



# CHAPTER EIGHT

## Manual Vehicle Gates Pedestrian Gates

### **Contents:**

- General Guidelines for Manual Gates
- Steps to Obtain Permits
- Dual Padlock Locking System
- Temporary Construction Gate
- Fire Lane Striping for Manual Gates
- Manual Gate Signage
- Pedestrian Gates

### **Purpose:**

Emergency responders need uniform and dependable access through gates to deliver prompt service to the community.



**Surprise Fire Department**  
14250 W. Statler Plaza, Suite 101  
623.222.5100



## MANUAL SWING GATE GENERAL NOTES

1. All manual gates shall use an approved padlock as a locking mechanism (See page 8-5).
2. An approved dual padlock locking bar and Fire Department padlock shall be used (See page 8-5).
3. Six-inch wide red stripping shall be painted on the ground along the length of both sides of the gate (See page 8-5).
4. Fire Department approved "No Parking" signs, four (4) total, two (2) shall be bolted back to back on each side of gate(s).
5. A sign that identifies the location of the property's primary entrance shall be bolted on the street side of the gate(s) (See page 8-8).
6. All clear access openings as shown on plans shall be a minimum of 20 feet. If gating an **existing** drive, the **current** width of drive must remain as the original City of Surprise approved clear access width.



## **VEHICLE ACCESS GATE PLAN SUBMITTAL GUIDELINES**

### **Gate(s):**

- Minimum of 20-foot wide, clear access opening on **ENTRANCES** and 16-foot wide on **EXITS**.
- Turning radius shall comply with AASHTO WB-50 turning radius.

### **Automatic Gate:**

- A Fire Department approved Knox Switch is located no higher than five and one-half (5½) feet above final finished grade on **ENTRANCE** and **EXIT** side of gate
- Emergency Gate Switch will fully open both the **ENTRANCE** and **EXIT** within 15 seconds of activation and remain in the open position until closed by operation of the electrical control device
- A sign plate reading "FIRE DEPT ACCESS" shall be installed at, but no more than 12 inches from the emergency gate switch. The sign shall be a minimum of 4X8 inches, reflective background with thickness of .080 aluminum. (See page 8-12).
- Battery backup installed on **ENTRANCE** and **EXIT** gates
- Residential/multifamily gate will open on battery backup during loss of power and remain open until the power is restored (fail safe)
- Commercial/industrial properties remain closed until the emergency gate switch is activated, then open on battery backup (fail secure)
- Activated access gate shall open at a rate of one foot per second
- All multifamily housing developments including single-family homes (five or more) shall have preemption devices on each gate

### **Manual Gate:**

- All manual fire apparatus access gates shall use an approved padlock as a locking mechanism
- An approved dual padlock locking bar and **#3753 KNOX PADLOCK** shall be used. (**See Knox Box Product Catalog**) (See page 8-14).
- Six-inch wide **RED** stripping shall be painted on the ground along the length of both sides of the gate



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- Fire Department approved “No Parking” signs are bolted onto each side, back-to-back, of the gate. Signs have a reflective background and are made of .080 aluminum. (See page 1-13).
- A sign that identifies the location of the property’s primary entrance shall be bolted on the street side of the fire apparatus gate. (See page 8-7).

**ELECTRICAL INSPECTION AND APPROVAL  
MUST BE OBTAINED FROM BUILDING SAFETY DIVISION PRIOR TO FIRE  
DEPARTMENT FINAL INSPECTION.**

**GATE INSTALLATION AND MODIFICATION SHALL BE SUBJECT  
TO FINAL FIRE INSPECTION AND APPROVAL.**



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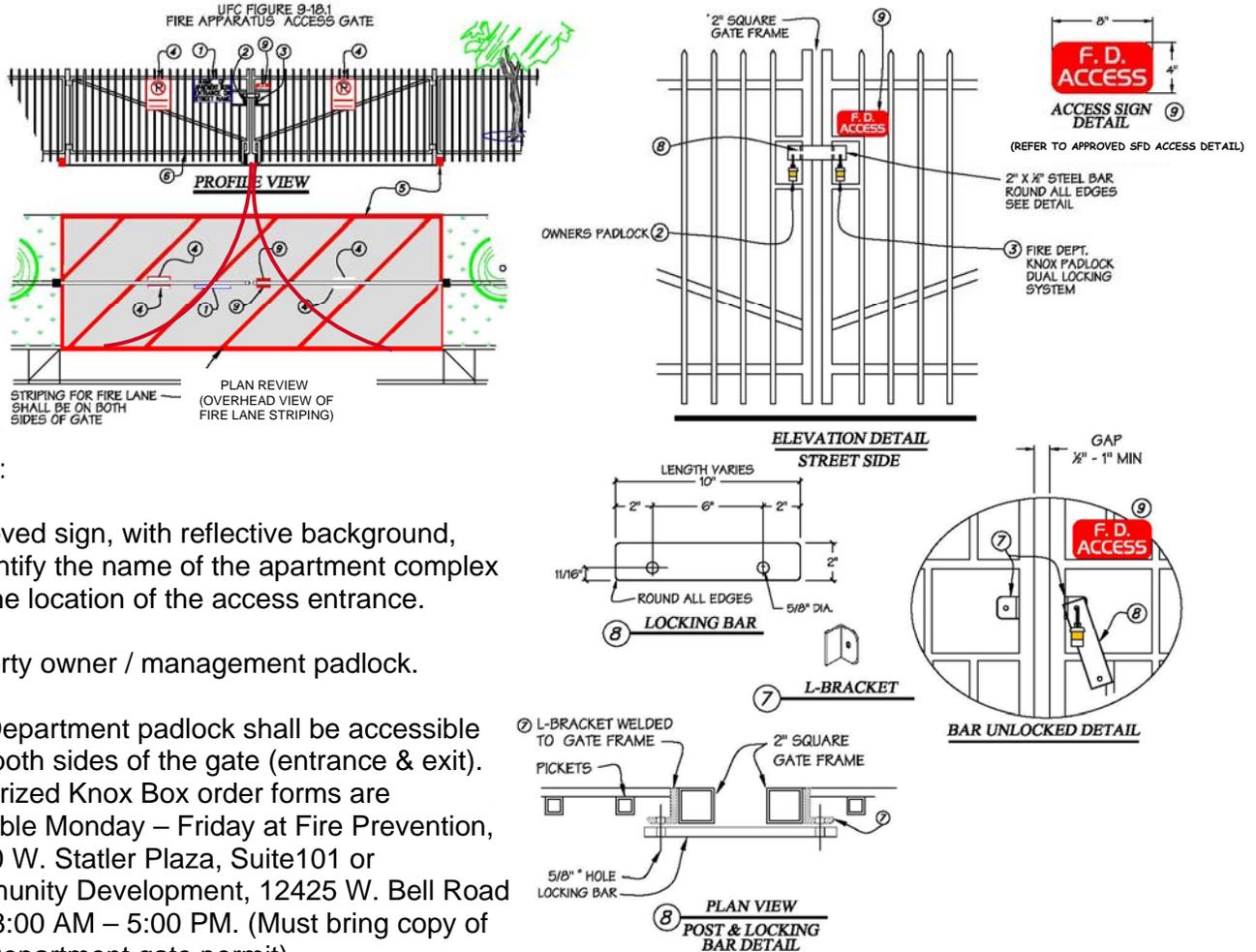


