

RFQ 640810 - ATTACHMENT 2

FENCING AND OTHER RELATED SPECIFICATIONS

(All specifications are Brand Name or Equal)

**Lines 1-23 - Fabric (Mesh):**

1. Produced in various gauges and mesh sizes.
2. Available in heights of 36", 42", 48", 60", 72", 84", 96", 120", and 144".
3. Gauge refers to the diameter of the wire used to produce the fabric. Higher gauge numbers indicate smaller wire diameter.
4. Mesh size is the clear distance between parallel wires forming a diamond. Smaller mesh size means tighter fabric.
5. Selvage can be "knuckled" (to avoid sharp ends) or "twisted" (for added security).

**Framework:**

1. Galvanized steel framework available in various gauge and diameter sizes for 3' to 12' high chain link fence systems.

**Gates:**

1. Full line of matching single, double, cantilever, and roll gates available.

**Coating:**

1. Aluminized steel fabric (ArmorLink®) provides the strength of steel, smooth aluminum finish, and low maintenance.
2. 6, 9, and 10 gauge fabric have a 25-year limited warranty.
3. 11½ gauge fabric has a 15-year limited warranty.
4. Meets American Society for Testing and Materials (ASTM) A491, A817, Federal specification RR-F-191 Type II, and American Association of State Highway and Transportation Officials (AASHTO) M-181 standards.

**Connections:**

1. Fabric shall be securely fastened to all terminal, corner and gate posts by 1/4 x 3/4-inch tension bars with 11-gauge pressed steel bands spaced approximately 14 inches apart.
2. Fabric shall be securely fastened to all line posts with .062 by .375 self-locking line post fabric band spaced 14" apart.
3. Fabric shall be securely fastened to top rail with .062 by .375 self-locking line post fabric band spaced 24" apart.
4. Fabric connection option (to be provided at no additional cost at County discretion) shall be a locking aluminum clip as manufactured by the Page Aluminized Corporation or equal.
5. Polyethylene mesh shall be 4 mm polyester knotted twine with maximum breaking stress of 285 pounds. The spacing between parallel sides of twine will be 11/2 inches; all edges will be finished with vinyl coated polyester and sewn with four rows of stitching.

## Lines 24-30 & 53-57- Mesh End Corner and Pull Posts

1. Line Post:
  - a. Outside diameter: *Refer to Table.*
2. End, Corner, Pull Post:
  - a. Outside diameter: *Refer to Table*

Group IA F1083, schedule 40 pipe reflects Regular Grade 30,000 psi yield steel, High Strength Grade, 50,000 psi yield steel not listed. Pipe terminal posts are generally one size larger in outside diameter than the line posts.

Table:

Fence Fabric	ASTM F1083 Sch. 40 Pipe Minimum
up to 6' 0"	1.900"
over 6' 0" to 8' 0"	2.375"
over 8' 0" to 10' 0"	2.875"
over 10' 0" to 12' 0"	3.500"
over 12' 0" to 14' 0"	3.500"
over 14' 0" to 16' 0"	4.000"

3. Top, Brace, Bottom, and Intermediate Rails:
  - a. Diameter: 1.660 inches (42.2 mm).
  - b. Weight per foot: 2.28 lb./ft (3.39 kg/m).
  - c. Note: Remove top or bottom rails when not required. Add tension wire if needed; terminal post brace rails are necessary for fences six feet or higher.

## Lines 31 – 52 - Black Thermally Fused Mesh

1. Fused Bonding Process:
  - a. Fused bonding is the process where PVC (polyvinyl chloride) is thermally fused to a core steel wire to not only protect it but also create an outer layer with color. In other words, the fused bonding process literally bakes the PVC onto the wire.
  - b. The PVC-coated wire is then woven into a chain link fence of various mesh sizes, heights, and colors.
2. Standard Colors Available:
  - a. Swan Fence offers six standard colors for fused bonded fences: black (which aligns with your request), green, brown, white, gray, and beige.
  - b. Additionally, they can match custom colors to meet specific preferences.
3. Mesh Sizes and Gauges:
  - a. The gauge refers to the wire diameter, with higher gauge numbers indicating smaller wire diameter.
  - b. Here are the available mesh sizes and corresponding gauges for fused bonded fence fabric:

Mesh Size	Gauge (Core/Finish)
2"	11/10
1.25"	10/9

4. Standards and Specifications:

a. Fused bonded fence fabric adheres to the following standards:

1. ASTM F-668 Class 2b
2. AASHTO M-181 Type IV Class B
3. RR-F-191 Type IV

5. Attachment of Mesh:

- a. Fabric shall be securely fastened to all terminal, corner and gate posts by 1/4 x 3/4-inch tension bars with 11-gauge pressed steel bands spaced approximately 14 inches apart.
- b. Fabric shall be securely fastened to all line posts with .062 by .375 self-locking line post fabric hand spaced 14" apart.
- c. Fabric shall be securely fastened to top rail with .062 by .375 self-locking line post fabric hand spaced 24" apart.
- d. Fabric connection option (to be provided at no additional cost at County discretion) shall be a locking aluminum clip as manufactured by the Page Aluminized Corporation or equal.
- e. Polyethylene mesh shall be 4 mm polyester knotted twine with maximum breaking stress of 285 pounds. The spacing between parallel sides of twine will be 11/2 inches; all edges will be finished with vinyl coated polyester and sewn with four rows of stitching.

### **Lines 58 – 70 - Aluminized Pedestrian Gates – 3ft**

1. Gate Width:
  - a. The gate is 3 feet wide.
2. Material:
  - a. The gate is made of aluminized steel.
3. Coating:
  - a. Aluminized steel is coated with a layer of aluminum to enhance durability and corrosion resistance.
4. Design and Construction:
  - a. The gate features a sturdy frame and mesh design suitable for pedestrian access.
  - b. It is designed for easy installation and operation.
5. Posts:
  - a. The gate requires corner, end, and pull posts.
  - b. These posts should be made of galvanized steel for strength and longevity.
6. Finish:
  - a. The gate's finish is typically in a black color.

### **Lines 71- 82 -Aluminized Pedestrian Gates – 4ft**

1. Gate Width:
  - a. The gate is 4 feet wide.

2. Material:
  - a. The gate is made of aluminized steel.
3. Coating:
  - a. Aluminized steel fabric adheres to ASTM A491 standards.
  - b. It is also available in a Zinc-5% Aluminum-Mischmetal Alloy Coated version with two classes:
    1. Class 1: 0.6 oz/ft<sup>2</sup> (183 g/m<sup>2</sup>).
    2. Class 2: 1.0 oz/ft<sup>2</sup> (305 g/m<sup>2</sup>)<sup>1</sup>.
4. Finish:
  - a. The gate's finish is typically in a black color.
5. Height:
  - a. The gate is 5 feet high on the ends and 5 feet 4 inches high in the center (additional tip height).

