



# LORGUARD INSTALLATION MANUAL

**FAILURE TO FOLLOW THESE INSTRUCTIONS POSES A THREAT TO SAFETY OR HEALTH AND MAY RESULT IN DEATH OR SERIOUS INJURY TO USERS OF THE LORGUARD AND/OR TO THIRD PARTIES. MANUFACTURER EXPRESSLY DISCLAIMS ANY LIABILITY FROM INJURY, DAMAGE, OR OTHER LOSS RESULTING FROM THE IMPROPER OR UNAUTHORIZED INSTALLATION OR USE OF THE LORGUARD.**

**ASSEMBLE AND USE LORGUARD AS SPECIFIED IN THE INSTRUCTIONS MANUAL TO MEET OSHA COMPLIANCE REGULATIONS, AS STATED, UNDER STANDARDS -29 CFR, 1910.23 & STANDARDS - 29 CFR, 1926.502.11.**

**TOOLS NEEDED FOR INSTALLATION: ¼" HEX KEY**

**TOOLS RECOMMENDED: ¼" HEX SOCKET BIT, SOCKET ADAPTOR, CORDLESS IMPACT DRIVER**

**TABLE OF CONTENTS**

<b>PRE INSTALLATION MESSAGE</b>	<b>2</b>
<b>DEFINITIONS</b>	<b>3</b>
<b>LORGUARD GUARDRAIL PARTS LIST</b>	<b>4</b>
<b>LORGUARD GUARDRAIL SPECIFICATION</b>	<b>5</b>
<b>LORGUARD GUARDRAIL SPECIFICATION - INSTRUCTION TUBE</b>	<b>6</b>
<b>LORGUARD GUARDRAIL SPECIFICATION - SWING GATE</b>	<b>7</b>
<b>LORGUARD GUARDRAIL INSTALLATION CONFIGURATIONS</b>	<b>8-13</b>
<b>CONTINUOUS RUN CONFIGURATION</b>	<b>8</b>
<b>OPEN CONFIGURATION</b>	<b>9</b>
<b>CLOSED CONFIGURATION</b>	<b>9</b>
<b>ROOF HATCH CONFIGURATION</b>	<b>10</b>
<b>TAPERED ROOF CONFIGURATION</b>	<b>11</b>
<b>CUSTOM SPLICE FITTING CONFIGURATION</b>	<b>12</b>
<b>LORGUARD GUARDRAIL INCORRECT INSTALLATION CONFIGURATIONS</b>	<b>13</b>
<b>OSHA REGULATION COMPLIANCE</b>	<b>14</b>
<b>LORGUARD GUARDRAIL INSTALLATION PROCEDURES</b>	<b>15</b>
<b>TOEBOARD BEST PRACTICES</b>	<b>16</b>
<b>TOEBOARD COMPLIANCE</b>	<b>17</b>
<b>TOEBOARD CONSTRUCTION</b>	<b>18</b>
<b>TOEBOARD INSTALLATION PROCEDURES</b>	<b>19</b>
<b>DISCLAIMER</b>	<b>20</b>
<b>LORGUARD GUARDRAIL PRODUCT INFORMATION</b>	<b>21</b>

## PRE INSTALLATION MESSAGE

- ❖ Applications of the LORGUARD should be verified and approved by a competent safety personnel.
- ❖ Verify that the surface the LORGUARD will be installed onto is capable of supporting the product and personnel installing it. A complete assessment of the entire surrounding areas should be made to determine if the walking and working surfaces have the strength and structural integrity to support users safely.
- ❖ Only install LORGUARD on flat dry clean surfaces under conditions where adequate illumination is provided.
- ❖ If a short parapet wall exists, Baseplate can be against it and should be positioned at least 24 inches from the unprotected or leading edge.
- ❖ Always use Outriggers at both ends of a continuous rail section.
- ❖ Each rectangular Baseplate must be installed in the correct orientation. Install the Baseplate with the long side perpendicular or 90 degrees to the LORGUARD as shown in Manual examples.
- ❖ If it is necessary to remove LORGUARD during a portion of a particular job, make sure to re-secure the unit before resuming work.
- ❖ If LORGUARD is impacted, loosen all screws on the BASEPLATE receivers. Realign the LORGUARD and baseplates, and then secure all setscrews. If damaged parts are found, replace with new ones.
- ❖ LORGUARD bases have non-skid pads on the bottom. If a non-skid pad is missing, do not use until one is installed. Contact Diversified Fall Protection immediately.
- ❖ Never erect LORGUARD near electrical wires. Keep a minimum of ten (10) feet from power lines.
- ❖ Never install or use LORGUARD on top of gravel, metal or on slippery surfaces without speaking with a Diversified Fall Protection representative.
- ❖ Routine inspection of all parts is recommended. If damaged parts are found, replace with new parts. Contact Diversified Fall Protection immediately.

