

Specifications

Model NMSB XI

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WARRANTY

Each item of equipment in the Nasatka Maximum Security Barrier is warranted by Supplier for a period of one year, after delivery F.O.B. plant, unless otherwise specified by Supplier, from failure of operation in ordinary use and against defects due to faulty material or workmanship. Any defective equipment in the Nasatka Maximum Security Barrier shall be returned to the factory, at Supplier's option, for repair or replacement, and Supplier assumes no responsibility for service at any consumer site. Supplier is in no event responsible for any labor costs under the warranty. Subject to the above limitation, all service, parts, and replacements necessary to maintain the equipment as warranted shall be furnished by Supplier at no cost to consumer. Supplier shall not have any liability under these specifications, other than for repair or replacement as described above for equipment malfunction or equipment failure of any kind, caused for any reason, including, but not limited to unauthorized repairs, improper installation, installation not performed by Supplier personnel, nor by Supplier authorized personnel, modifications, misuse, accident, catastrophe, neglect, natural disaster, act of God or if at any time the power supplied to any part of the Nasatka Maximum Security Barrier falls short or exceeds the rate of tolerance for the equipment.

The exclusive remedy for breach of any warranty by Supplier shall be the repair or replacement at supplier's option, of any defects in the equipment. **IN NO EVENT SHALL THE SUPPLIER OF NASATKA MAXIMUM SECURITY BARRIER BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES OR ANY KIND OF DAMAGES TO ANYONE.** Except as provided herein, Supplier makes no warranties or representations to consumer or to anyone else and consumer hereby waives all liability against Supplier as well as any other person for the design, manufacture, sale, installation, and/or servicing of the Nasatka Maximum Security Barrier.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NO OTHER WARRANTIES EXIST.

Any modification or alteration by anyone other than NASATKA or NASATKA authorized personnel will render the NASATKA warranty herein as null and void.

INTRODUCTION

The Nasatka Maximum Security Vehicle Arrest Barrier plays a leading role in the vehicle access control industry. The patented surface mount design greatly simplifies barrier installation and eliminates *all* major site excavation. By utilizing the latest technology in the design of the proprietary hydraulic power unit and the microprocessor based electronic control systems; the NMSB provides performance, reliability, safety and security unmatched in the industry.

Having been designed, manufactured, and approved to exceed 4,000-pound truck traveling at 30 mph, Nasatka will provide videocassette tapes to qualified parties who wish to witness the basic installation procedure and the stopping power of these devices.

Operating security has been maximized by eliminating the decisions required by the system attendant to the level that Nasatka can provide a totally automatic system, which requires no personnel to control vehicle access.

Each system is 100% factory tested and adjusted for normal installed operating conditions. The Barrier, Hydraulic Power Unit, and the Electronic Control are interconnected and run in all operating modes. This insures that each component part of the NMSB is functioning in accordance with the customer operating parameters and the quality assurance standards of Nasatka Barrier, Inc.

Nasatka's pre-procurement "check list" insures the proper system configuration and operation with the minimum expenditure of time and at the lowest possible cost.

In addition, our standard system documentation contains over 30 pages of detailed, step-by-step, information pertaining to all aspects of installation, start up, trouble shooting, and maintenance. Familiarity with vehicle access systems, hydraulics, or electronics is not required to properly install, operate, and maintain the NMSB!

DISCLAIMER:

All barriers systems should be carefully planned with safety as a paramount concern. The product is designed to control vehicle traffic. Nasatka Barrier is not a traffic safety-engineering firm and recommends that a system be reviewed before installation. It is recommended that all forms of safety be used wherever possible, examples are; proper lighting, written warnings sign, traffic lights, gate arm and audible.

STANDARD OPERATING SYSTEM

The following are the statements of operation for the standard NMSB barrier. If the functional requirements of the installation are different from the standard, Nasatka must be notified at the time of order and any additional cost for the required changes will be quoted as an addition to the standard price.

The four-(4) operating possibilities are:

- (1) The barrier is fully open (down).
- (2) The barrier is fully closed (secure).
- (3) The barrier is between fully open and fully closed and moving toward the closed position.
- (4) The barrier is between fully open and fully closed and moving toward the open position.

