

# Vertical Mezzanine Gate

## Installation Instructions/Operation and Maintenance Manual



**Models**  
MGVM  
MGVE

### Table of Contents

Product Information .....2  
Installation Instructions .....3  
Operation .....11  
Inspection & Maintenance .....11  
Inspection & Maintenance Log .....12  
Replacement Parts List .....13  
Warranty Information .....16

### PS DOORS Contact Information

<b>Mail</b> PS DOORS Attn: PS Safety Access 1150 South 48th Street Grand Forks, ND 58201	<b>Local Phone</b> 701.746.4519 <b>Toll Free Phone</b> 877.446.1519	<b>Website</b> psdoors.com <b>Email</b> 4psinfo@psdoors.com	<b>Hours of Operation</b> 8 A.M. to 5 P.M. CT Monday – Friday
--	--	--	---

**IMPORTANT!** Read entire Instruction and Operations Manual to become familiar with the product.

**NOTICE** This product is a vertical mezzanine gate. The effectiveness of the product is directly related to the proper installation and operation of this product. Failure to properly maintain this product **will** affect performance.

### Publication Notice

This manual has been compiled and published covering the latest product descriptions and specifications.

The contents of this manual and the specifications of this product are subject to change without notice.

PS DOORS reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

PS DOORS and/or its respective suppliers may make improvements and/or changes in the product(s)/service(s) offered at any time without notice.

Retain this manual for future reference.

If you would like to download an 8.5"x11" copy of this manual, please go to [psdoors.com](http://psdoors.com)



## Safety Precautions

The following icons are used throughout this Manual.

- ▲ DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ▲ WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ▲ CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderated injury.
- NOTICE** Indicates manufacturer's statement of additional information.
- IMPORTANT!** Indicates a required action.
- CRITICAL** Indicates a vital component to product performance.

## Vertical Mezzanine Gate Product Information

### I. General Information

- A. This manual contains information regarding installation, operation, and maintenance of the Vertical Mezzanine Gate.
- B. The Vertical Mezzanine Gate is designed to meet Federal OSHA requirements for standard railings, for dimensions and loading CFR 1910.23(e)
- C. PS DOORS recommends that the owner implement a regular maintenance program to inspect the Vertical Mezzanine Gate as necessary.

**NOTICE** This product is manufactured to specific guidelines. Unauthorized alteration in any way will result in voiding Factory Warranty, and may cause product to fail with potential serious consequences. Accordingly, if the product requires service after unauthorized modification, you can expect any request for warranty repair to be charged to you. Authorized modifications, received in writing from PS DOORS, as long as the modification is accomplished strictly in accordance with PS DOORS' instructions, does not void warranty. To request product modifications contact PS DOORS.

### II. Storage Prior To Installation of Product

- A. Store materials in a dry, ventilated location. If outdoor storage is required, block materials and tarp in a tent-like arrangement, elevated above the product with open sides to allow airflow.

**NOTICE** Before beginning any portion of the site preparation and installation of the Vertical Mezzanine Gate, read the entire Operation and Maintenance Manual.

### III. Installation Site Preparation

- A. Clear work area of any debris.
- B. Ensure you have the necessary tools available. (Minimum recommended tools):
  1. One (1) 1/2" Wrench
  2. One (1) 9/16" Wrench
  3. One (1) Tape Measure
  4. One (1) Level
  5. One (1) 7/16" Drill Bit
  6. One (1) Electric Drill
  7. Additional anchoring tools may be needed specific to individual applications.

### IV. Safety Precautions

- A. Comply with all OSHA Safety Regulations and/or company safety policies when installing.
- B. Personnel: Determine the appropriate number of personnel required to perform installation and have them readily available at the project site. (2-3 people recommended)

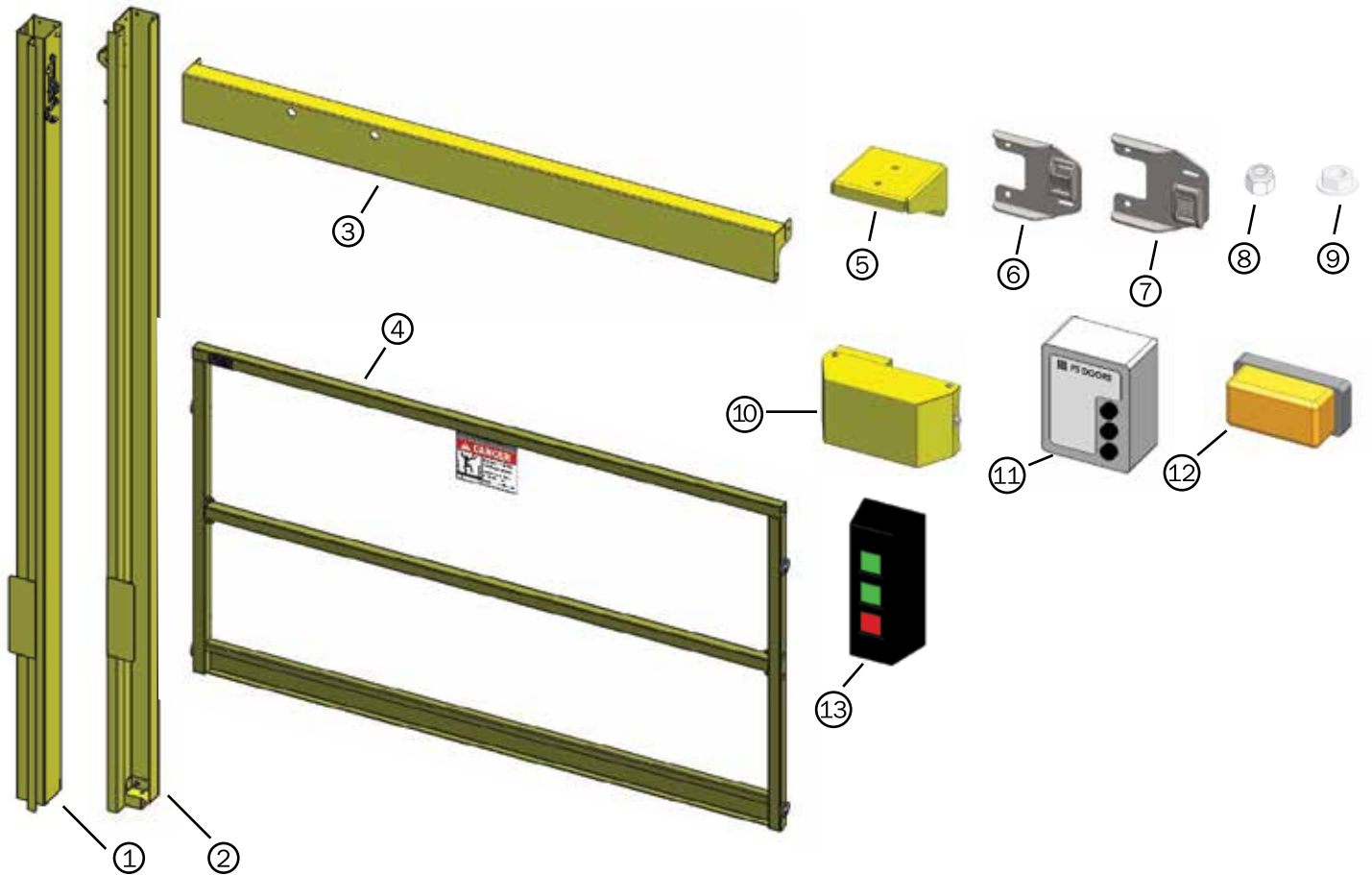
**▲ DANGER** Ensure a structural review (by an appropriate authority/professional) of the adjacent structure's capacity to accept all loads transferred to structure has been completed and approved.

