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# METHOD OF STATEMENT

IBS V-PLUS WALL LIGHTWEIGHT PANEL  
FOR **WORK CONSTRUCTION**

FOR LOCAL CAPACITY & INTERNATIONAL MARKET



PSB Singapore



VODAPRUF  
VPLUS PANEL

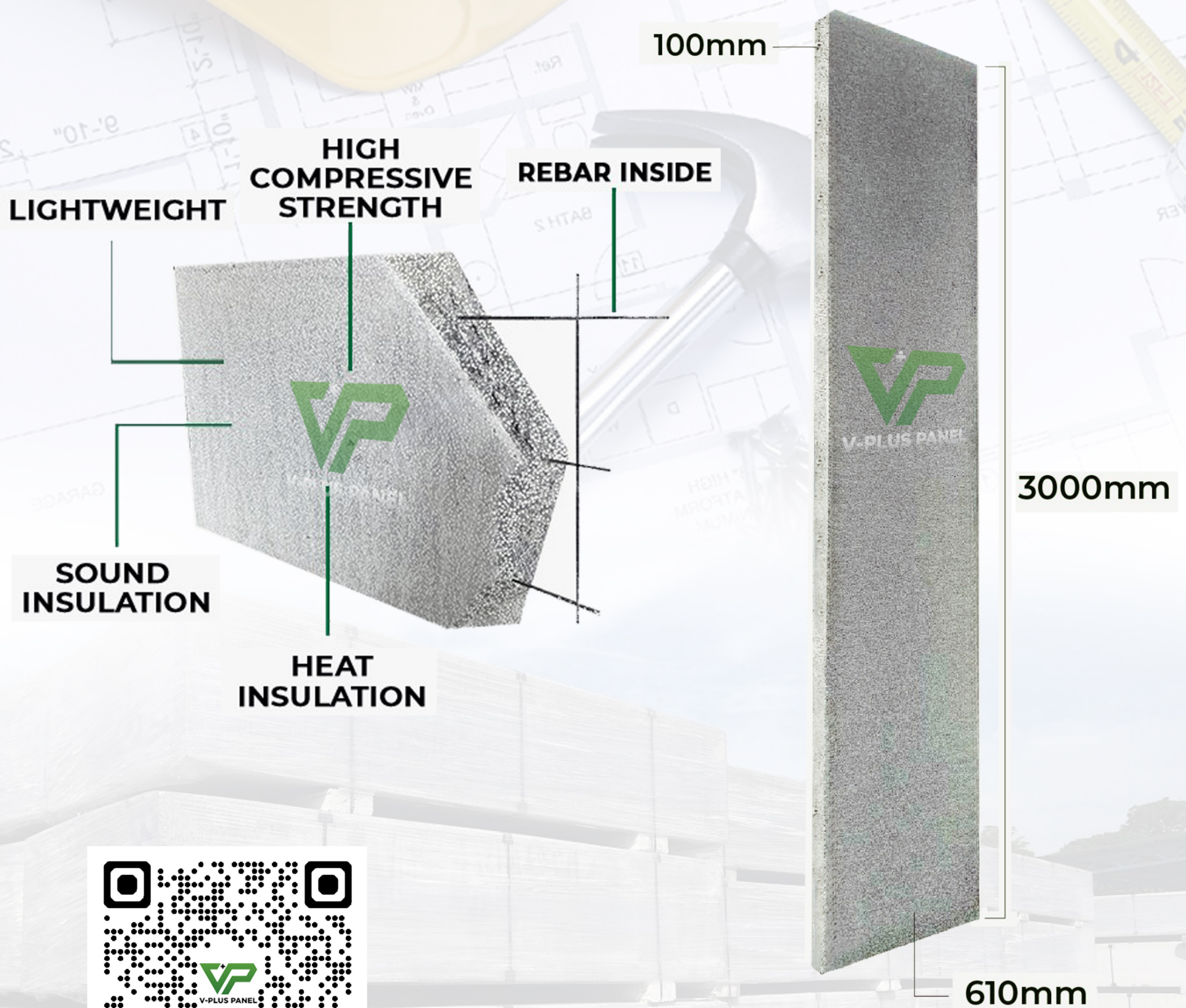
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# INTRODUCTION

IBS VPLUS Panel is Aerated Lightweight Concrete (ALC) block. This product's technological innovation benefits any construction projects by accelerating the overall timeline, being cost-effective, and requiring fewer workers.

This Method of Statement (MOS) is established to guide our client on standard installation of the VPLUS panel. This will apply to all the siteworks as related to the construction as per project requirements and referring to the approved permit by the respective authority. All work shall be executed as per the direction of the supervisor/foreman for all activities as per schedule. Disciplines of work and liaison with the on-site supervisor are required for day-to-day activities. Please ensure pre-briefing is conducted prior to start work on site.



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# IBS VPLUS PANEL WALL

INSTALLATION OF VPLUS PANEL  
FOR EXTERNAL & INTERNAL WALL

# PREPARATION MATERIAL LIST

100mm



VPLUS panel come with standard size  
3000mm (L) x 610mm (W) x 100 (T)

3000mm

610mm

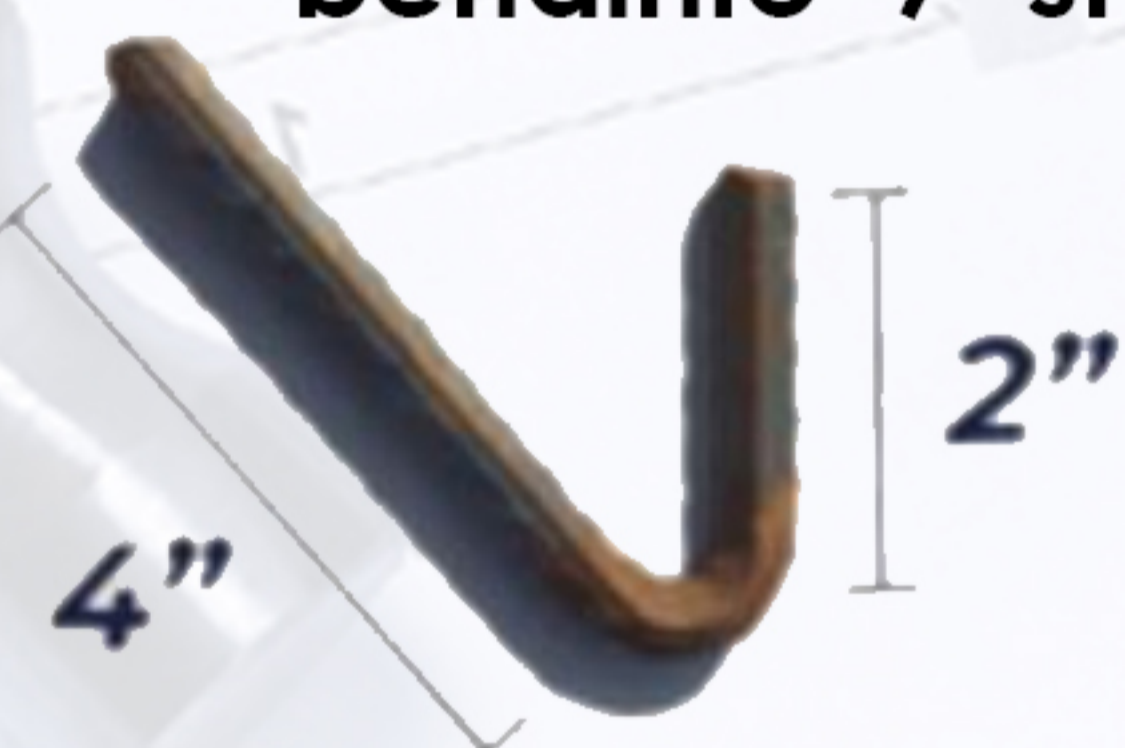


Fibre mesh

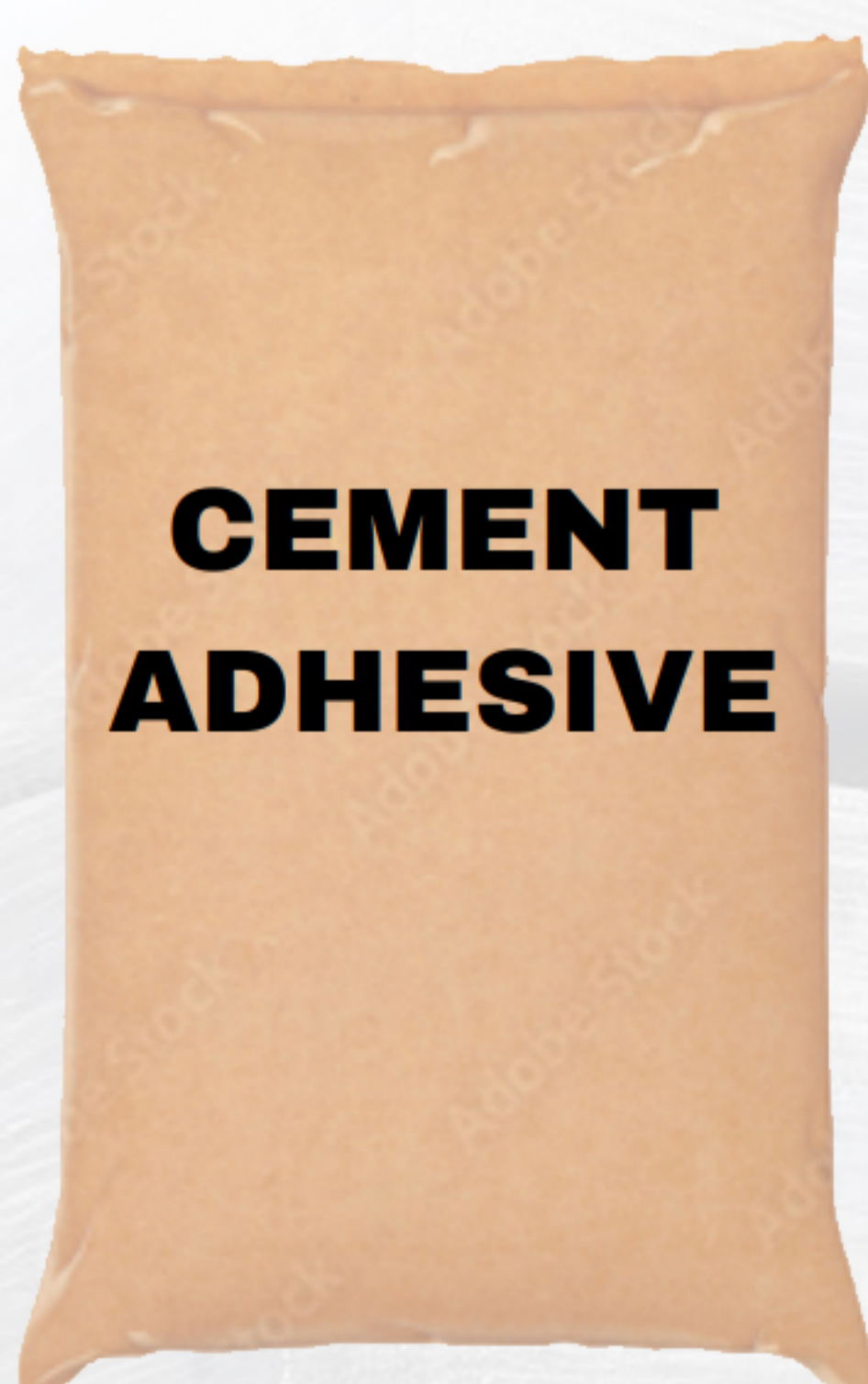
Steel bar Y10 with  
size 10mm Ø and cut  
6" - 7" inches and  
bend into '7' shape



Steel bar Y10 with  
size 10mm Ø & cut  
10 inches length



concrete nail  
(size 2" @ 2½")



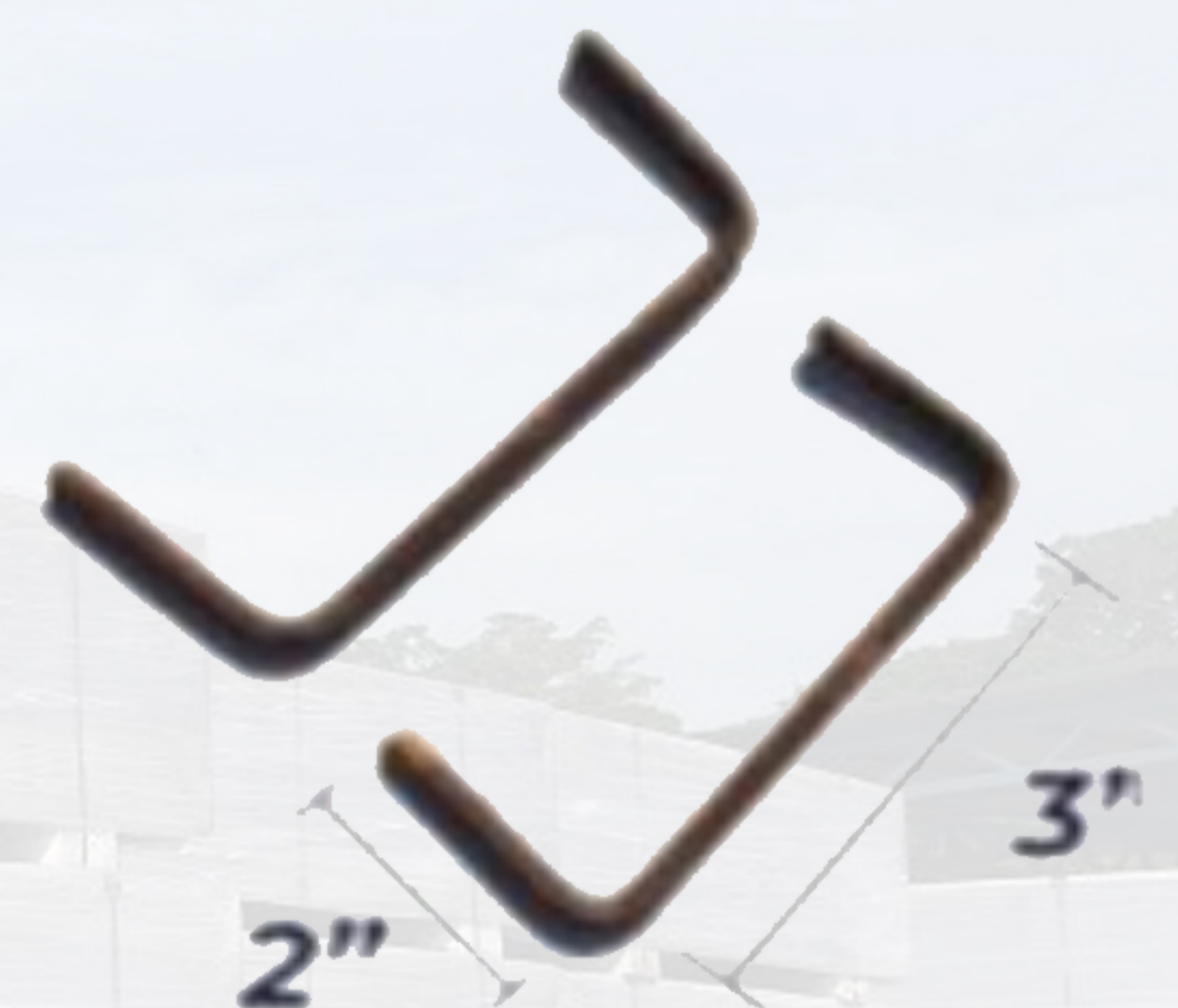
**CEMENT  
ADHESIVE**

Cement adhesive  
come with standard  
weight of 40kg  
per bag.



**PLASTER  
RENDER**

Plaster render OR skimcoat  
drymix come with  
standard weight  
of 40kg per bag.



Steel bar R6 with  
size 6mm Ø and cut  
7" - 8" inches and  
bend into 'U' shape

# PREPARATION TOOLS LIST



**1**  
Ladder



**2**  
Grinder



Circular Saw  
Cutter size 9" @ 12"



**3**  
Stagging



Drill



Timber



Cement mixer



Water Level @  
Balancer



Cement  
Scoop



Scraper

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL



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## A) Site Preparation

- a) The column/beam/common brick/shear wall should be accurately aligned, with good finishing in order for the VPLUS panel to be joined properly.
- b) The beam surface must be level and clean from debris before setting out the marking line.

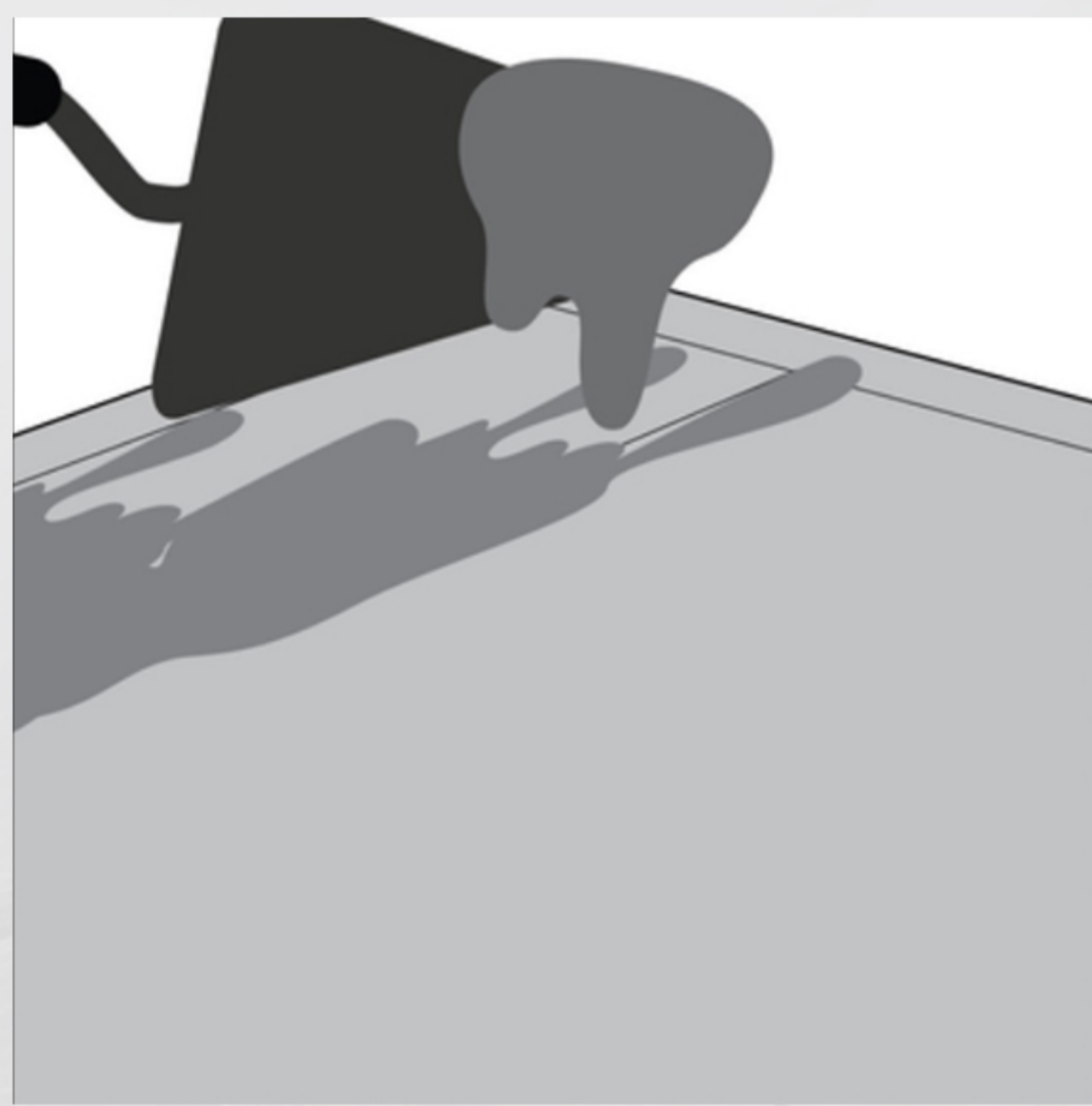
## B) Setting out & measurement



**1** Set the concrete structures neatly, clear from any debris and marking.

**2**

Mix the cement adhesive with 4:1.25 ratio to the water using blender.



**3**

Apply cement adhesive on the beam before installing every VPLUS Panel.

**4**

Paste the mixed cement adhesive on the side of VPLUS Panel.



# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

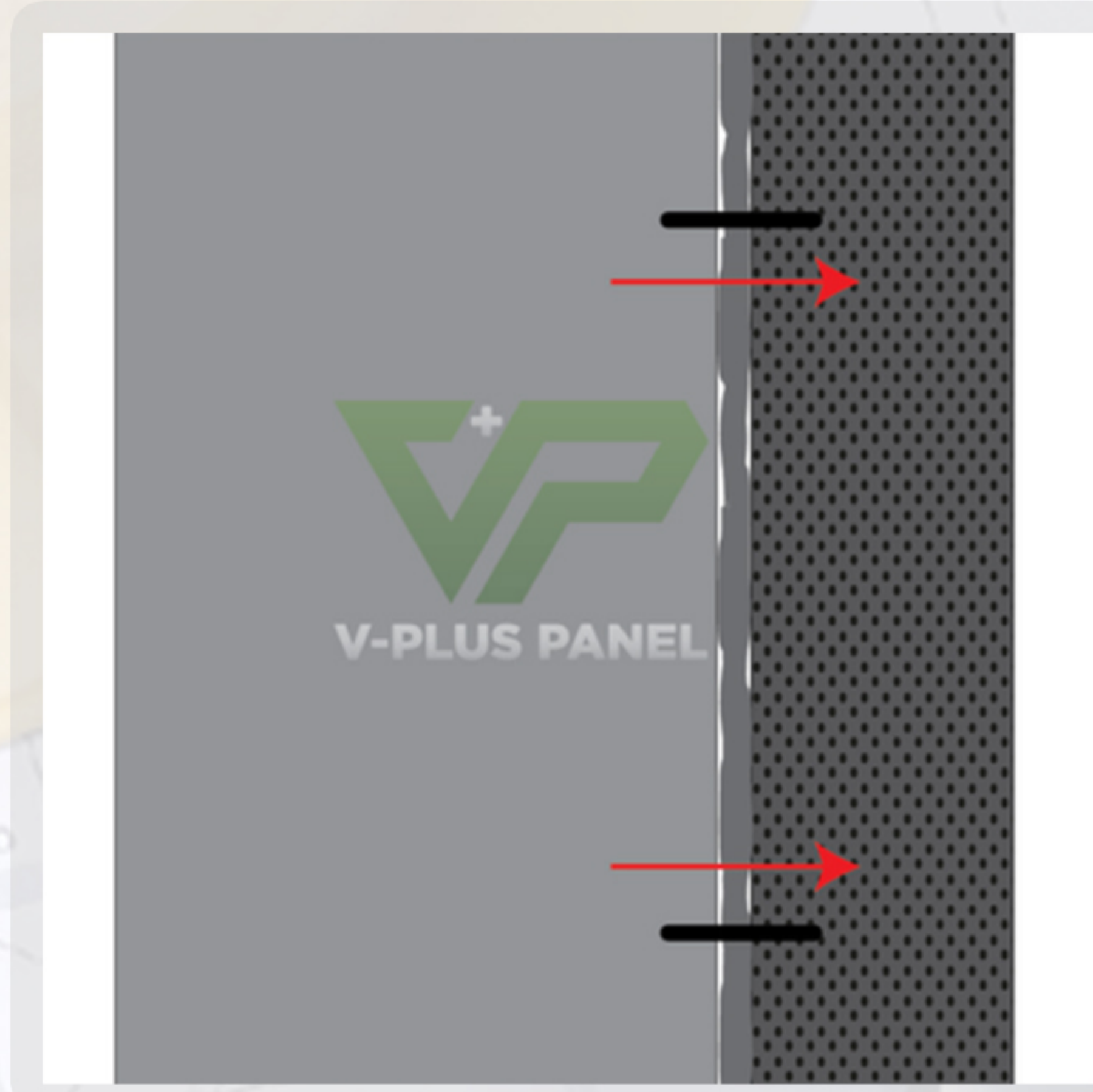
## C) VPLUS Panel installation types & arrangement

### i) 2 common types of VPLUS Panel installation:

#### 5-1 VPLUS Panel to concrete column



Install VPLUS Panel vertically attach to the column.

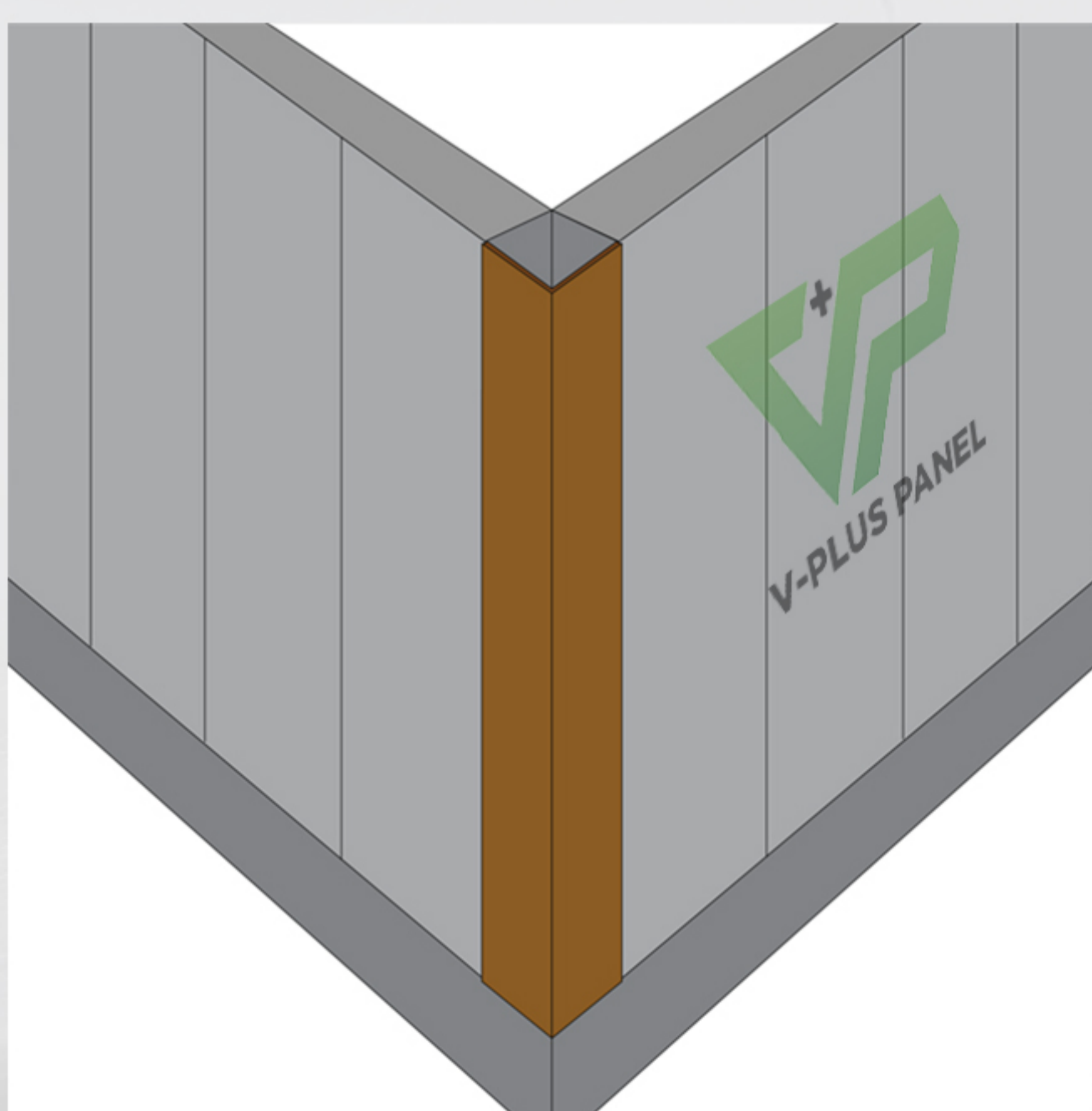


Before Panel attachment, drill and install stater bar Y10 with length 6 inches.

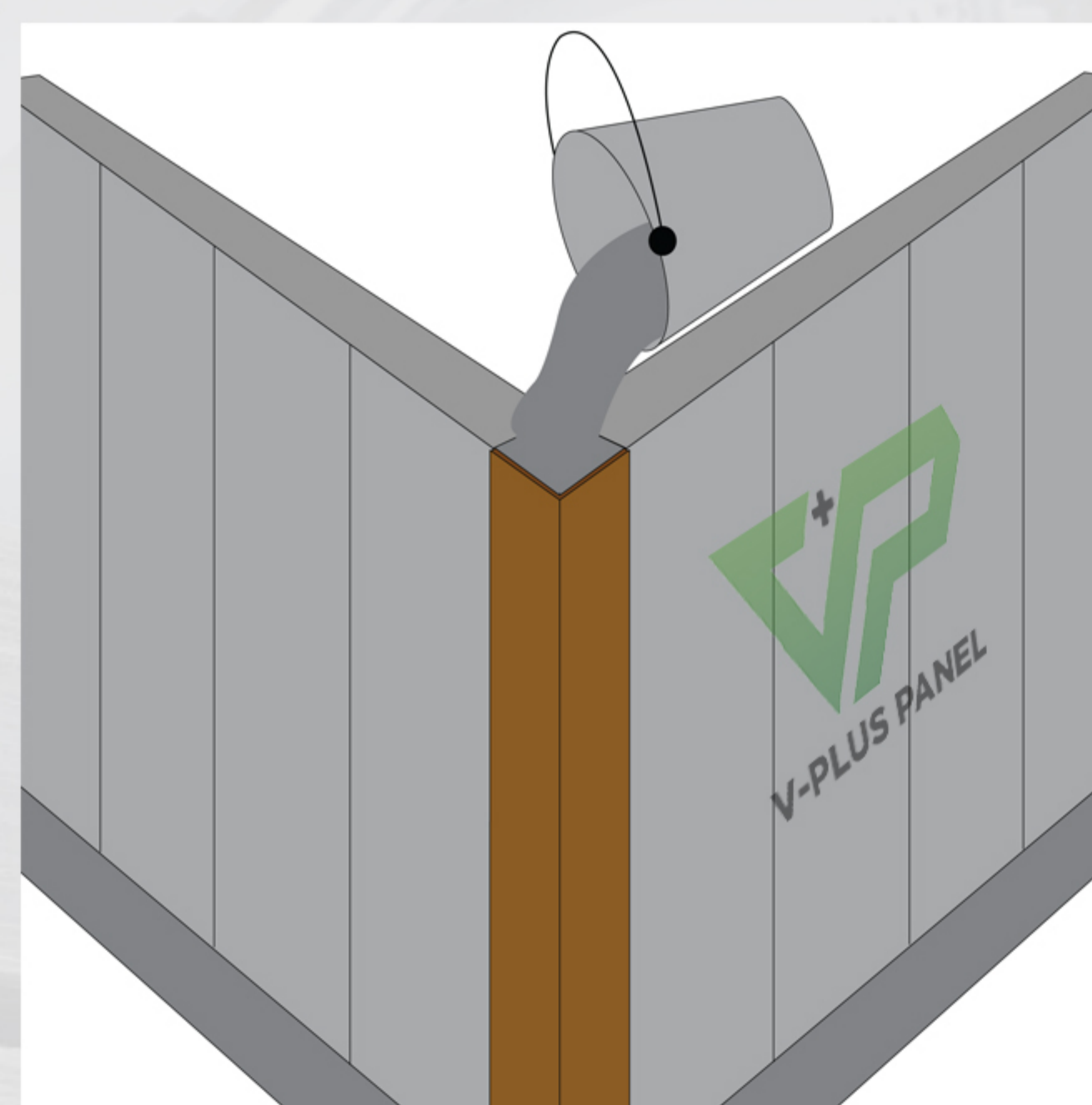


Scan code for detail drawing

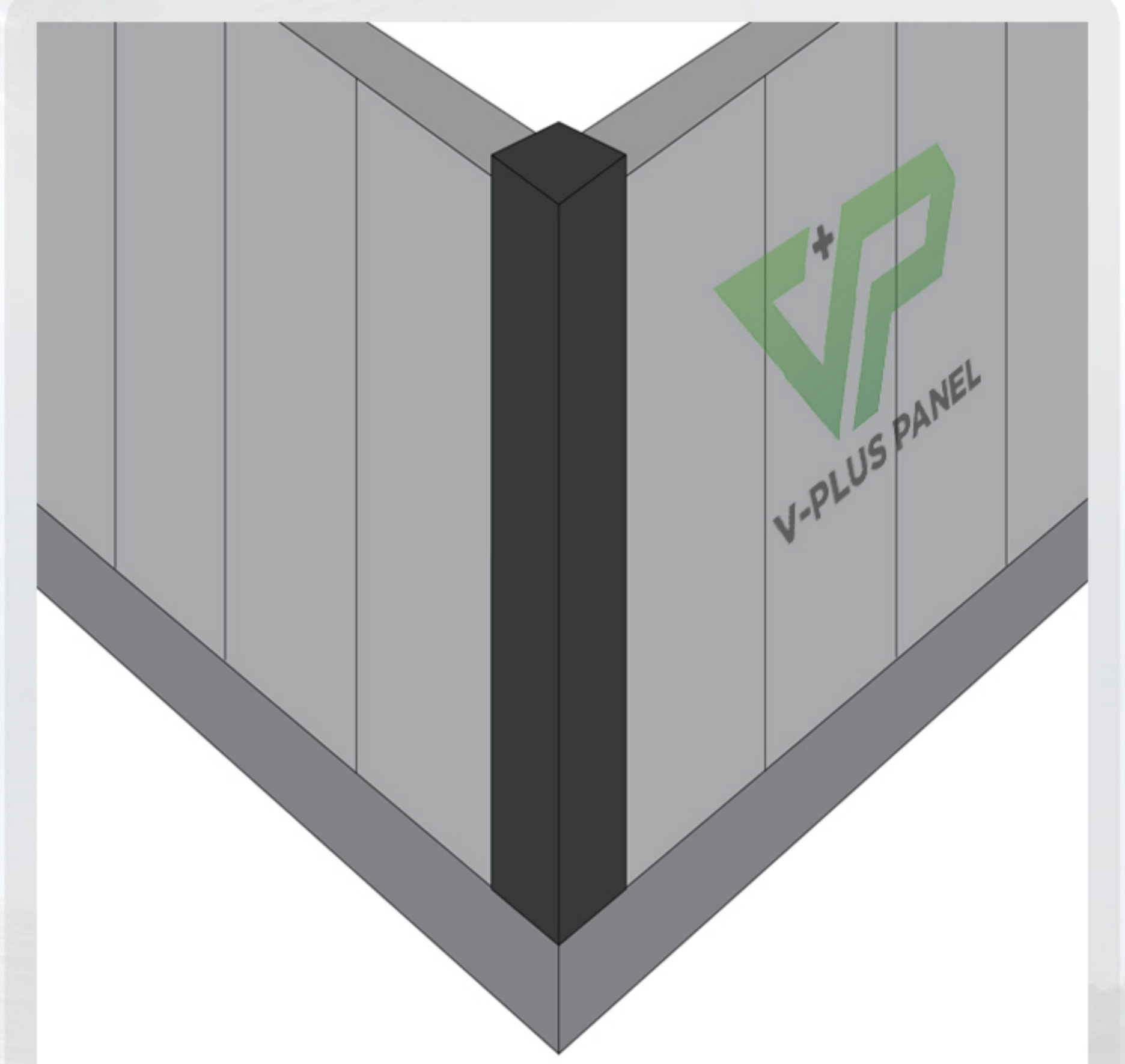
#### 5-2 VPLUS Panel to concrete column (Shuttering)



Complete Column steel rebar and link bar installation, put timber shuttering between panel to panel, to create column formwork.



Mixing concrete as per column specification. Pour concrete into timber shuttering. Optional to use concrete vibrator to ensure concrete evenly filled its form



After concrete dried, dismantle timber shuttering, make sure column form is perfectly done and no 'honeycomb' mark.

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

## C) VPLUS Panel installation types & arrangement

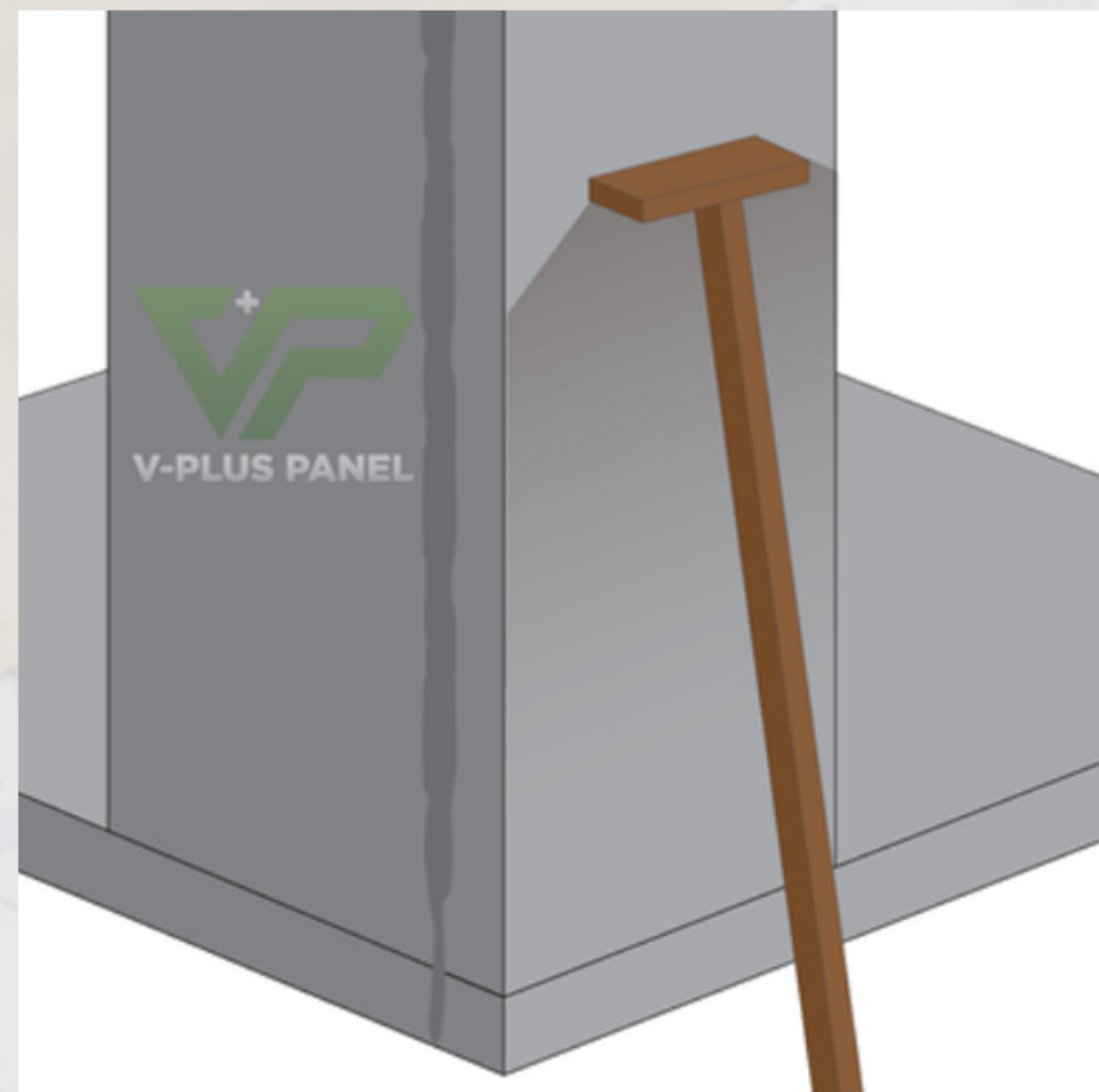
### ii) Panel installation without column

( Only applicable for 1-storey house with 1000 sq.ft. & below )

## 5-3 Jointing VPlus Panel to VPLUS Panel



Directly attach panel edge to other panel side edge to form 'L' shape.

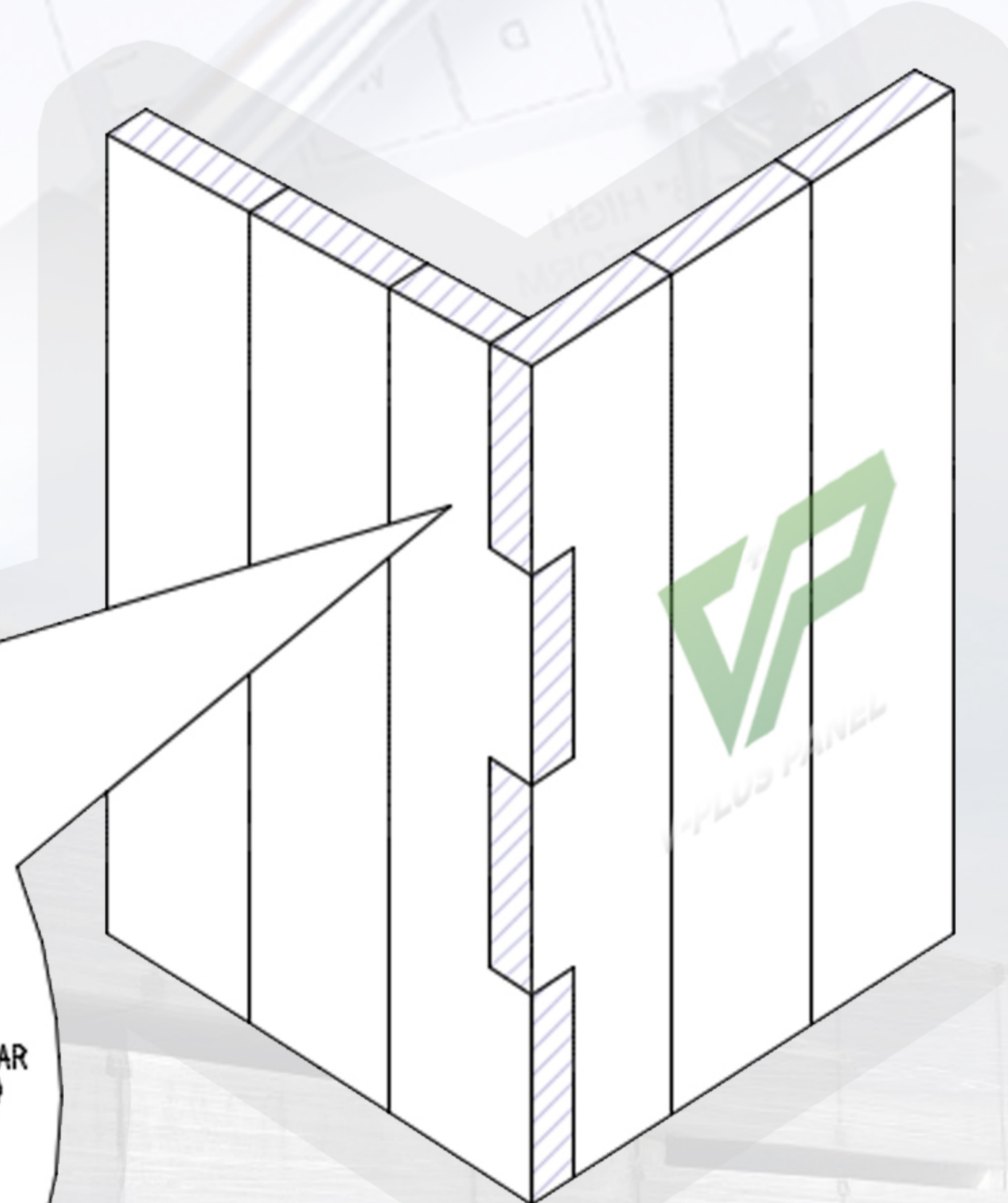
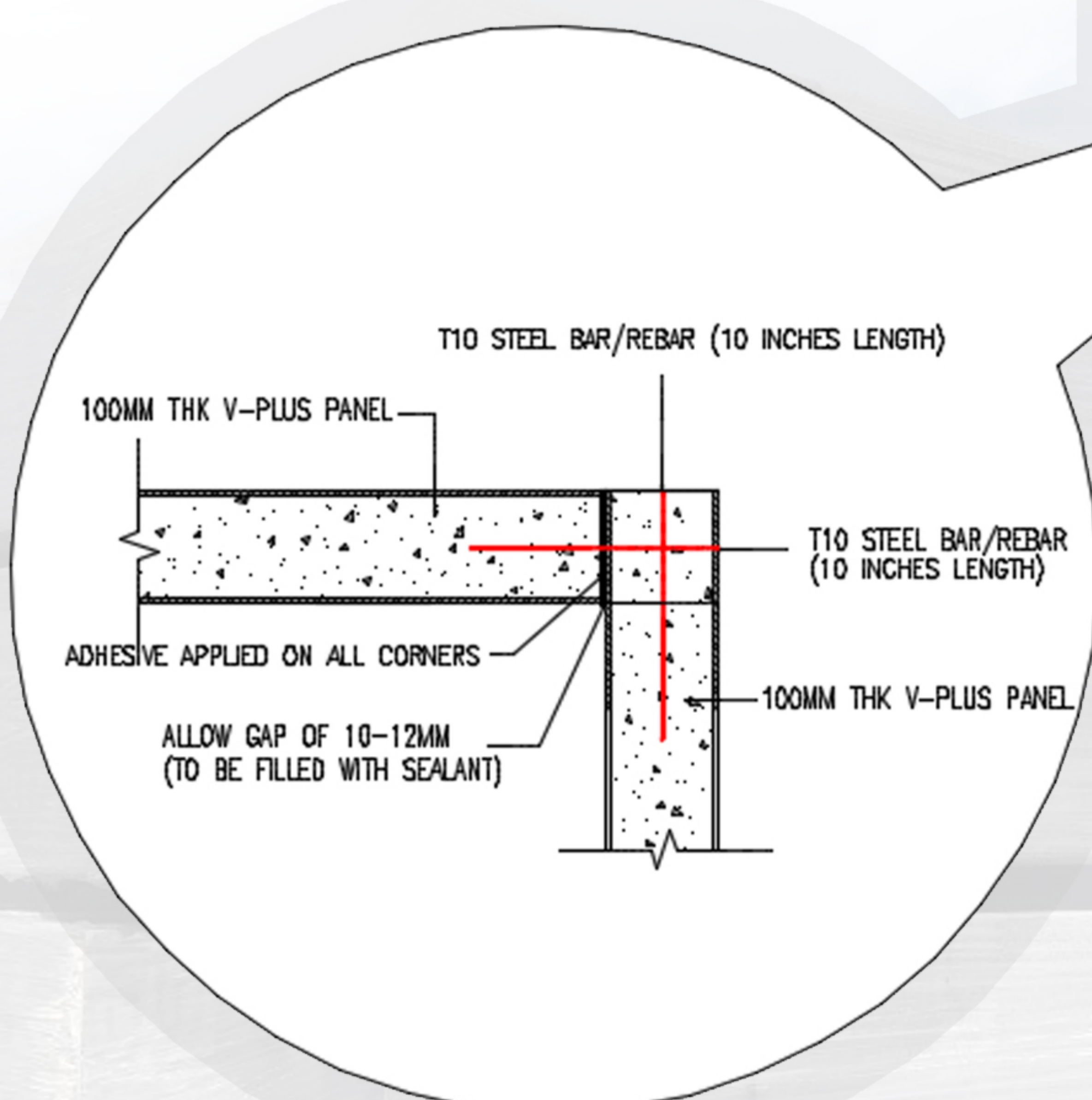