**❖ DEFINITIONS**

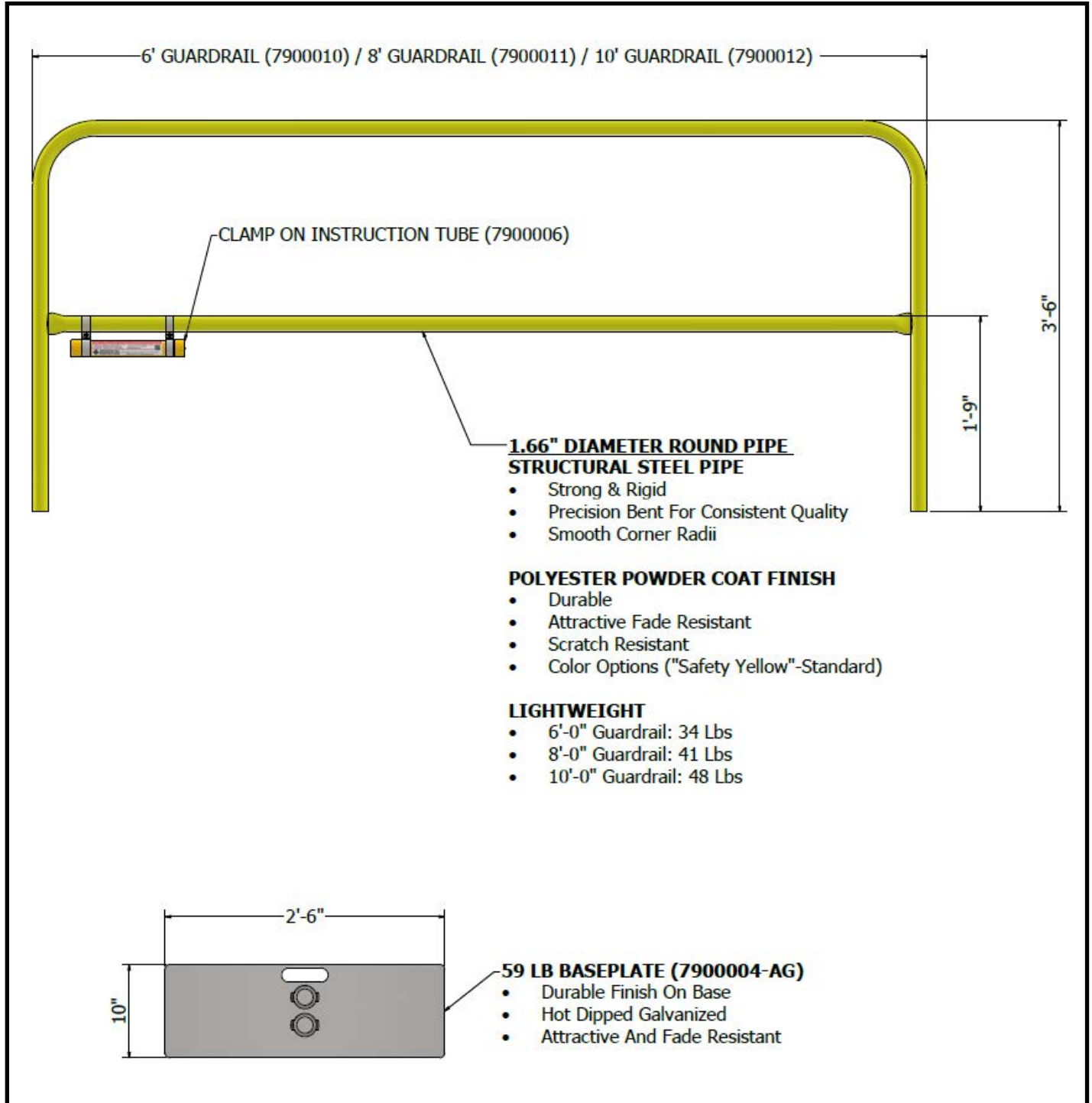
- ❖ **BASEPLATE:** Supporting base for LORGUARD.
- ❖ **COMPETENT PERSON:** Defined by 29 CFR 1926.32 (f) as someone *...who is capable of identifying existing and predicable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them...*
- ❖ **CONTINUOUS RUN:** A single or series of LORGUARD modular LORGUARD sections installed in a continuous, without interruption, straight line.
- ❖ **LEADING EDGE:** The edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof or deck, or formwork sections are placed or constructed. A leading edge is considered an unprotected side and edge.
- ❖ **LORGUARD:** A passive restraint fall protection system secured to uprights and erected along exposed edges and ends of platforms, catwalks, or rooftops to prevent falls of persons.
- ❖ **OUTRIGGER:** A 6 foot, 8 foot or 10 foot long LORGUARD installed at a 90 degree angle to a continuous run with a BASEPLATE connected to it.1
- ❖ **QUALIFIED PERSON:** Defined by 29 CFR 1926.32 (m) as someone...*who, by possession of a recognized degree, certificate, professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, work, or the project...*
- ❖ **TOEBOARD:** A low protective barrier that will prevent the fall of materials and equipment to lower levels.
- ❖ **UNPROTECTED SIDE AND EDGE:** Any side or edge (except at entrance points of access) of a walking/working surface, e.g. floor, roof, ramp, or runway where there is no wall or LORGUARD system.

## LORGUARD PARTS LIST

- ❖ **7900010 (6 FOOT), 7900011 (8 FOOT), 7900012 (10 FOOT) MODULAR LORGUARD:** which are 6 feet, 8 feet and 10 feet long. Each LORGUARD section is 42 inches tall with a mid-rail 21 inches high. Standard color of the LORGUARD is safety yellow while other colors and finishes are available upon request.
- ❖ **7900004 BASEPLATE:** The Baseplate is a rectangular flat base, containing two receivers that the corresponding Modular LORGUARD is placed within. The receiver fittings are designed to accept LORGUARD sections, **7900010 (6 FOOT), 7900011 (8 FOOT), 7900012 (10 FOOT)**. Standard finish baseplate is hot dipped galvanized.
- ❖ **7900005 SPLICE KIT:** The Splice Kit is a fitting used to create custom length of the Modular LORGUARD.
- ❖ **OPTIONAL UNIVERSAL TOEBOARD BRACKET:** The Toeboard(s) is only required when it is possible objects could fall from the work area to a lower level.
- ❖ **OPTIONAL 7900006 INSTRUCTION TUBE:** The Instruction Tube attaches to the LORGUARD mid-rail. In the Instruction Tube are Installation Instructions, and one Allen Wrench tightening tool. Standard color of the tube is safety yellow while other colors and finishes available upon request.
- ❖ **OPTIONAL BRP1530 RUBBER ROOF PADS:** The Rubber Roof Pad(s) is a protective accessory that withstands environmental conditions while providing traction for personnel to conduct work upon the roof, or other outdoor surfaces.
- ❖ **SWING GATE:** The Swing Gate is a self-closing gate designed for use with Modular LORGUARD. Standard color of the Swing Gate is safety yellow while a hot-dipped galvanized finish is also available upon request.