## VEHICLE ACCESS GATE PLAN GUIDELINES

The following general information needs to be provided with the plan submittal:

1. **A SEPARATE BUILDING/FIRE DEPARTMENT PERMIT IS REQUIRED** for both **automatic** and **manual gates**. Obtain the permit at the City of Surprise, 12425 W. Bell Road. An **“Approved”** stamp is required.
2. No landscaping shall obstruct the sight path of preemption detectors.
  - Submit **two (2)** sets of plans at **Community Development Counter**
  - Submit completed permit application at **Community Development Counter**
  - Submit gate locations and details on site plan for TAC approval for review of Fire Department and Planning & Zoning approvals
  - Identify the number of gates to be installed
  - Name and address of the installing contractor
  - New contractors will need to supply the following:
    - Contractors license(s)
    - State Privilege number
    - City of Surprise business license
  - On manual gates **ONLY**, the owner may be listed as the contractor
  - Location, including the street address, floor, and/or suite number
  - Site plan, showing orientation to streets, property line and point of compass
  - Scale of drawing and a graphic representation of scale
  - Drawing should be legible and dedicated to the specific system being installed (Vehicle Access Gates)
  - Electrical inspection and approval must be obtained prior to the final fire inspection
  - Stamped, approved plans permit must be on site for all inspections

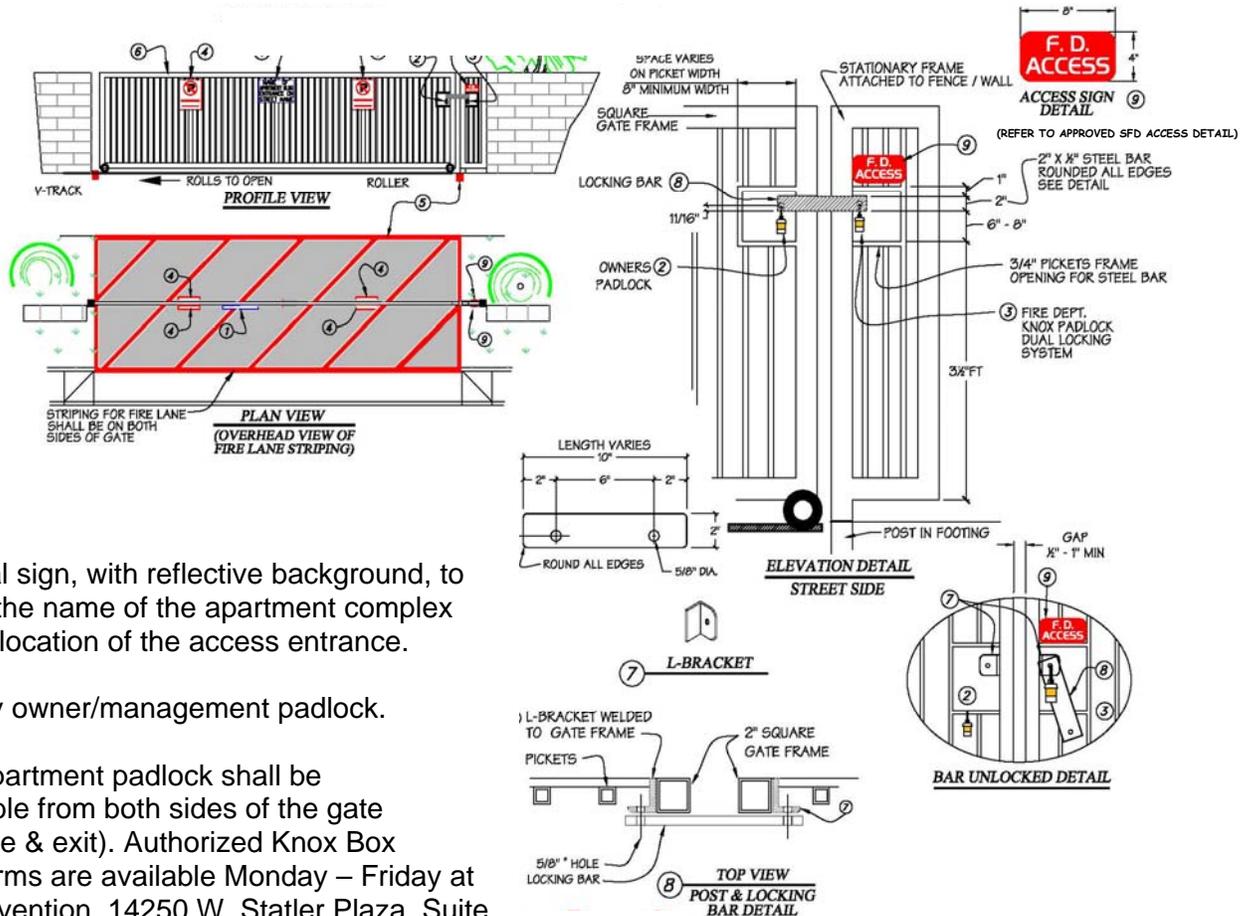
## KNOX PADLOCK LOCKING SWING GATE DETAIL