## Installing Vertical Mezzanine Gate

Inventory carton to ensure all parts are present for assembly/installation. Refer to part list below.

### Vertical Mezzanine Gate Part List (As shipped)

ITEM #	DESCRIPTION	QTY	USES
1	MGV;DRIVE COLUMN ASSY	1	ALL
2	MGV;IDLER COLUMN ASSEMBLY	1	ALL
3	MGV; SPREADER BAR WLD	1	ALL
4	MGV;GATE ASSEMBLY	1	ALL
5	MGV;FACE MNT BRKT	2	FACE MOUNT ONLY
6	MGV;GATE LIFT PLATE WLDMNT-LH	1	ALL
7	MGV;GATE LIFT PLATE WLDMNT-RH	1	ALL
8	NUT;NYLOCK 3/8"16	4	ALL
9	NUT;FLANGE 5/16"	4	ALL
10	MG;ELECTRIC OPERATOR	1	ELECTRIC ONLY
11	ZAP 800-III CONTROLLER COMPLETE	1	ELECTRIC ONLY
12	STROBE LIGHT; AMBER	1	ELECTRIC ONLY
13	CONTROL THREE BUTTON NEMA 1	1	ELECTRIC ONLY



Parts are not to scale.

# Installing Vertical Mezzanine Gate

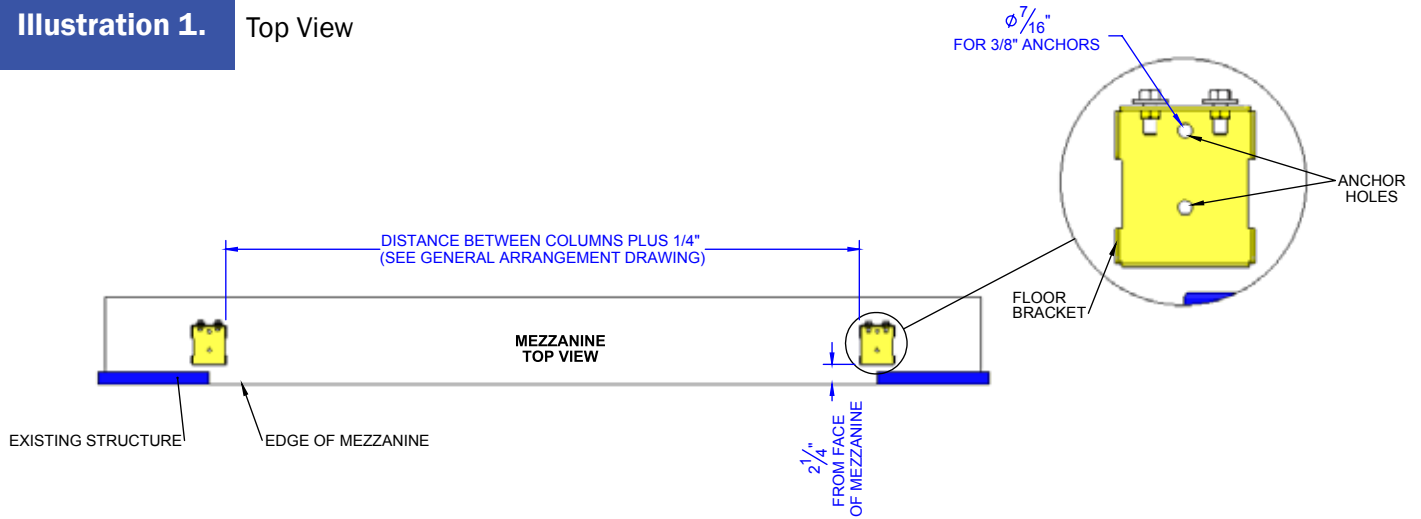
## V. Installation

### Step 1.1 \*Deck Mount Only\* (See Illustrations 1. & 2. )

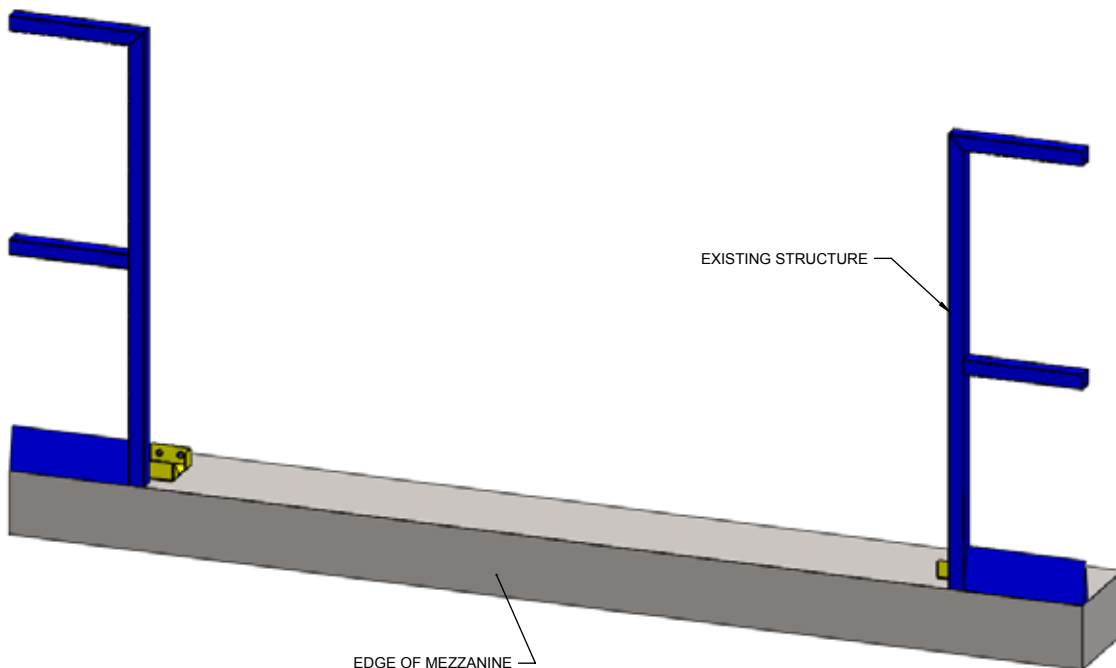
- Place the floor brackets and center within the opening (refer to general arrangement drawing for placement).
- Anchor floor brackets (See Illustrations 1.) (pic, show dimension 2¼"). The brackets must be parallel to each other (provided by others).

**IMPORTANT!** Make sure brackets are anchored in correct orientation

**Illustration 1.** Top View



**Illustration 2.** Front View



## Installing Vertical Mezzanine Gate

### Step 1.2 \*Face Mount Only\* (See Illustrations 3. & 4.)

A. Determine the correct spacing between face brackets and anchor on mezzanine face using factory located holes. (Refer to general arrangement drawing).