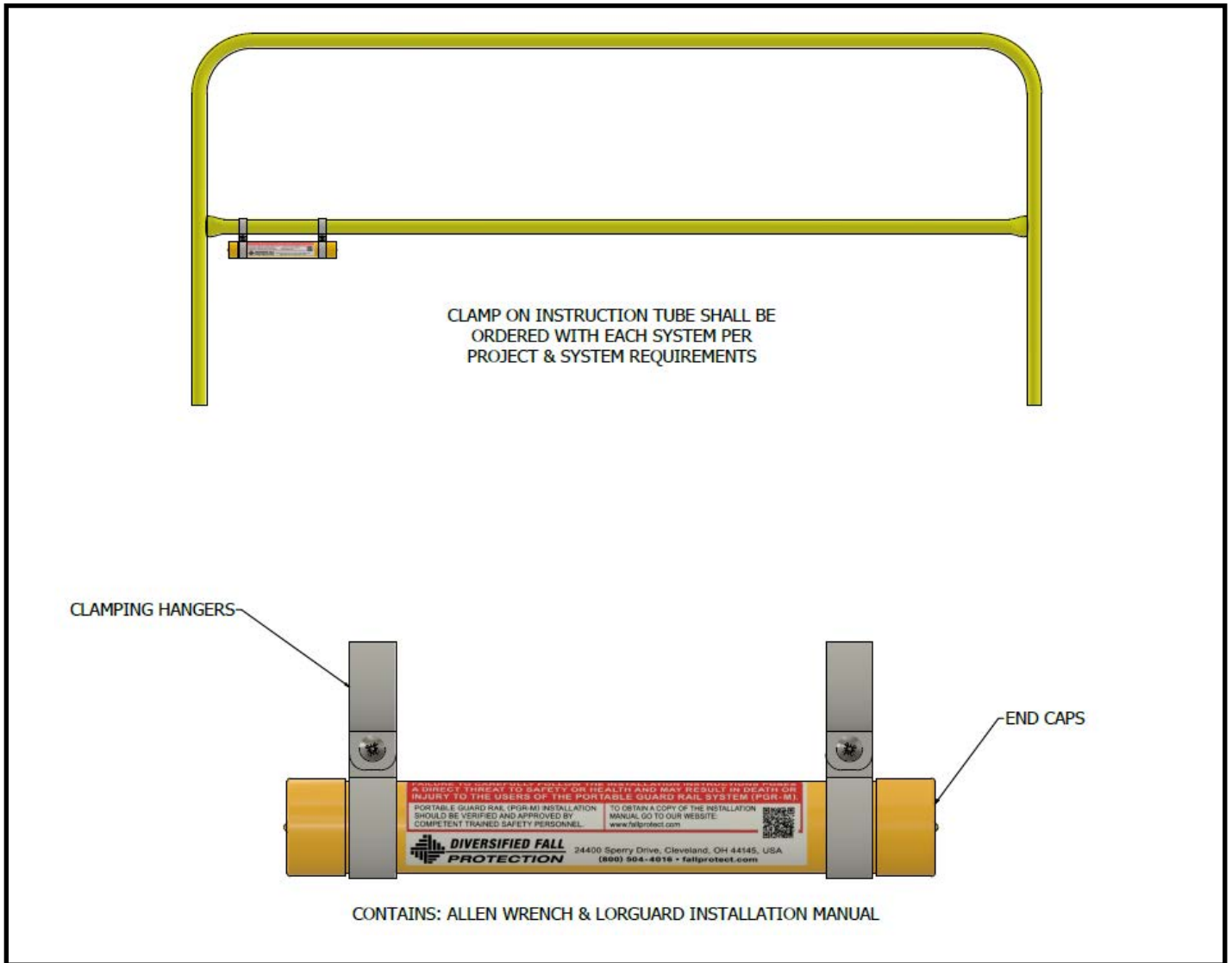
## LORGUARD SPECIFICATION

### LORGUARD



## LORGUARD SPECIFICATION

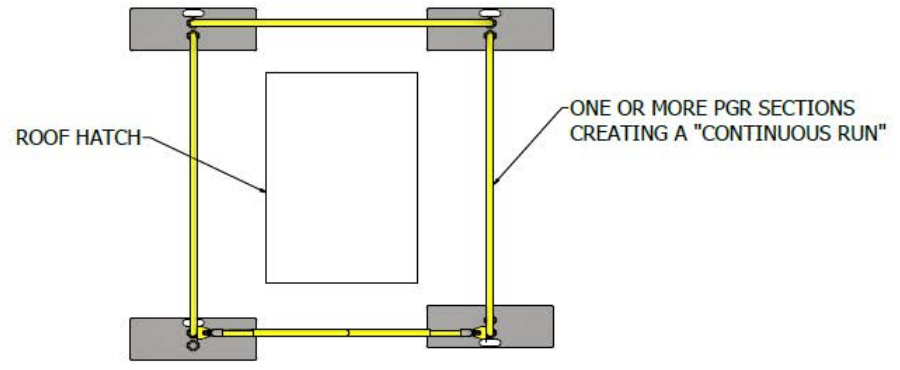
### Instruction Tube Accessory



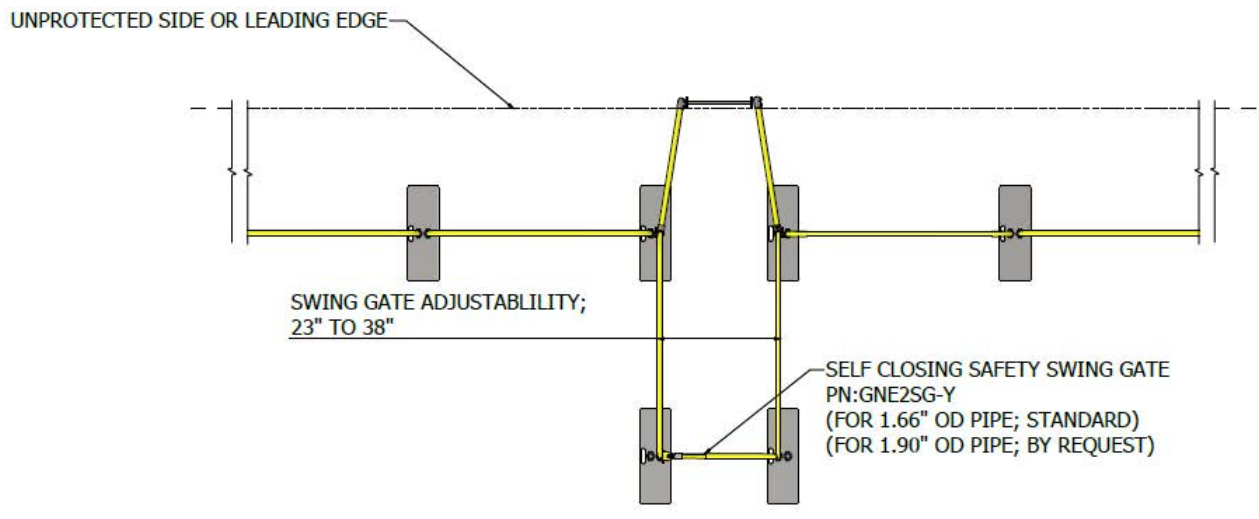


**LORGUARD SPECIFICATION**

**Swing Gate Accessory**



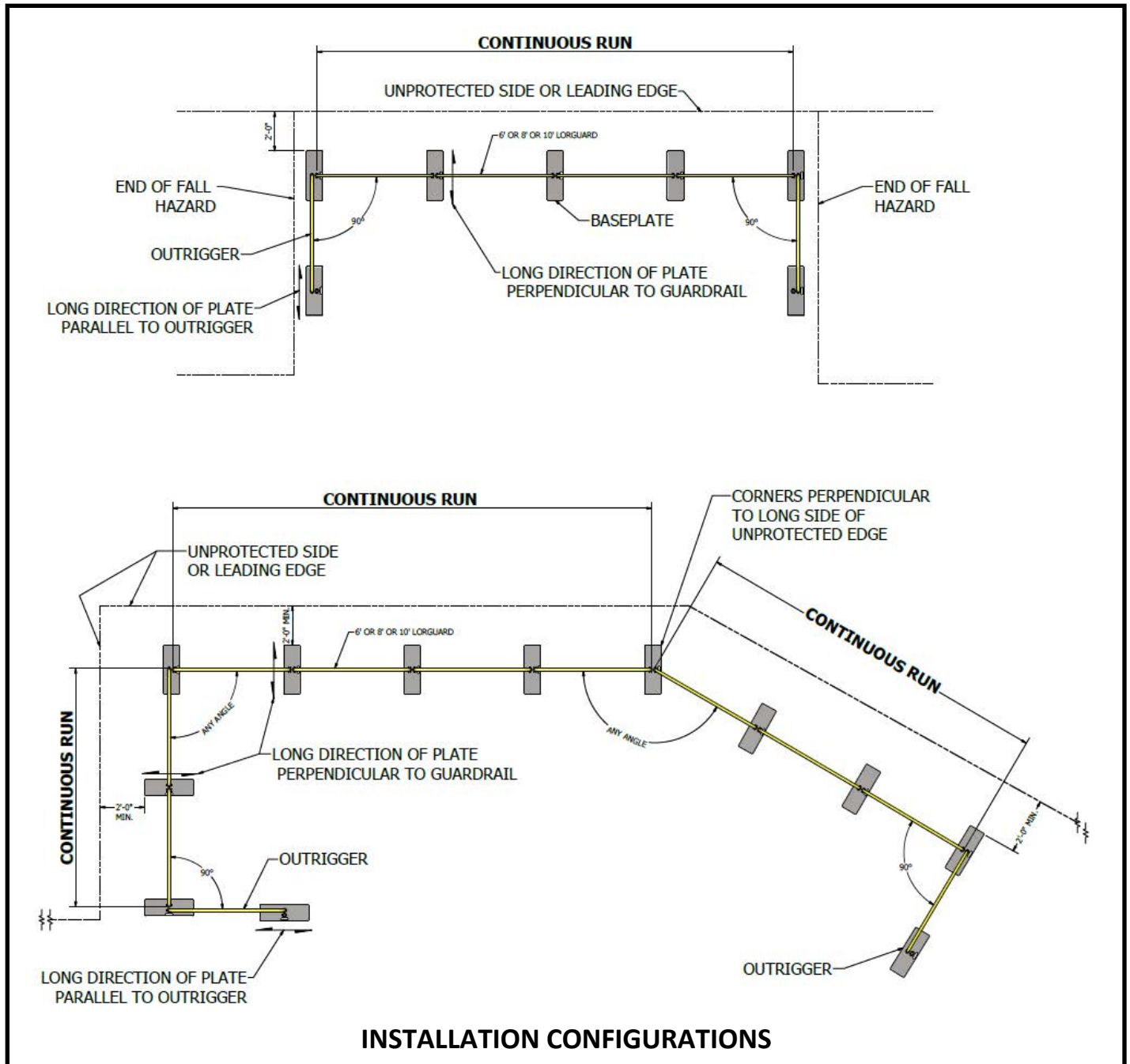
**ROOF HATCH ACCESS**



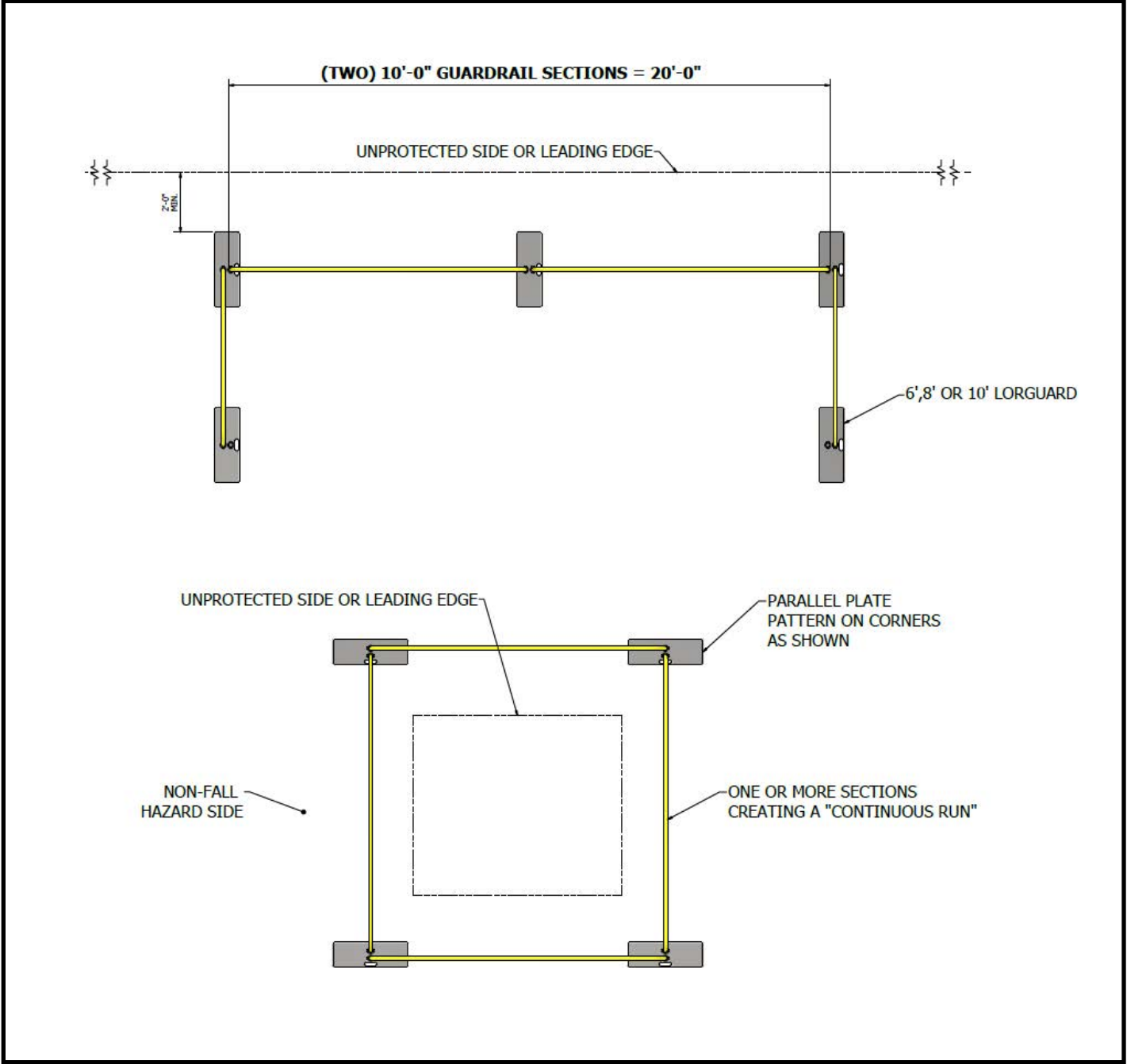


## INSTALLATION CONFIGURATIONS

### Continuous Run Configuration



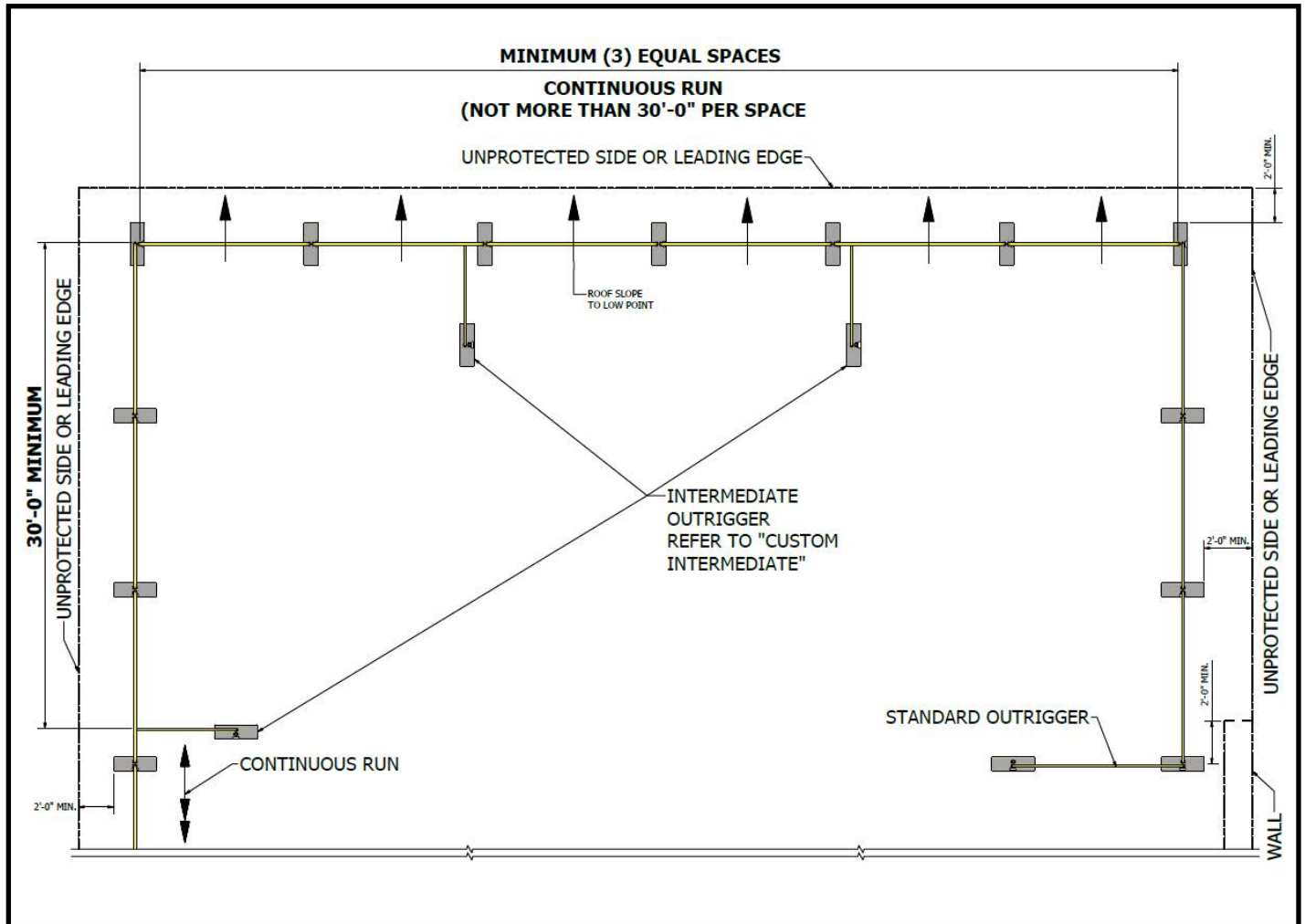
**Open Configuration**



**Closed Configuration**

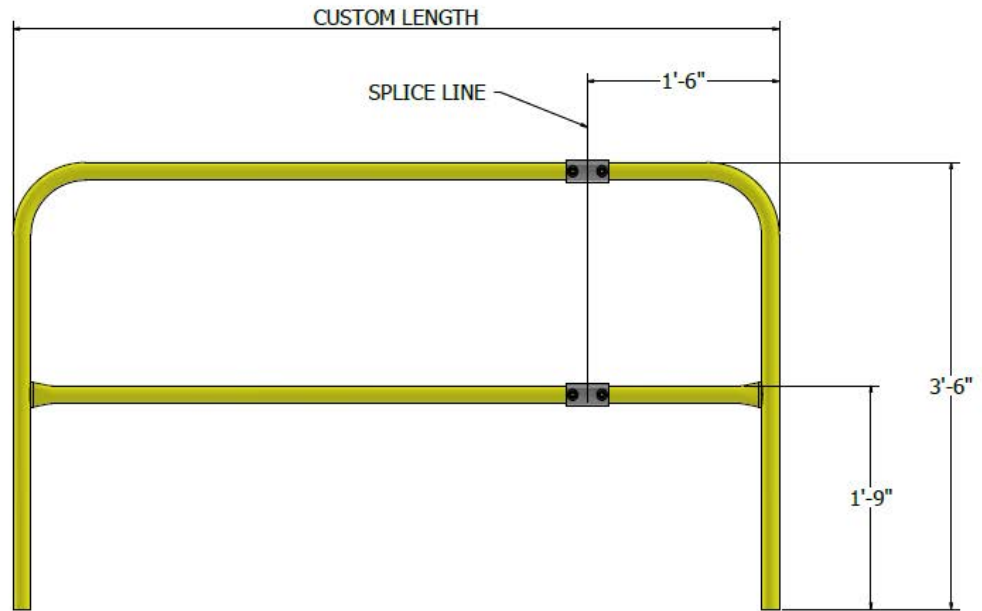