### NOTES:

1. Approved sign, with reflective background, to identify the name of the apartment complex and the location of the access entrance.
2. Property owner / management padlock.
3. Fire Department padlock shall be accessible from both sides of the gate (entrance & exit). Authorized Knox Box order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM. (Must bring copy of Fire Department gate permit).
4. Approved Fire Lane signs with reflective background, placed back to back, and fastened on all four corners.
5. Six-inch parking lot striping at the locations shown on concrete curbs and applied to asphalt.
6. The minimum overall width of the gate opening shall be 20 feet.
7. Weld Modifier L-bracket to gate frame. Round all edges & round all corners.
8. Locking bar length is determined by the frame width and the gap width between the two gates. Remove all sharp edges.
9. Approved Fire Department access sign with red reflective background placed back-to-back.

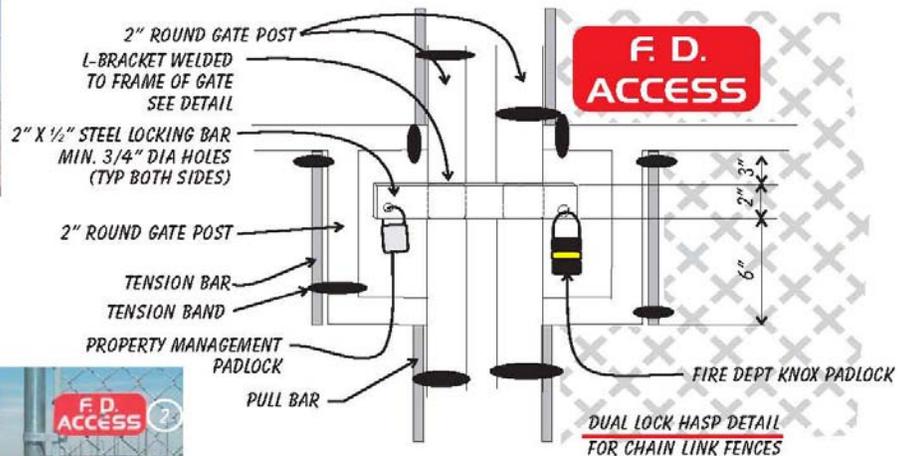
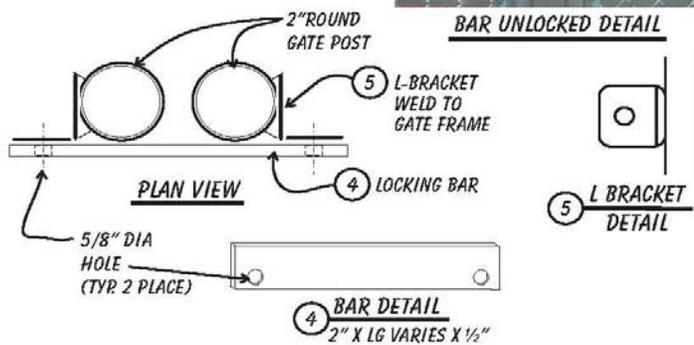
## Knox Padlock Locking Rolling Gate Detail



### NOTES:

1. Approval sign, with reflective background, to identify the name of the apartment complex and the location of the access entrance.
2. Property owner/management padlock.
3. Fire Department padlock shall be accessible from both sides of the gate (entrance & exit). Authorized Knox Box order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite 101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM. (Must bring copy of Fire Department gate permit).
4. Approved fire lane signs with reflective background, placed back-to-back and fastened on all four (4) corners.
5. Six-inch parking lot striping at the locations shown on concrete curbs and applied to asphalt.
6. The minimum overall clear width of the gate opening shall be 20 feet.
7. Weld modified L-bracket to gate frame, round all edges. (Typical two places)
8. Locking bar length is determined by the frame width and the gap width between the two gates. Remove all sharp edges and round all corners.
9. Approved Fire Department access sign with red reflective background placed back-to-back.