Results of all possible operator inputs, i.e. close, and Open. The four (4) standard operating modes are described on the following pages.

Standard operating condition

(1) Barrier is fully open (down):

Operator input -

Result -

A. Close

Traffic change from yellow to red, then the Gatearm goes from the up position to the down position Barrier delays for 3 seconds then goes to the fully secure position in standard operating time.

B. Open

No action.

(2) Barrier is fully closed (secure):

Operator input -

Result-

A. Close

No action.

B. Open

Barrier goes to the fully open position in standard operating time. Then the gate arm goes from the down position to the up position. Traffic change from red to yellow after gate arm is up.

(3) Barrier is between open and closed and moving toward secure position:

Operator input -

Result -

A. Close

Barrier continues toward the fully secure position in standard operating time.

B. Open

Barrier immediately reverses direction of travel and goes to the fully open position in standard operating time (slightly faster due to reduce travel).

(4) Barrier is between open and closed and moving toward open position:

Operator input -

Result -

A. Close

Barrier delays for 3 seconds then goes to the fully secure position. (Slightly faster due to reduced travel).

B. Open

Barrier continues toward the fully open position in standard operating time.

Maximum Run Down Timer:

The CPU is equipped with an internal maximum run timer. This is used to prevent the motor from continuously running and causing damage to the system. The maximum run timer is set to 8 seconds. The timer is activated by an input from the system to lower the barrier. The timer is reset by the activation of the down button again.

Maximum Run Up Timer:

Up timer is about a four (4) second adjustable internal timer used to shut off the hydraulic motor and solenoid valve after the up button is pressed. The timer is activated whenever the up push button is pressed; the timer is used in place of a limit switch for the up cycle only.

Cardreader System

1. A vehicle pulls up to the cardreader at the barrier and is on loop 1. They then insert the card into the system.
2. If the card is verified and the vehicle is over loop 1, the barrier will lower to the open position. After the barrier is secured down, the traffic light will change from red to yellow, allowing the vehicle to pass into the parking lot.
3. After the vehicle has passed over the barrier and passed loop 2, the traffic lights will change from yellow to red, then the barrier will rise back to the secure position.
4. If someone accesses the cardreader, and no vehicle is present over loop 1, the barrier will remain in the secure position and access is denied.
5. If a vehicle accesses the cardreader and is on loop 1, but never proceeds through the barrier to loop 2, the barrier will remain in the down position and after 15 seconds, an alarm will sound to inform the operator that the barrier is left in the down position. The personnel in charge of the barrier system should check to make sure that no one is near the barrier and raise the barrier manually by pressing the up button. This, in turn, will reset the alarm.
6. If a vehicle is at the cardreader and does not have a card, they may notify the officer through the intercom system. After the officer verifies access, the officer then can manually lower and raise the barrier from master panel without loops interfering with any of the process.
7. If the barrier is in motion, either moving toward the secure position or the open position, and it fails to reach the desired limit switch (up or down) in eight seconds, the system will shut down turning off the motor and solenoid. To reactivate the system and reset the timer, just press the up or down button on the master control panel.
8. The exit barrier works in exactly the same manner as the entrance barrier.

1.1 Purpose

The following specifications give a general description of the Nasatka Maximum Security Barriers XI.

1.2 Qualifications

Equipment names and model numbers included herein are those currently under production for or are utilized in the Nasatka Maximum Security Barrier as of the writing of this specification, and are subject to change without notice.

1.3 Description of System

(See accompanying drawings for details.)

1.3.1 Make and Model: Nasatka Maximum Security Barrier XI.

1.3.2 Road Width: Nominal 10 foot (3.1 meter) gate opening. Other widths available including configurations for bi-directional roads/access points.

1.3.3 Barrier Material: High impact steel having the following properties:

Yield Strength : 100 KSI
Tensile Strength : 110/130 KSI
Elongation (2 in.) : long 18 Trans 16

This material is produced in accordance with U.S. ASTM Specification T-1 Type B.