Lock both panels altogether and use timber to support panels fix to horizontally stand.

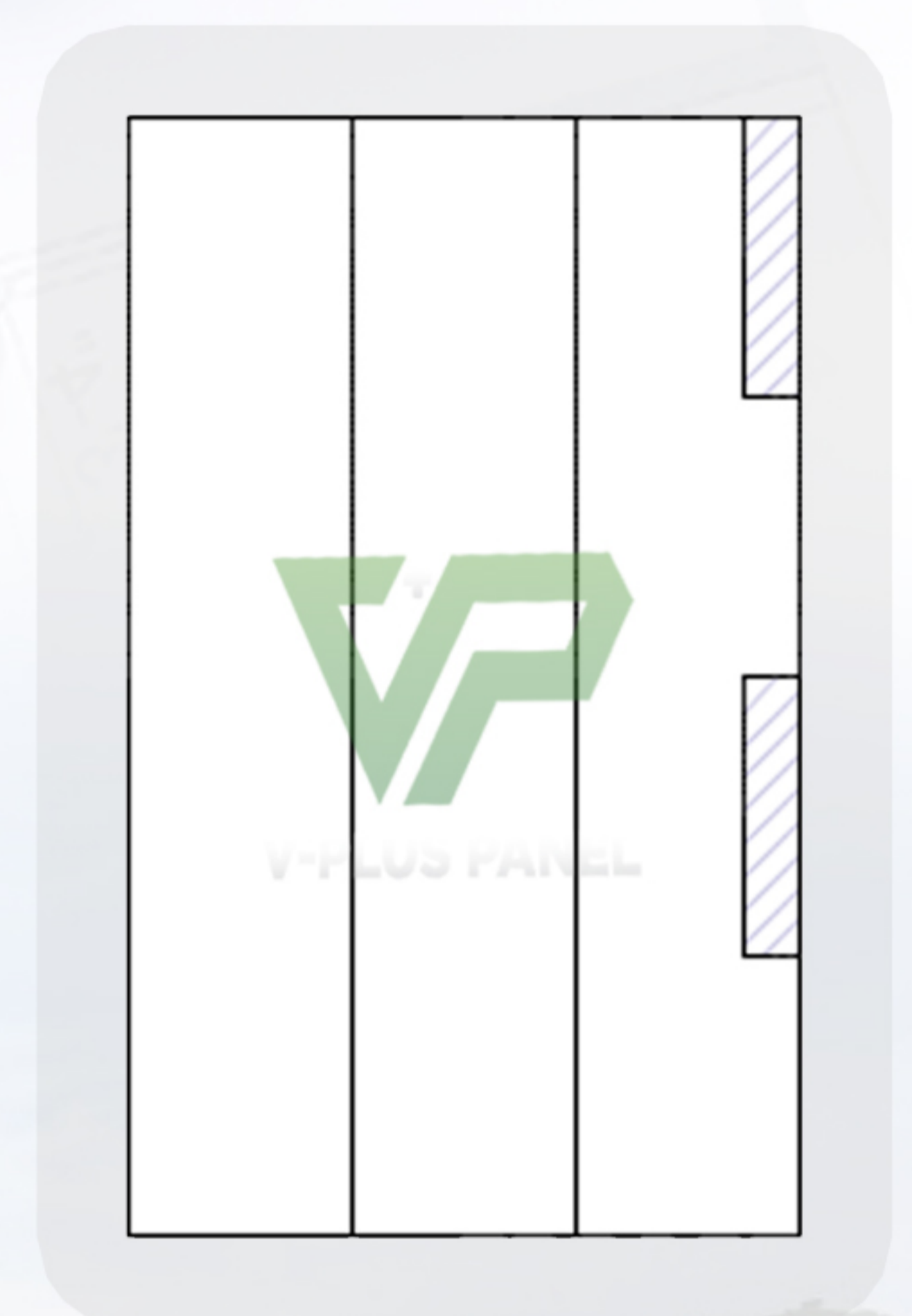


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Optional installation method on 'L' jointing.



Angle View



Side View

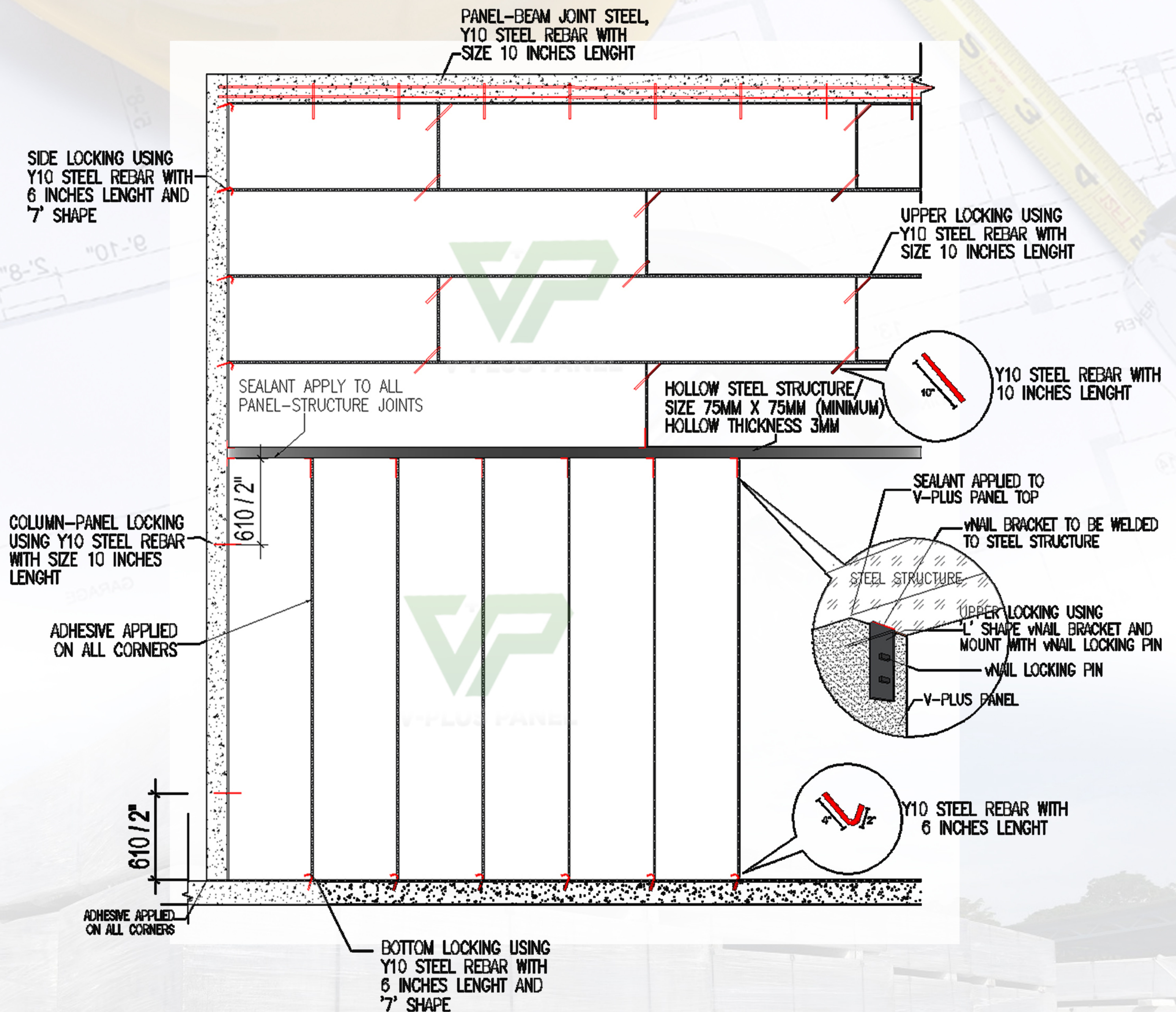
# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

## C) VPLUS Panel installation types & arrangement

### iii) Typical installation of VPLUS Panel for 18' feet wall



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detail drawing



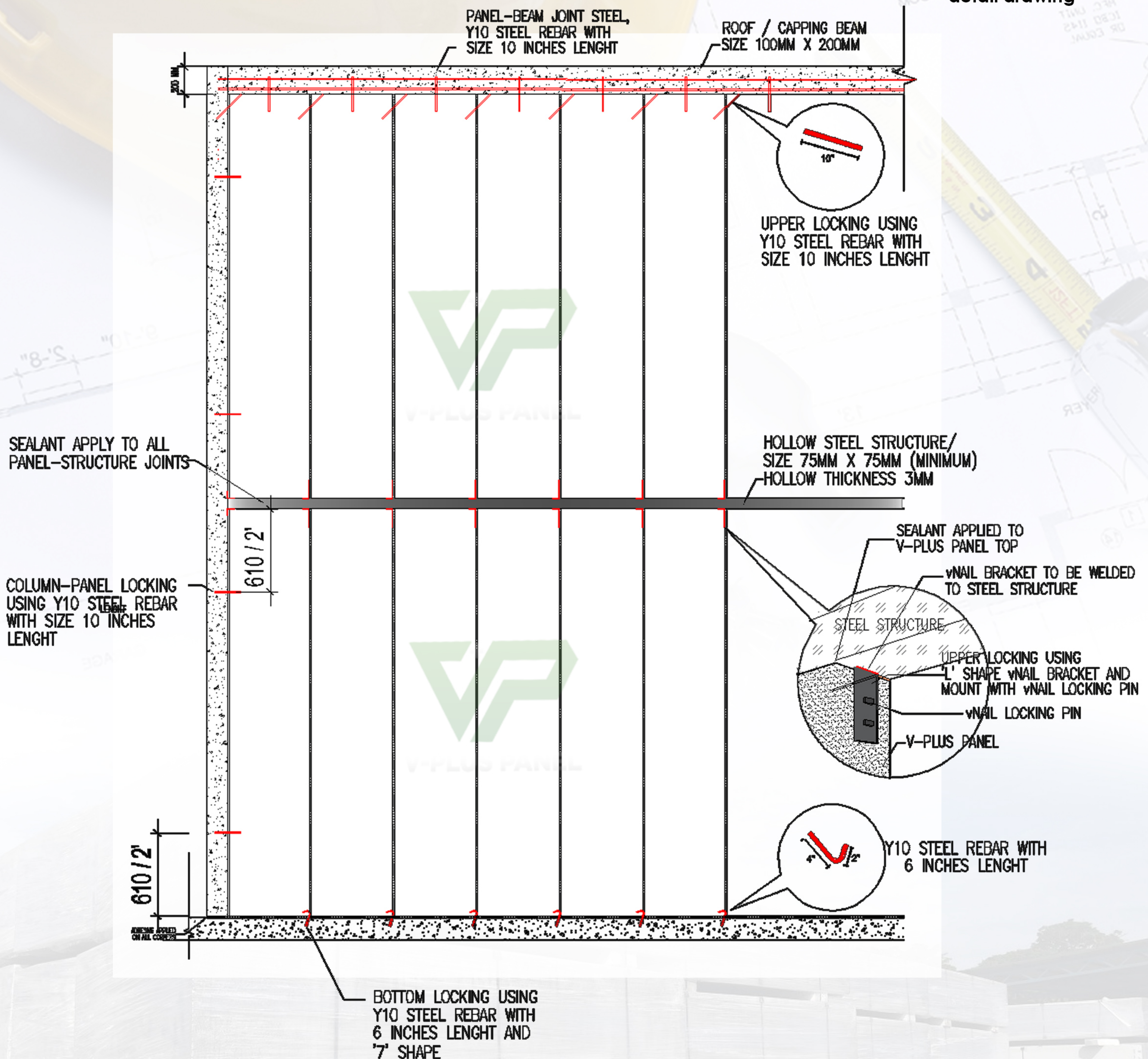
# METHOD OF STATEMENT V-PLUS FOR PANEL WALL



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detail drawing

## C) VPLUS Panel installation types & arrangement

### iv) Typical installation of VPLUS Panel for 20' feet wall



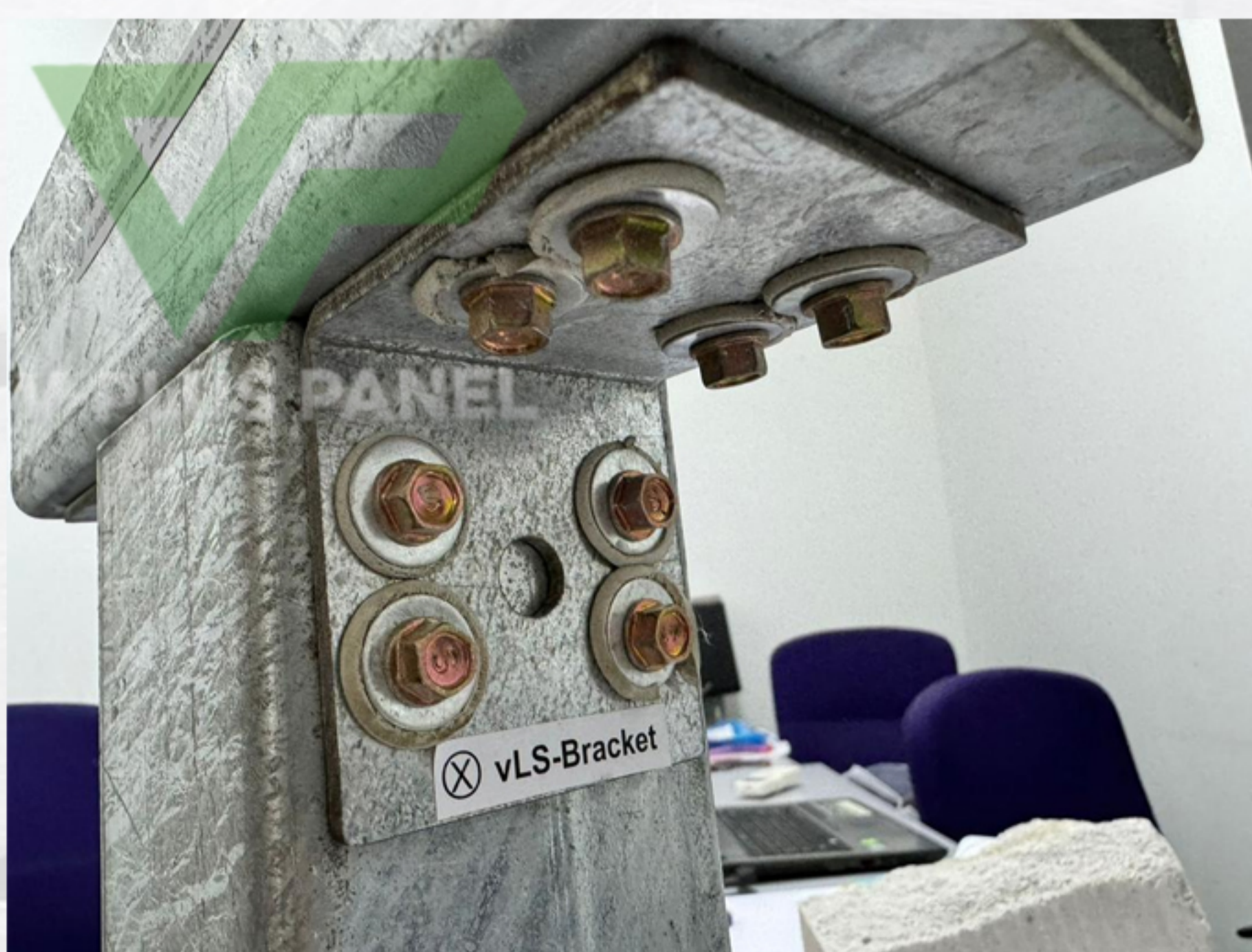
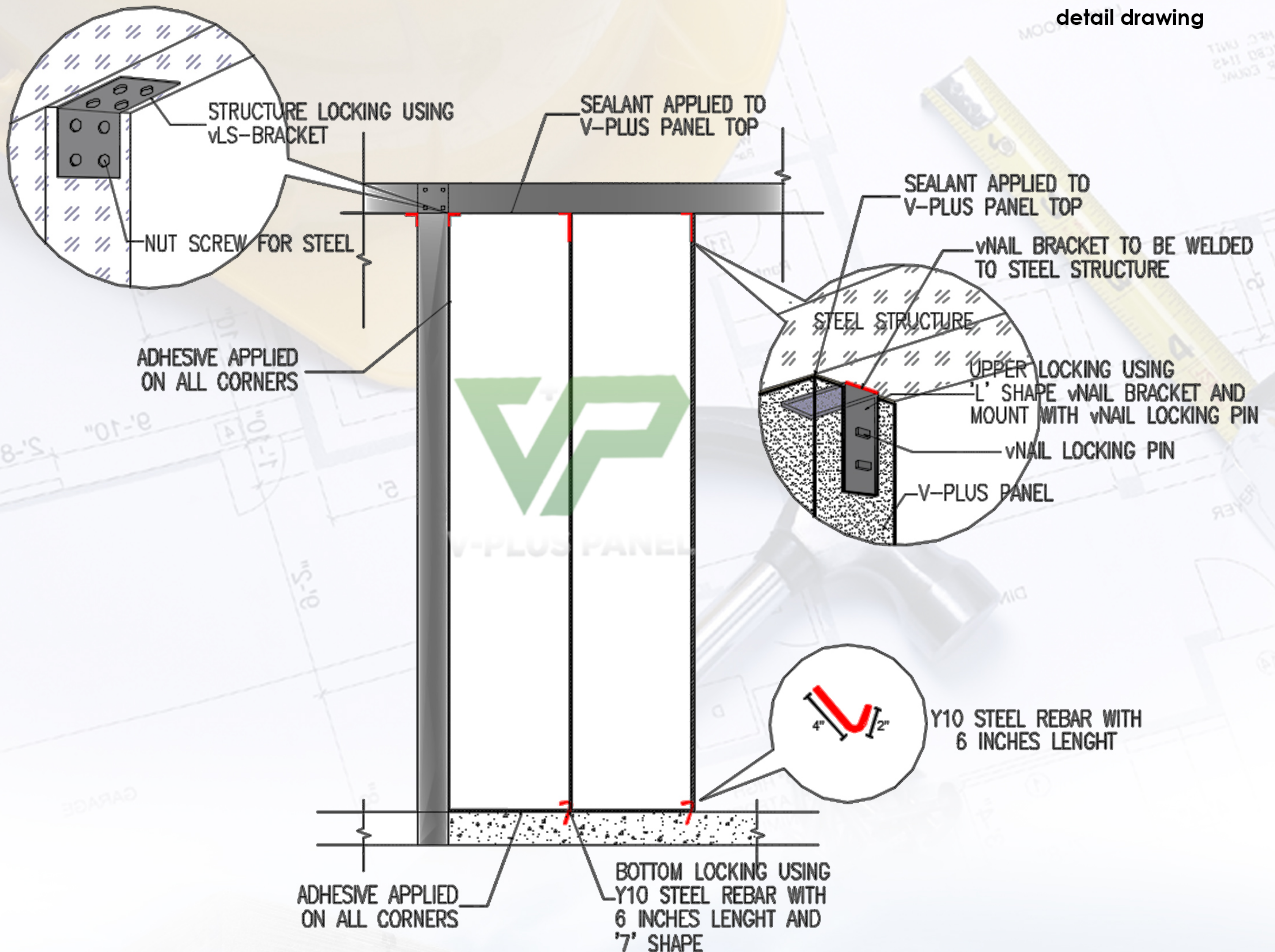
# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