### **Lines 83 – 92 - 10ft wide Double Driveway Gate and posts**

1. Gate Width:
  - a. The gate is 10 feet wide.
2. Material:
  - a. The gate is made of aluminized steel.
3. Frame Specifications:
  - a. Frame Sides & Bottom: 40 x 40 x 2 mm Tube (1-9/16" x 1-9/16" x 1/16").
  - b. Frame Top Horizontal: 40 x 30 x 2 mm Tube (1-9/16" x 1-3/16" x 1/16").
  - c. Second Rail (Top & Bottom): 30 x 5 mm Flat Bar (1-3/16" x 3/16").
4. Finish:
  - a. The gate's finish is typically in a black color.
5. Height:
  - a. The gate is 5 feet high on the sides and 6 feet high at the apex.

### **Lines 93 – 102 - 12 Ft wide double driveway gate**

1. Gate Width:
  - a. The gate is 12 feet wide.
2. Material:
  - a. The gate is made of aluminized steel.
3. Frame Specifications:
  - a. The frame sides and bottom are constructed from 40 x 40 x 2 mm (1-9/16" x 1-9/16" x 1/16") square tubes.
  - b. The top horizontal frame uses 40 x 30 x 2 mm (1-9/16" x 1-3/16" x 1/16") tubes.
  - c. The gate is fully welded for extra strength and durability.
4. Finish:
  - a. The gate features a black, powder-coated finish for minimal maintenance and long-lasting beauty.
5. Height:
  - a. The gate stands 5 feet high on the sides and 6 feet high at the apex.
6. Additional Details:
  - a. The gate can be attached to post kits or existing structures.
  - b. It comes with a transferable limited lifetime warranty.
  - c. Proudly made in the USA.

### **Line 103 – 114 - 14 Ft Double driveway**

1. Gate Width:
  - a. The gate is 14 feet wide.
2. Material:
  - a. The gate is made of aluminized steel.
3. Frame Specifications:
  - a. The frame sides and bottom are constructed from 40 x 40 x 2 mm (1-9/16" x 1-9/16" x 1/16") square tubes.
  - b. The top horizontal frame uses 40 x 30 x 2 mm (1-9/16" x 1-3/16" x 1/16") tubes.
  - c. The gate is fully welded for extra strength and durability.
4. Finish:
  - a. The gate features a black, powder-coated finish for minimal maintenance and long-lasting beauty.
5. Height:
  - a. The gate stands 5 feet high on the sides and 6 feet high at the apex.
6. Additional Details:
  - a. The gate can be attached to post kits or existing structures.
  - b. It comes with a transferable limited lifetime warranty.
  - c. Proudly made in the USA.

#### **Lines 115 – 124 - 16 ft double driveway**

1. Gate Width:
  - a. The gate is 16 feet wide.
2. Material:
  - a. The gate is made of aluminized steel.
3. Frame Specifications:
  - a. The frame sides and bottom are constructed from 40 x 40 x 2 mm (1-9/16" x 1-9/16" x 1/16") square tubes.
  - b. The top horizontal frame uses 40 x 30 x 2 mm (1-9/16" x 1-3/16" x 1/16") tubes.
  - c. The gate is fully welded for extra strength and durability.
4. Finish:
  - a. The gate features a black, powder-coated finish for minimal maintenance and long-lasting beauty.
5. Height:
  - a. The gate stands 5 feet high on the sides and 6 feet high at the apex.
6. Additional Details:
  - a. The gate can be attached to post kits or existing structures.
  - b. It comes with a transferable limited lifetime warranty.
  - c. Proudly made in the USA.

#### **Lines 125 – 130 - 3 Ft Wide Black Thermally Fused Pedestrian Gate & Posts**

1. Width: 3 feet
2. Height: The height can vary depending on the style you choose, ranging from 48 inches to 89 inches.
3. Color: The gate comes in a black powder coat finish.
4. Design Options:
  - a. DuraGate DGT-GGA Arch Top Garden Gate:
    1. Available Heights: 4 ft high on ends and 4 ft 4 in high in the center, or 5 ft high on ends and 5 ft 4 in high in the center.

2. Bolt-On Decorative Ornamentals: Optional
3. Matches with DGT Driveway Gates

### **Lines 131- 138 - 4 Ft Wide Black Thermally Fused Pedestrian Gate & Posts**

1. Width: 4 feet
2. Height Options:
  - a. DuraGate DGT-GGF4x6 Flat Top Garden Gate:
    - Height: 6 ft high on ends and 4 ft wide
  - b. DuraGate DGT-GGF4x5 Flat Top Garden Gate:
    - Height: 5 ft high on ends and 4 ft wide
3. Color: The gate comes in a black powder coat finish.
4. Bolt-On Decorative Ornamentals: Optional
5. Matches with DGT Driveway Gates

Additional components for installation:

1. Hinges: Not included but required for new installations. Consider using Lockey SUMO™ SSCHD Heavy-Duty Adjustable Self-Closing SafeCloseGate Hinges (closes gates up to 187 lbs.).
2. Lock Assembly & Keep: Locinox LUKY-3030-J5L-9005-VMZFA Gate Lock (square profile, 1-1/4" to 1-3/8" black w/ black Zamac handles).
3. Security Keep & Gate Stop: Locinox SHKL-QF-9005 (square 1-1/2" profile, black stop plate).

Gate Posts:

1. DuraGate DGT-GP Garden Gate Post:
  - a. Size: 100 x 100mm (4" Square)
  - b. Material: 3mm Hot Dip Galvanized Steel (1/8" Thick)
  - c. Finish: Black, Powder-Coat Finish
  - d. For use with DuraGate DGT Series

### **Lines 139 – 146 - 12 Ft Wide Black Thermally Fused Vinyl Fabric Driveway Gates & Posts**

1. Gate Dimensions:
  - a. Width: 12 feet
  - b. Height: The height can vary based on the specific gate model you choose.
2. Material and Finish:
  - a. Material: Heavy-duty vinyl fabric.
  - b. Color: Black.
3. Gate Options:
  - a. DuraGate DGT-12X4-FS Flat Top Driveway Gate:
    1. Height: 4 feet.
    2. Material: Hot-dip galvanized steel.
    3. Finish: Black powder coat.
    4. Bolt-On Decorative Ornamentals: Optional.
4. Gate Posts:
  - a. DuraGate DGT-GP Garden Gate Post:

1. Size: 100 x 100mm (4" Square).
2. Material: 3mm Hot Dip Galvanized Steel (1/8" Thick).
3. Finish: Black, Powder-Coat Finish.
4. Designed for use with DuraGate DGT Series gates.
5. Customization Options:
  - a. Bolt-On Scroll Art: Personalize your gate with decorative scrollwork. Choose from various scroll designs.
  - b. Bolt-On Puppy Pickets: Add puppy pickets for safety.
6. Additional Components for Installation:
  - a. Hinges: Not included but required for new installations. Consider using Lockey SUMO™ SSCHD Heavy-Duty Adjustable Self-Closing SafeCloseGate Hinges (suitable for gates up to 187 lbs.).
  - b. Lock Assembly & Keep: Locinox LUKY-3030-J5L-9005-VMZFA Gate Lock (square profile, 1-1/4" to 1-3/8" black w/ black Zamac handles).
  - c. Security Keep & Gate Stop: Locinox SHKL-QF-9005 (square 1-1/2" profile, black stop plate).