### INSTALLATION CONFIGURATIONS

#### Tapered Roof Configuration (Common Plan for Rubber and/or Bituminous Roofs) (1 ½: 12 Slope or Less)



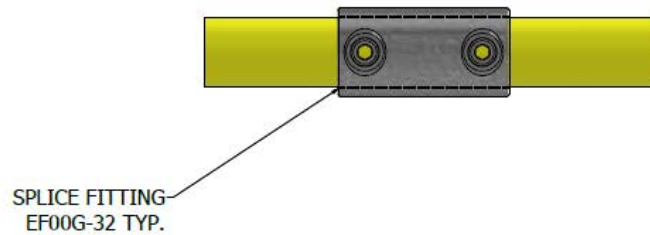
## INSTALLATION CONFIGURATIONS

### Custom Splice Fitting

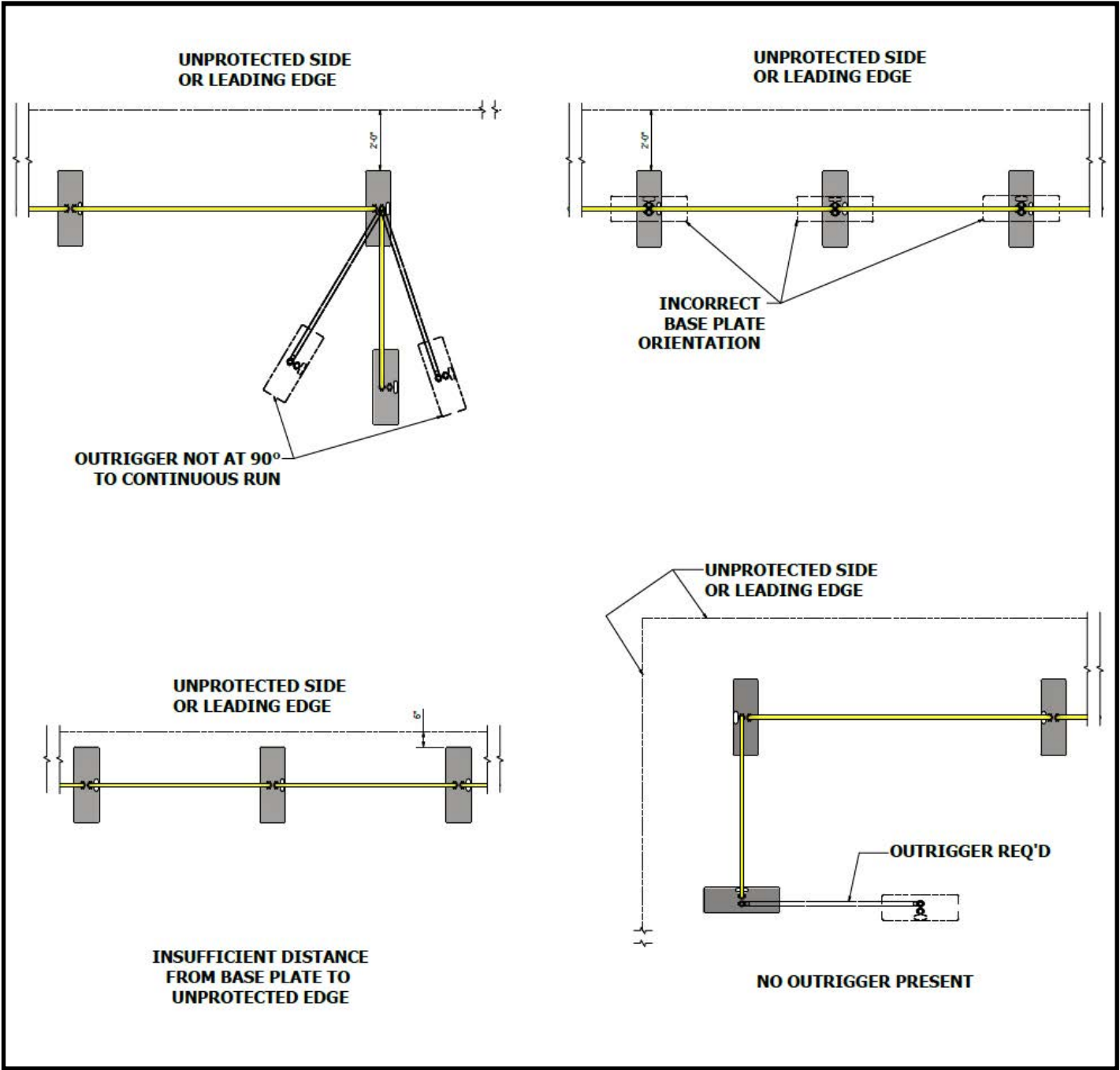


### STEPS

1. MEASURE LENGTH REQUIRED
2. CUT TOP AND MID RAIL AS SHOWN
3. SLIDE ON SPLICE FITTINGS
4. TIGHTEN SET SCREW TO 29 FT-LBS



**INCORRECT INSTALLATION CONFIGURATIONS**



## OSHA REGULATION COMPLIANCE

**LORGUARD