

INSTRUCTION **MANUAL**

# FRONTLINE<sup>®</sup>

FALL PROTECTION



USER MANUAL

## **SAFETY GUARDRAIL BOOT BASE**

GPB200

Meets or exceeds  
applicable standards

Rev. Aug. 2023





## GENERAL STATEMENT AND WARNINGS

This guardrail system is meant to be installed **ONLY** by competent and trained personnel in fall protection. This system serves as part of a complete passive fall prevention system. This system has been designed to comply with OSHA 1926 and OSHA 1910.

User/Installer **MUST** read, understand and follow all safety information contained in these instructions prior to the use or installation of this system. Misuse of this system other than its original intended use or not described in this User Instruction Manual is not approved by Frontline Fall Protection and could result in serious injury or death.

These instructions must be provided to the installer/user of this equipment. Retain these instructions for future reference or you can find a copy of them at [www.frontlinefall.com](http://www.frontlinefall.com). For more information regarding any portion of this user instructions manual please contact us at [info@frontlinefall.com](mailto:info@frontlinefall.com). The following are requirements for the safe use of this system:

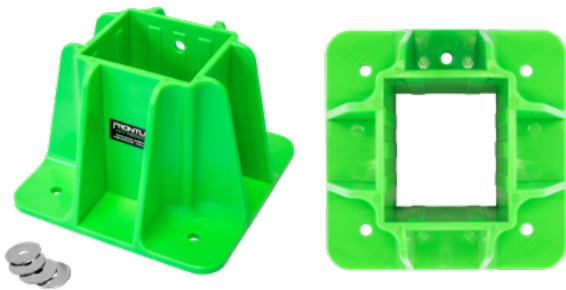
- Do not install this equipment until proper training, fall protection and rescue programs are in place
- Do not use this is equipment for other uses other than its original and designed intended use
- Do not lean or climb at any point of the guardrail system
- Do not use this product if it does not pass safety inspection or that the safety and integrity of it is questionable
- Pregnant women or minors must not be exposed to a workplace hazard and must not install this equipment
- All installers/users must refer to local, state or federal safety and health regulations before using this equipment. Whichever is most stringent shall supersede and apply
- Never alter or intentionally misuse this equipment, always inspect before each use to ensure its compliance and safe use
- Always examine the work area and the surroundings to identify hazards that may impact safety before commencing work

## GENERAL DISCLAIMER

Frontline has tested their product to comply with OSHA and/or ANSI under a controlled environment and with certain substrates. Frontline cannot and does not guarantee the same performance for different substrates other than the ones mentioned in these user manuals. Frontline anchors will meet or exceed OSHA and/or ANSI requirements, but it's ultimately up the end user/installer/owner of the product to ensure that their specific substrate will resist and withstand the required loads as stated by OSHA and/or ANSI or other governing safety entities. Please contact [ino@frontlinefall.com](mailto:ino@frontlinefall.com) if you have any questions regarding this subject matter.

## DESCRIPTION

Our Safety Guardrail Boot Base is made out of high strength material composed of ABS plastic to last the duration of the job and it's reusable helping with cost savings so take it from one jobsite to the next jobsite. It's easily installed and comes with hardware included limiting down time and install time.



## APPLICATION

This system has been designed to serve as a passive fall prevention system. This system should be set-up anywhere where there is a leading edge or fall hazard that is over 4' for general industries and 6' for the construction industry. Refer to state and local safety regulations in case there's a more stringent requirement, as the most stringent will apply. Once the system has effectively been installed, set in place and fall hazard eliminated, the use of active fall arrest systems may not be required. Check with your employer for more details on fall protection compliance if the area is questionable.

## RELEVANT STANDARDS

1926.502(b)(1) - Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches (1.1 m) plus or minus 3 inches (8 cm) above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of this paragraph.

Note: When employees are using stilts, the top edge height of the top rail, or equivalent member, shall be increased an amount equal to the height of the stilts.

1926.502(b)(2) - Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches (53 cm) high.

1926.502(b)(2)(i) - Midrails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level.

1926.502(b)(3) - Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge.

1926.502(b)(4) - When the 200 pound (890 N) test load specified in paragraph (b)(3) of this section is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 39 inches (1.0 m) above the walking/working level. Guardrail system components selected and constructed in accordance with the appendix B to subpart M of this part will be deemed to meet this requirement.

1926.502(b)(5) - Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds (666 N) applied in any downward or outward direction at any point along the midrail or other member.