1.3.4 All barriers are hot dip galvanized on complete surface of the unit to prevent the steel from rusting.

1.3.5 The barrier shall meet Environmental Protection Agency standards set for oil containment. Oil containment pits shall hold 1 gallons of oil for .5 gallon of oil in the reservoir.

1.3.6 Barrier Height: In the fully "secure" position, the barrier height above the ground is 20".

1.3.7 Barrier Dimensions: See accompanying drawing.

1.3.8 Response time: The barrier will erect to the fully "up" position in less than five (5) seconds under normal operating conditions.

1.3.9 Cycling Time: The hydraulic pump is capable of completing six (6) cycles (up/down) per minute.

1.3.10 Normal Activation: Electrically-driven hydraulic pump operating at a pressure of 500 psi and a flow rate of 2.31 g.p.m. (8.8LPM) are used to activate a double-acting cylinder.

1.3.11 Operating Modes:

- A) Raise and lower barrier, normal conditions, operator command, and momentary input.
- B) Raise and lower barrier, by cardreader and loops, with momentary input.
- C) Default to manual operation.

1.3.12 System Controller NMSB XI: Microprocessor controller with relays and timers synchronized to properly operate a barrier system.

1.3.13 Control Panel:

- A) Momentary push buttons to raise or lower the barrier.
- B) Status indicating lights for barrier position.

1.3.14 Power Source: Nominal 20 AMP, 120 or 220 VAC, 1-phase, 60 Hz main power. Adaptable to 50 Hz main power with component substitution.

1.3.15 Foundation Pad: Reinforced concrete pad for the NMSB XI is 4 feet by 12 feet, 6 inches deep. (for standard 120" barrier)

1.3.16 Optional Features: The following options are available to enhance the performance and operation of the NMSB:

- * Master control panel.
- * Indicator lights for barrier status.
- * Traffic lights (red & yellow).
- * Loop Detectors (access control).
- * Hydraulic heat.
- * E-up operation
- * Remote control panel.
- * Loop Detectors (safety).
- * Gate arm.
- * Cardreader
- * Slab heater (snow melt)
- * Custom paint of barrier

5.3.17 Installed Weight: Approximately 900 lbs.

SPECIFICATIONS

MODELS: NMSB XI

CRASH TEST: Models XI 4,000 lbs at 30 mph

WEIGHT: 900 lbs.

SIZE: Length - 96", Width - 28 " (for standard 120" barrier) Height -20"

VOLTAGE: The NMSB is supplied with operating capabilities for a standard 1-phase line voltage between 120 -220 volts 50Hz or 60Hz, ¾hp motor.

FULL LOAD CURRENT: The full load current depends on the actual line voltage and frequency that the barrier is operated from. The following are two examples:

- 120 VAC @ 11.8 AMP, 60 HZ 220 VAC @ 6.4 AMP, 60 HZ

OPERATOR CONTROLS: Close, and Open push buttons (at 24 volts).

HYDRAULIC FLUID:

Capacity - .5 gallons nominal.

Type -U.S.P.P petroleum base.

Recommended Brand - Dexron III Transmission Fluid.