## C) VPLUS Panel installation types & arrangement

### v) Installation of VPLUS panel to the steel column



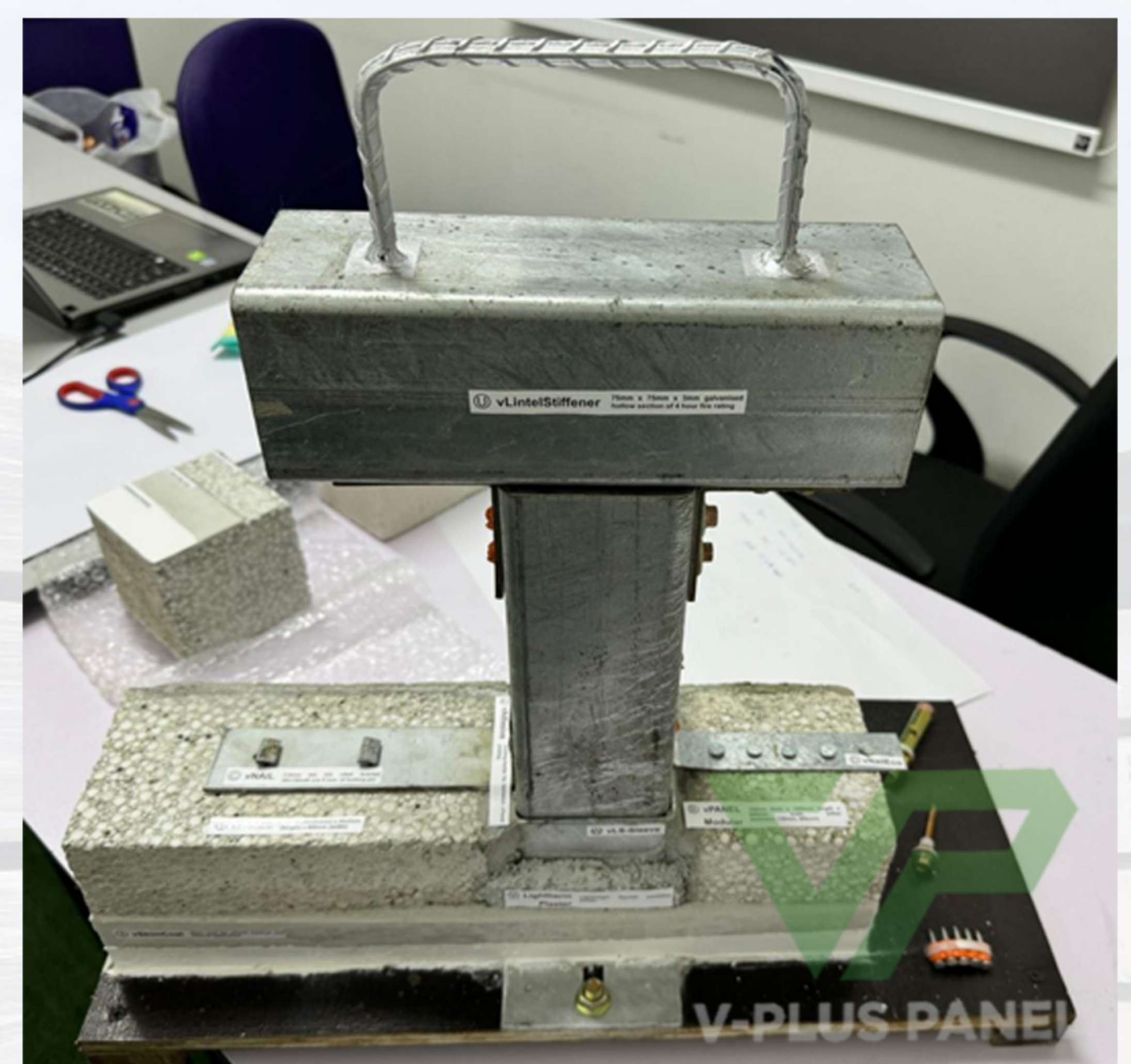
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detail drawing



Typical design of vLS-Bracket



Typical design of vNAIL-Bracket  
and vNAIL Locking Pin

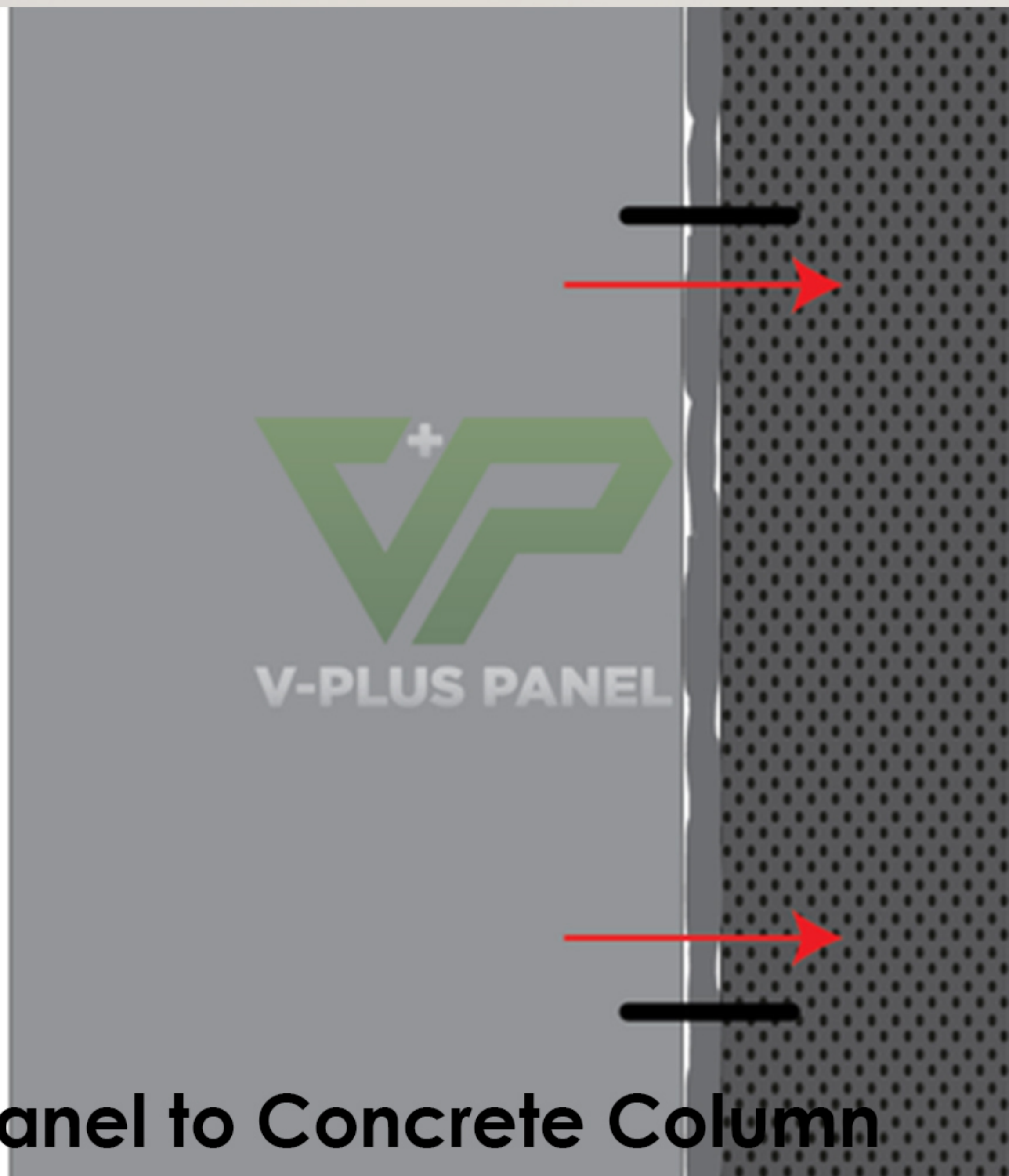


Typical installation method of V-PLUS  
panel to the steel structure / column

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

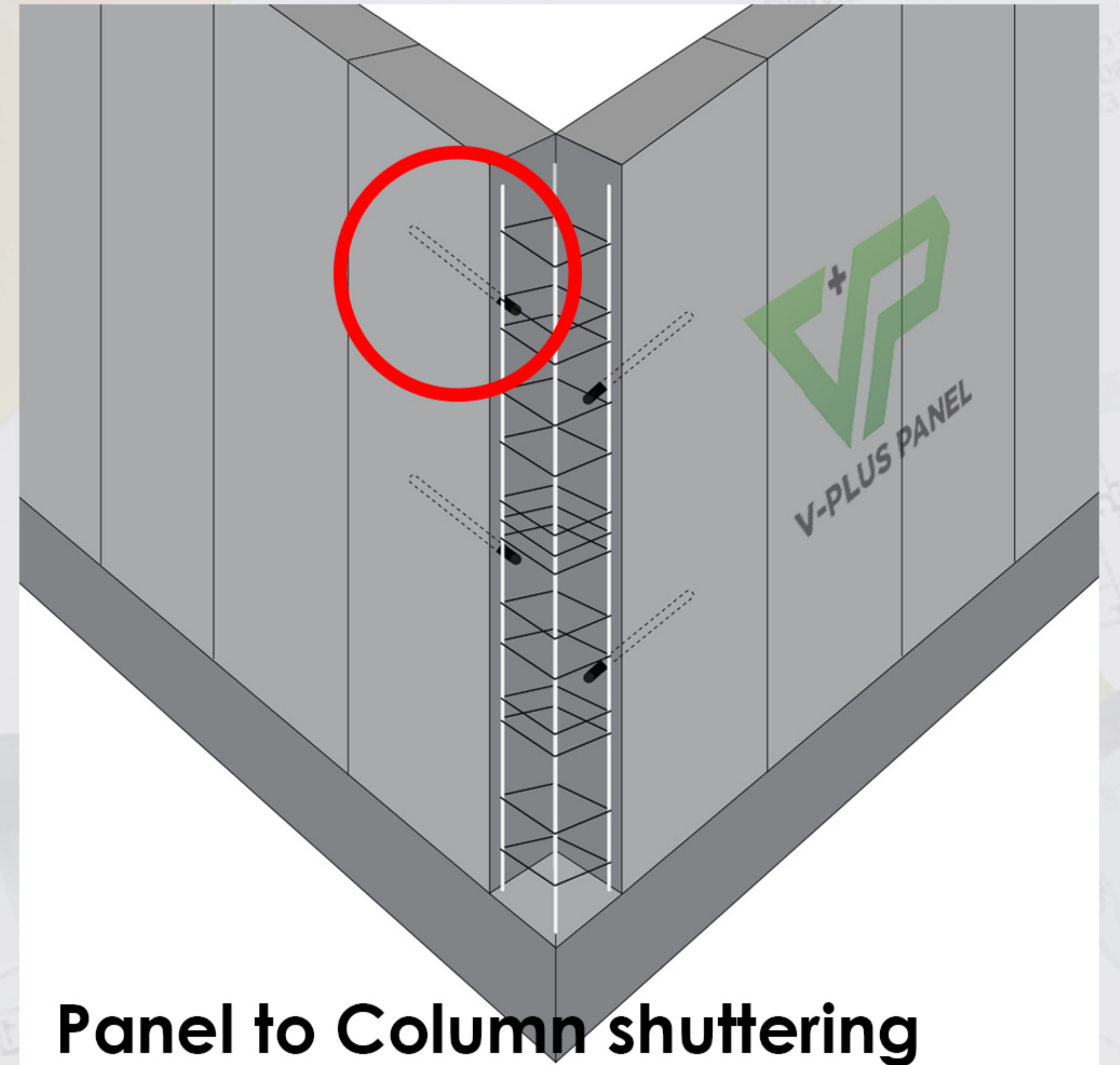
## D) IBS VPLUS Panel Locking System

### 1) Column Type and Locking Method



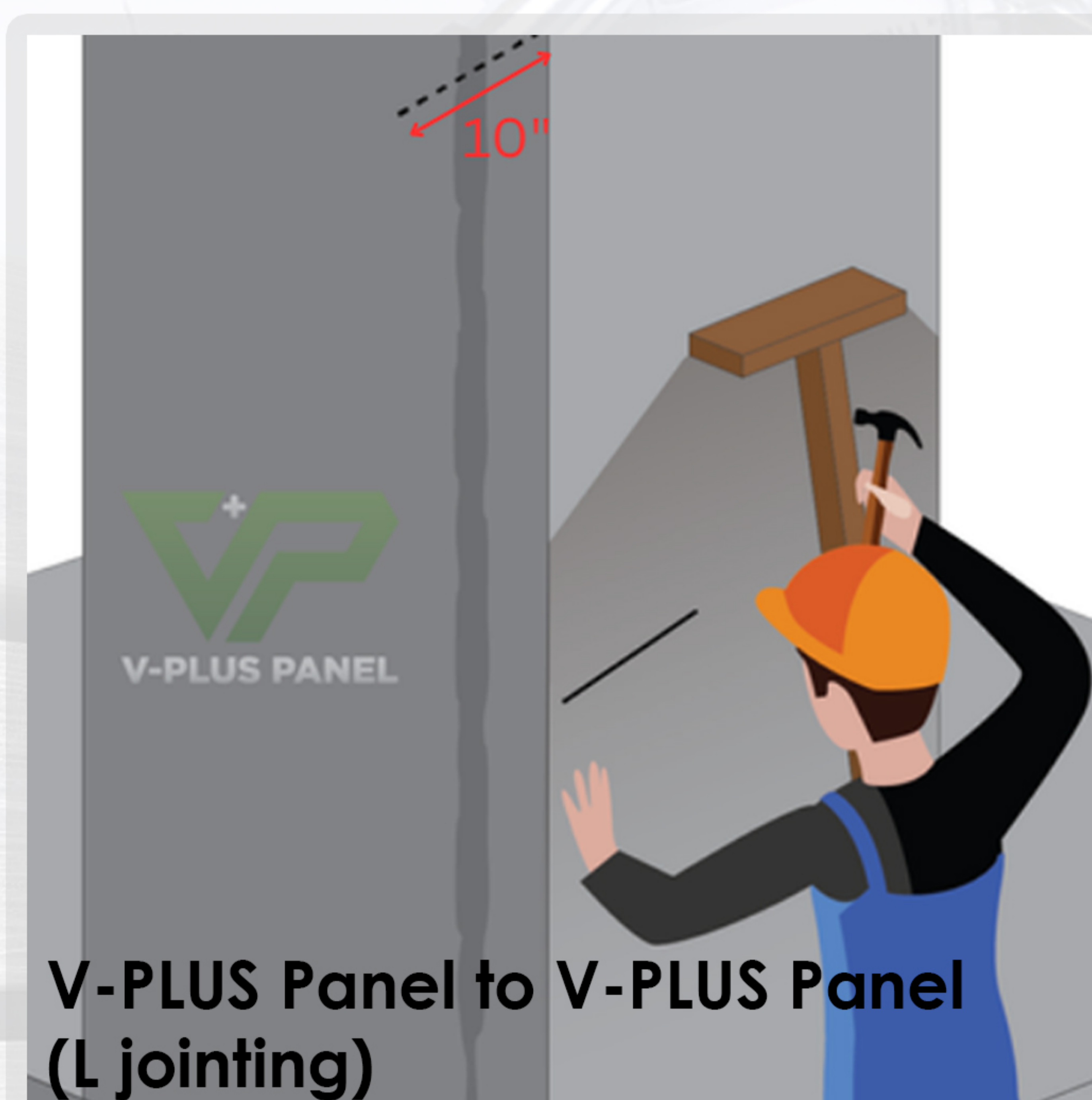
**Panel to Concrete Column**

Lock the panel using Y10 steel for starter bar with length 6 inches (3 inches IN, 3 inches OUT), minimum 2 Nos.



**Panel to Column shuttering**

Placing Y10 steel inside column formwork with length 6 inches (3 inches IN, 3 inches OUT), minimum 2 Nos.



**V-PLUS Panel to V-PLUS Panel (L jointing)**

Directly lock the panel using Y10 steel bar with length 10 inches, minimum bar to be used is 5 Nos.

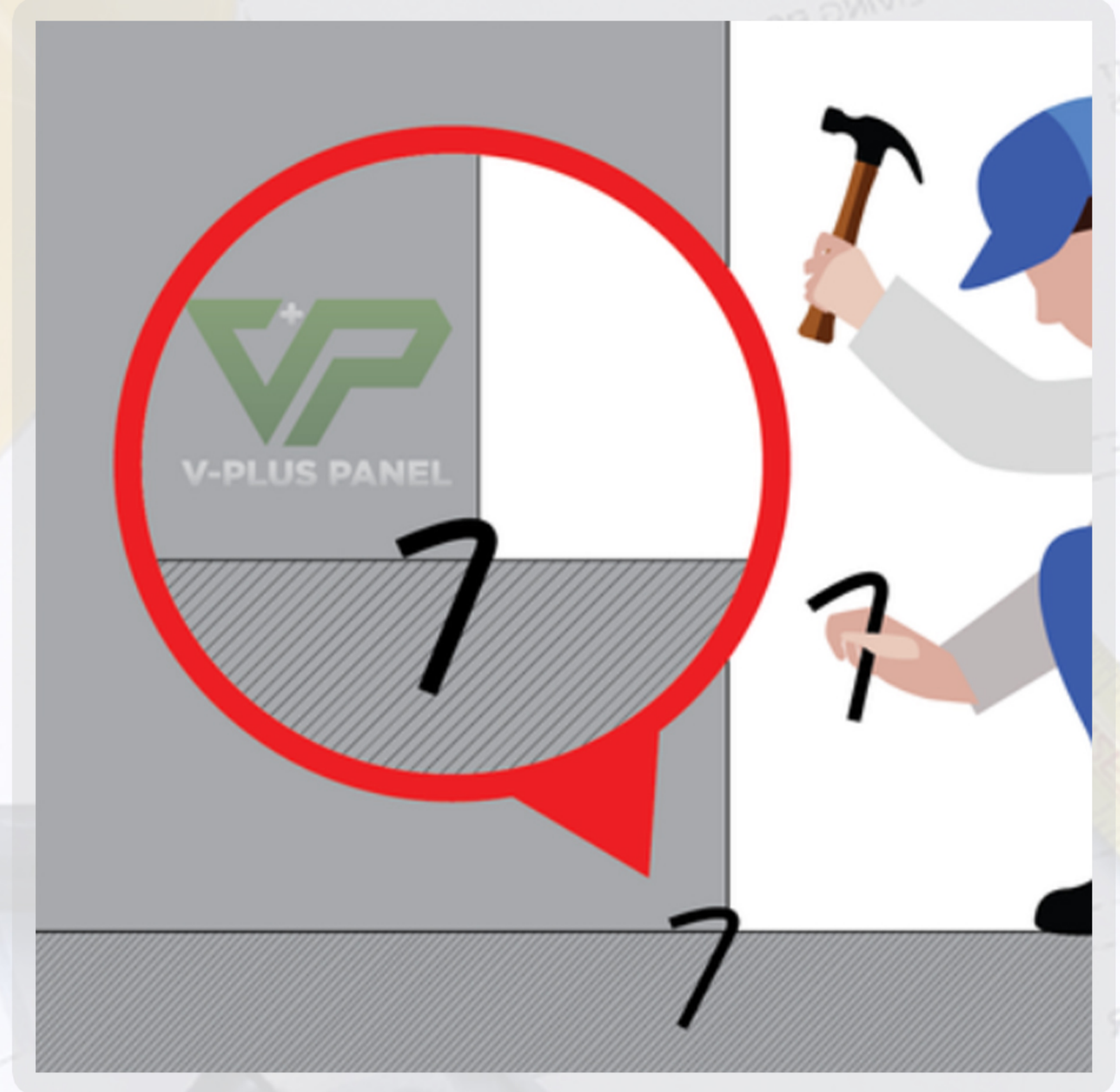
# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

## D) IBS VPLUS Panel Locking System

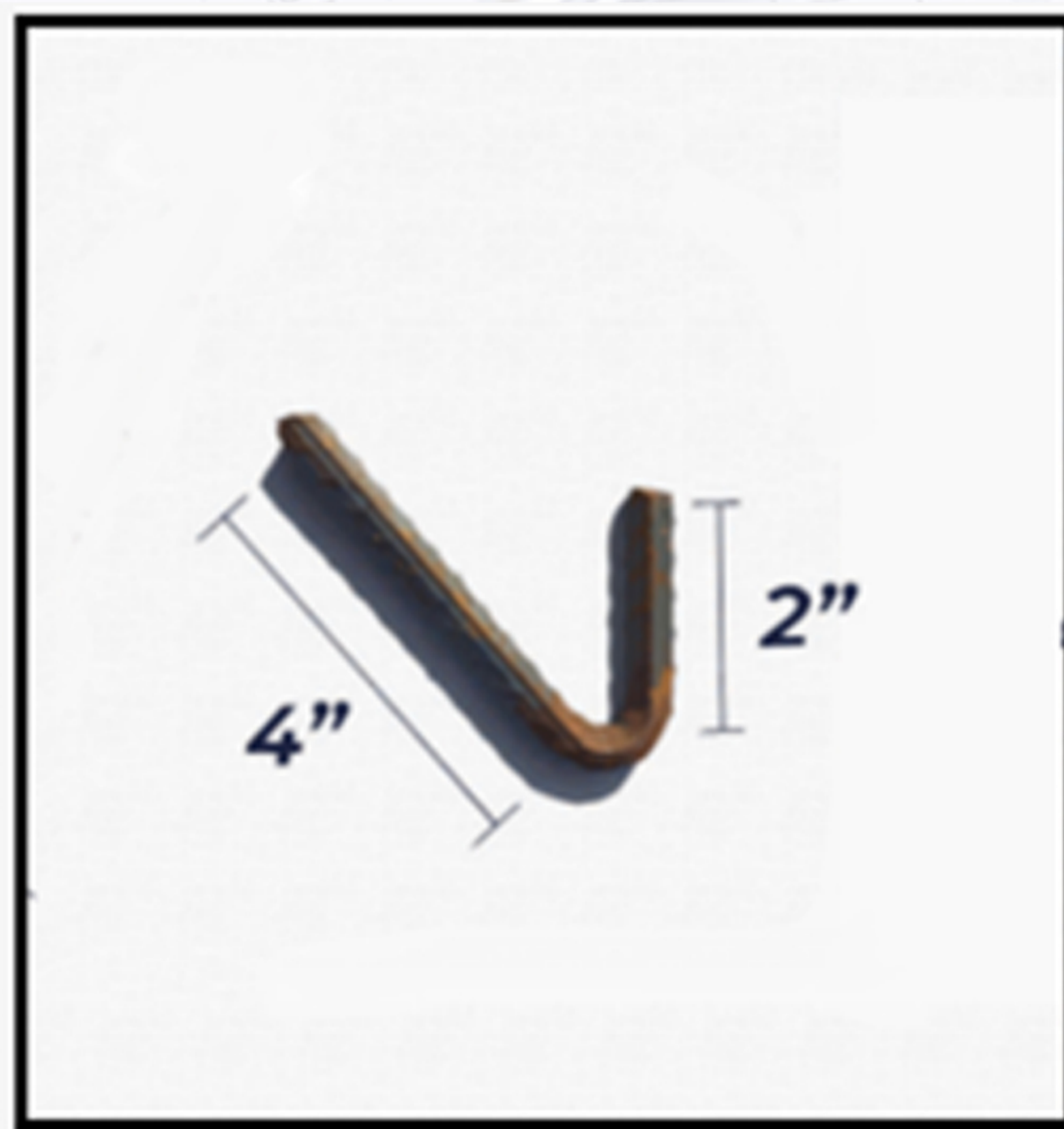
### i) Bottom Locking



Drill the hole into the beam concrete for bottom locking slot at the edge of the Panel.



