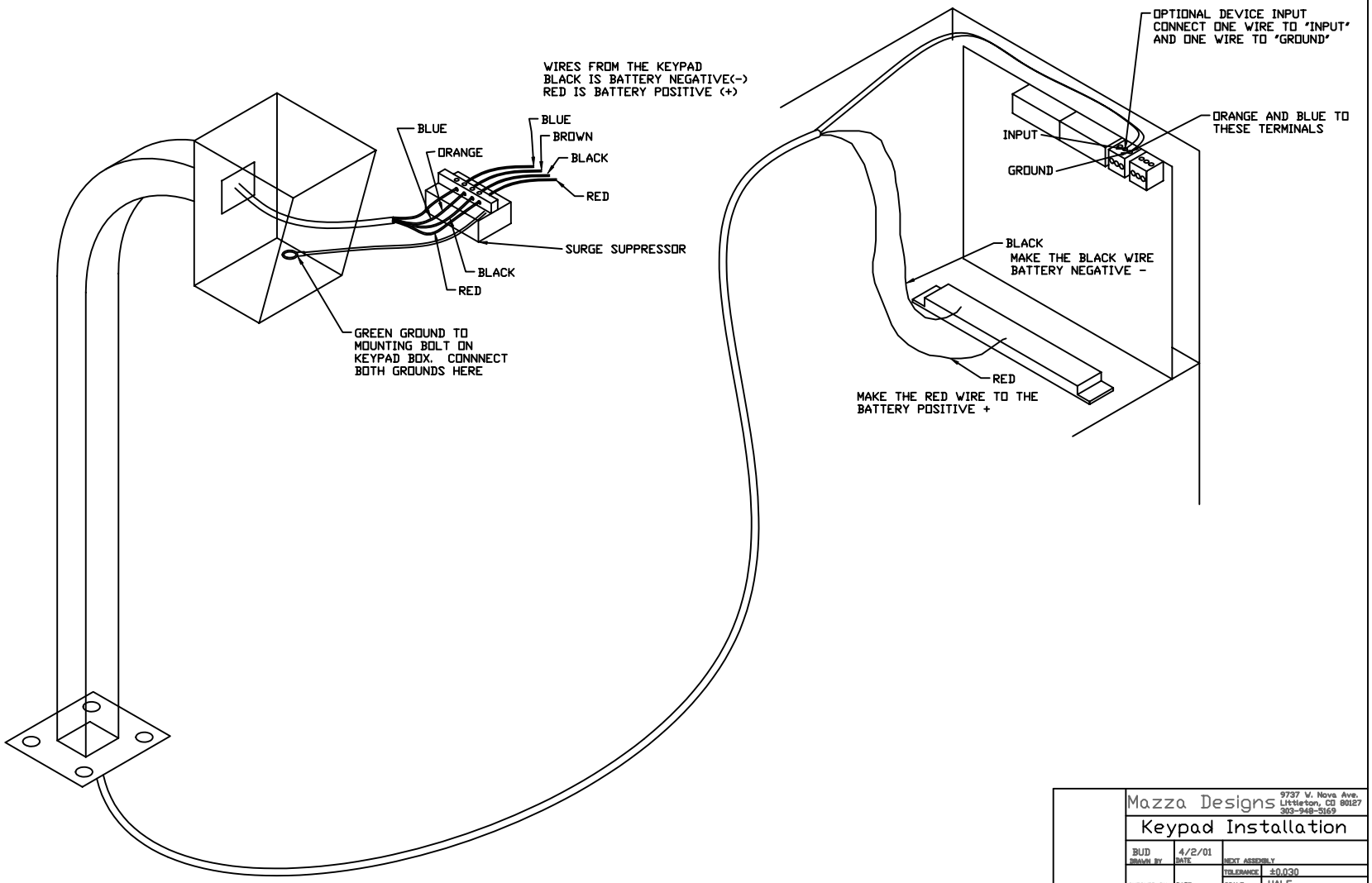
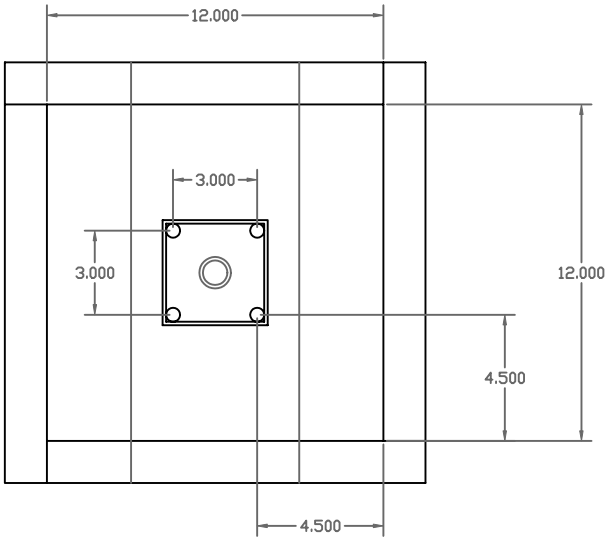
Exit Probe Installation