## Manual Chain Link Security Gate Details



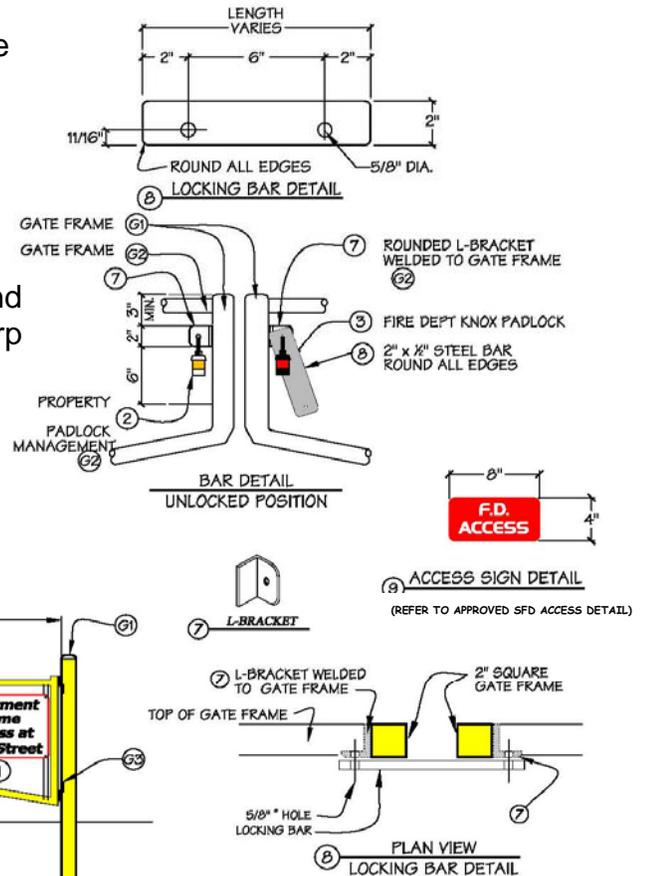
### NOTES:

- Approved fire lane signs with reflective background, placed back-to-back and fastened on all four (4) corners.
- Approved Fire Department access sign with reflective background placed back to back.
- Striping shall be painted Industrial Grade Safety Red, six (6) inch wide hash striping approximately four (4) to six (6) feet apart.
- Locking bar length is determined by the frame width and gap width between the two gates. Remove all sharp edges / round all corners; 3/4" diameter - hole diameter.
- Fire Department Knox Padlock application order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite 101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM. (Must bring copy of Fire Department gate permit).
- Weld Modified L-bracket to gate frame.
- The minimum overall width of the gate shall be 20 feet.