Lock the bottom of every panel installed using '7 shaped' Y10 bar with length 6-7 inches.



## Y10 Steel

With '7' shaped & length  
6 - 7 inches

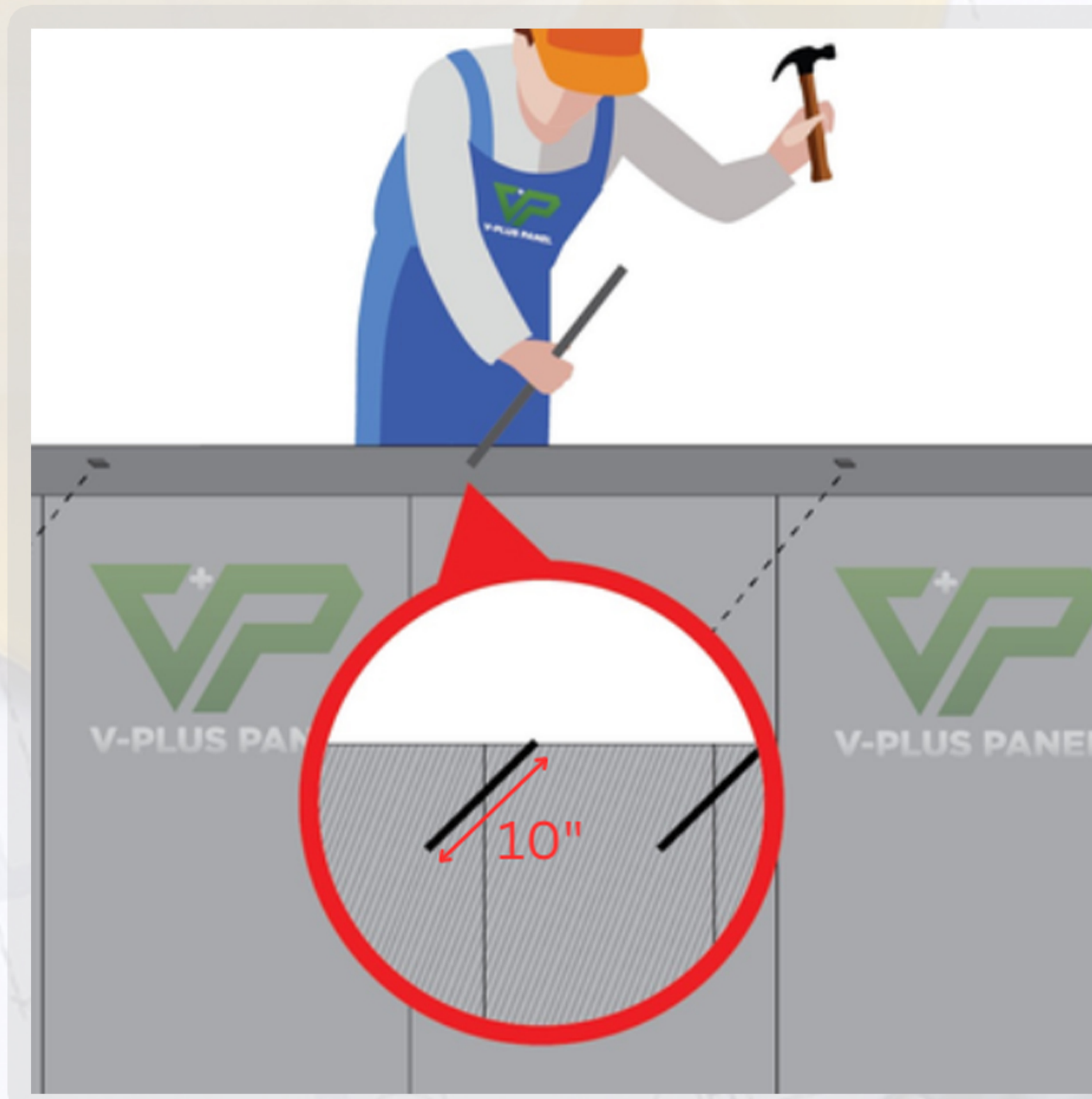


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# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

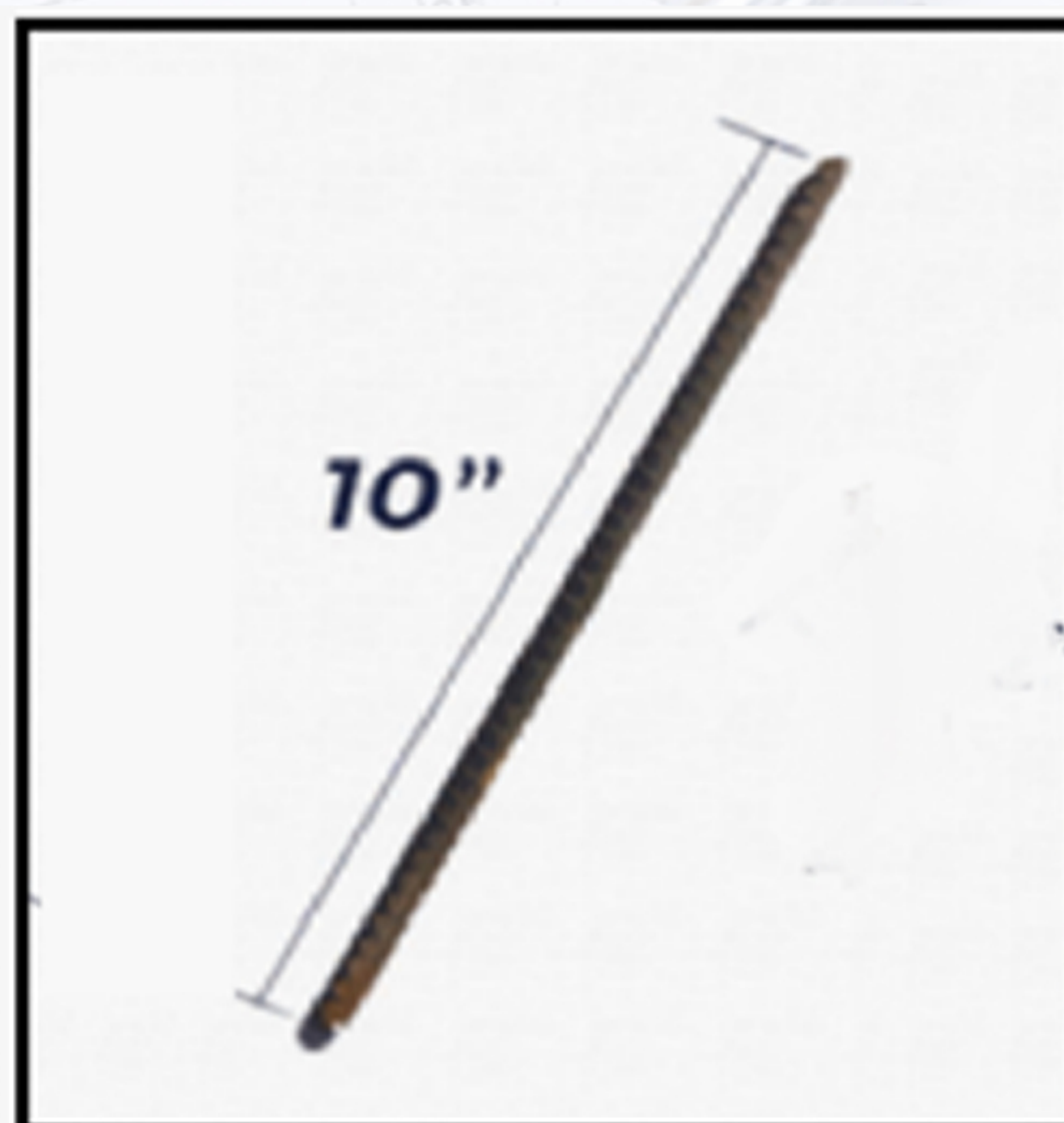
## D) IBS VPLUS Panel Locking System

### ii) Upper Locking



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Lock every panel at the top using  
Y10 steel with length 10 inches.



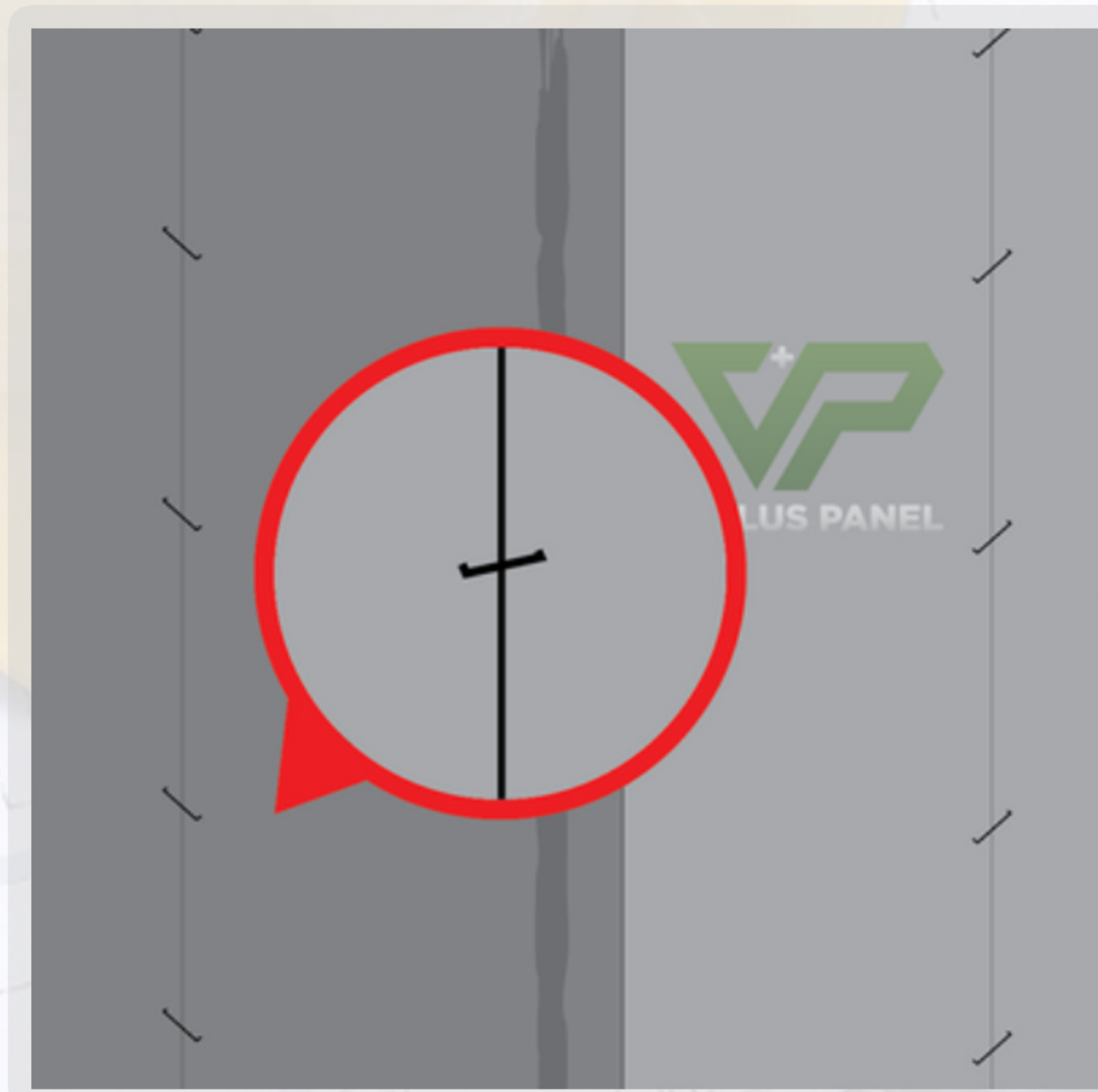
## Y10 Steel

With length 10 inches

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

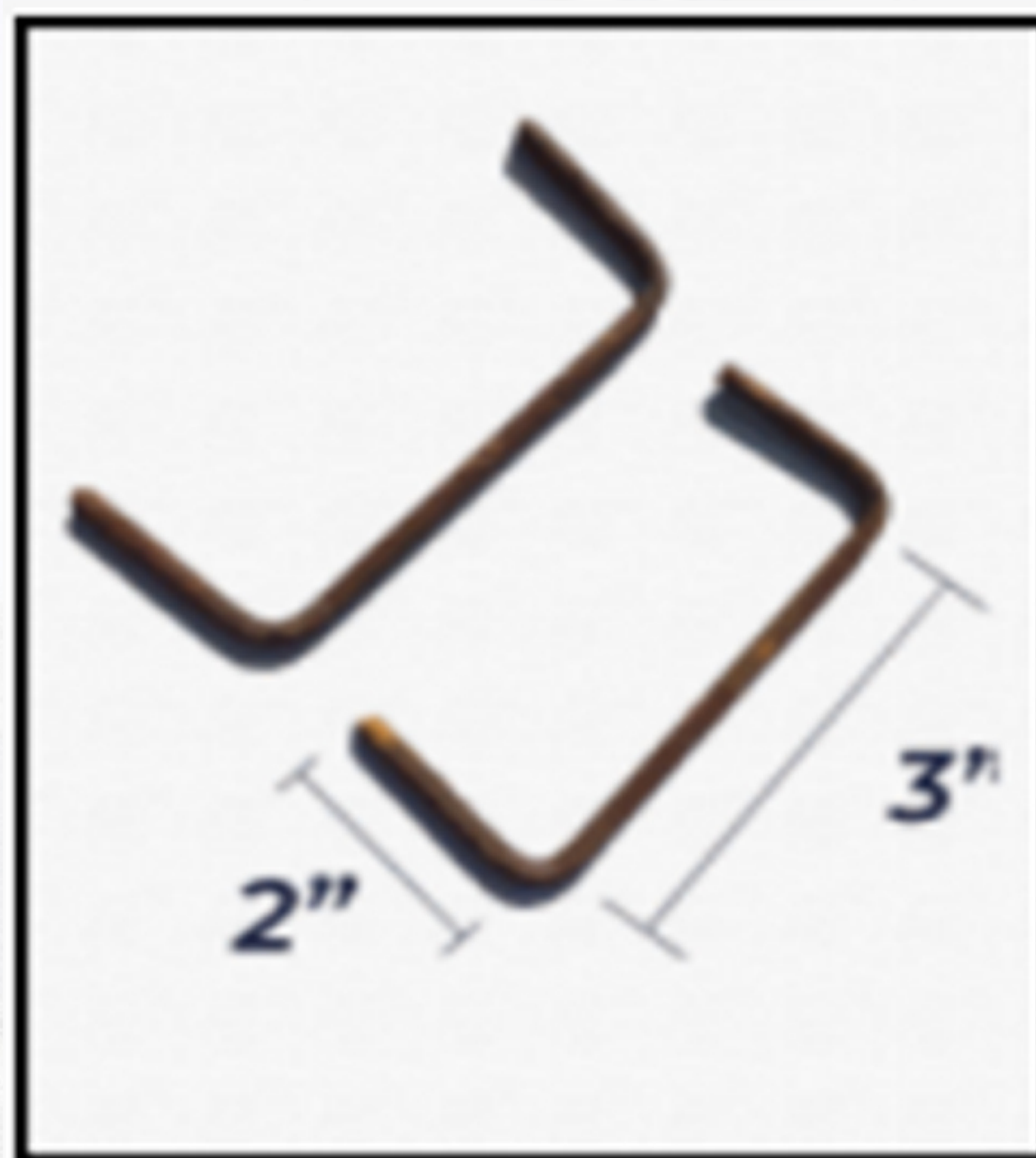
## D) IBS VPLUS Panel Locking System

### iii) Surface Locking



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Lock the jointing of every panels using  
R6 steel with 'stepler' shaped and  
length 7" - 8" inches.