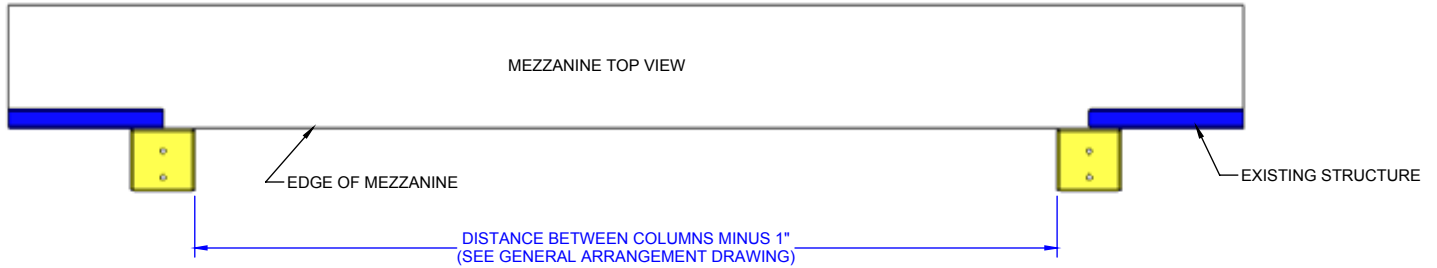
**IMPORTANT!** Face brackets must be flush with the top of the mezzanine.

B. Attach face brackets. Anchors provided by others.

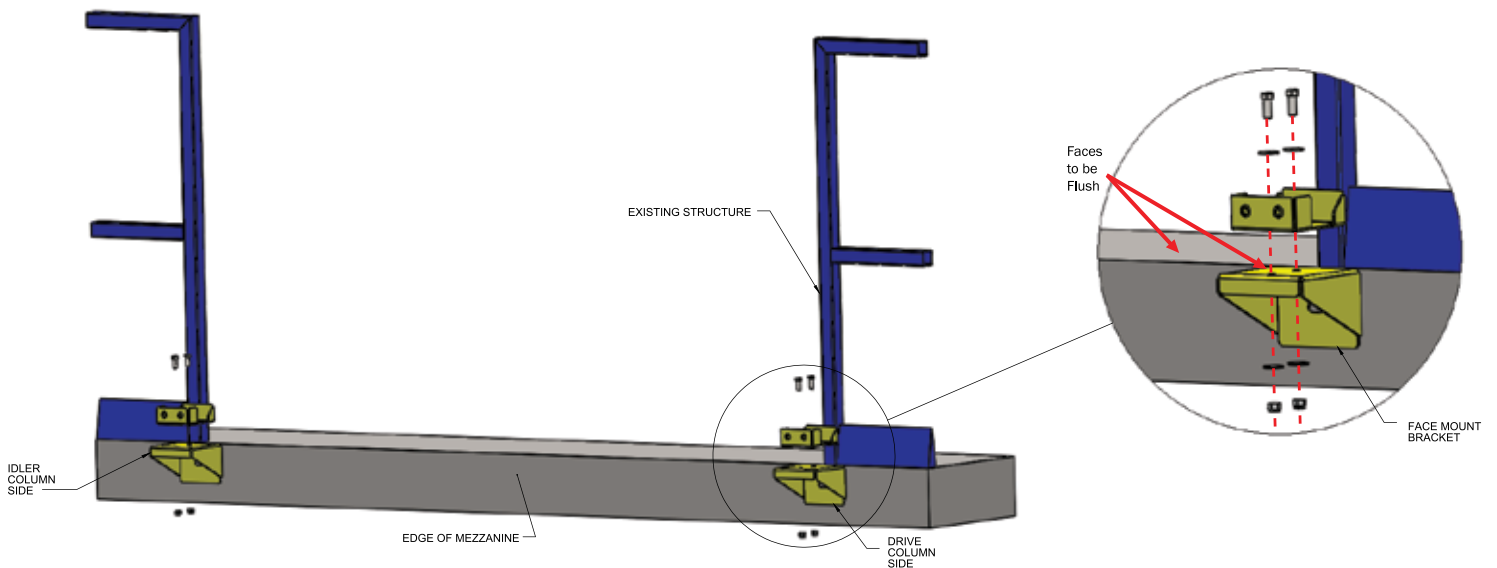
C. Attach the floor brackets to the top of the face mount brackets.

**NOTICE** Make sure brackets are bolted in correct orientation.

**Illustration 3.** Top View



**Illustration 4.** Front View



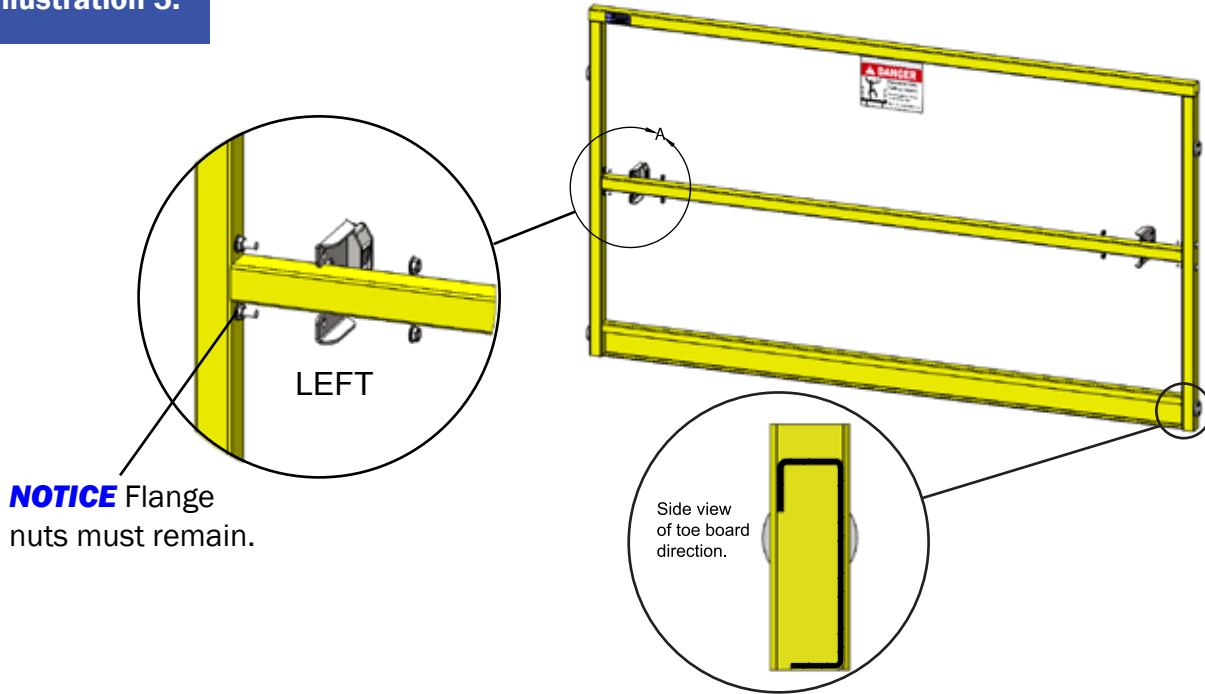
## Installing Vertical Mezzanine Gate

### Step 2.1 \*Deck Mount Only\*

A. Install lift brackets to gate. (See Illustration 5.)

**IMPORTANT!** Make sure lift brackets are installed in correct orientation as there is a left and right bracket.

Illustration 5.