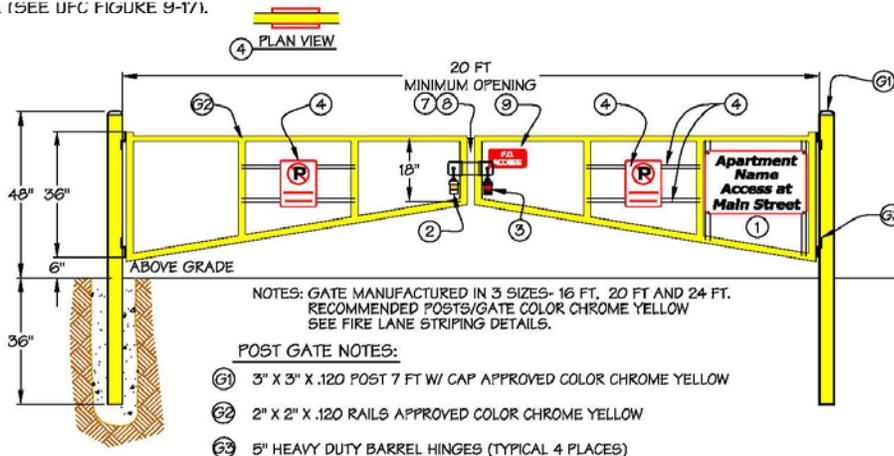
## SINGLE SWING MANUAL SECURITY GATE INSTALLATION DETAILS

### NOTES:

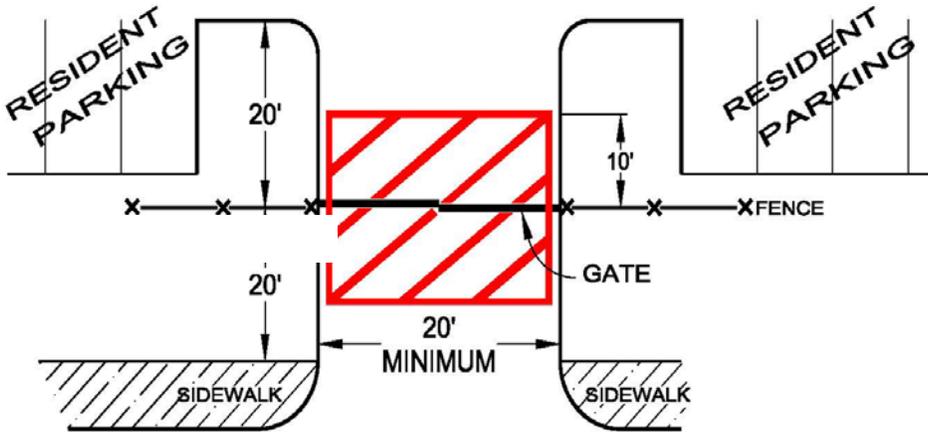
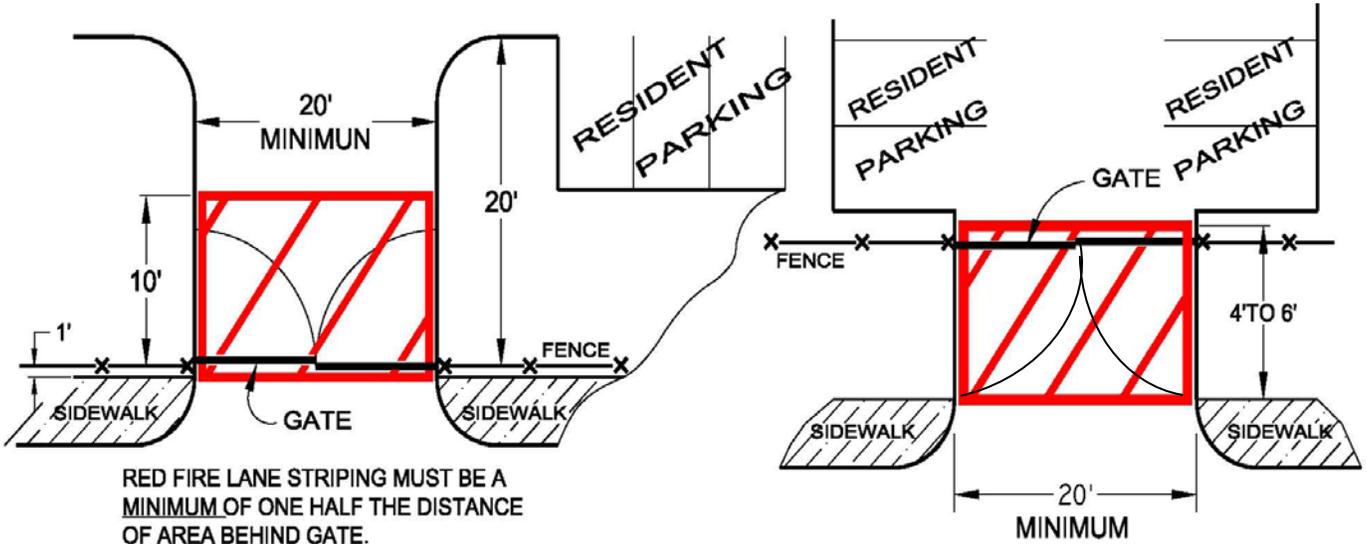
1. Approved sign, with reflective background, to identify the name of the apartment complex and the location of the access entrance. ¼x½ inch mounting straps.
2. Property owner/management padlock.
3. Fire Department padlock shall be accessible from both sides of gate. Authorized Knox Box order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM. (Must bring copy of Fire Department gate permit).
4. Approved No Parking Signs with reflective background, placed back-to-back and fastened on all four (4) corners. ¼x½ inch mounting straps.
5. Fire lane striping shall be provided at each manual gate.
6. The minimum overall width of the gate opening shall be 20 feet.
7. Weld Modified L-bracket to gate frame. Round on all edges.
8. Locking bar length is determined by the frame width and the gap width between the two gates. Remove all sharp edges / round all corners.
9. Approved Fire Department access sign with red reflective background placed back-to-back.



BACK (SEE UFC FIGURE 9-17).