1926.502(b)(10) - When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

**Additional note and disclaimer:** Other regulations may apply as described under OSHA 1926.502, OSHA 1926.502 Appendix B, OSHA 1910.29 and other relevant standards under OSHA or State or local specific safety programs. It is the employer's responsibility to ensure that their guardrail systems are erected and built to comply with OSHA or other regulatory agencies' minimum standards.

SYSTEM SPECIFICATIONS:	
MATERIAL:	ABS Plastic
DIMENSIONS:	7.5" x 7.5" x 5 1/4"
WEIGHT:	1.5 lbs

## INSTALLATION

Employers must ensure installers are properly trained in fall protection, have a complete fall protection and rescue program in place prior to installation. Installers should also be experienced and competent in building guardrails in order to properly build and assemble our Safety Guardrail Boot Bases. Remember not to install on gravel or metal deck surfaces. A layout plan should be done of the fall hazard exposed area which is being covered prior to installation so that the proper lineal foot amount of Safety Guardrail Boot Bases are accounted for. Once the Safety Guardrail Boot Bases are onsite and ready to be installed, the following steps must be followed:

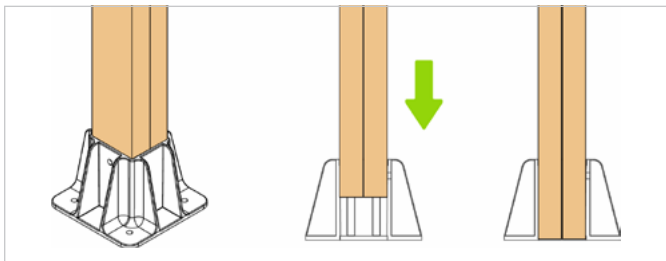
### Work Area and Material:

**Concrete Substrate** - Ensure that the work and installation area is clear of debris, hazardous materials and that concrete substrate is fully cured in order to set-up the systems safely.

**Wood Substrate** - Wood substrate needs to be part of the building structure and be able to withstand a minimum force of 200 lbs per boot section. Ensure that the work and installation area is clear of debris, hazardous materials and that all wood being used is free from debris, decay, cracking or any other any other defect. Wood being used as part of the guardrail systems should be minimum 2x lumber blocking construction grade. Do not use wet lumber when installing the guardrail system.

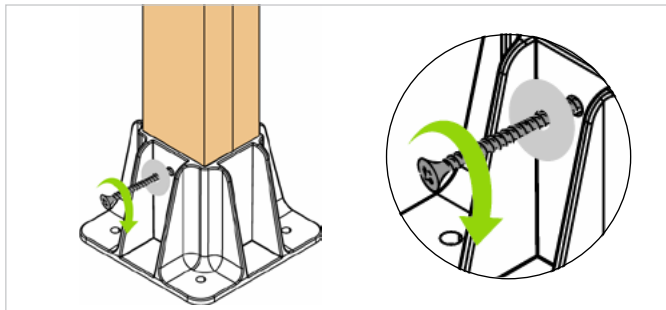
1. Once the proper materials and work area has been selected, assemble your guardrail post with your first boot:
  - a. Cut (2) 2" x 4" to 42" in height to make your vertical support and post.
  - b. Place boot flat on the ground and insert both (2) 2" x 4". Ensure you tap until the posts are flat on the ground and flush inside the boot (Figure 1)

FIGURE 1



- c. Fasten (1) 3/8" x 3" lag screw with included steel washers through boot opening. This will secure and give your guardrail post stability with the boot. (Figure 2)

FIGURE 2



**Concrete Substrate:** Install your first post along the walking/working surface of the unprotected edge:

1. Insert (5) 3/8" x 3" concrete wedge anchors (Figure 3) or 3/8" x 3" tapcon concrete screws with washers through the openings of the boot (Figure 4)
2. Ensure that anchor is flat on the concrete surface without any obstructions.
3. Drill the four holes so the 1/2 concrete wedge anchors can fit snug and be properly installed.
  - a. For proper concrete wedge installation refer to wedge anchor manufacturer's instructions.
  - b. Anchors must be embedded into the concrete a minimum 2" in depth.
  - c. Clean the hole for any debris after drilling.
  - d. Insert the 5 concrete wedge anchors through the anchor openings.
  - e. Assemble the washer and nut onto the bolt.