### **Lines 147 – 154 - 14 Ft Wide Black Thermally Fused Vinyl Fabric Double Driveway Gates & Posts**

1. Gate Dimensions:
  - a. Width: 14 feet
  - b. Height: The height can vary based on the specific gate model you choose.
2. Material and Finish:
  - a. Material: Heavy-duty vinyl fabric.
  - b. Color: Black.
3. Gate Options:
  - a. Estate Swing 14 Foot Long, Dual Driveway Gate:
    1. Length: 14 feet, 7 inches (including hinges).
    2. Height: 5 feet on sides, 6 feet at the apex.
    3. Appearance: Features an elegant sweeping arc and clean lines.
    4. Automation: Designed for gate automation.
4. Gate Posts:
  - a. Mounting Posts: Estate Swing 3" mounting posts included (total length with posts: 15 feet, 0.50 inches).
5. Customization Options:
  - a. Bolt-On Scroll Art: Personalize your gate with decorative scrollwork.
  - b. Bolt-On Puppy Pickets: Add puppy pickets for safety.
6. Additional Components for Installation:
  - a. Hinges: Not included but required for new installations.
  - b. Lock Assembly & Keep: Choose a suitable gate lock assembly.
  - c. Security Keep & Gate Stop: Install a gate stop for secure closure.

### **Lines 155 – 162 - 16 Ft Wide Black Thermally Fused Vinyl Fabric Double Driveway Gates & Posts**

1. Gate Length:
  - a. 15 feet, 11 inches long (measured from one end to the other).
  - b. Including the hinges: 16 feet, 6 inches long.
  - c. Including the Estate Swing 3" mounting posts: 16 feet, 11.5 inches long.
2. Height:

- a. 5 feet on the sides.
- b. 6 feet at the apex (highest point).

### **Lines 163 – 176 – Aluminum (Frame Only) Rolling Gates & Steel Posts**

1. Aluminum (Frame Only) Rolling Gates:
  - a. These gates are fabricated from heavy-duty aluminum.
  - b. They are coated with a heat-fused (baked-on) matte black powder coating for durability and aesthetics.
  - c. Gate frame kits include assembly hardware, latch, and hinges that can be mounted to either posts or walls.
  - d. Optional cedar wood infill is available for customization.
  - e. Other options include steel posts and drop rods.
2. Steel Posts:
  - a. Heavy-duty steel fence posts are available in square shapes ranging from 2 inches to 4 inches.
  - b. They come in colors such as black, bronze, tan, white, or un-painted galvanized steel.
  - c. Posts include a flush mount post cap

### **Lines 177 – 183 - Steel (Frame Only) Rolling Gates & Posts**

1. Steel (Frame Only) Rolling Gates:
  - a. These gates are fabricated from heavy-duty steel.
  - b. They are designed to slide parallel with the fence line using a track and wheel system.
  - c. Gate frames are welded and may also be braced and trussed depending on the size.
  - d. The gate frame is captured between two bottom and top rollers.
  - e. Roller covers must be installed to protect others in accordance with ASTM 2200 and UL325.
  - f. These gates are reliable and economical.
  - g. The overall length of the gate is usually one and a half times the distance of the opening.
  - h. For example, if you have a 30-foot opening, your gate would be 45 feet overall.
  - i. The height of the gate is shorter than the fence to allow for the chosen wheel carrier underneath.
  - j. Steel rolling gates work best on level surfaces and cannot be automated due to friction issues.
  - k. If automation is desired, consider using a cantilever gate instead.
2. Steel Posts:
  - a. Heavy-duty steel fence posts are available in square shapes ranging from 2 inches to 4 inches.
  - b. They come in colors such as black, bronze, tan, white, or unpainted galvanized steel.
  - c. Posts include a flush mount post cap.

### **Lines 184 – 196 - Pipe Entrance Gates (Painted)**



1. 3-inch Schedule 40 Top Rail and Lock Slot, 3.5 Gate slip over hinge post, 2.5-inch angel support hinge post, 3-inch Schedule 40 welded steel plate on top with  $\frac{3}{4}$  inch harden pin welded to washer. (See additional detail in attachment)

#### **Line 197 – Lock Open Posts**

1. See picture provided and install per standard specifications to match picture

#### **Line 198 – Locking Closed Stop Post**

1. This is a post with cap that should be buried as per specifications in this solicitation for posts and be installed to stop the gate from opening too far.(picture provided).

#### **Line 199 – Lock Pin on Hinge Post**

1. Attack a 5/8 tractor pin six (6) inches with a chain to use for locking gate in place (picture provided).

#### **Line 200 – Slide Gate Opener**

1. SlideSmart DC15 Slide Gate Operator:
  - a. This commercial-grade, continuous-duty, electromechanical chain-driven slide gate operator is designed for millions of low-maintenance cycles.
  - b. It can handle gates weighing up to 1,500 lbs. (680 kg) and gate lengths of up to 40 ft (12 m).
  - c. The open/close speed is adjustable and can be set independently at 0.75 ft/s, 1 ft/s, or 1.25 ft/s.
  - d. No heater is required unless temperatures drop below -13°F (-25°C).
2. Features:
  - a. Digital Control: The SlideSmart DC15 integrates easily with other HySecurity products for a complete gate automation solution.
  - b. Battery Backup: Reliable battery backup provides up to 4,000 ft of travel, and you can upgrade batteries for up to 25,000 ft.
  - c. Programmable: Over 70 user-configurable settings allow customization to meet site-specific requirements.
  - d. Solar Efficient: Designed for off-grid applications with low power consumption.
  - e. Battery Monitor: Maximizes battery life with an intelligent charging system.
  - f. Easy Programming: The 32-character display on the LCD screen simplifies programming.
  - g. Safety Features: The polyethylene pad base plate protects against rust and corrosion, and a safety cover prevents pinch points in the drive.
  - h. Heavy-Duty Chassis: The low-flex, corrosion-resistant chassis ensures durability.
3. Technical Specifications:
  - a. Horsepower:  $\frac{1}{2}$  hp
  - b. Rate of Travel: 1.75 ft/s, 2 ft/s, or 2.25 ft/s (open/close speed set independently)
  - c. Gate Weight (Maximum): 1,500 lbs. (680 kg)
  - d. Gate Length (Maximum): 40 ft (12 m)