BUD DRAWN BY	7/12/04 DATE	NEXT ASSEMBLY
CHECKED BY	DATE	TOLERANCE / SCALE
REVISION	DWG NO.	2200-500

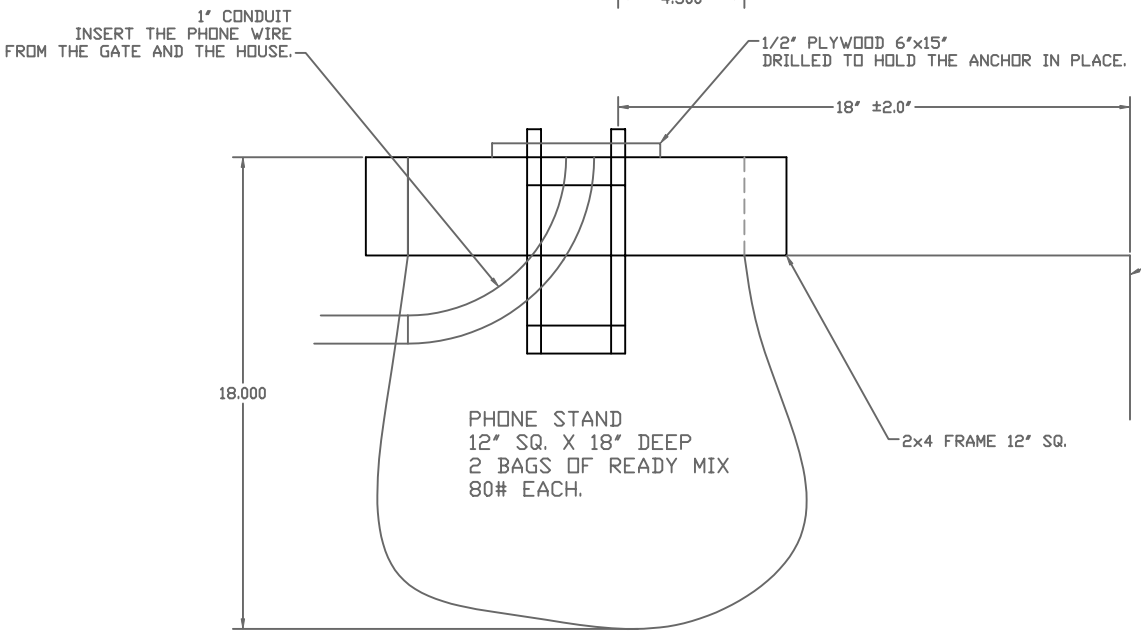


Mazza Designs	9737 W. Nova Ave. Littleton, CO 80127 303-948-5169	
Keypad Installation		
BUD DRAWN BY	4/2/01 DATE	NEXT ASSEMBLY
		TOLERANCE ±0.030
CHECKED BY	DATE	SCALE HALF
REVISION	DWG NO. 2100-300	