SYSTEM EXCEEDS OSHA 29 CFR-1910.23, OSHA 29 CFR-1926.502, AND IBC 2002 DESIGN REQUIREMENTS FOR GUARDRAIL WHEN ASSEMBLED AS DIRECTED IN INSTALLATION MANUAL.**

- ❖ Exceeds top rail loading of 200 pounds in any downward or outward direction
- ❖ Exceeds mid rail loading of 150 pounds in any downward or outward direction
- ❖ 3 foot and 6 inches high and 1.66 inches outside diameter round pipe LORGUARD
- ❖ Mid-rail 1 foot and 9 inches between base and top rail

## LORGUARD INSTALLATION PROCEDURES

- ❖ Lay out the job first by measuring and spacing the baseplates. Locate bases at least 24 inches from the edge of any surface. Failure to properly measure and plan ahead will result in difficulty in moving the assembled system to another location.
- ❖ Be sure the baseplates are in the correct orientation and the bottom of the baseplate is non-skid treated. Next, check that adequate room has been provided for the Outriggers.
- ❖ When satisfied with the layout, start inserting LORGUARD sections 6 foot, 8 foot, or 10 foot into the baseplate (7900004) receiver, which is mounted on the baseplate.
- ❖ Locate instruction tube accessory containing the Allen Wrench and Instructions to the mid-rail.
- ❖ Use the Allen Wrench to tighten the setscrews of the receivers mounted on the baseplate. Torque to 29 ft-lbs. Check tension twice on setscrews to make sure they all have been tightly secured. To disassemble, reverse the process. Once installation is completed, return Allen Wrench to the instruction tube for future use.
- ❖ Toeboards are an optional accessory provided only upon request. Refer to toeboard section for information regarding toeboards.