#### **Line 201 – Slide Gate Opener**

1. SlideSmart DC25 Slide Gate Operator:

- a. This commercial-grade, continuous-duty, electromechanical chain-driven slide gate operator is designed for millions of low-maintenance cycles.
  - b. It can handle gates weighing up to 2,500 lbs. (1,134 kg) and gate lengths of up to 50 ft (15 m).
  - c. The open/close speed is adjustable and can be set independently at 0.75 ft/s, 1 ft/s, or 1.25 ft/s.
  - d. No heater is required unless temperatures drop below -13°F (-25°C).
2. Features:
- a. Digital Control: The SlideSmart DC25 integrates easily with other HySecurity products for a complete gate automation solution.
  - b. Battery Backup: Reliable battery backup provides up to 4,000 ft of travel. You can upgrade batteries for up to 25,000 ft.
  - c. Programmable: Over 70 user-configurable settings allow customization to meet site-specific requirements.
  - d. Solar Efficient: Designed for off-grid applications with low power consumption.
  - e. Battery Monitor: Maximizes battery life with an intelligent charging system.
  - f. Easy Programming: The 32-character display on the LCD screen simplifies programming.
  - g. Safety Features: The polyethylene pad base plate protects against rust and corrosion, and a safety cover prevents pinch points in the drive.
  - h. Heavy-Duty Chassis: The low-flex, corrosion-resistant chassis ensures durability.
3. Technical Specifications:
- a. Horsepower: 1/2 hp
  - b. Rate of Travel: 0.75 ft/s, 1 ft/s, or 1.25 ft/s (open/close speed set independently)
  - c. Gate Weight (Maximum): 2,500 lbs. (1,134 kg)
  - d. Gate Length (Maximum): 50 ft (15 m)

## **Line 202 – Slide Gate Opener**

1. SlideSmart DC30 Slide Gate Operator:
- a. This commercial-grade, continuous-duty, electromechanical chain-driven slide gate operator is designed for millions of low-maintenance cycles.
  - b. It can handle gates weighing up to 3,000 lbs. (1,361 kg) and gate lengths of up to 50 ft (15 m).
  - c. The open/close speed is adjustable and can be set independently at 0.75 ft/s, 1 ft/s, or 1.25 ft/s.
  - d. No heater is required unless temperatures drop below -13°F (-25°C).
2. Features:
- a. Digital Control: The SlideSmart DC30 integrates easily with other HySecurity products for a complete gate automation solution.
  - b. Battery Backup: Reliable battery backup provides up to 4,000 ft of travel. You can upgrade batteries for up to 25,000 ft.
  - c. Programmable: Over 70 user-configurable settings allow customization to meet site-specific requirements.
  - d. Solar Efficient: Designed for off-grid applications with low power consumption.
  - e. Battery Monitor: Maximizes battery life with an intelligent charging system.
  - f. Easy Programming: The 32-character display on the LCD screen simplifies programming.
  - g. Safety Features: The polyethylene pad base plate protects against rust and corrosion, and a safety cover prevents pinch points in the drive.
  - h. Heavy-Duty Chassis: The low-flex, corrosion-resistant chassis ensures durability.

3. Technical Specifications:
  - a. Horsepower: 1/2 hp
  - b. Rate of Travel: 0.75 ft/s, 1 ft/s, or 1.25 ft/s (open/close speed set independently)
  - c. Gate Weight (Maximum): 3,000 lbs. (1,361 kg)
  - d. Gate Length (Maximum): 50 ft (15 m)

### **Line 203 – Gate Pedestal for Cars**

1. Model: Pedestal Pro 58-9C-DSP
  - a. Height: 58 inches (1473.2 mm)
  - b. Material: Carbon Steel
  - c. Color: Black
  - d. Weight: Approximately 45 lbs.
  - e. Device Supported: Access Control System, Biometric Reader, Camera, Card Reader, Housing, Intercom System, Keypad, Push Button, Telephone Entry System
  - f. Application/Usage: Automatic Gate, Outdoor, Parking Lot, Vehicle
2. Construction Details:
  - a. The pedestal is built using a single 2" x 2" channel from bottom to top, allowing easy wiring for both the lower and upper heads.
  - b. The gooseneck is bent with the tightest 6" center radius, uniformly formed without collapsing the underside of the neck.
3. Purpose:
  - a. This pedestal provides a sturdy mounting solution for various access control components, including readers, cameras, and intercom systems.

### **Line 204 - Gate Pedestal for Cars and Trucks**

1. Device Supported: Access Control System, Biometric Reader, Camera, Card Reader, Housing, Intercom System, Keypad, Push Button, Telephone Entry System
2. Material: Carbon Steel
3. Color: Black
4. Height: 58 inches (1473.2 mm)
5. Weight (Approximate): 45 lbs.

### **Line 205 - Touch Pad**

This line directly relates to lines 200-202 and should work with that manufacturer. Example specifications are below:

Operating range	up to 115 ft. (35m)
Sensitivity adjustment	potentiometer
Power indicator	Green LED
Detect indicator	Green LED
Mode selection switch	3 modes, relay output, pulsed (3 frequency), pulsed (2 frequency)
Relay output operation	Light on/dark on selection
Relay output	Form C contacts (NO, COM, NC)
Resistive termination	10k Ohm across NO contact
Power protection	Thermal fuse

Transmitter power cycle	>300mS (for use in configuration 0 Monitored)
Power supply	6...35 VDC, 12...24VAC (configuration 0-relay only)
Current (config. 1 and 2)	15mA (12VDC, includes TX and RX wired in parallel)
Current (config. 0)	60mA (relay activated)
Operating temperature	-40°F...170°F (-40°C...77°C)
Environmental	NEMA 4X
Dimensions (L x W x H)	2.3" (57mm) x 2.6" (65mm) x 3.7" (94mm)
Weight	TX – 0.35 lbs. (159 g), RX 0.35 lbs. (159 g)
Connections	TX-2 terminal, RX-5 terminal

### **Lines 206-213 - Slide Gate Openers Assorted Parts**

These lines are directly related to lines 200 – 202 and should be per manufacturer's requirements.

### **Lines 214 and 215 - Steel Bollards for Slide Gate Openers**

1. 4-Inch Steel Bollards:
  - a. Pipe Specs:
    1. Nominal Size: 4 inches
    2. Wall Thickness: 0.237 inches
    3. Inner Diameter (ID): 4.026 inches
    4. Outer Diameter (OD): 4.5 inches
    5. Weight: Approximately 10.8 lbs. per foot
    6. Default Grade: ASTM A500 Grade A
    7. Finishes: Bare Steel, Primed, Galvanized
    8. Primer Colors: Red Oxide, Yellow, Gray
  - b. Common Applications:
    1. These 4-inch steel bollards are typically used in areas with vehicle traffic but not high risk to pedestrians, buildings, or valuables.
    2. Examples include drive-through lanes at gas stations or locations where slow-moving vehicles need protection from hitting sensitive areas.
    3. They are usually installed 3 to 4 feet above ground and filled with concrete during installation.
2. 6-Inch Steel Bollards:
  - a. While the specifications for 6-inch steel bollards are not explicitly provided, they would follow a similar pattern with larger dimensions and increased strength.
  - b. The 6-inch bollards would offer more robust protection compared to the 4-inch ones.
3. Construction and Purpose:
  - a. Both 4-inch and 6-inch bollards are made of schedule 40 US steel pipe.
  - b. They are installed in-ground (in concrete, asphalt, or soil) and filled with concrete.
  - c. The slim profile of the 4-inch bollards is desirable in areas with limited space.
  - d. These bollards serve to prevent slow-moving vehicles from colliding with specific structures or areas.