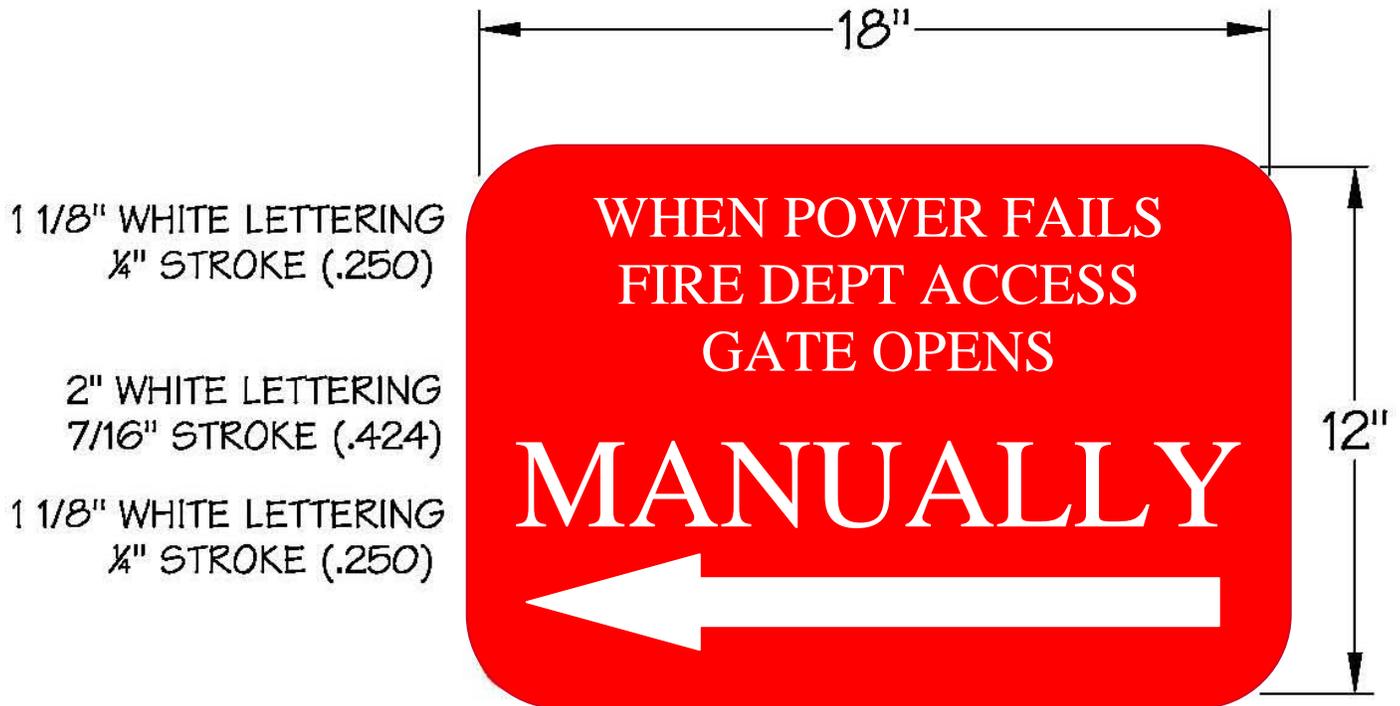
**FIRE LANE STRIPING DETAILS FOR MANUAL GATE INSTALLATIONS**



NOTE:

Striping shall be painted Industrial Grade Safety Red. Six inches wide hash striping running approximately four (4) to six (6) feet apart.

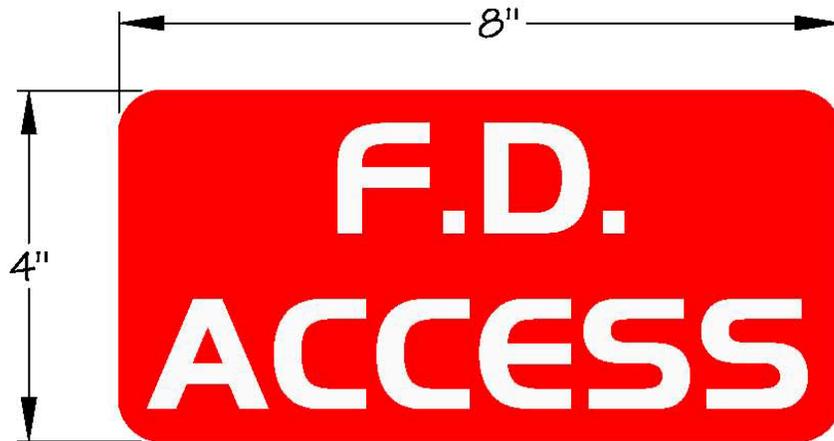
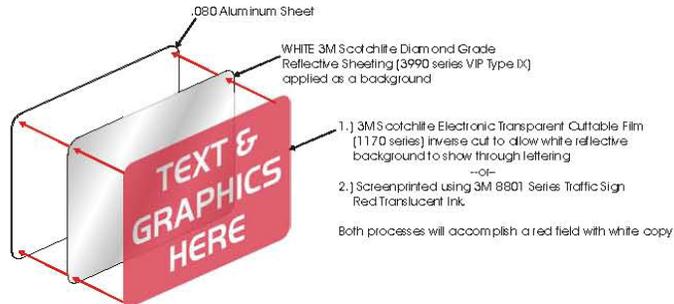
## FIRE LANE STRIPING DETAILS FOR MANUAL GATE INSTALLATIONS



### NOTES:

1. The sign plate shall be 18X12 inches with a thickness of .080 aluminum construction and 1 1/2" radius corners.
2. Striping shall be painted Industrial Safety Red. Six-inch wide hash striping running approximately four (4) to six (6) feet apart.
3. Sign face shall have a white reflective copy on red contrasting non-reflective, engineer-grade vinyl background, using 3M Scotchlite Sign face number R7-32 or equivalent, with 3M Scotchlite pressure sensitive reflective sheeting, engineer-grade or better, for lettering / numbering, using Handel Gothic font.
4. The sign shall identify the location of manual powered override switch.

## APPROVED FIRE DEPARTMENT GATED ACCESS SIGN



### NOTES:

1. The sign face shall be 8x4 inches and fabricated from .080 aluminum sheet with 1½ inch radius corners.
2. Letters shall be 1¼x¼ inch stroke, Handel Gothic capital font.
3. The sign face shall have a white 3M diamond-grade reflective sheeting (3990 series VIP Type IX) applied as a background.
4. Lettering/graphics shall be one of the following:
  - a. 3M Scotchlite electronic transparent cuttable film (1170 series) inverse cut to allow white reflective background to show through lettering.
  - b. Screen printed using 3M 8801 series traffic sign red translucent ink.
  - c. Both processes (a or b) will accomplish a red field with white copy.