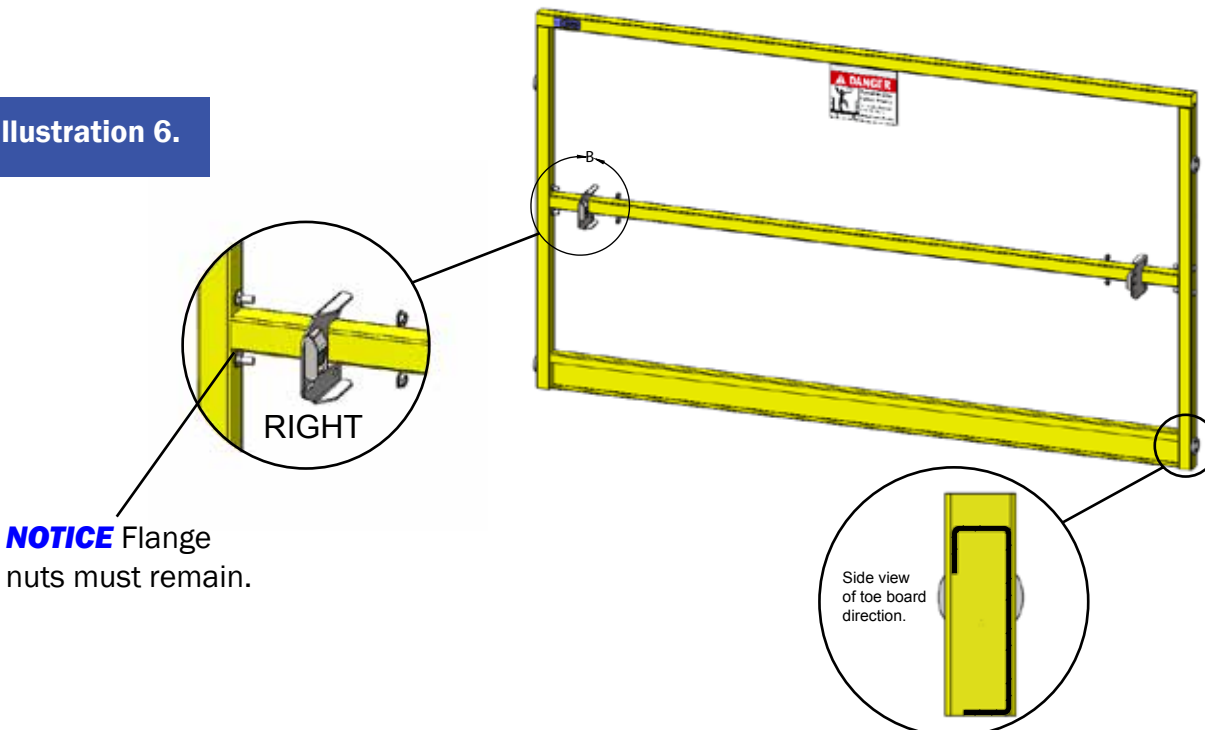
**NOTICE** Flange nuts must remain.

### Step 2.2 \*Face Mount Only\*

A. Install lift brackets to gate. (See Illustration 6.)

**IMPORTANT!** Make sure lift brackets are installed in correct orientation as there is a left and right bracket.

Illustration 6.



**NOTICE** Flange nuts must remain.

## Installing Vertical Mezzanine Gate

(The following Illustrations are of a Deck Mount but they are instructions for both Deck and Face Mount)

### Step 3.

A. Attach drive column to floor bracket (See Illustration 8.) and temporarily secure the column to the existing structure as needed.

**▲ CAUTION** when standing column in vertical position, be aware of counterweight moving freely in column. (See Illustration 7.)

**IMPORTANT!** Make sure installed on correct floor bracket

Illustration 7.

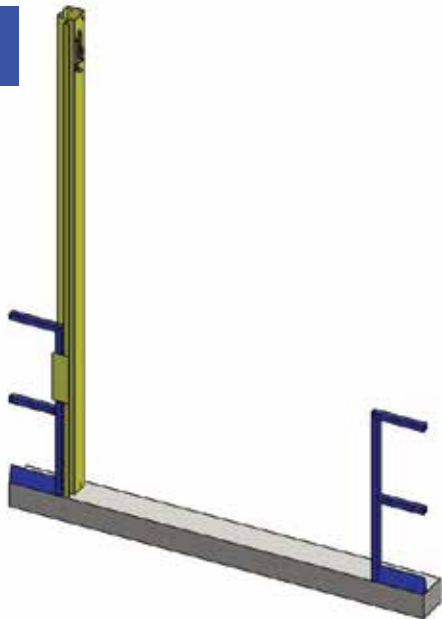
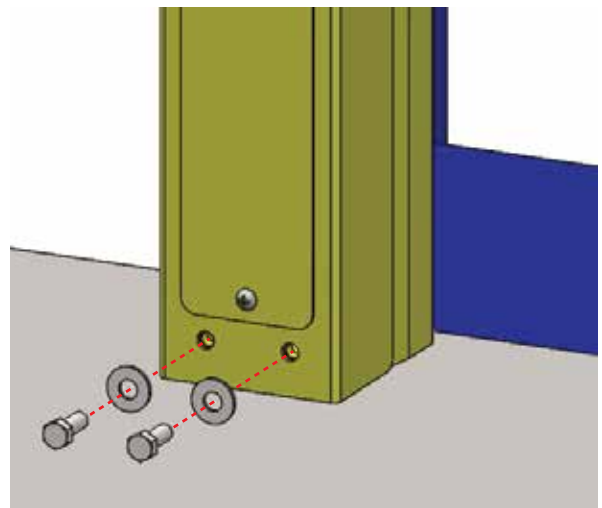


Illustration 8.



**Step 4. (Deck and Face Mount)** Install gate into drive column track and temporarily secure the gate to the drive column and/or existing structure.

**IMPORTANT!** Make sure the gate is correct orientation (toe board facing mezzanine (See Step 2 & Illustration 9.))

Illustration 9.

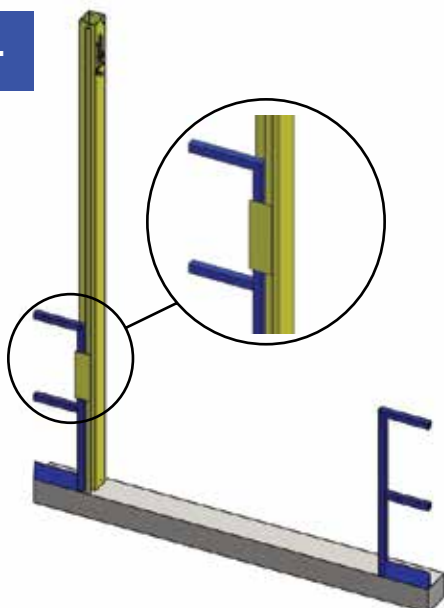
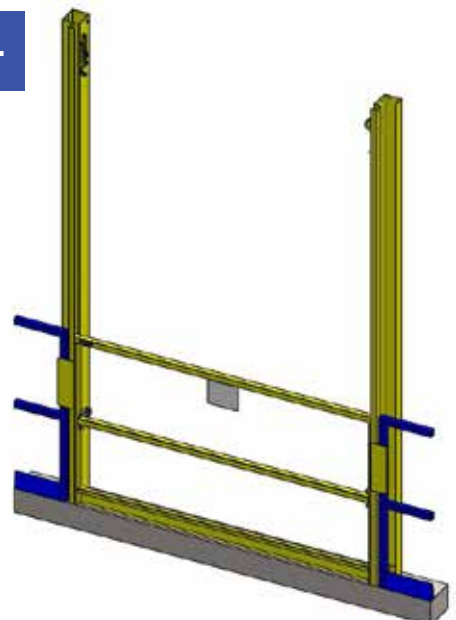


Illustration 10.