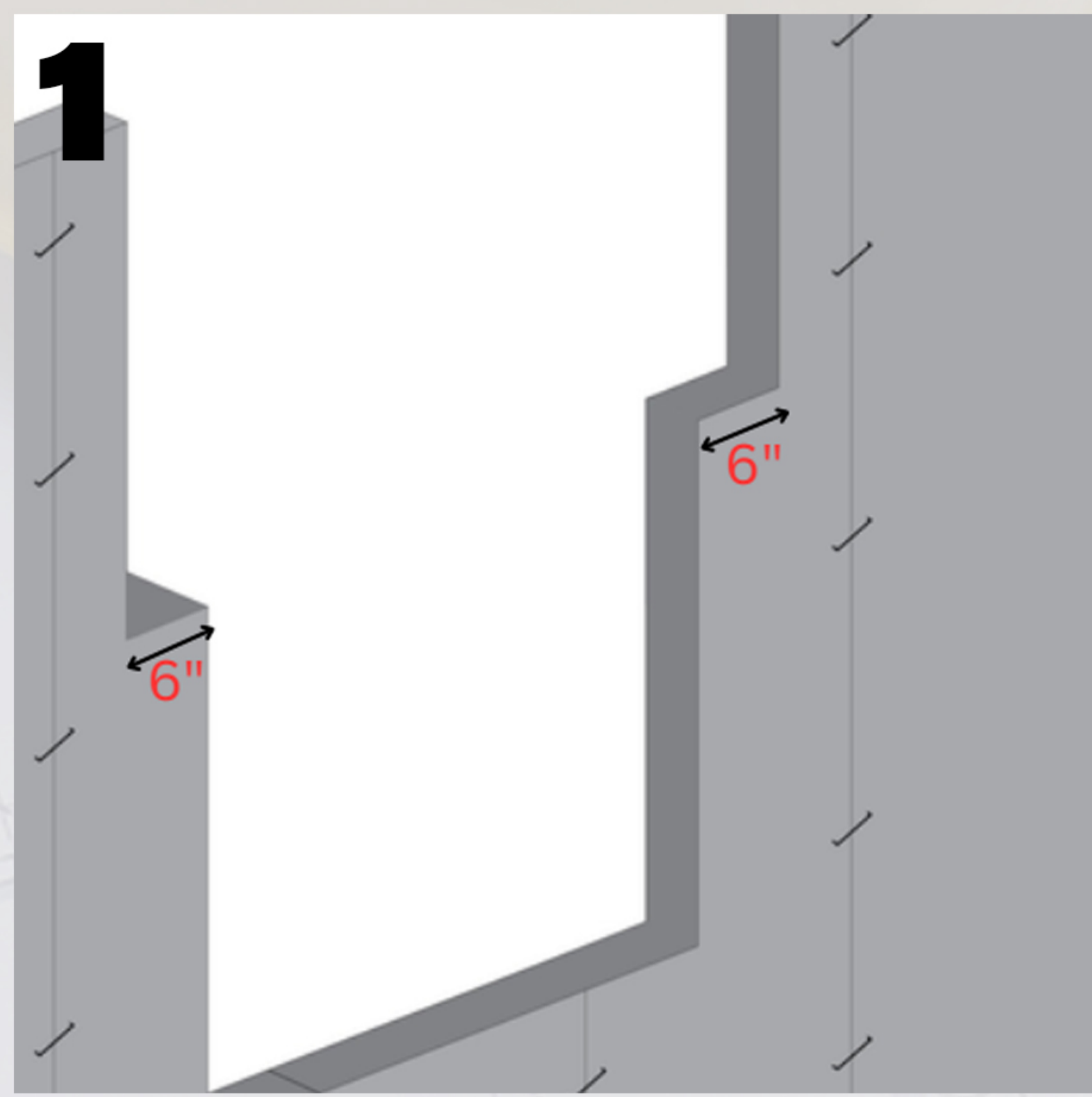
**R6 Steel**

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL



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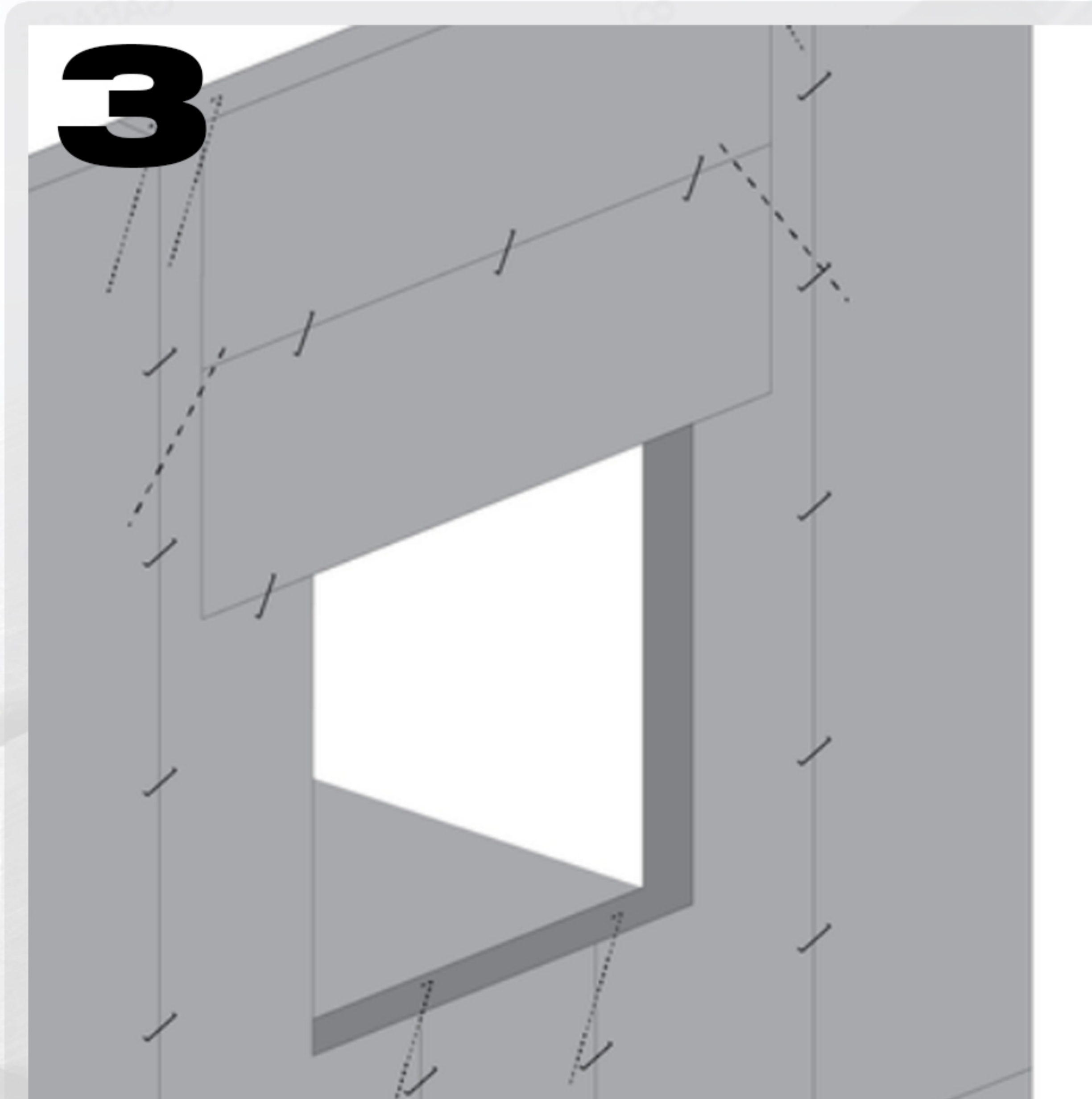
## E) IBS VPLUS Panel install as a Lintel Beam for opening



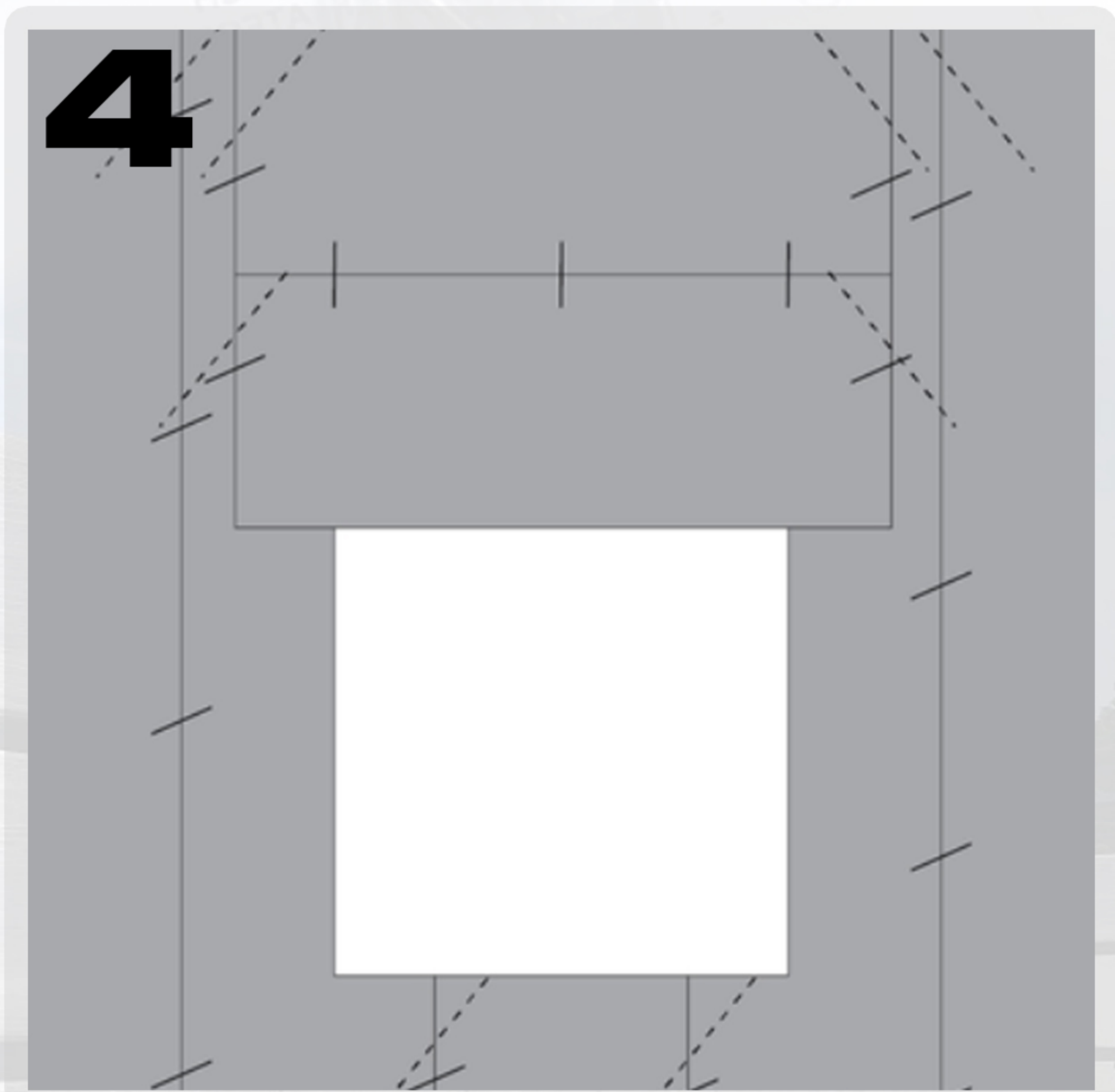
Cut the panel according to the opening size as scheduled in drawing. Ensure the length for panel platform is 6" minimum on both sides.



Put cement adhesive on VPLUS panel and arrange panel horizontally based on cutting size, Panel will be used as a lintel beam for windows & doors opening.



Lock the panel on every corners. bottom lock, upper lock and surface lock according to mentioned locking system after the lintel been placed.



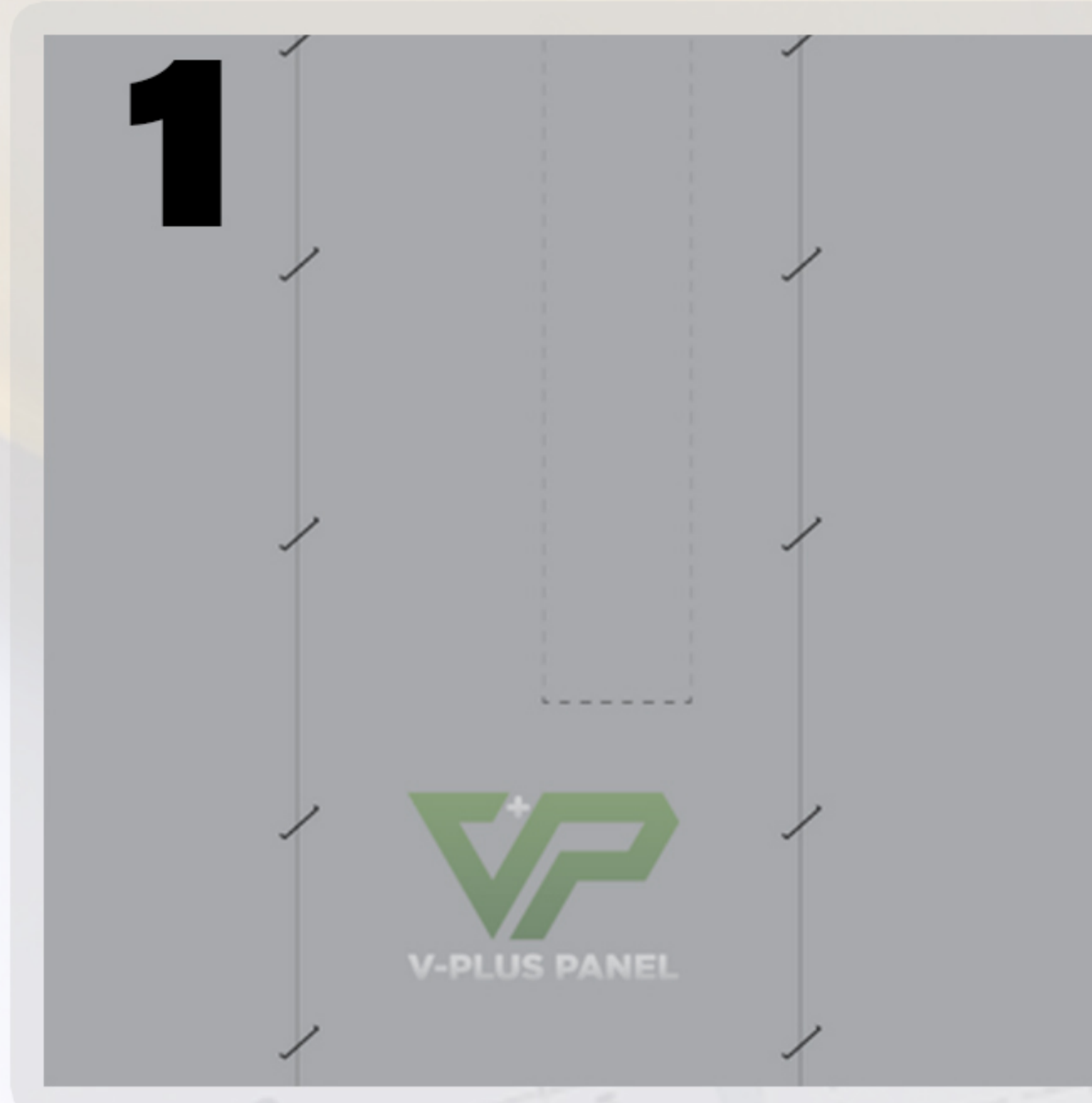
Make sure cement adhesive plenty applied to every jointing.

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

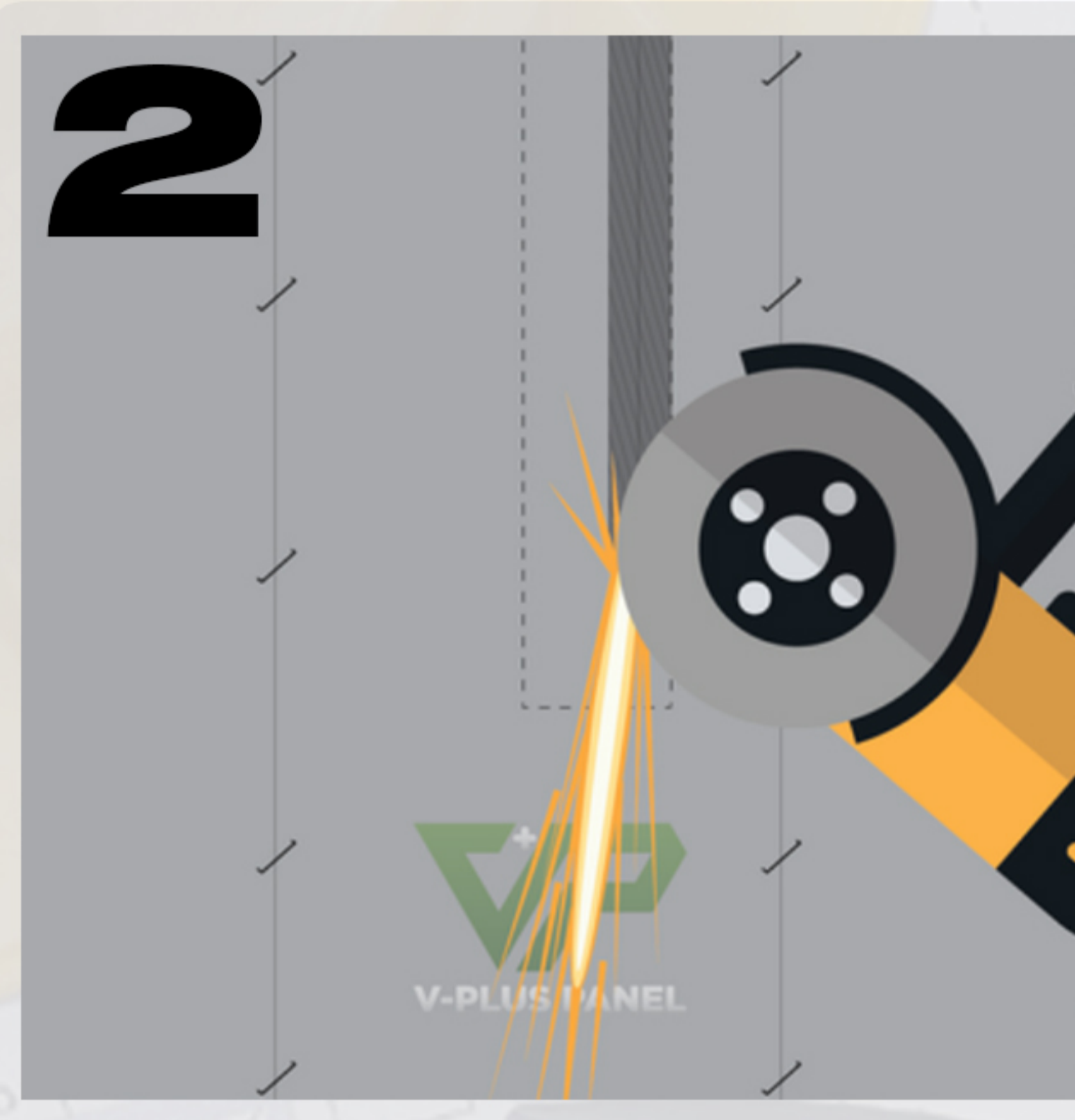


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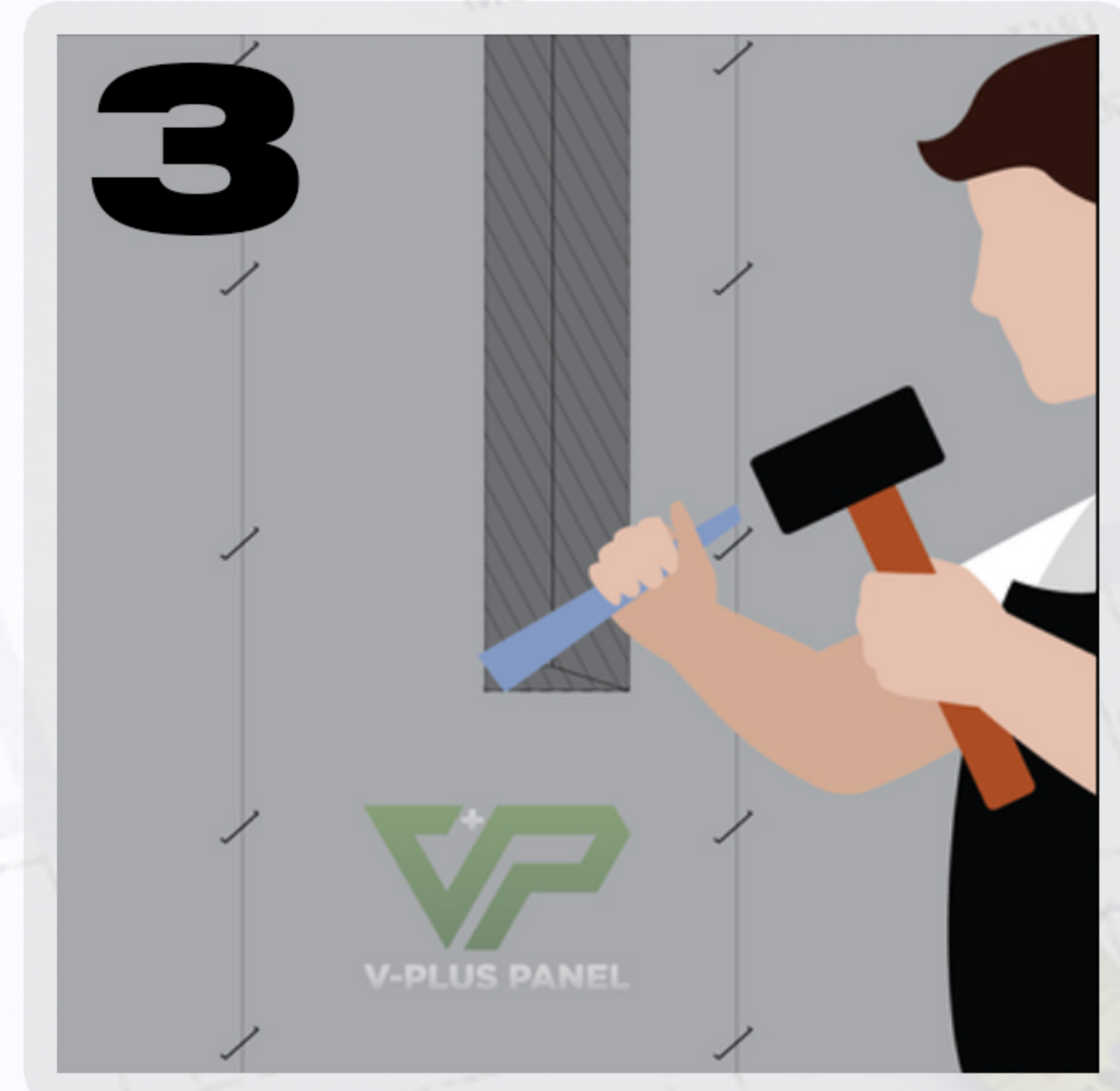
## F) Electrical Conduit Installation



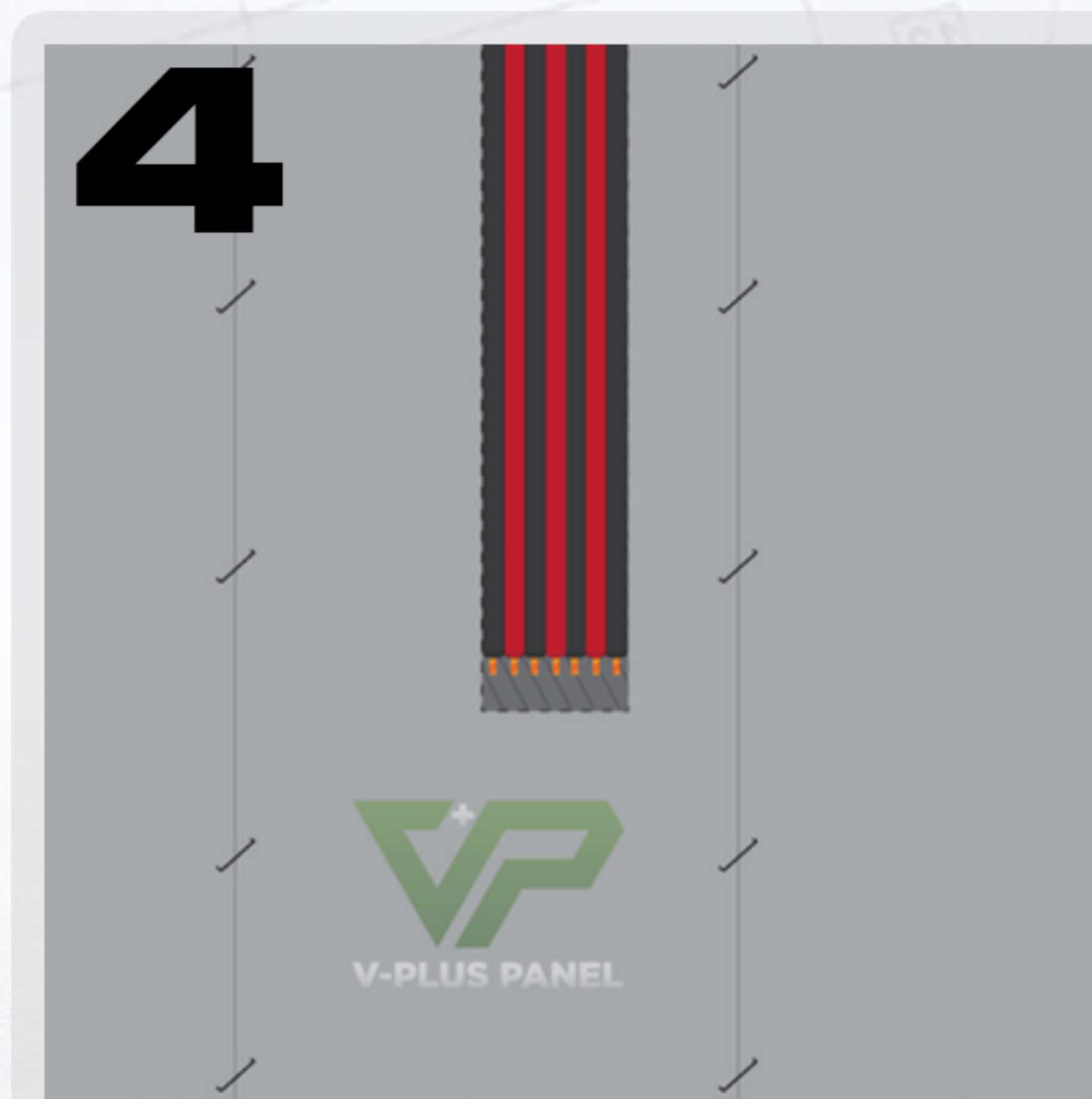
Mark the spot and measure the area need to be cutted.