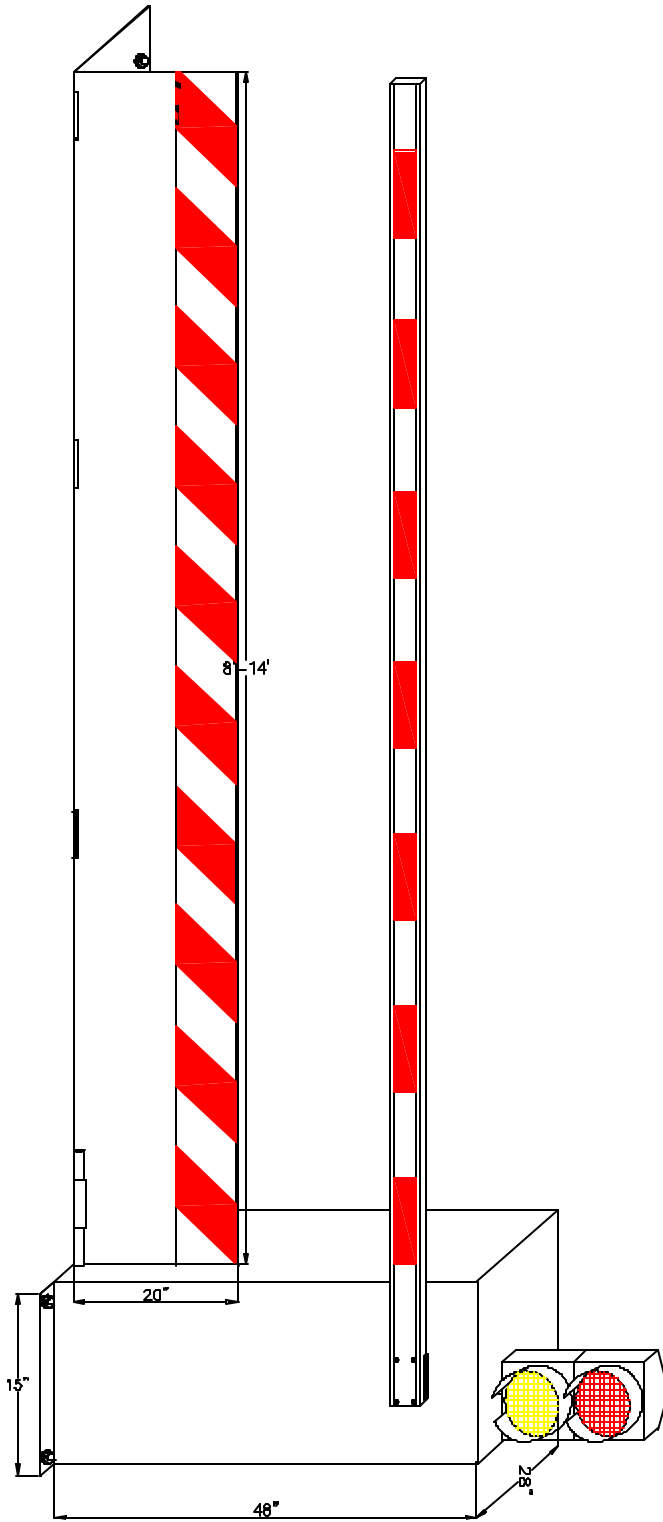
CYCLE TIME: Nominal ½ cycle (raise or lower) time is 5 seconds for normal operation.

HYDRAULIC PRESSURE: (factory setting)

Pump Output - 800-PSI relief valve setting

Barrier Requirements - 500 PSI

OPERATING TEMPERATURE: 20° to 120° Fahrenheit.