## Installing Vertical Mezzanine Gate

**Step 6.** Install idler column as the drive column was installed. (See Illustrations 8, 11, & 12.)

**NOTICE** When installing the column, place the gate inside the idler column as the column is attached

**Step 7.** Attach spreader bar to idler and drive column with hardware (See Illustration 9 & 10.)

**Step 8.** Make adjustments by squaring/plumbing columns and tightening all fasteners.

Illustration 11.

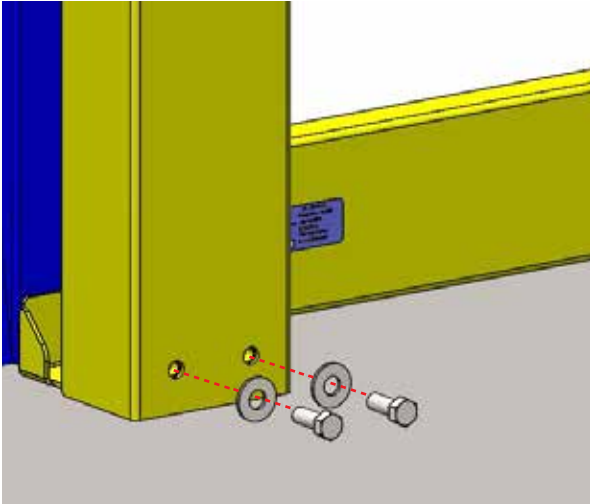
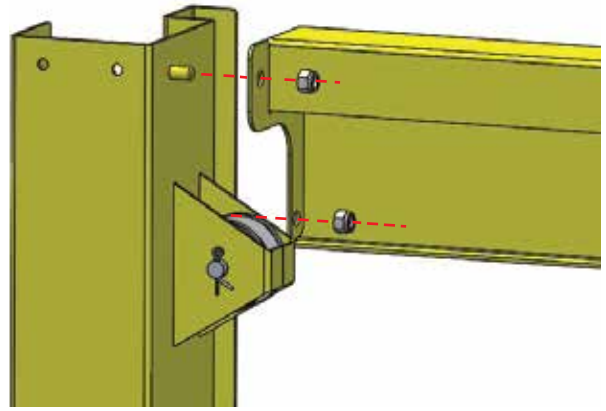


Illustration 12.



**Step 9.** Attach the column plates (See Illustration 11.) to the existing structure. Block-out as required.

**▲ WARNING** Do not penetrate drive column. Columns must be attached to existing structure (check local codes)

Illustration 13.

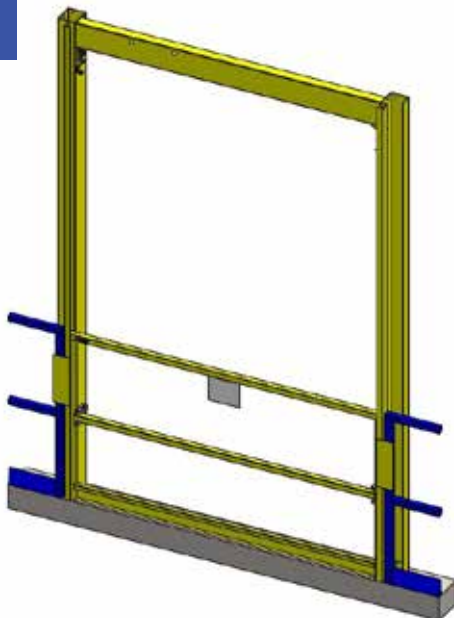
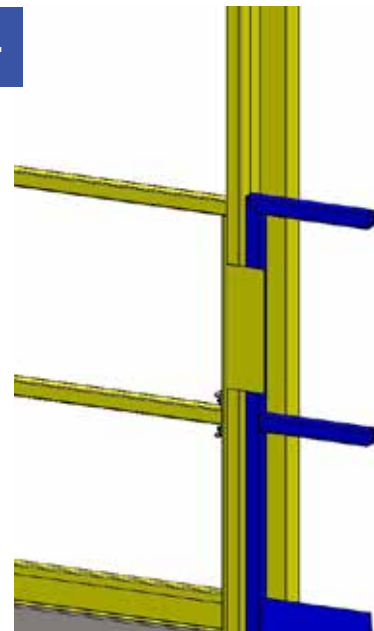


Illustration 14.





## Installing Vertical Mezzanine Gate

**Step 10.** Attaching the lift strap (ensure there are no sections where it is twisted or kinked).

A. Remove Access covers to retrieve lifting strap from drive column. (See Illustration 15)

**IMPORTANT!** (DO not trim strap at this time.) Make sure to leave a minimum of six inches of strap exposed.

**NOTICE** There are two lengths of strap attached to the counterweight. The shorter strap is shown in a dot pattern, while the longer strap is solid. (See Illustration 16.)

When installing strap, pull counterweight to top of column until it hits the stop (at bottom of sheave bracket (See Illustration 17.)). Make sure the gate is on the ground.

Illustration 15.

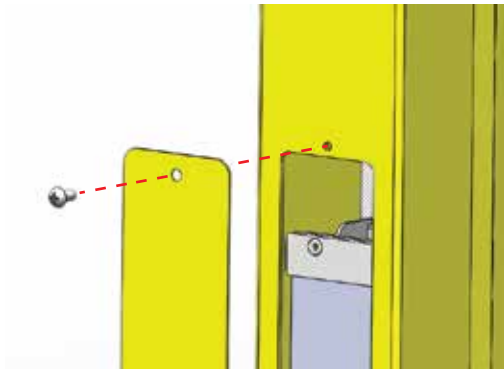
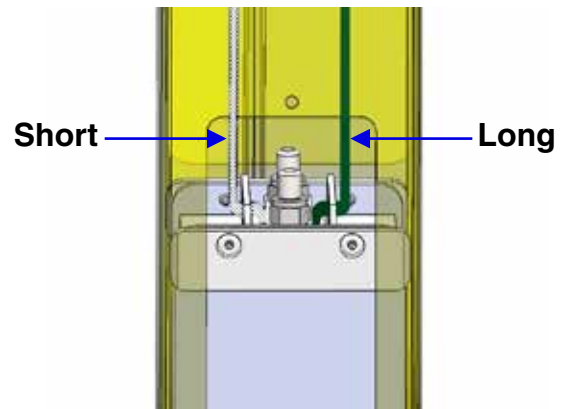


Illustration 16.



B. Feed the lifting strap as shown through sheave. The shorter strap will go through the lower pulley; while the longer strap goes through the upper pulley. Be sure there aren't any twists in the strap. (See Illustration 18.)

Illustration 17.