FIGURE 3

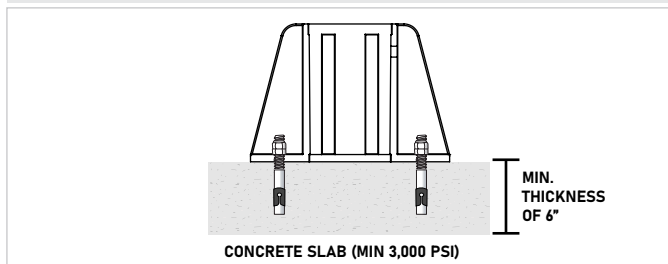
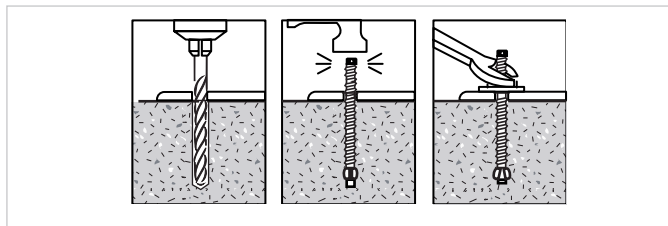


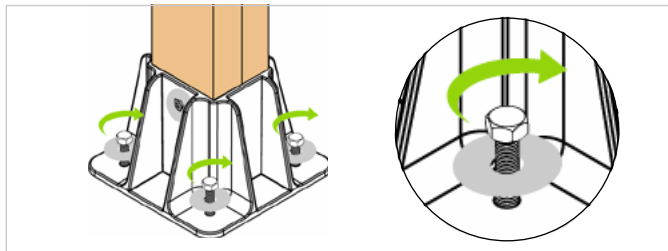
FIGURE 4





**WARNING:** Concrete cannot be hollow, must be fully cured and able to withstand the rated loads or as part of a complete personal fall arrest system which maintains a safety factor of at least two under the supervision of a qualified person as described by OSHA 1926.502.

FIGURE 5

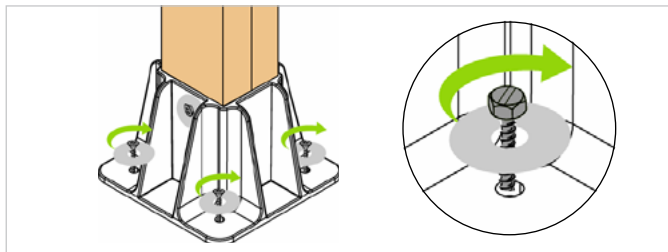


- f. Install a minimum of 6" from the edge of the concrete slab or surface to avoid cracked edges
- g. Ensure that the wedge anchors or concrete screws (Tapcons) are fully inserted and substrate can withstand the minimum required load of 200 lbs for each section.

**3. Wood Substrate:** Install your first post along the walking/working surface of the unprotected edge:

- a. Insert (5) 3/8" x 3" hex head lag screws through the openings of the boot (Figure 6)

FIGURE 6



- b. All five screws should be fully inserted into floor sheathing of a minimum thickness of 1 1/8". A minimum of three of the five screws should penetrate structural floor joist/members as shown on figure 7.

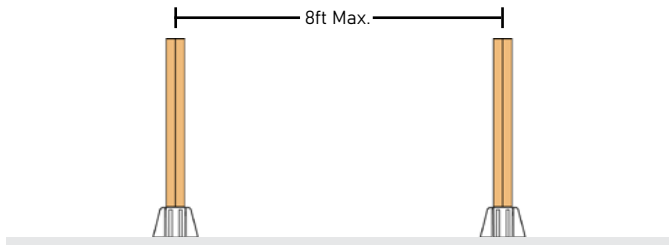
FIGURE 7



- c. Ensure that the screws and substrate can withstand the minimum required load of 200 lbs for each section

4. Once you have your first post properly installed, repeat these steps and continue installation of the following post no more than 8' apart to covered the desired location (Figure 8)