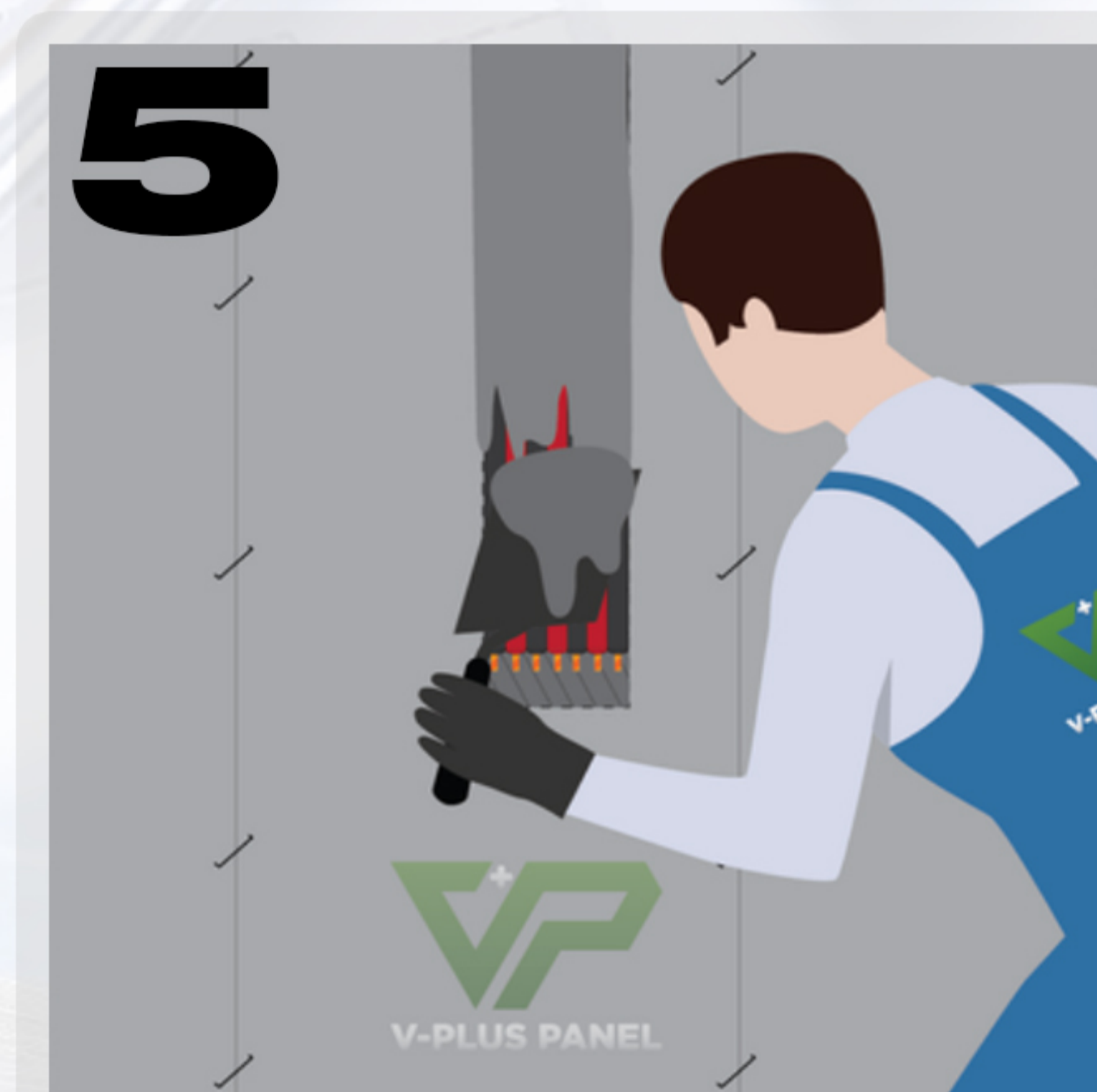
Cut the area marked using grinder



Use the chisel to clean all debris.



install electrical conduit into the wall cut.



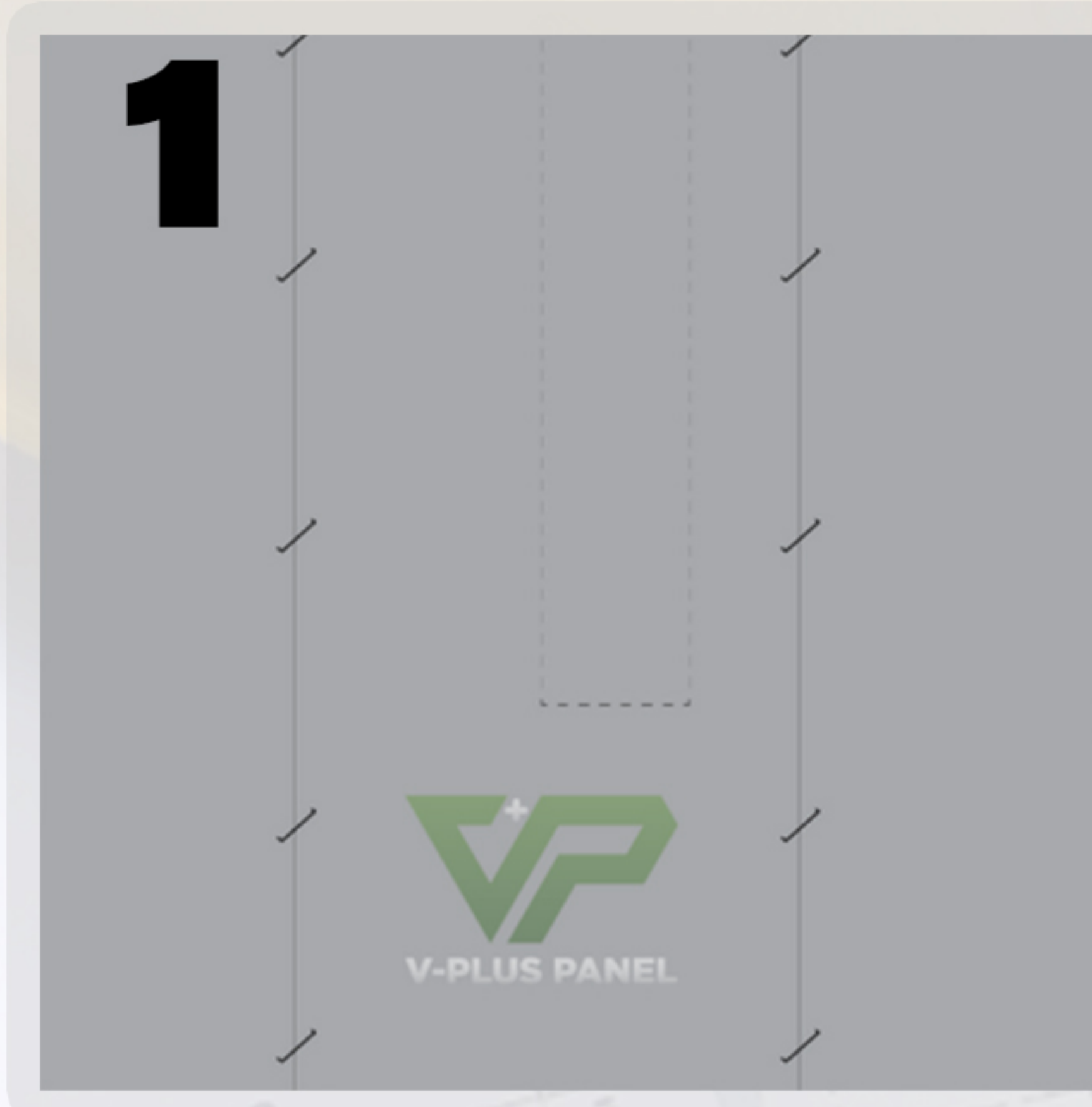
refill cutted area with mortar.  
ensure mortar entirely fill all gaps and fix same level with panel surface.

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

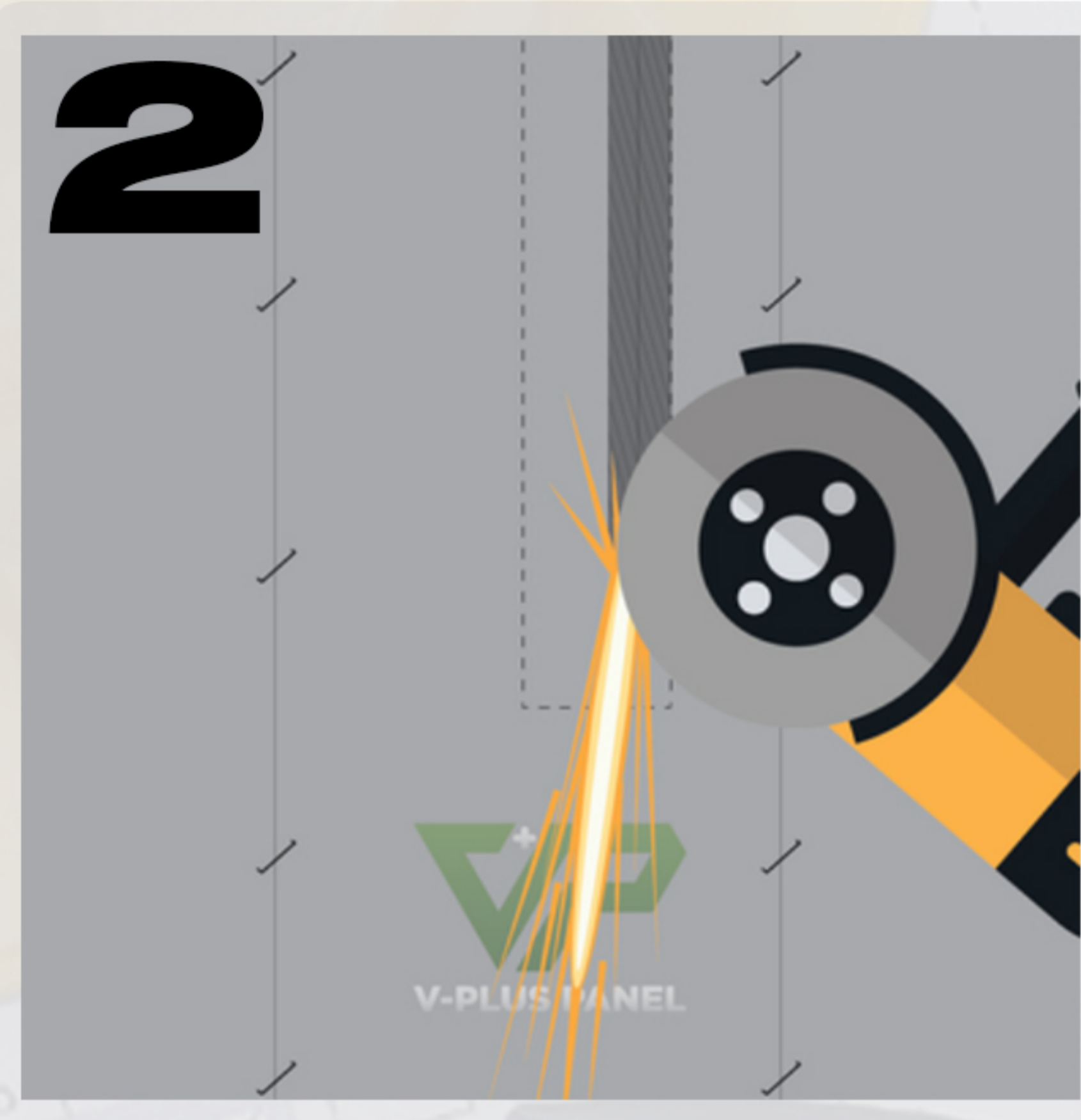


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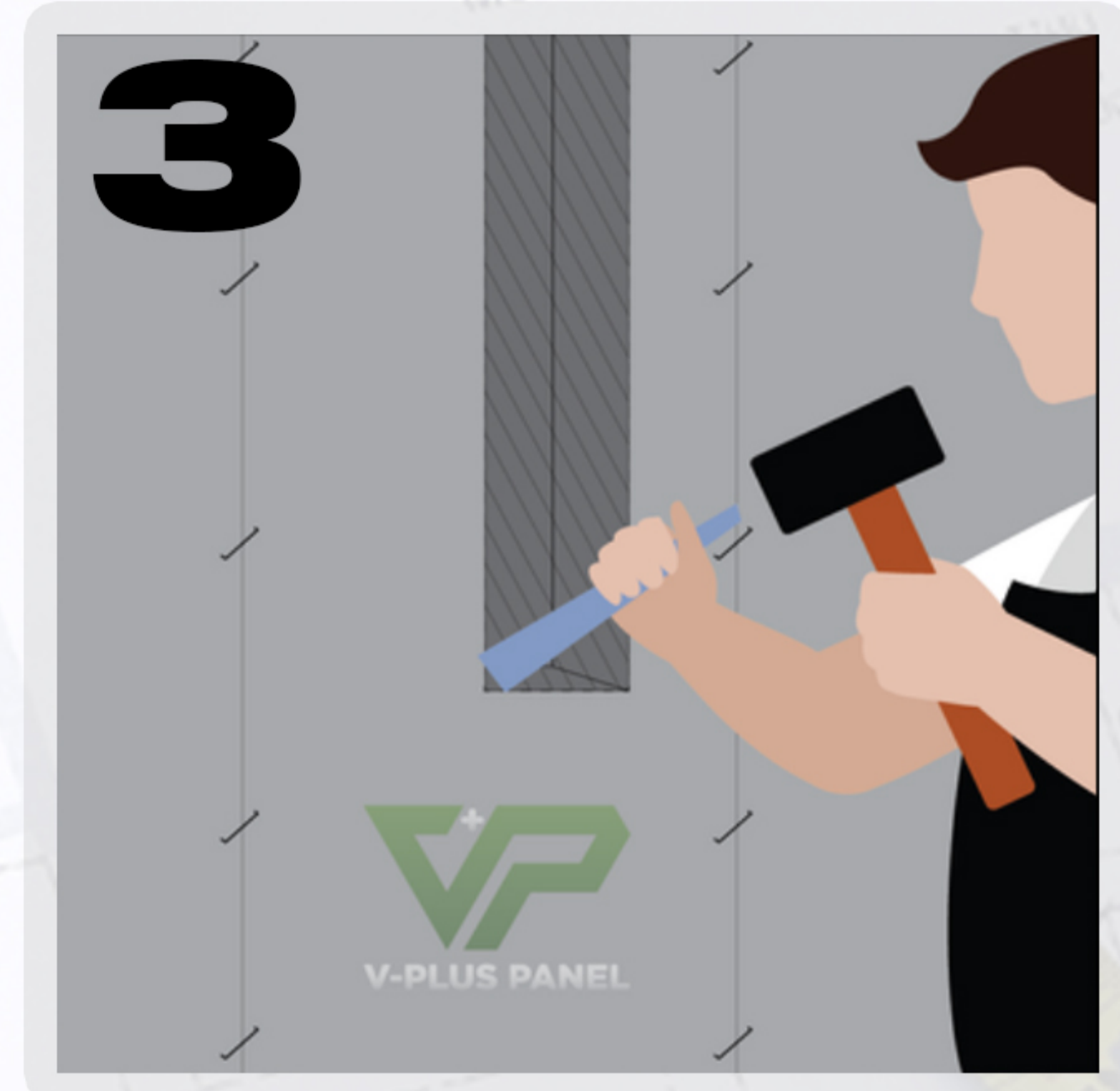
## G) Plumbing Installation



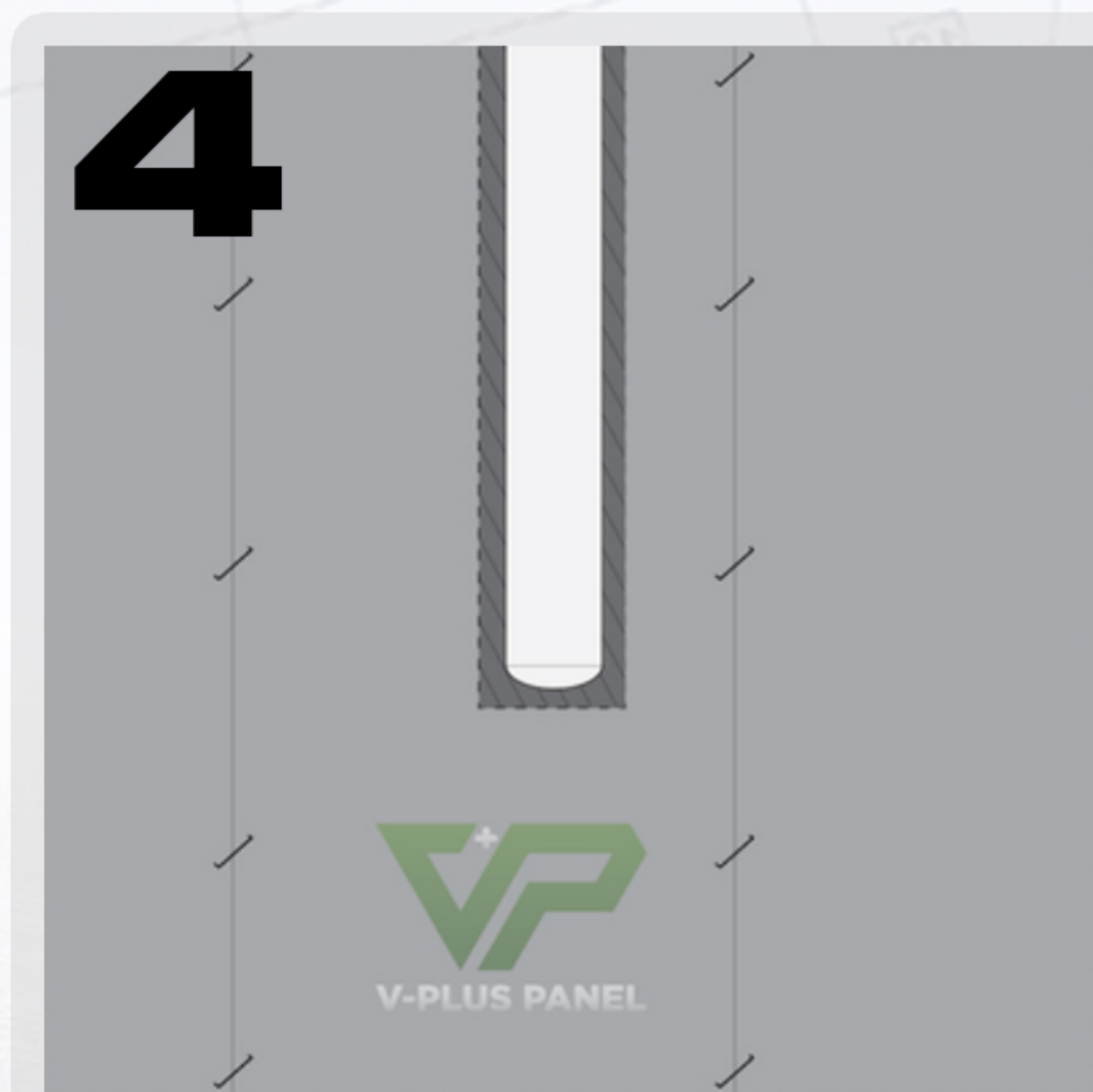
Mark the spot and measure the area need to be cutted.