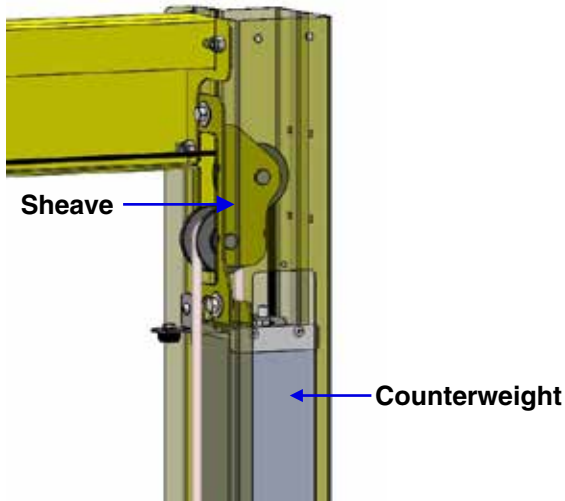
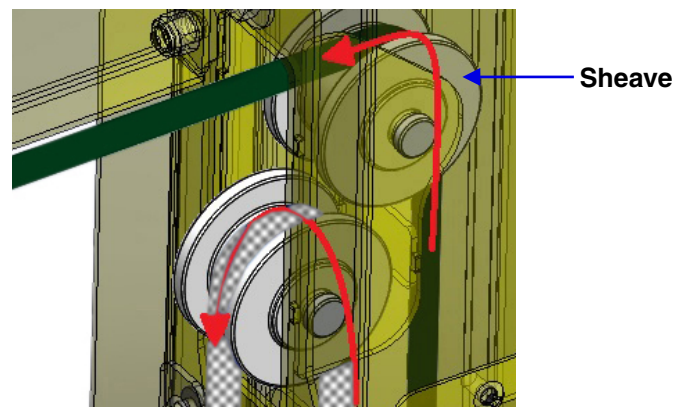


Illustration 18.



## Installing Vertical Mezzanine Gate

- C. **\* For electric gates only.\*** Remove strap cover on operator. Run the long strap section through the operator. Install strap cover when finished. (See Illustration 19.)
- D. Feed the longer lifting strap around sheave of idler column. (See Illustration 20.)

**IMPORTANT!** With counterweight still at the stop, complete steps E and F.

- E. Connect shorter lifting strap section to drive side lift bracket as shown. (See Illustration 21.)
1. Loosen first flange nut on lifting bracket to allow more room to feed strap through lift bracket.
  2. Be sure to tighten when finished.

Illustration 19.

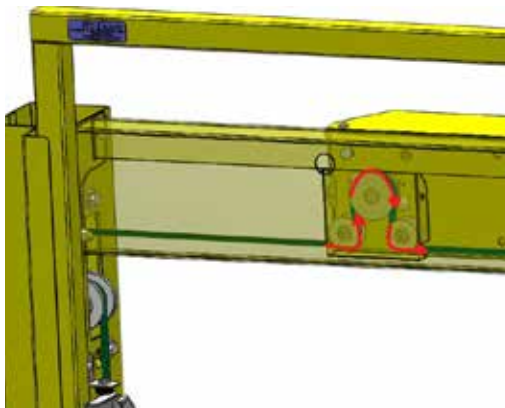
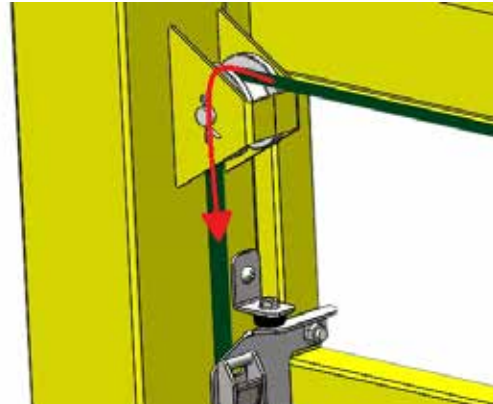


Illustration 20.



- F. Repeat step E. for longer lifting strap and idle column lift bracket. (See Illustration 22.)

Illustration 21.

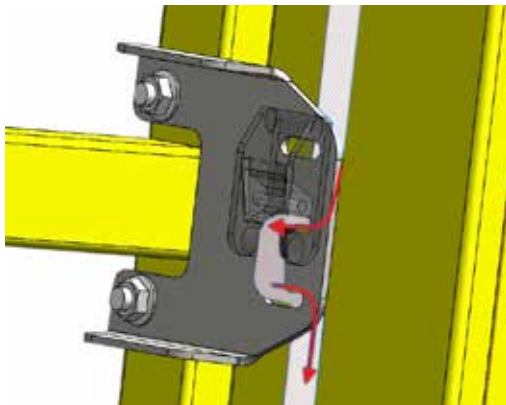
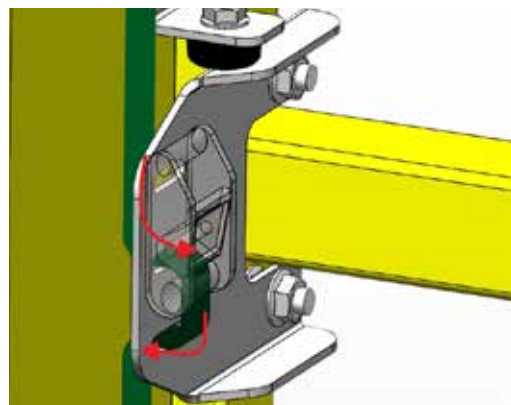


Illustration 22.



**Step 11.** Upon cycling the gate 5-10 times, make final adjustments and verify smooth operation.

Confirm for proper operation:

- Equal belt tension on both sides of gate.
- Lift gate to stops to verify gate hits both stops at the same time.
- No twisting in the straps

**NOTICE** If you are making adjustments on a manual gate, leave the strap on the idler column side 9-12 inches longer than the lift bracket in case an electric option is added later. Once final adjustments have been made you may now trim the lifting strap as desired.

## Operation of Vertical Mezzanine Gate

### VI. Operation

The procedures and information are supplied for the operation of the Vertical Mezzanine Gate assemblies. Operation in a manner other than intended could result in damage or less than acceptable performance, for which the manufacturer will not be held responsible.

- A. Ensure opening is clear of all obstructions through the entire travel of the gate during operation.
- B. Do not force components if they do not operate freely.
- C. To operate the gate utilize the properly marked push button to perform the open/stop/close function of the gate. If your gate has electrically interlocked dual mezzanine gates only one can be open at a time.

## Inspection & Maintenance

### VII. Inspection and Maintenance

**IMPORTANT!** Consult drawings before replacing fasteners, as most have specific design load requirements.

- A. Gate and Guide Column:
  1. Inspect items for damage and misalignment. Adjust, repair, or replace as needed, to meet original design tolerances.
  2. Check all mounting connections, making sure they meet original design standards (refer to original product drawings).
- B. Fasteners and mechanical connections:
  1. All fasteners must be in place and adjusted to their original design standards. Replace any damaged fasteners or connections. (refer to original product drawings).
- C. Finishes
  1. Inspect and clean finishes periodically.
  2. Touch up repair finishes, or refinish as necessary to protect the structural integrity of the product.
  3. This product comes with a polyester powder coat finish. Use finish materials compatible with powder coat. Follow paint manufacturer's instructions for prep and touch-up.
- D. Housekeeping
  1. Clean guide columns and keep the area clean throughout the operating area of the gate.
  2. To ensure your product continues to operate and last, upon completion of installation, complete the following:
    - a. Clean all surfaces.
    - b. If project is ongoing, protect installed products until completion of project.
    - c. Touch-up, repair or replace damaged components before Substantial Completion.