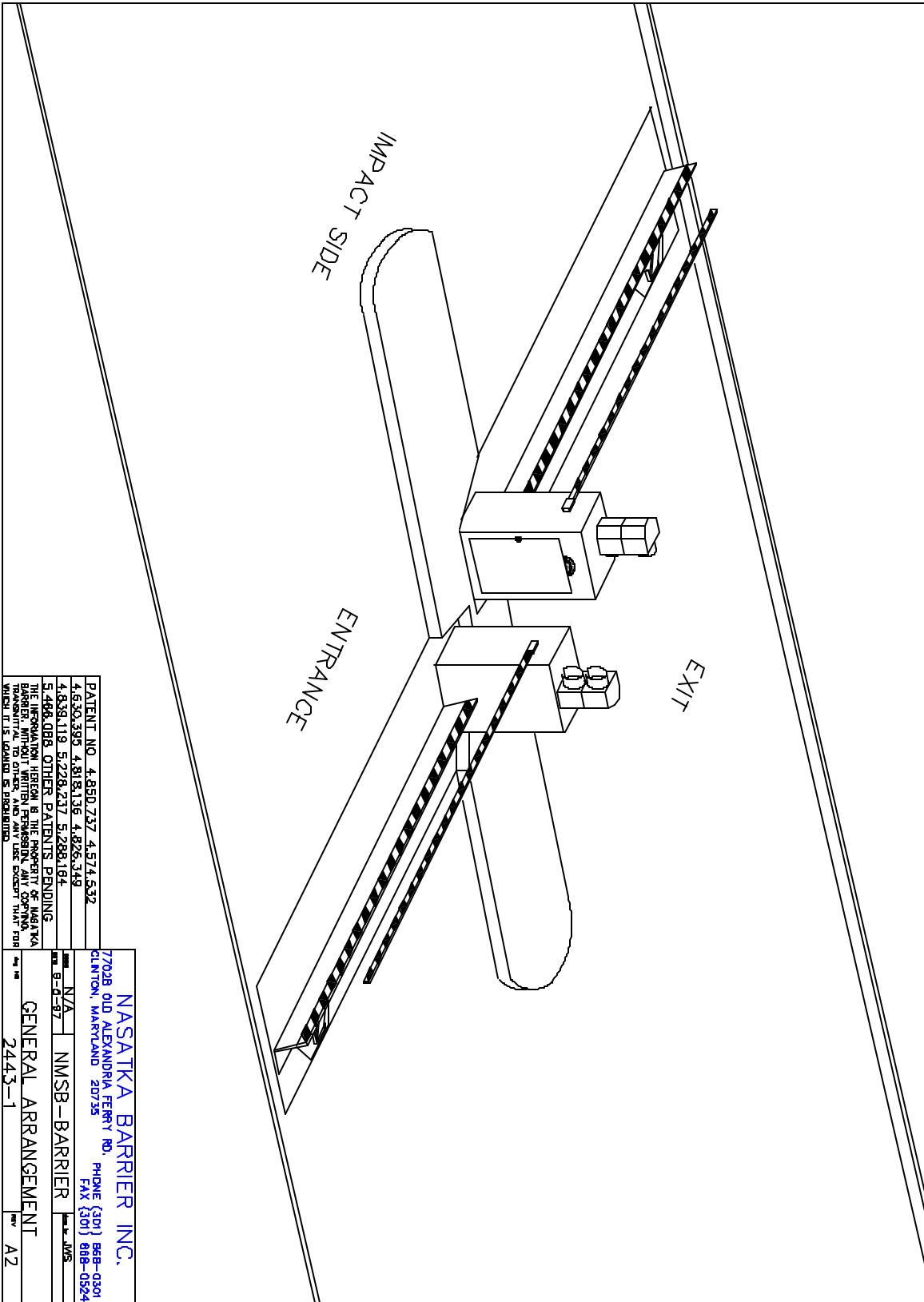


PATENT NO. 4,850,737 4,574,523
 4,830,395 4,818,176 4,826,349
 4,893,119 5,228,237 5,288,184
 5,466,082 OTHER PATENTS PENDING