### **Lines 216 – 222 - Privacy slats**

1. No tools necessary

2. Simply slide fence slat through chain link "mesh" until it clicks/locks into the provided channel
3. Each box contains 82 slats, and three 4 ft. locking channels that cover 10 lin. ft. of fence (in 2 in. diamond chain link)
4. Fence Slats provide 85% privacy in 2 in. diamond chain link, 80% privacy in 2-1/4 in. diamond chain link, and 75% privacy in 2-3/8 in. diamond chain link
5. Colors available: Variety
6. Each slat measures 1.25 in. wide
7. High Density Polyethylene (HDPE) material with UV inhibitors are resistant to severe weather conditions, salt water, sand, road dirt, and most environmental pollutants
8. Specifically designed to retard the harmful effects of the sun
9. Slats are deliberately cut 4 in. shorter than the height of the fence to accommodate installation and protect the slats within the wire

### **Line 223 – 7.5-foot Barricade Section with Stand**

Gauge	16
Tube Outside Diameter	1-5/8 inch
Color	Silver
Material	Steel
Finish	Hot Dip Galvanized
Length	90 inches
Height	42 inches
Weight	55 pounds

### **Line 224 – Filled Sandbag**

The sandbag material shall be polypropylene, polyethylene or polyamide woven fabric with a minimum unit weight of four (4) ounces per square yard. The sandbags shall be 24 to 30 inches in length, 16 to 18 inches in width and six (6) to eight (8) inches in thickness when filled with sand.

### **Line 225 - 6Ft x 10 Ft Temporary Fence Panel**

1. Size: Each panel measures 6 feet in height and 10 feet in width.
2. Frame:
  - a. The frame tubing is made of 1 3/8-inch (16 gauge) galvanized steel.
  - b. It includes a vertical brace for added stability.
3. Chain Link Mesh:
  - a. The chain link fabric consists of 11.5-gauge wire.
  - b. The diamond pattern has a 2.25-inch opening.

### **Line 226 - 6 Ft x 12 Ft Temporary Fence Panel**

1. Size: The panels measure 6 feet in height and 12 feet in width.
2. Fabric: The chain link fabric is made of 12-gauge hot-dipped galvanized steel wire.
3. Top, Bottom, and Middle Rails: The tubing for the top, bottom, and middle rails is 1 3/8 inches in diameter with a wall thickness of 0.047 inches (galvanized).

4. Additional Vertical Brace: These panels come with an extra vertical brace for added stability. This feature is present in panels that are 12 feet, 14 feet, and 16 feet wide.
5. Tie Wires: The tie wires used are 9-gauge aluminum.

### **Line 227 - 8 Ft x 10 Ft Temporary Fence Panel**

1. Panel Size:
  - a. Available dimensions: 8 feet in height and 10 feet in width.
  - b. Other available panel sizes include 6x12, 6x10, 6x8, and 8x12 feet.
2. Frame:
  - a. Frame tubing material: Galvanized steel.
  - b. Frame diameter options: 1.25 inches (32 mm), 1.5 inches (38 mm), or 1.6 inches (40 mm) round.
  - c. Frame thickness: Varies based on gauge (e.g., 14-gauge, 16 gauge).
3. Chain Link Mesh Wire:
  - a. Wire gauge options: 9 ga (2.9 mm), 10.5 ga (2.7 mm), 11 ga (2.3 mm), 11.5 ga (2.2 mm), or 12 ga (2.0 mm).
  - b. Mesh size: 2 inches (50 × 50 mm), 2.25 inches (57 × 57 mm), 2.4 inches (60 × 60 mm), or 2.75 inches (70 × 70 mm).
4. Cross Brace:
  - a. Vertical and horizontal bracing for increased strength.
  - b. Cross brace diameter: 1 inch (1.25 inches optional).
  - c. Wall thickness: 14 gauge.
5. Stands:
  - a. Stands (feet) size: 16 inches x 36 inches.
  - b. Tubing diameter: 1-3/8 inches.
  - c. Designed to fit panels securely.
6. Temporary Chain Link Fence Clamps:
  - a. Material: Pressed steel.
  - b. Gauge: 8.
  - c. Purpose: Joining fence panels together.
  - d. Includes: 3/8-inch x 2-1/2-inch H.D.G. carriage bolt & nut.

### **Line 228 – Temporary Concrete Block Fence Stand**

1. OxBlock HiVis:
  - a. Available in three weight options: 40lb, 51lb, or 57lb.
  - b. Made from heavy-duty recycled plastic that is more durable than concrete.
  - c. High visibility with yellow capped ends for pedestrian safety.
  - d. Easy to carry and install, featuring internal handles molded into the product.
  - e. Creates a stable fence line that is highly wind resistant.
  - f. Dimensions for different variants:
    1. 40lb: Height 5", Width 8", Length 30", Hole diameter 2"
    2. 53lb: Height 6", Width 8", Length 30", Hole diameter 2"
    3. 57lb: Height 5.5", Width 9.5", Length 27"<sup>1</sup>
2. Injection Temporary Fence Base:
  - a. Size: L570mm x W130mm x H245mm.
  - b. Filled with MPA425 concrete.
  - c. Empty shell weight: 0.90kg-1.50kg (customizable).
  - d. Weight after cement filling: 26kg-30kg.

- e. Hole size options: 25mm, 32mm, 35mm, 38mm, 42mm.
- f. Center distance options: 75mm, 80mm, 90mm, 100mm.
- g. Packing: Metal pallet wrapped with plastic film.

### **Line 229 - Temporary Fence Driven Post For 10 Ft Tall Section**

- 1. Post Material and Dimensions:
  - a. The posts are to be made of galvanized steel.
  - b. Minimum post diameter: 2 inches (O.D.).
  - c. Post gauge: 16 gauge.
  - d. Maximum post spacing: 10 feet on center (o.c.).
  - e. Posts must be driven into the ground to a minimum depth of 24 inches.

### **Line 230 - Temporary Fence Driven Post For 12 Ft Tall Section**

- 1. Post Material and Dimensions:
  - a. The posts are to be made of galvanized steel.
  - b. Minimum post diameter: 2 inches (O.D.).
  - c. Post gauge: 16 gauge.
  - d. Maximum post spacing: 10 feet on center (o.c.).
  - e. Posts must be driven into the ground to a minimum depth of 24 inches.