# Inspection & Maintenance Log

**CRITICAL** Periodic Inspection and Maintenance Required.

Date Purchased: \_\_\_\_\_

Product: Vertical Mezzanine Gate \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

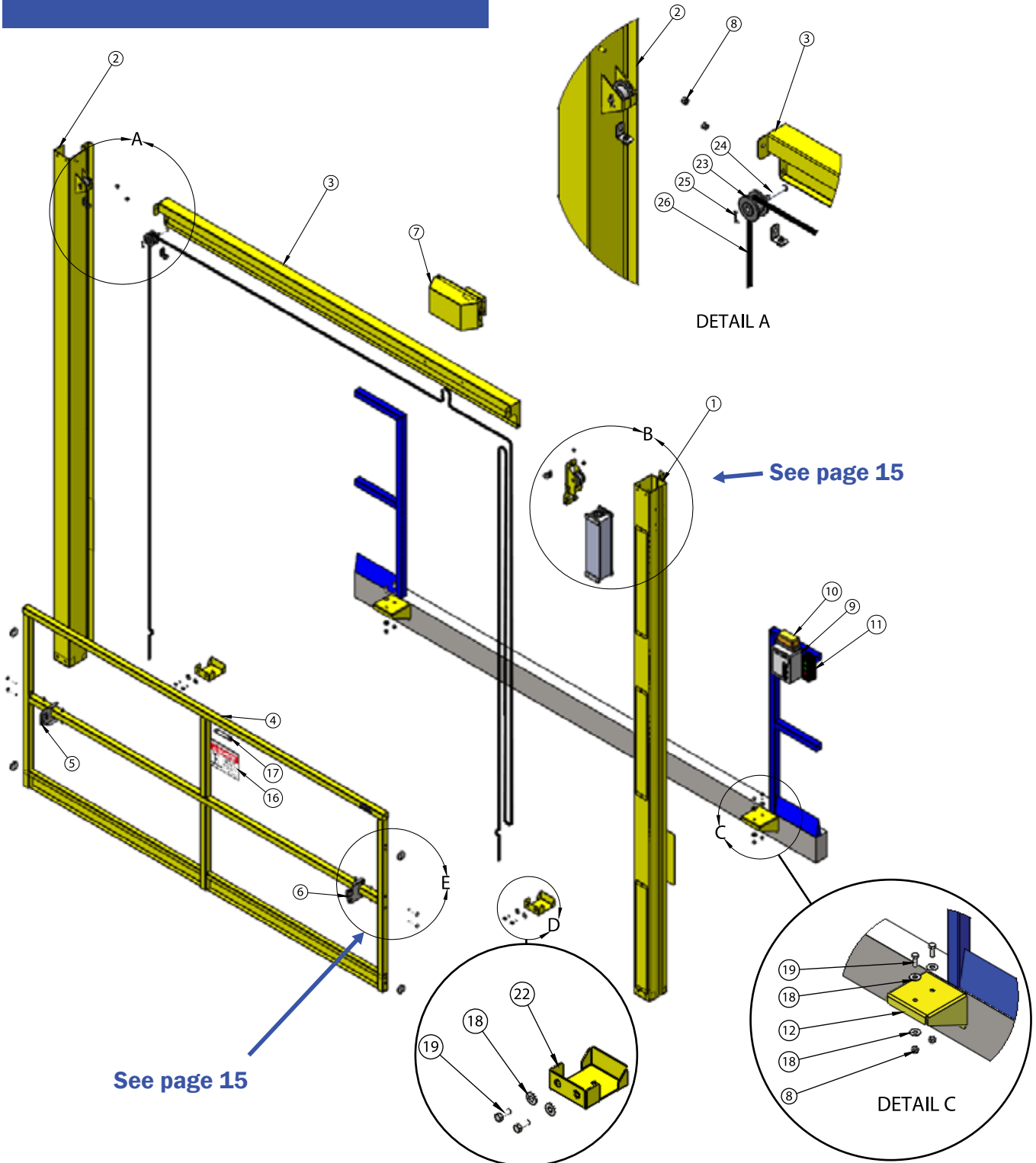
Door Identifier / Number: \_\_\_\_\_

Location: \_\_\_\_\_

DATE INSPECTED	INSPECTED BY <i>(Print &amp; Sign)</i>	INSPECTION ITEMS NOTED	CORRECTIVE ACTION	CORRECTED BY <i>(Print &amp; Sign)</i>

# Replacement Parts List Manual and Electric Gates

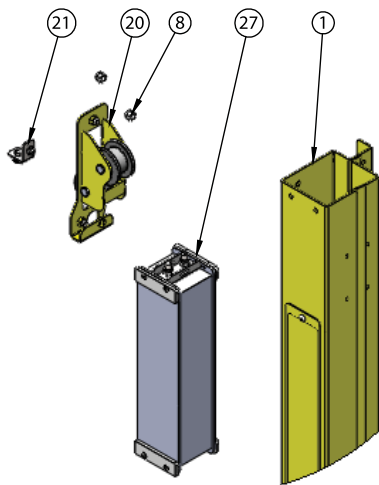
**To Order Parts Contact PS DOORS:  
Call: 877.446.1519  
Email: 4psinfo@psdoors.com**



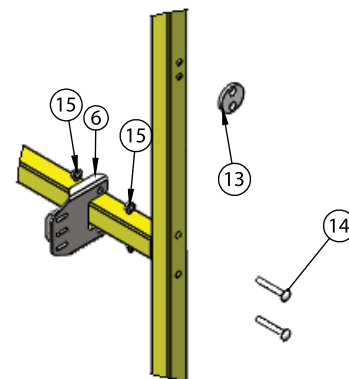
# Replacement Parts List Manual and Electric Gates

## Manual & Electric Vertical Mezzanine Gates Replacement Parts List Electric Operator Part List on page 14

ITEM #	DESCRIPTION	QTY.	U/M	PART # PCY	PART # SST	
1	MGV;DRIVE COLUMN ASSY	1	EA	CONSULT FACTORY	CONSULT FACTORY	
2	MGV;IDLER COLUMN ASSEMBLY	1	EA	CONSULT FACTORY	CONSULT FACTORY	
3	MGV;SPREADER BAR WLD	1	EA	CONSULT FACTORY	CONSULT FACTORY	
4	MGV;GATE ASSEMBLY	1	EA	CONSULT FACTORY	CONSULT FACTORY	
5	MGV;GATE LIFT PLATE WLDMNT-RH	2	EA	511242	511242	
6	MGV;GATE LIFT PLATE WLDMNT-LH	2	EA	511243	511243	
7	MG;ELECTRIC OPERATOR	1	EA	511162	511371	ELECTRIC ONLY
8	NUT;NYLOCK 3/8"16	8	EA	501120	502176	
9	ZAP 800-II CONTROLLER COMPLETE	1	EA	506988	506988	ELECTRIC ONLY
10	STROBE LIGHT; AMBER	1	EA	501143	501143	ELECTRIC ONLY
11	CONTROL THREE BUTTON NEMA 1	1	EA	506080	506080	ELECTRIC ONLY
12	MGV;FACE MNT BRKT	2	EA	511283	511356	FACE MOUNT ONLY
13	MGV;UHMW GUIDE BLOCKVERT	4	EA	511260	511260	
14	BOLT;CARRIAGE5/16"18X2-1/4"	4	EA	506502	506985	
15	NUT;FLANGE 5/16"18	8	EA	501087	501088	
16	MG; POLYESTER DANGER PLACARD	1	EA	511770	511770	
17	MG; PLACECARD BRACKET-SS	1	EA	511937	511937	
18	WASHER;FLAT 3/8"	12	EA	501947	501945	
19	BOLT;HEX3/8"16X1	8	EA	500400	500402	
20	MGV;DRIVE SHEAVE ASSY	1	EA	511254	511085	
21	MGV;TRACK STOP ASSY-SS	2	EA	510908	510908	
22	MGV;FLOOR BRACKET WLDMNT	2	EA	511231	511347	
23	SHEAVE;UHMW,BLACK,1-3/4" DIA	1	EA	501555	501555	
24	PIN;CLEVIS 1/2"X 2-1/4"	1	EA	509178	509179	
25	PIN;COTTER 1/8 X 3/4	1	EA	503403	509181	
26	MGV;DRIVE BELT (ELECTRIC)	1	EA	CONSULT FACTORY	CONSULT FACTORY	
27	MGV;COUNTERWEIGHT ASSY	1	EA	CONSULT FACTORY	CONSULT FACTORY	