## KNOX BOX PLACEMENT FOR PEDESTRIANS GATES

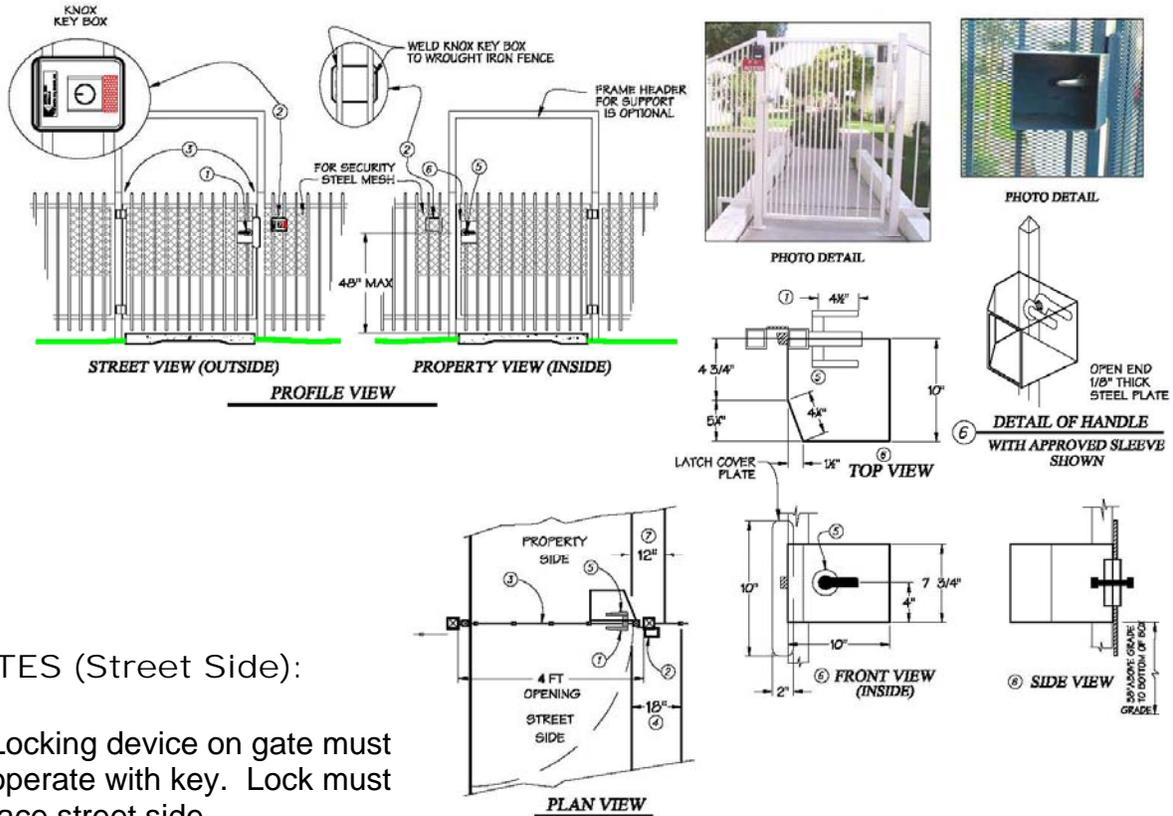


### NOTES:



1. Primary access points that have pedestrian gates require Fire Department access. This access may be provided with a 3200 Hinged Series Knox Box model # 3500 Series Key Switch model # 3502.
2. The final placement and amount of Knox Boxes will be determined by the Fire Department.

## APPROVED PEDESTRIAN GATE REQUIREMENTS



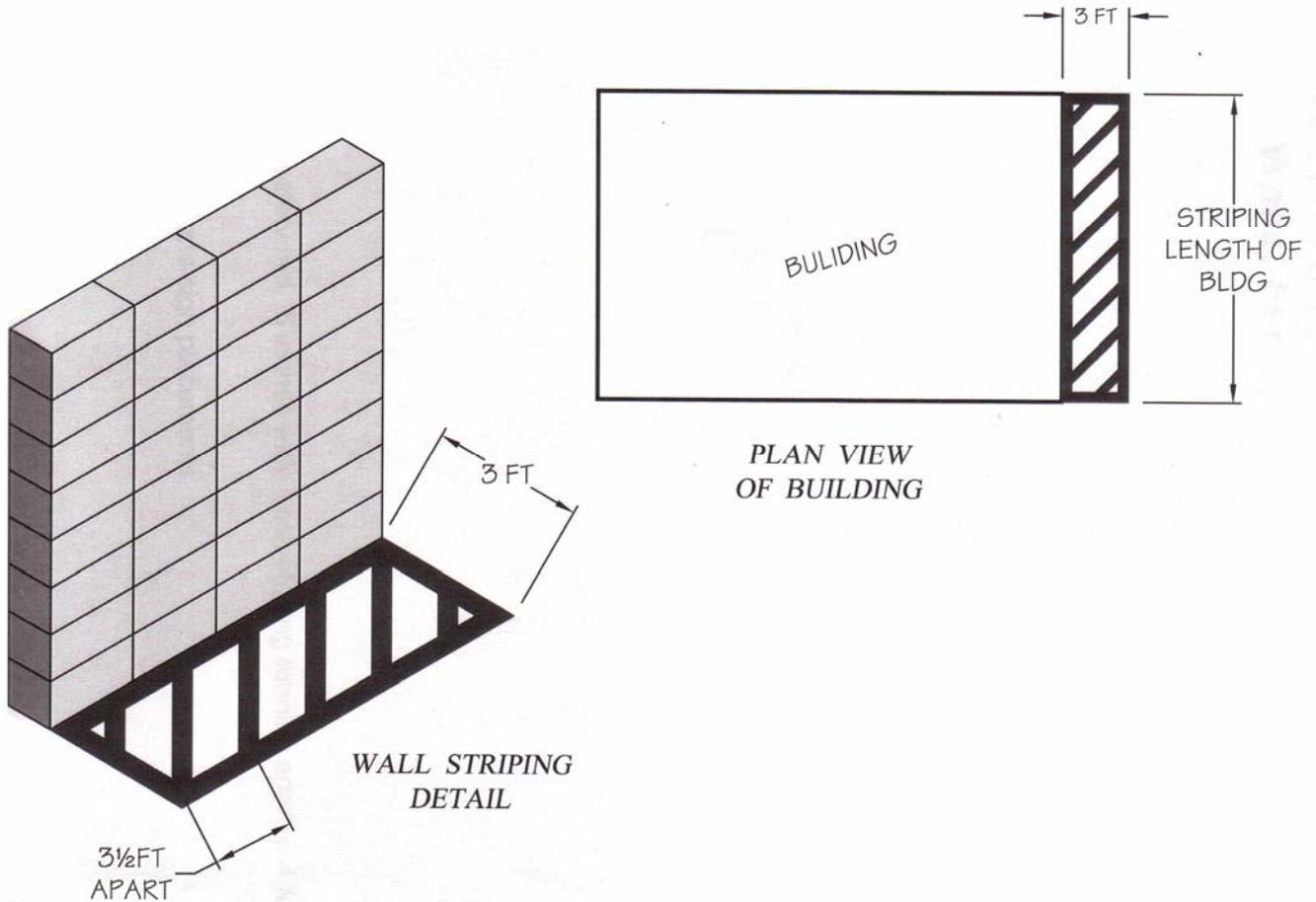
### NOTES (Street Side):