### **Line 231 - Barrier Screen Installed Over Temporary Fence**

- 1. MATERIAL:
  - a. Knitted HDPE (High Density Polyethylene)
  - b. Grommets: Brass
  - c. Fabric Weight: 130 GSM
- 2. FEATURES:
  - a. Shade Factor: 85%
  - b. (12) Grommets
  - c. 90% UV Resistant for 5 years.
- 3. INCLUDES:
  - a. (15) 10 x 0.19" Black UV Cable ties

### **Lines 232 - Concrete Barriers**

- 1. Applicable Standards:
  - a. ASTM C 825: Standard Specification for Precast Concrete Barriers.
  - b. NCHRP 350: Recommended Procedures for the Safety Performance Evaluation of Highway Features.
- 2. Classification of Barrier:
  - a. New Jersey Barrier (Type-F Barrier): A common design used for highway median applications.
- 3. Design and Materials:
  - a. Concrete Design Strength: Typically 4,000 psi in 28 days.
  - b. Air Entrainment: Concrete usually contains an air content of 5.5% +/- 1%.
  - c. Dimensions: Minimum length of each barrier section is often 10 feet, but DOTs may request longer lengths (20 or 30 feet).

- d. Steel Reinforcement: Sufficient reinforcement to permit handling, delivery, and placement without damage.
- e. End Design: Reinforcement design for the ends of barrier sections to prevent fracture at the joints.
- 4. Manufacture and Quality Considerations:
  - a. Concrete mixture proportioned and cured per ASTM C 825.
  - b. Forms must be rigid and maintain dimensional parameters.
  - c. Acceptance criteria based on strength properties, dimensional properties, and end results.

### **Line 233 - Plastic Barriers**

- 1. Low Plastic Barriers (Under 36"):
  - o 42 in x 42 in Water-filled Wedge Barrier: Ideal for use on sidewalks or pedestrian walkways. Easy to move into place, strong, and durable.
  - o 32 in x 72 in Barrier: Suitable for blocking off temporary "no access" work zones on roads or in parking lots. Available in multiple high-visibility colors.
- 2. Standard Plastic Barriers:
  - o 46 in x 23 in Water-filled Wall Barrier: Creates walls to block off restricted areas. Easy to transport, store, and set up.
  - o 42 in x 72 in Barrier: Commonly used as highway barriers or in work zones. Available in seven colors for high visibility.
- 3. Tall Plastic Barriers:
  - o These larger, heavier models approach the strength of concrete barriers but at a much lower cost.
  - o Three-Foot (Height and Length) Mobile-cades Barriers: Used for parking, traffic, and pedestrian control.
- 4. Plastic Barriers Under Three Feet Tall:
  - o Ideal for blocking off temporary "no access" work zones on roads or in parking lots.
  - o Available in five heights (from 24" to 34") and three lengths (6, 8, or 10 feet wide).
  - o Weights range from 50 to 180 pounds, and they come in seven colors.
- 5. Standard Plastic Barriers (Standard Profile Water Filled):
  - o JB-13 (42 in x 24 in x 72 in): Weighs 170 lbs.
  - o JB-14 (46 in x 24 in x 72 in): Weighs 180 lbs.
  - o JB-23 (42 in x 24 in x 96 in): Weighs 200 lbs.

### **Lines 234-240 – Baseball & Softball Backstops**

- 1. The Contractor shall be responsible for the excavation for post bases and concrete anchoring of post and installation of the fence, fabric chain link and polyethylene and post.
- 2. All material shall be in accordance with the American Society of Testing Material (ASTM) Specification for Strength F6669-81.
- 3. Upright vertical chain link mesh shall be #6 gauge aluminized coated wire (ASTM) Specification A392, Class #2.
- 4. Hood shall be set at a forty-five (45) degree angle. There will be an extension to the top of the hood with a projection that forms the trapezoidal shape.
- 5. The chain link mesh of hood portion of backstop shall consist of #9-gauge aluminized chain link mesh.



6. Concrete anchoring shall be ASTM Portland Cement 2000 TSI at 28 days with 2-3-inch slump.
7. Terminal and intermediate posts shall be 3-inch OD zinc coated steel pipe in accordance with ASTM strength specification F6669-81.
8. Top rail and bracing shall be 1-5/8-inch OD steel pipe in accordance with ASTM strength specification F6669-81.
9. All fittings shall be zinc coated and in accordance with ASTM F626-79.
10. Hood arms will be 2-inch OD zinc coated steel pipe with welded construction (ground smooth) to form a 45-degree angle.
11. Knee braces shall be one and one fifth inch (1518") OD zinc coated steel pipe with rail ends welded at each end -minimum of five-foot S foot (5') for each pipe.
12. Polyethylene mesh shall be four (4) mm polyester knotted twine with maximum breaking stress of 285 pounds. The spacing between parallel sides of twine shall be one and half inches {1112"}; all edges shall be finished with vinyl coated polyester and sewn with four {4} rows of stitching.
13. All material for athletic fields shall be galvanized with black vinyl coating unless requested otherwise by the Project Manager.

### **Lines 241 – 259 - Posts**

1. Posts shall not be buried less than 24" subsurface.
2. All posts shall be of sufficient length to provide 36" setting in concrete footings crowned at top to shed water.
3. Holes shall be 10 inches in diameter for line posts and 12 inches for terminal posts. Holes for gate posts shall be 3 times wider than the diameter of the gate post
4. After the post has been set and plumbed, the hole shall be filled with 1-2-4 mix concrete.
5. Post footings for all work shall be set 2" below grade and area around post restored unless otherwise specified.
6. Pipe Material:
  - a. Use galvanized Schedule 40 steel pipe for the framework of your chain-link fence. This pipe is an industrial-grade option suitable for commercial and industrial projects.
  - b. You can choose between imported (foreign) or domestic options.
7. Purpose:
  - a. The Schedule 40 pipe serves as the skeleton of the fence.
  - b. It is used for both horizontal rails and posts.
8. Available Sizes:
  - a. The following are common sizes for chain-link fence posts:
    1. 1-5/8" (1.625"): Wall thickness of 0.140", weighing 2.27 lbs. per foot.
    2. 2" (1.875"): Wall thickness of 0.145", weighing 2.72 lbs. per foot.
    3. 2-1/2" (2.375"): Wall thickness of 0.154", weighing 3.67 lbs. per foot.
    4. 3" (2.875"): Wall thickness of 0.203", weighing 5.79 lbs. per foot.
    5. 4": Wall thickness of 0.226", weighing 9.11 lbs. per foot.
    6. 6-5/8" (6.625"): Wall thickness of 0.280", weighing 19.92 lbs. per foot.
    7. 8-5/8" (8.625"): Wall thickness of 0.322", weighing 28.55 lbs. per foot.
9. Installation Guidelines:
  - a. Terminal posts (end posts, corner posts) should be 36" longer than the fence height for commercial installations.
  - b. Line posts (posts between terminals) should be 2-1/2" longer than the fence height for commercial installations.