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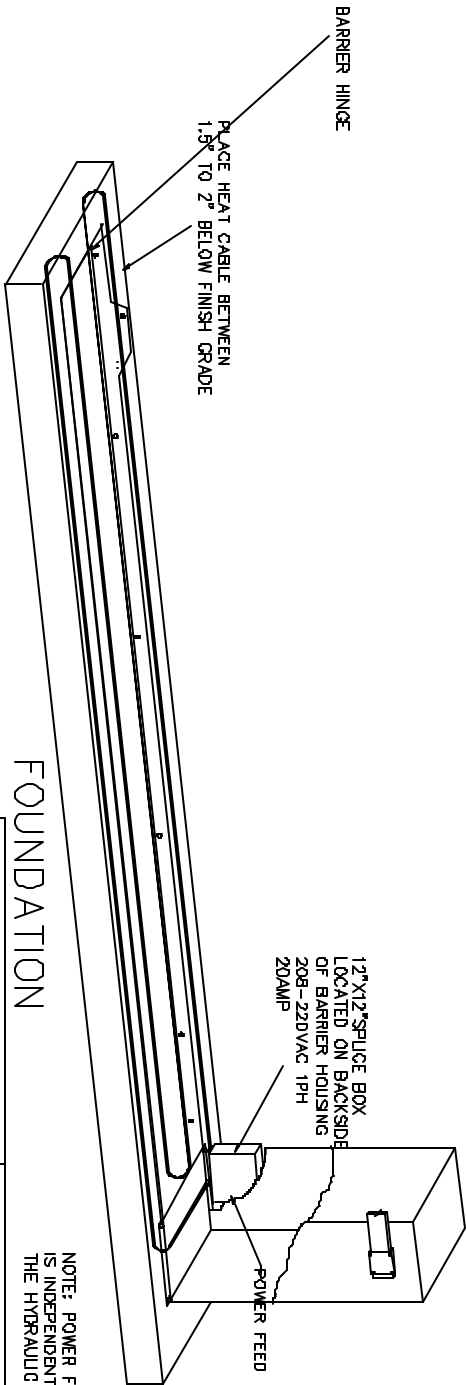
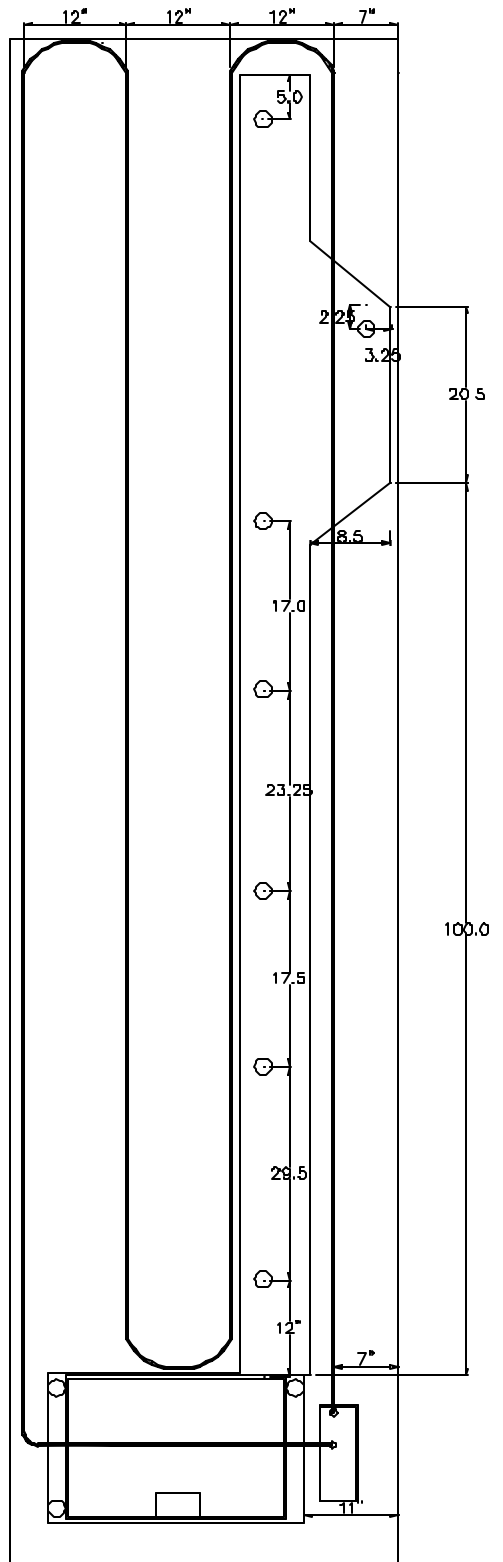
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part no. N/A
 desc. MINI-BARRIER
 part no. N/A
 desc. NMSB-XI
 part no. 60892
 desc. B



PATENT NO. 4,890,737 4,574,532
 4,630,395 4,818,136 4,826,349
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BARrier	HEAT CABLE REQ
10'	56'
12'	64'
14'	74'

FOUNDATION

NOTE: POWER FEED TO THE HEAT CABLE IS INDEPENDENT OF POWER TO THE HYDRAULIC AND CONTROLS.

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Model No.	N/A	Model No.	MWSB-XI MINI-BARRIER
Patent No.	4,850,395 4,819,136 4,826,348	Patent No.	4,850,395 4,819,136 4,826,348
Other Patents	5,466,088 OTHER PATENTS PENDING	Other Patents	5,466,088 OTHER PATENTS PENDING

HEAT CABLE LAYOUT
 4039-1