DETAIL B



DETAIL E

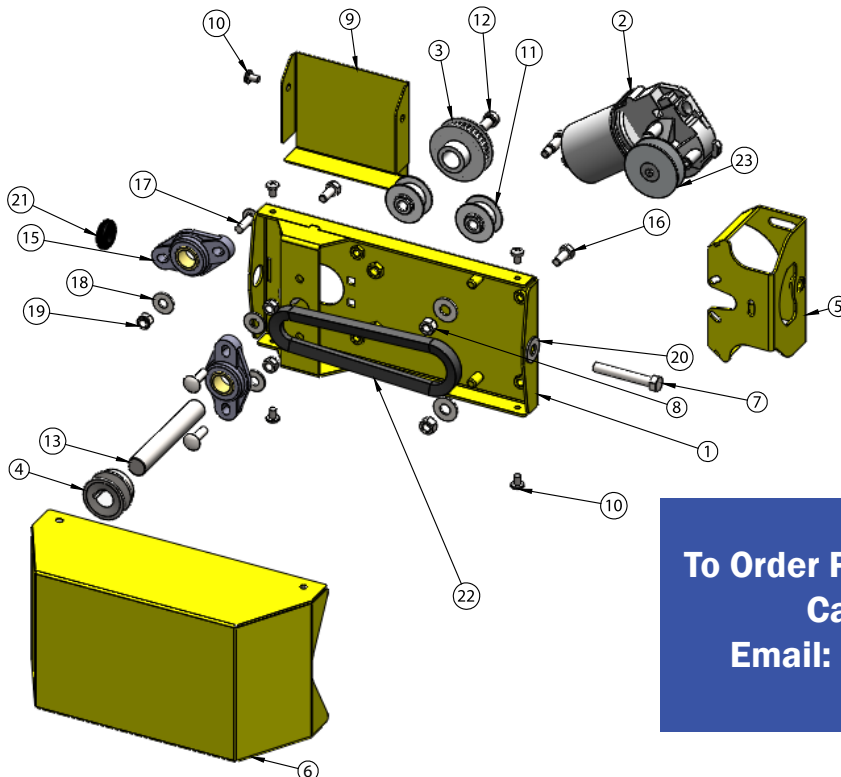
# Replacement Parts List

## Electric Operator - Vertical Mezzanine Gate

### Electric Operator Replacement Parts List

Manual & Electric Vertical Mezzanine Gates Part List on pages 12 & 13.

ITEM #	DESCRIPTION	Qty	U/M	PART # PCY	PART # SST
1	MG;E OPERATOR MOUNT PLATE	1	EA	511172	511365-1
2	ZAP 800 SERIES MOTOR ONLY	1	EA	502047	502047
3	PULLEY; POLYCARB/ALUHUB	1	EA	511173	511173
4	PULLEY; AK17 X 3/4" W/KEYWAY	1	EA	501359	501359
5	MG;E OPP MOTOR MOUNT	1	EA	511180	511365-1
6	MG;E OPERATOR COVER	1	EA	511165	511362
7	BOLT;TAP3/8"16X2 1/2	1	EA	500452	506352
8	NUT;NYLOCK 3/8"16	2	EA	501120	508296
9	MG;E OPERATOR ROLLER COVER	1	EA	511167	511360
10	SCREW;PANPHMACH1/4"20X3/8SS	5	EA	503219	503219
11	MG;E OPP IDLER PULLEY	2	EA	511182	511182
12	SCREW;SHOULDER3/8"X3/4 SS	2	EA	502861	502861
13	MG;E OPP DRIVE PULLY SHAFT SST	1	EA	511372	511372
14	ZAP 4M CABLE ASSEMBLY	1	EA	502045	502045
15	BEARING;2 BOLT FLG J	2	EA	511655	511655
16	BOLT;HEX5/16"18X3/4	2	EA	500429	500430
17	BOLT;CARRIAGE5/16"18X1	4	EA	502819	511938
18	WASHER;FLAT 5/16"	4	EA	501949	508053
19	NUT;NYLOCK 5/16"18	4	EA	501126	508995
20	WASHER;FLAT 3/8"	3	EA	501947	500296
21	GROMMET,PUSH .625IDX.875HOLE	1	EA	511694	511694
22	BELT; V, 4L180	1	EA	500296-1	500296-1
23	PULLEY;DRIVE, 58MM, ZAP	1	EA	502048	502048



**To Order Parts Contact PS DOORS:**  
**Call: 877.446.1519**  
**Email: 4psinfo@psdoors.com**

## PS DOORS—Limited Warranty

### **Limited Warranty - Fill out warranty registration and return to PS DOORS.**

PS DOORS warrants this product and components to be free from defects in material and workmanship for a period of one (1) year from date of shipment. If within the term of this warranty, any Vertical Mezzanine Gate or component is found to be defective upon inspection by an authorized PS DOORS representative, PS DOORS will replace or repair, at PS DOORS' discretion, any part found to be defective. Any field labor charges incurred are the sole responsibility of the customer.

To make a claim under this warranty, contact PS DOORS at the address shown below.

PS DOORS	Toll Free: 877.446.1519
Attention: Warranty	Phone: 701.746.4519
1150 South 48th Street	Fax: 701.746.8340
Grand Forks, ND 58201	E-mail: 4psinfo@psdoors.com

Unauthorized modification of or to this product voids the PS DOORS Limited Warranty. Accordingly, if the product requires service after unauthorized modification, you can expect any request for warranty repair to be charged to you. Authorized modifications, received in writing from PS DOORS, as long as the modification is accomplished in strict accordance with PS DOORS' instructions, does not void warranty. To request product modifications contact PS DOORS at the address above.

PS DOORS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

All other warranty's, express or implied including any warranty of merchantability, are expressly excluded. Some states do not allow the exclusion or limitation of consequential or incidental damages, so the above limitation or exclusion may not apply to you.

WARRANTY DOES NOT APPLY TO ANY DAMAGE OR DETERIORATION CAUSED BY MODIFICATION, ABUSE, APPLIED PAINT FAILURE OR FAILURE TO PROVIDE REASONABLE AND NECESSARY MAINTENANCE.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state, or by country.

#### Exclusions:

Lifting Straps are considered a "wear-item" and are not covered under this warranty.