### **Lines 260-262 - Top, Middle, Bottom rail**

1. Top Rail:
  - a. The top rail is typically 1 5/8" O.D. (Outside Diameter).
  - b. It provides structural support and helps maintain the shape of the fence.
2. Middle Rail:
  - a. The middle rail, if used, is also 1 5/8" O.D..
  - b. It adds stability to the fence and prevents sagging.
  - c. The middle rail is often placed between the top rail and the bottom rail.
3. Bottom Rail:
  - a. The bottom rail, like the others, is 1 5/8" O.D..
  - b. It reinforces the lower portion of the fence.
  - c. The bottom rail is essential for maintaining the integrity of the entire fence system.

### **Line 263 - Bottom Tension Wire**

1. Material:
  - a. The bottom tension wire is typically made of coated spring coil wire.
  - b. The most common gauge used is No. 7.
2. Purpose:
  - a. The bottom tension wire runs along the bottom of the chain-link fabric.
  - b. It helps keep the fabric taut and prevents it from sagging over time.
3. Coating Options:
  - a. Galvanized: The wire is coated with zinc to resist corrosion.
  - b. Vinyl Coated: The wire is coated with vinyl for added durability and weather resistance.
4. A 7-gauge aluminum coated steel (.40) coil spring tension wire shall be installed along the bottom of the fence approximately 6" above grade.

### **Line 264 - Foul Poles**

Poles should be 3.5 inches to 6.625 inches in diameter and height ranges from 21 feet to 45 feet tall. Poles shall be made of heavy-duty steel pipe designated to withstand wind loads up to 130 miles per hour. All poles will be yellow in color and poles will be placed at the end of the foul line in both the right and left fields.

### **Line 265- Concrete**

3000 Pounds Per Square Inch – NO DRY PACK WILL BE ACCEPTED

### **Line 266 - Concrete Pad**

8 INCH THICK REINFORCED AND 6 IN LAYER OF 21 A GRAVEL 28 FT DEPTH X 24 FT WIDE Transverse bars #4 @ 12 in on center spacing @ control/ construction joints caulked with longitudinal bars #5 high yield bars @ 6 in on center and 4x4 woven

### **Line 267 - Yellow Corrugated Safety Fence Cap**

The cap is typically featured in a safety yellow color and is made of heavy-duty, durable, and flexible plastic in an open "P" shape profile <sup>1</sup>. The cap is designed to endure high impact, resist the harmful effects of the sun, and withstand severe weather conditions <sup>1</sup>. It is available in

different sizes, with the most common being 4.5 inches in diameter <sup>23</sup>. The cap is installed by simply "snapping" it over the top of a fence and fastening it to the wire mesh with steel hog-rings (included with each package) through the (3) three pre-drilled holes on each piece .

### **Line 268 - Self Locking Fabric Bands**

1. Post Sizes
  - a. 1 5/8 in., 2 in., 2 1/2 in., and 3 in.
2. Finishes
  - a. Aluminum
  - b. Powder Coated (Black and Green)
3. Applications
  - a. Great for high traffic, high contact places such as residential areas, schools, and playgrounds.
4. Specifications
  - a. Size: 0.065 x 0.375
  - b. Tensile Strength: 30,000 psi
  - c. For use on 9-gauge fabric only or no more than 8-gauge finish vinyl coated fabric
  - d. Shipped in box of 500

### **Lines 269-272 - 3 & 4 Boad Fence Installed (Fence Height 42 In TO 48 In Tall ) Flush Cut Posts Tapered Back**

Fence boards are to be attached to posts using galvanized nails no smaller than 2 1/2 inches. Posts to be in ground no less than 24 inches and secured as per previous standards. Opening size between posts and rails shall be determined based on location and specified at the time of pricing request.

### **Lines 273-274 - Pressure Treated Pine Guard Rails (see attached drawings)**

### **Lines 275-276 - Carriage Bolts**

Bolts shall be either hot dipped or stainless steel, no less than 1/2 inch bolts with associated washers and nuts. Bolt length will depend on usage and shall have no more than two (2) threads exposed once attached and secured.

### **Lines 277-280 – Split Rail Fence**

1. Materials
  - a. All materials shall be free of cracks deeper than one inch (1 "), warps, and knotholes greater than one inch (1") in diameter. The Contractor shall not use green wood or sap laden conditions materials.
  - b. The posts shall be Black Locust. The rails shall be Spruce or Red Pine.
2. Dimensions
  - a. At a minimum the post lengths shall be seventy-eight inches (78") for the three (3) rail fence and sixty-six inches (66") for the two (2) rail fence. At a minimum, the post diameters shall be four inches (4").
  - b. At a minimum, the rail lengths shall be eleven feet (11'). The rail diameters shall average three and half inches (3.5") or greater. The rails shall extend a minimum of two inches (2") through the posts, except at the end posts.
3. Post Settings

- a. Direct bury post footings shall be a minimum of 30" deep and backfilled with soil compacted in 6" lifts.
- b. At a minimum, the concrete footings shall be thirty inches (30") deep and ten inches (10") in diameter. The Contractor shall pour 1-2-4 mix concrete to the full depth of the post and set it flush with the surface unless otherwise as directed by the Project Manager. THE CONTRACTOR SHALL OBTAIN AN ADVANCE WRITTEN APPROVAL OF THE METHOD FROM THE COUNTY PROJECT MANAGER.
- c. All settings shall be crowned at top to shed water. All surplus soils shall be removed from the site by the Contractor. Posts shall be plumb.

### **Lines 281-283 – Stockade Fence & Gate**

Posts shall be Pressure Treated Pine. Stockade shall be #1 Milled Spruce. Posts shall be set in accordance with the correlated specifications of this solicitation.

### **Lines 284- 287 - Picket Fence/Gate**

1. Height: Per line item
2. Rails: A horizontal top rail and bottom rail are attached to fence posts, which are installed upright into the ground. Evenly spaced boards are affixed vertically to the rails.
3. Spacing: The spacing between pickets depends on the style of the fence. For example, a traditional picket fence has pickets spaced 2-3 inches apart .
4. Materials: The most common materials used for picket fences are wood, vinyl, and aluminum. Wood is the most popular choice for picket fences due to its affordability and versatility .
5. Installation: The installation process for a picket fence involves digging post holes, setting the posts in concrete, attaching the rails, and then attaching the pickets.

### **Lines 288-295 - Baseball/Softball Netting**

The netting is made of high-quality materials such as nylon, polyester, Dyneema, or Plateena fibers for optimal visibility . The netting is available in different sizes and can be customized to fit the specific needs of a baseball field. The netting is typically installed using a pulley system that allows it to be easily raised and lowered. The pulley system is attached to the top of the netting and is used to raise and lower the netting as needed. The netting is also designed to withstand harsh weather conditions and is UV resistant. The netting is usually installed on aluminum uprights that range from 4 to 8 inches in diameter and 10 to 40 feet high. The netting is installed into ground sleeves that are provided with the system .

### **Line 296 –Bollard Pro Model # SKU: SMR 4.5X42 or Equivalent Design**

Bollard Pros surface mount plate 4" SCH 40 Pipe Bollards is 42" tall. Bollards is designed for quick surface mount attachment.