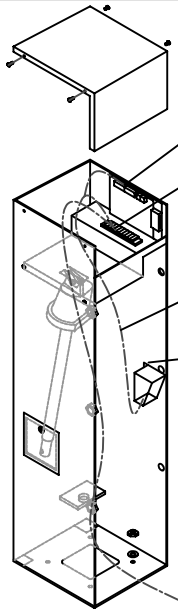
USE 1" CONDUIT FOR ALL PHONE AND INTERCOM INSTALLATIONS.
THEY REQUIRE TWO SETS OF WIRES, ONE TO THE GATE, ONE TO THE HOUSE.
FROM THE GATE TO THE HOUSE USE TWO TWISTED PAIR. ONE FROM
THE PHONE OR INTERCOM AND THE OTHER PAIR IS FOR SIGNAL OR
TO COMPLETE THE PHONE CIRCUIT.

USE 3/4" CONDUIT FOR ALL OTHER KEYPAD INSTALLATIONS.
FROM THE GATE TO THE KEYPAD USE TWO PAIR. ONE PAIR FOR POWER
ONE PAIR FOR SIGNAL.



THE FOUNDATION MUST BE LEVEL
AND FLAT. THE BOLTS MUST BE
PARALLEL TO THE ROAD.

	Mazza Designs	9737 W. Nova Ave. Littleton, CO 80127 303-948-5169
	Keypad Post Installation	
BUD DRAWN BY	7/5/02 DATE	NEXT ASSEMBLY
		TOLERANCE
CHECKED BY	DATE	SCALE
REVISION		2100-301



WIRES TO #9 & #10 ON CONTROL BOARD
FROM THE PHOTO EYE. WHITE & GREEN

WIRES TO BOTH SIDES OF THE PHOTO EYE
12 VOLT DC ONLY.

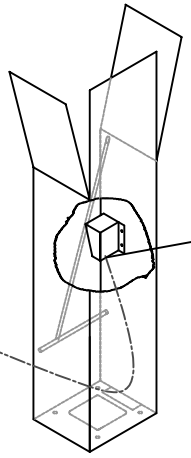
4 CONDUCTOR 22 GA WIRE
TWO WIRES, WHITE & GREEN
TWO WIRES, BLACK & RED TO BATTERY

PHOTO EYE MOUNTED ON AN ALUMINUM BRACKET
MOUNTING HARDWARE INSTALLED.

THE MOUNTING HOLES ARE DRILLED IN THE
HINGE POST AND REST POST. THEY WILL BE
IN ALIGNMENT WHEN THEY ARE INSTALLED.

CUSTOMERE MUST PROVIDE THE CONDUIT
WIRE IS INCLUDED IN THE GATE PACKAGE
TO CONNECT THE REST POST PHOTO EYE
TO THE POWER IN THE HINGE POST.

POWER WIRE BURIED
IN CONDUIT UNDER DRIVEWAY
18 GA. 2 CONDUCTOR DIRECT BURIAL CABLE.
MUST BE IN CONDUIT UNDER THE DRIVEWAY
TO PROTECT THE WIRE.



POWER FROM GATE
12 VOLT DC NO POLARITY

POWER MUST BE SUPPLIED TO THE REST POST
SIDE OF THE PHOTO EYE. USE ANY MEANS TO
POWER THE EYE.
1. A 5 WATT SOLAR PANEL AND A SMALL 12 VOLT BATTERY
CAN BE USED TO POWER THE EYE.
2. IF 120 VOLT POWER IS AVAILABLE ON THE REST POST
SIDE USE A 12 VOLT BELL TRANSFORMER TO POWER THE EYE.

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Photo Eye Installation

DRAWN BY: BUD	DATE: 10/11/00	NEXT ASSEMBLY	
CHECKED BY	DATE	TOLERANCE	±.005
REVISION	DWG NO. 2100-200	SCALE	FULL