## **TOEBOARD BEST PRACTICES**

### **WHEN TO USE TOEBOARDS**

- ❖ When the unprotected edge does not have a substantial barrier, like a parapet wall on a roof.
- ❖ When it is possible that materials and equipment could possibly fall off the working area, like a crew working on a HVAC unit atop a roof and near the roofs edge.
- ❖ When any of the following may occur in or around the working area:
  - ❖ Persons can pass
  - ❖ Moving machinery
  - ❖ Falling materials could create a hazard

## TOEBOARD COMPLIANCE

### (OSHA 1926.501(c))

- ❖ **Ladder floor opening or platform:** shall be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening (OSHA 1910.23(a)(2)).
  
- ❖ **On a Continuous Run:** The toeboard protection shall extend one LOGGUARD unit on either side of a work area.
  
- ❖ **Protection from falling objects:** When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures:
  - ❖ Erect toeboards, screens, or LOGGUARD systems to prevent objects from falling from higher levels.
  
  - ❖ Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.
  
  - ❖ Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

## TOEBOARD CONSTRUCTION

- ❖ Shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below. (OSHA 1926.502(j)(1))
- ❖ Where tools, equipment, or materials are piled higher than the top edge of a Toeboard, paneling or screening shall be erected from the walking/working surface or Toeboard to the top of a LOGGUARD system top rail or midrail, for a distance sufficient to protect employees below. (OSHA 1926.502(j)(4))
- ❖ Toeboards shall be capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the Toeboard. (OSHA 1926.502(j)(2))
- ❖ Toeboards shall be a minimum of 3 1/2 inches (9 cm) in vertical height from their top edge to the level of the walking/working surface. They shall have not more than 1/4 inch (0.6 cm) clearance above the walking/working surface. They shall be solid or have openings not over 1 inch (2.5 cm) in greatest dimension. (OSHA 1926.502(j)(3))

## TOEBOARD INSTALLATION PROCEDURES

- ❖ A footer laying out the job and placing baseplates per the LORGUARD Installation Procedures, slide the toeboard over the baseplate (7900004) receiver, which is then mounted on the baseplate.
- ❖ Be sure the proper toeboard model is used with the properly corresponding baseplate orientation (long or short direction).
- ❖ Insert the LORGUARD sections 6 foot, 8 foot, or 10 foot into a baseplate receiver, which is mounted on the baseplate.
- ❖ It is necessary to rise up the toeboard assembly at this point to tighten the setscrews for the receivers on the baseplate.

## DISCLAIMER

Although every effort was made to ensure that all information in this Installation Manual is factual and that the numerical and non-numerical values expressed are accurate to a degree consistent with current practice(s), Diversified Fall Protection and its affiliates do not assume responsibility for errors or oversights that may result from the use of the information contained within this Installation Manual. Anyone making use of the contents in this Installation Manual assumes all liability arising for such use. By accepting and using this Installation Manual, you release Diversified Fall Protection and its affiliates of liability.

LORGUARD PRODUCT INFORMATION

LORGUARD Product	SKU	Weight	Base Price
6 Foot GuardRail - Safety Yellow	7900010-Y	34 pounds	\$109.40
8 Foot GuardRail - Safety Yellow	7900011-Y	41.00 pounds	\$126.19
10 Foot GuardRail - Safety Yellow	7900012-Y	48.00 pounds	\$158.65
6 Foot GuardRail - Galvanized	7900010-G	34.00 pounds	\$130.56
8 Foot GuardRail - Galvanized	7900011-G	41.00 pounds	\$165.79
10 Foot GuardRail - Galvanized	7900012-G	48.00 pounds	\$195.87
6 Foot Toeboard - Safety Yellow	TB6	12 pounds	\$87.46
8 Foot Toeboard - Safety Yellow	TB8	16 pounds	\$95.40
10 Foot Toeboard - Safety Yellow	TB10	20 pounds	\$111.04
6 Foot Toeboard - Galvanized	TB6G	15 pounds	\$87.46 LOT CHARGE MAY APPLY
8 Foot Toeboard - Galvanized	TB8G	19 pounds	\$95.40 LOT CHARGE MAY APPLY
10 Foot Toeboard - Galvanized	TB10G	13 pounds	\$111.04 LOT CHARGE MAY APPLY
6 Foot Toeboard - Custom Color	TB6C	12 pounds	\$87.46 LOT CHARGE MAY APPLY
8 Foot Toeboard - Custom Color	TB8C	16 pounds	\$95.40 LOT CHARGE MAY APPLY
10 Foot Toeboard - Custom Color	TB10C	20 pounds	\$111.04 LOT CHARGE MAY APPLY
Accessory Base Plate - Galvanized	7900004-AG	59.00 pounds	\$173.94
Accessory Splice Kit - Galvanized	7900005-G	0.50 pounds	\$36.50
Accessory Instruction Tube - Safety Yellow	7900006-SY	2.00 pounds	\$22.50
Swing Gate - Safety Yellow	GNE2SG-Y	21.00 pounds	\$225.00
Swing Gate - Galvanized	GEN2SG-G	21.0 pounds	CALL FOR PRICING AND AVAILABILITY