1. Features:
  - a. Welded and ground low profile dome cap
  - b. 4" schedule 40 mild steel pipe
  - c. 9" round base plate 3/8" thick with (4) 3/4" holes for 5/8" wedge anchors
  - d. Includes (4) 5/8" wedge anchors
  - e. Powder coated safety yellow (custom colors available)
  - f. Made in the USA

- g. 47 lbs.

These heavy-duty surface mounted bollards are ideal for the protection of storefronts, parking lots, garages, warehouse entrances, and many other locations with heavy vehicle or pedestrian activity.

### **Line 297 – Bollard Pro Model # SKU: SMR 6.625X42 or Equivalent Design (6 IN Bollard, Surface Mount Removable)**

Bollard Pros surface mount removable 6" SCH 40 Pipe Bollard is 42" tall. The Bollard features an easily removable base for quick access.

1. Features:
  - a. 6" schedule 40 domestic pipe with 1/2" bottom plate that mates to the base plate
  - b. 6" SCH 40 mild steel pipe
  - c. Welded and ground smooth low profile dome cap
  - d. The 1/2" thick bottom plate has (4) 7/8" holes for using 3/4" diameter wedge anchors
  - e. Bollard and plates are powder coated safety yellow (custom colors available)
  - f. Optional puck lock also available
  - g. Made in the USA
  - h. 115 lbs.

Bollard Pros 6" lockable bollards use an American puck style lock or a padlock sold separately. If multiple 6" locking bollards are purchased, the locks will be keyed alike for ease and added convenience.

### **Line 298 - Bollard Pro Model # SKU: SMP 4.5 X 42 or Equivalent Design (4 IN Bollard, Surface Mount)**

Bollard Pros embedded removable 4" SCH 40 Pipe Bollard is 42" tall. The bollard is designed to be easily removable with the look of a permanent bollard.

1. Bollard Features:
  - a. 4" SCH 40 domestic pipe equals 4 1/2" OD
  - b. Welded and ground low profile dome cap
  - c. Bollard powder coated safety yellow (custom colors available)
  - d. Made in the USA
  - e. 60 lbs.
2. Sleeve Features:
  - a. 12" deep galvanized sleeve with 6" drain extension.
  - b. 1/4" Stainless Steel top & lid
  - c. Lid features pass through hole to bolt in closed position, and fits over post on bollard to padlock in open position
  - d. Made in the USA
  - e. 30 lbs.

### **Line 299 - Bollard Pro Model # SKU: SMP 6.625 X 48 or Equivalent Design (4 IN Bollard, Surface Mount)**

Bollard Pros surface mount plate 6" SCH 40 Pipe Bollards is 48" tall. Bollards is designed for quick surface mount attachment.

1. Features:

- a. Welded and ground low profile dome cap
- b. 6" schedule 40 mild steel pipe
- c. 10 1/2" round base plate 1/2" thick with (4) 7/8" holes for 3/4" wedge anchors
- d. Includes (4) 3/4" wedge anchors
- e. Powder coated safety yellow (custom colors available)
- f. Made in the USA
- g. 92 lbs.

These heavy-duty surface mounted bollards are ideal for the protection of storefronts, parking lots, garages, warehouse entrances, and many other locations with heavy vehicle or pedestrian activity.

### **Line 300 - Bollard Pro Model # SKU: ERB 4. 5 X 48 or Equivalent Design ( 4 IN Bollard, Embedded Removable)**

Bollard Pros embedded removable 4" SCH 40 Pipe Bollard is 42" tall. The bollard is designed to be easily removable with the look of a permanent bollard.

1. Bollard Features:
  - a. 4" SCH 40 domestic pipe equals 4 1/2" OD
  - b. Welded and ground low profile dome cap
  - c. Bollard powder coated safety yellow (custom colors available)
  - d. Made in the USA
  - e. 60 lbs.
2. Sleeve Features:
  - a. 12" deep galvanized sleeve with 6" drain extension.
  - b. 1/4" Stainless Steel top & lid
  - c. Lid features pass through hole to bolt in closed position, and fits over post on bollard to padlock in open position
  - d. Made in the USA
  - e. 30 lbs.

### **Line 301 - BOLLARD PRO MODEL # SKU: ERB 6.625 X 48 OR EQUIVALENT DESIGN ( 6 IN BOLLARD, EMBEDDED REMOVABLE)**

Bollard Pros embedded removable 6" SCH 40 Pipe Bollard is 48" tall. The bollard is designed to be easily removable with the look of a permanent bollard.

1. Bollard Features:
  - a. 6" SCH 40 domestic pipe equals 6 5/8" OD
  - b. Welded and ground low profile dome cap
  - c. Bollard powder coated safety yellow (custom colors available)
  - d. Made in the USA
  - e. 115 lbs.
2. Sleeve Features:
  - a. 18" deep galvanized can with 6" drain extension.
  - b. 1/4" Stainless Steel top & lid
  - c. Lid features pass through hole to bolt in closed position, and fits over post on bollard to padlock in open position
  - d. Made in the USA
  - e. 50 lbs.

### **MISCELLANEOUS ADDITIONAL SPECIFICATIONS**

## Paint

The Contractor shall thoroughly clean all surfaces prior to painting in accordance with SP-1, Solvent Cleaning. The Contractor shall use solvents such as mineral spirits, xylol or turpentine to remove all dirt, grease and foreign matter. Paint shall be applied immediately after a final SP-1 solvent cleaning and drying.

Rails shall be primed and painted as described below:

1. **FIRST COAT:** The Contractor shall use Sherwin Williams Kem Kromik Universal Metal Primer, as manufactured by Sherwin Williams Company or an approved equal. Primer is a rust inhibiting, low VOC, modified alkyd, flat finish coating having a dry film thickness of 3 to 4 Mills. Paint requires 48-72 hours drying time before recoating. Performance shall meet or exceed the standards of Federal Specification TT-P-86H, Type III & IV, TT-P-664D.
2. **SECOND & THIRD COATS** The Contractor shall use Sherwin Williams Silicone Alkyd Low VOC B56Z Black or approved equal. Topcoat is a silicon alkyd, high gloss coating having a dry film thickness of 2 - 4 mils. Color shall be black. Paint requires 16 hours drying time @ 77° F to re-coat. All paints shall be applied when ambient air temperature is 50 degrees F. and rising and surfaces to be painted are moisture free. No painting will be allowed below the minimum ambient air temperature. In addition, no painting will be allowed below the temperature at which moisture will condense on surfaces. All painting shall be done in a neat and workmanlike manner. The paint shall be applied by brush, and thoroughly worked into the surface and into all cracks and fissures without leaving fins or runs. Drop cloths shall be used to protect existing ground surfaces and adjacent appurtenances.
3. **PAINT SUBSTITUTION** An advance written authorization from the Project Officer shall be obtained for paint substitution. The Contractor shall submit their substitution request along with the paint manufacturer's data sheets for approval of an equal product.