1. Locking device on gate must operate with key. Lock must face street side.
2. Key to lock must be placed in approved Fire Department key box. Key box must be welded on fence picket facing street. Authorized Knox Box order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM.
3. The minimum overall width of gate opening shall be four (4) feet.
4. Width of concrete pad will increase by 18" if disabled person might approach from street side.

### NOTES (Property Side):

1. Gate must be able to be opened without a key or special knowledge.
2. An approved protection sleeve may be placed over the lever handle.
3. Width of concrete pad should be increased by 12" if the gate has a closer.

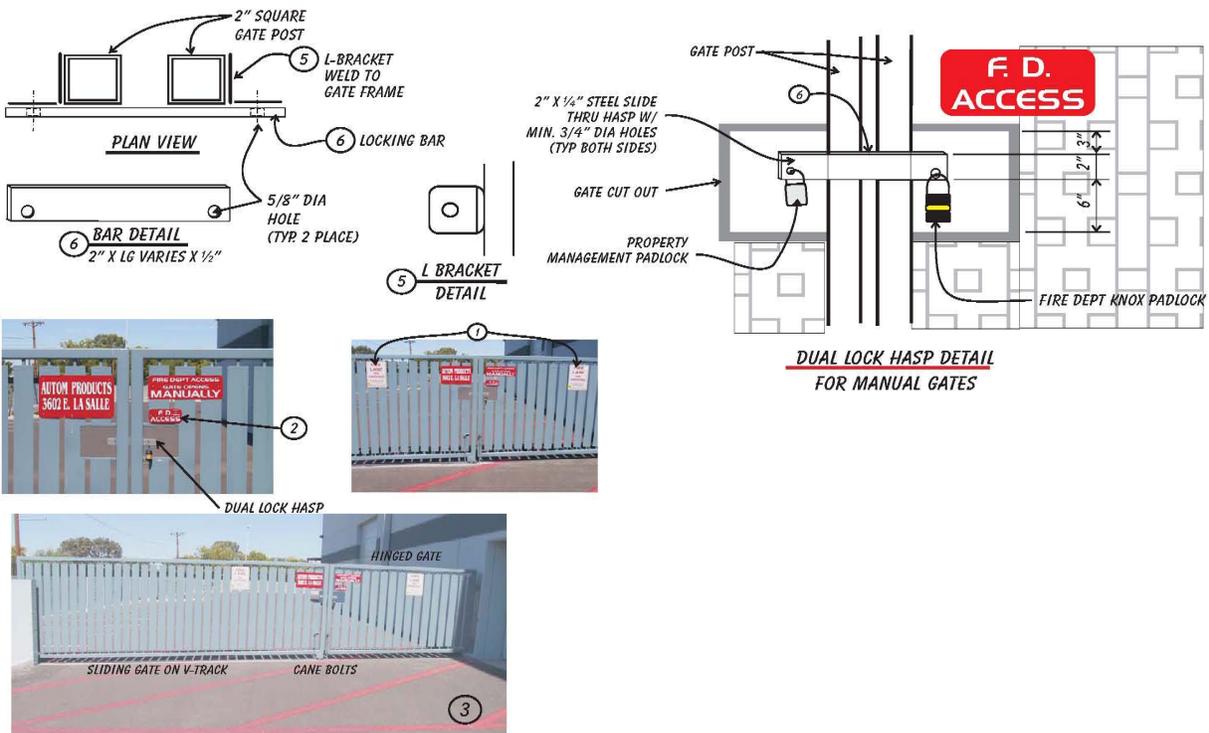
## FIRE LANE STRIPING DETAIL FOR ALONG WALLS, FENCES & BUILDINGS



### NOTES:

1. Striping shall be painted safety red. Six-inch wide hash striping running approximately four (4) to six (6) feet apart.

## MANUAL ROLLING GATE DETAILS



### NOTES:

1. Approved fire lane signs with reflective background, placed back-to-back and fastened on all four (4) corners.
2. Approved Fire Department access sign w/ reflective background placed back-to-back.
3. Striping shall be painted Safety Red. Six-inch wide hash striping approximately four (4) to six (6) feet apart.
4. The minimum overall width of the gate opening shall be 20 feet.
5. Weld modified L-bracket to gate frame.
6. Locking bar length is determined by the frame width and the gap width between the two gates. Remove all sharp edges/round all corners.  $\frac{3}{4}$  inch diameter hole minimum; hole diameter determined by size of padlock.
7. Fire Department Knox Padlock application order forms are available Monday – Friday at Fire Prevention, 14250 W. Statler Plaza, Suite 101 or Community Development, 12425 W. Bell Road from 8:00 AM – 5:00 PM. (Must bring copy of Fire Department gate permit).