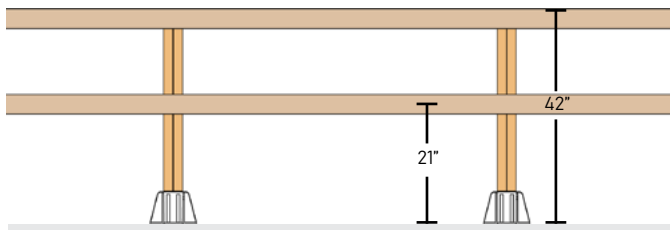
FIGURE 8



**Top/Mid Rail and Toe Boards:**

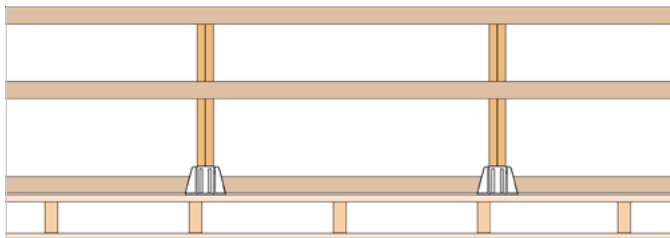
5. Install your top rail 42" (+/- 3") and mid rail halfway between the top rail and the floor between your two post sections with construction grade lumber with a minimum of a 2" x 4" section. (Figure 9)

FIGURE 9



6. Insert toe boards through boot slots to protect other on lower floors and object or debris from falling. (Figure 10)

FIGURE 10



7. Continue following ALL these steps until your area is fully covered and protection.

## MAINTENANCE AND INSPECTION

Guardrails and Safety Guardrail Boot Base's should be inspected every time before use and when required. Maintenance on the system should be performed on a common basis for any defects or wear and tear that may compromise the system. Any maintenance or repairs that compromises the safety of the guardrail system should be decommissioned and a new system should be set-up and installed. Guardrail system should be rigid, stable and should be able to withstand the required forces as described by OSHA. Below are some of the items that should be inspected on the product and system guardrail overall, but do refer to local and state requirements as there may be more stringent requirements:

INSPECTION AND MAINTENANCE LOG			
INSPECTION DATE:		INSPECTED BY:	
<b>SAFETY GUARDRAIL BOOT BASE:</b>	Inspect the for damage: Look for cracks, dents, or deformities on boot	<b>PASS</b>	<b>FAIL</b>
	Inspect that concrete/wood anchors are installed properly	<input type="checkbox"/>	<input type="checkbox"/>
	Inspect that bolts and washers are in all four perforations	<input type="checkbox"/>	<input type="checkbox"/>
	Inspect for UV damage and excessive wear	<input type="checkbox"/>	<input type="checkbox"/>
	Inspect hex screw is installed properly on post	<input type="checkbox"/>	<input type="checkbox"/>
	Inspect for other deformities	<input type="checkbox"/>	<input type="checkbox"/>
<b>GUARDRAIL SYSTEM:</b>	Inspect that all lumber/wood used are all of quality and construction grade and minimum 2" x 4" wood members	<input type="checkbox"/>	<input type="checkbox"/>
	Inspect wood is free from debris, decay, cracking or any other any other defect	<input type="checkbox"/>	<input type="checkbox"/>
	Guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds	<input type="checkbox"/>	<input type="checkbox"/>
	The top edge height of top rails, or equivalent guardrail system members, are 42 inches (107 cm), plus or minus 3 inches	<input type="checkbox"/>	<input type="checkbox"/>
	Midrails are installed at a height midway between the top edge of the guardrail system and the walking-working surface	<input type="checkbox"/>	<input type="checkbox"/>
	Guardrails posts are no more than 8' apart	<input type="checkbox"/>	<input type="checkbox"/>
	Toe board is 3.5" height and able of withstanding 50 lbs of force	<input type="checkbox"/>	<input type="checkbox"/>
	Guardrail system meets all other requirements are outlined by OSHA 1910 and 1926	<input type="checkbox"/>	<input type="checkbox"/>

Any items that don't pass safety inspection then those items or system should be immediately repaired or removed from service and reported to a competent person so all that safety precautions are met to safely replace/rebuild the system.

**Disclaimer:** Frontline takes no responsibility on how to set-up a complete, maintenance or inspect a guardrail system. Frontline's responsibility lies on the product so please do refer to all local, state and federal requirements on how to properly set-up a guardrail system.

INSPECTION DATE:	INSPECTED BY:
MODEL NUMBER:	DATE OF FIRST USE:

Corrective Action/Maintenance:	Approved by:
	Date:
Corrective Action/Maintenance:	Approved by:
	Date:
Corrective Action/Maintenance:	Approved by:
	Date:
Corrective Action/Maintenance:	Approved by:
	Date:
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## LABELS







**Frontline Fall Protection Inc.**

[www.frontlinefall.com](http://www.frontlinefall.com)

[info@frontlinefall.com](mailto:info@frontlinefall.com)

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