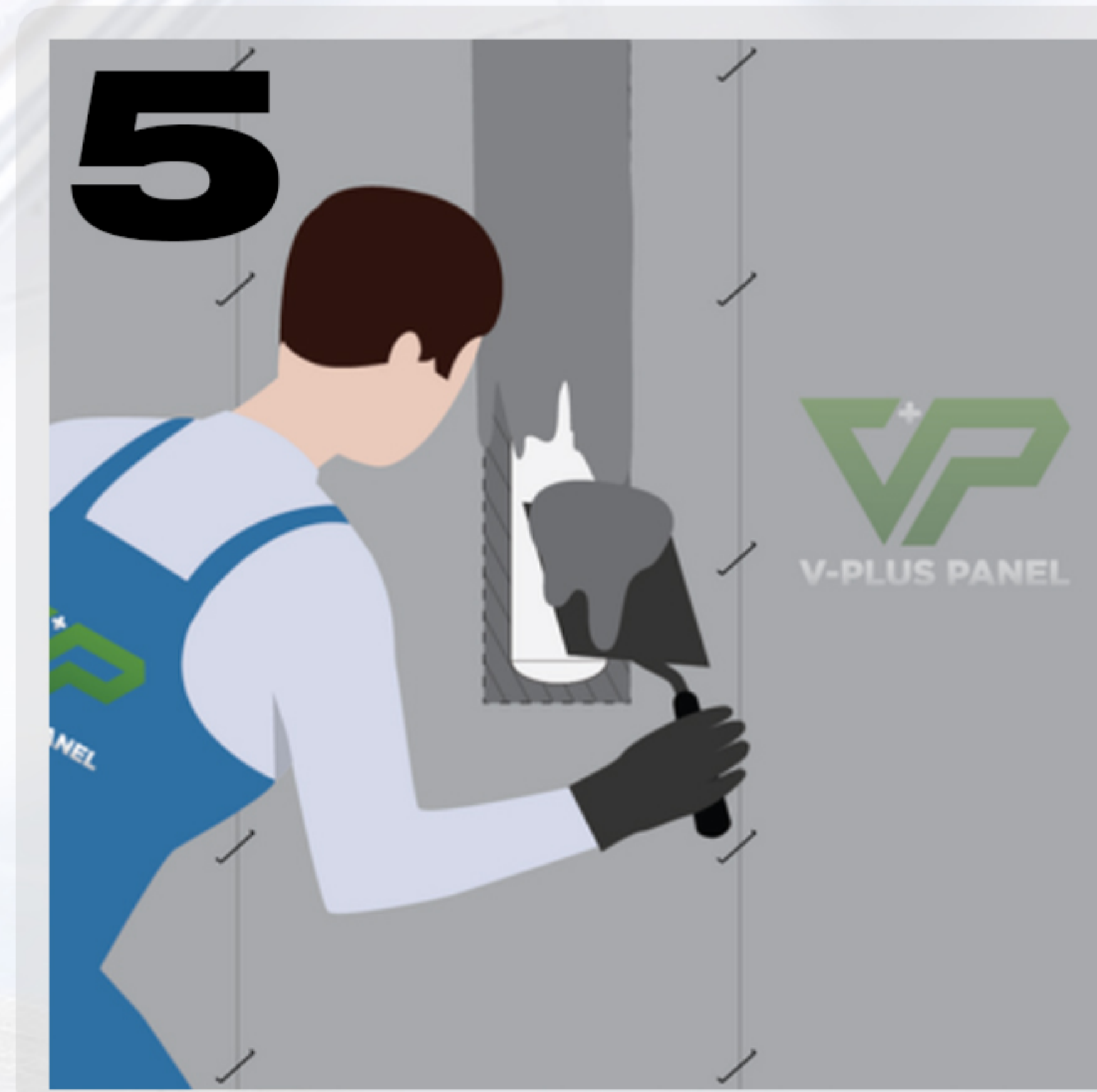
Cut the area marked using grinder



Use the chisel to clean all debris.



install pipe into the wall cut.



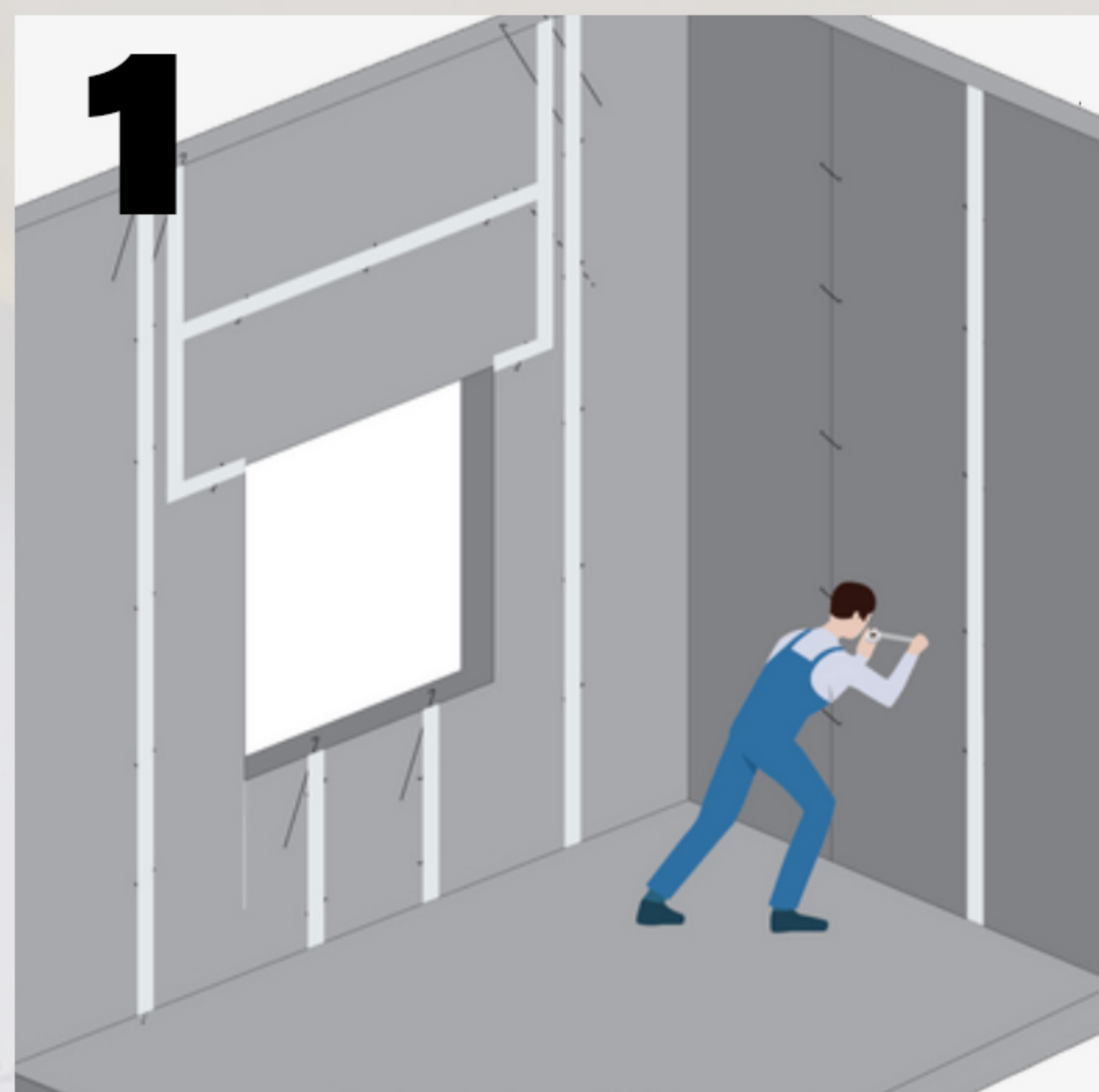
refill cutted area with mortar.  
ensure mortar entirely fill all gaps and fix same level with panel surface.

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL



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## H) Application of Fibre Mesh & Skim Coat



**1**  
Apply fiber glass netting at every jointing panel to panel. fibre glass is self-adhesive can be applied directly to jointing.

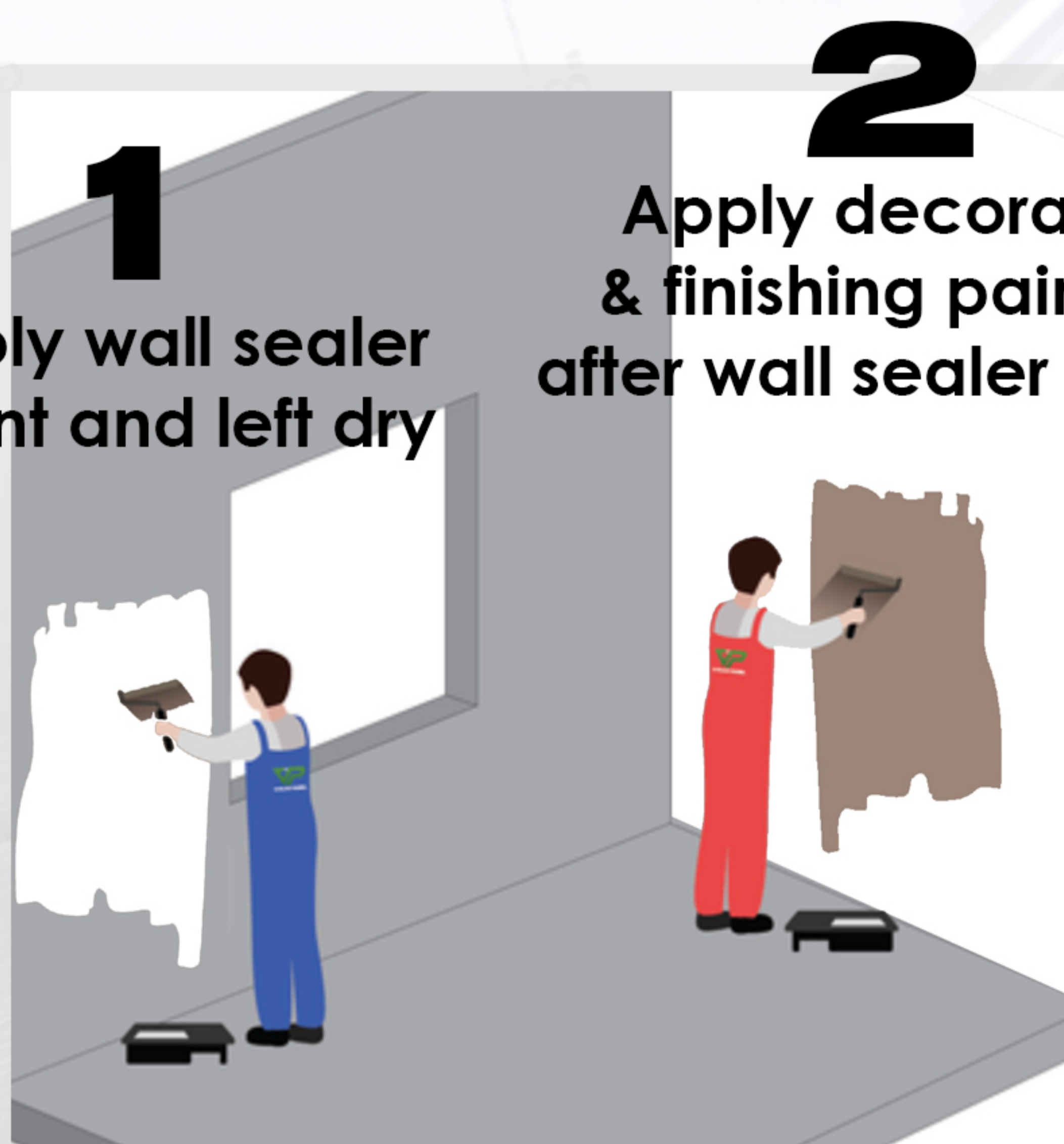


**2**  
Render all VPLUS panel surface with Skim coat. Required coating thickness is only 3mm - 6mm.



**3**  
It is optional to use 'Sponge Trowel' technique for better smooth & finishing wall surface.

## I) Application of Wall Paint



**1**  
Apply wall sealer paint and left dry



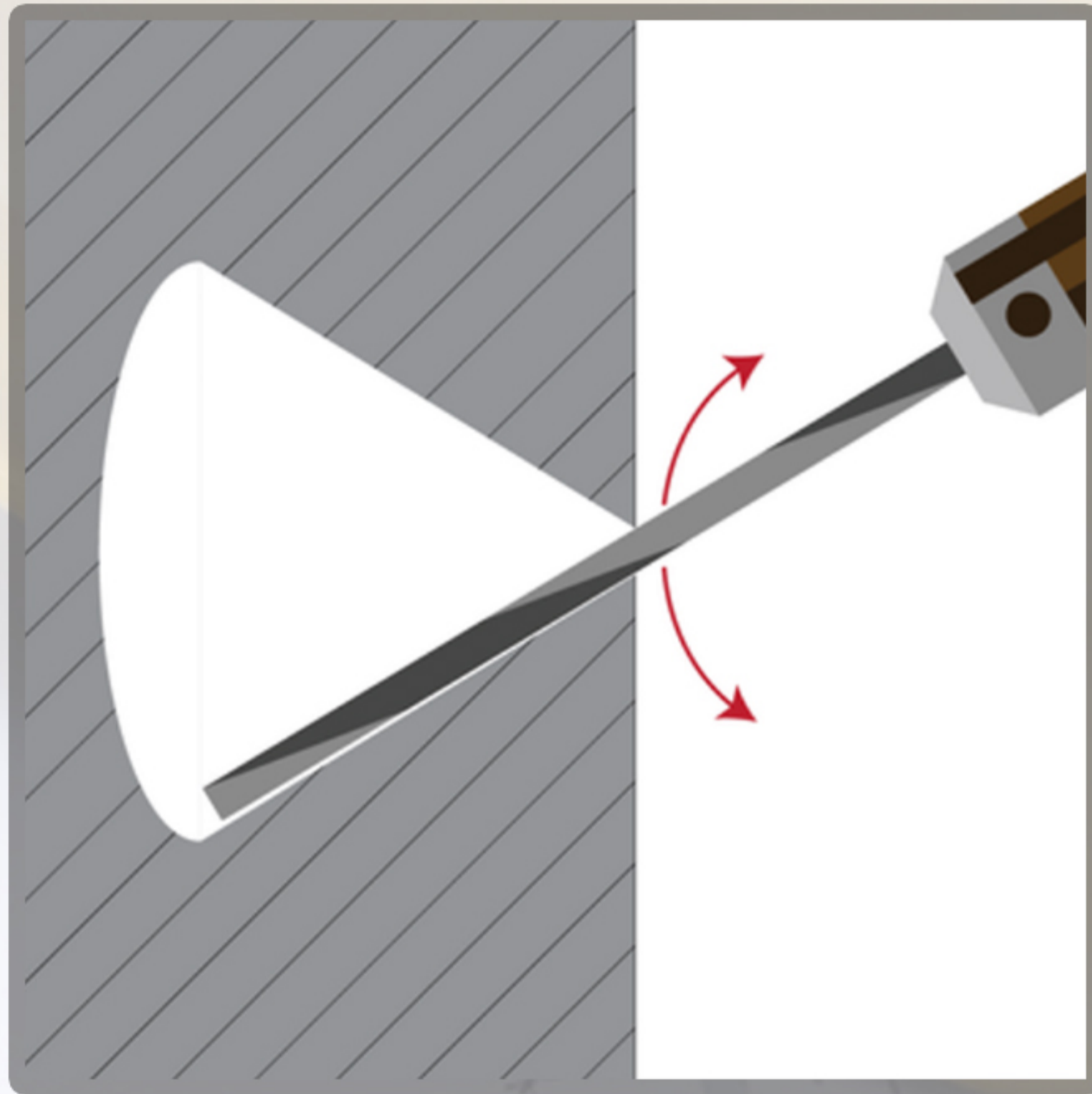
**2**  
Apply decorative & finishing painting after wall sealer dried.



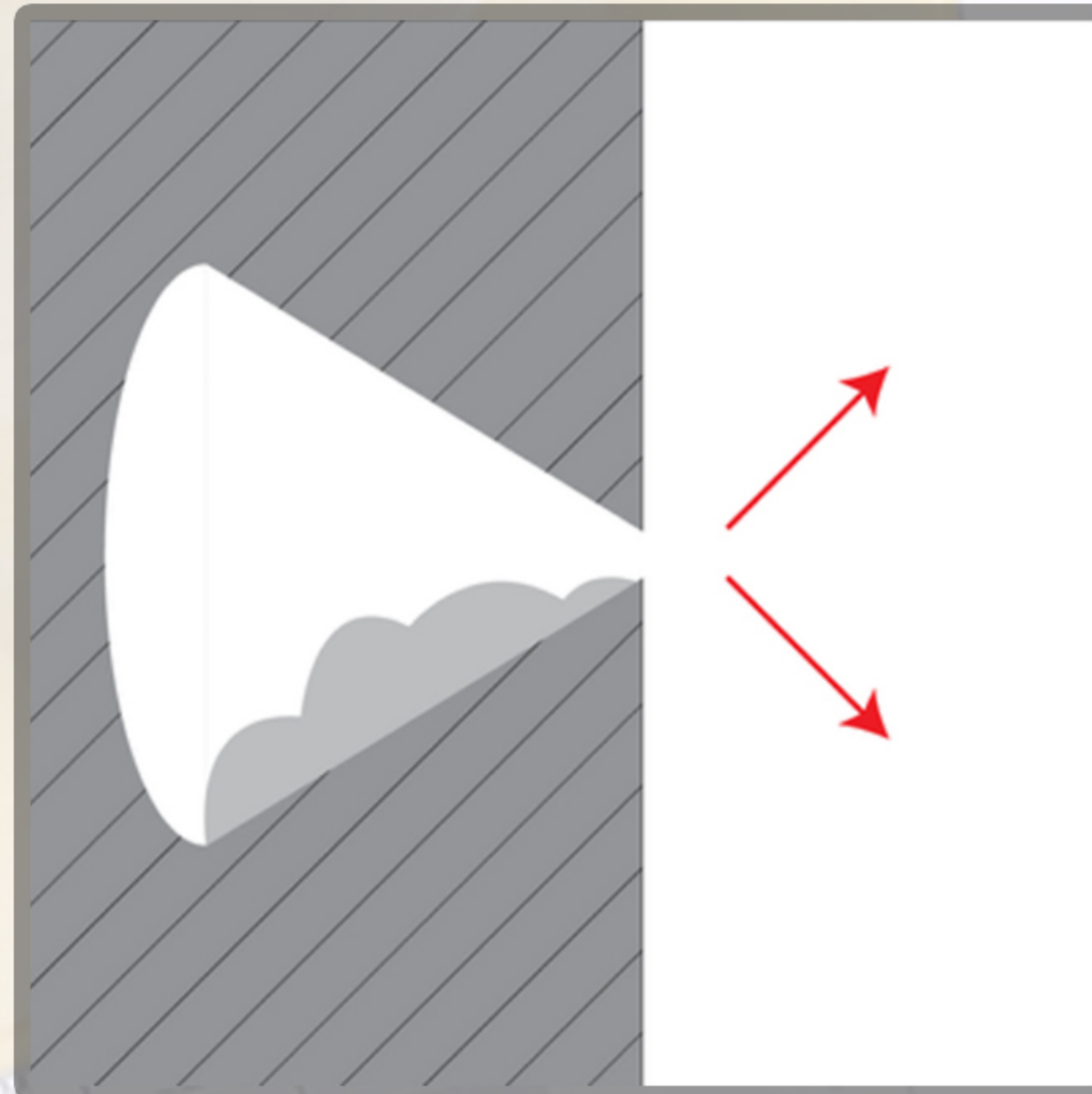
**3**  
Ensure wall painting is evenly applied to wall & work is done.

# METHOD OF STATEMENT V-PLUS FOR PANEL WALL

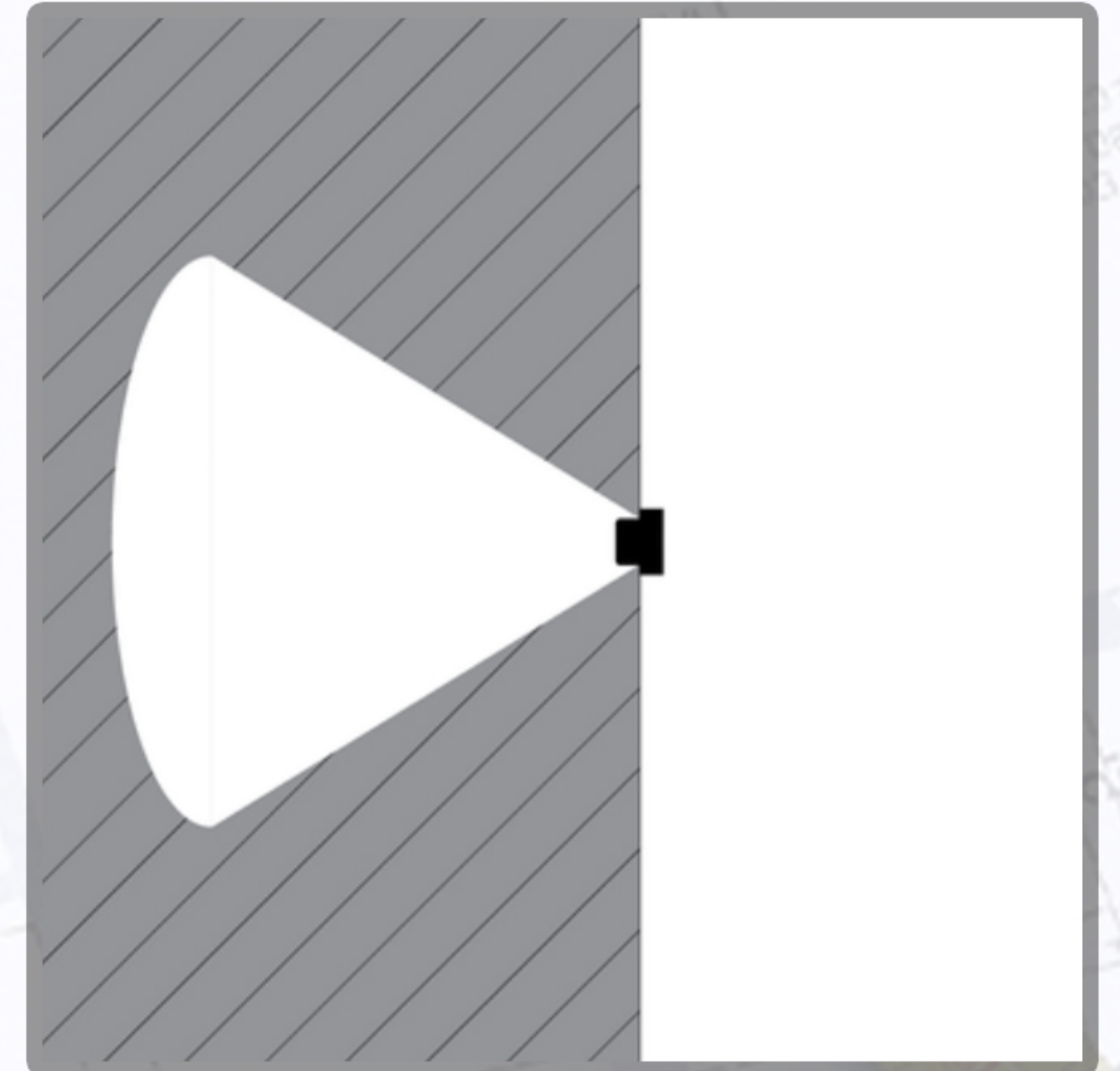
## H) Bracket Mounting for Heavy Item



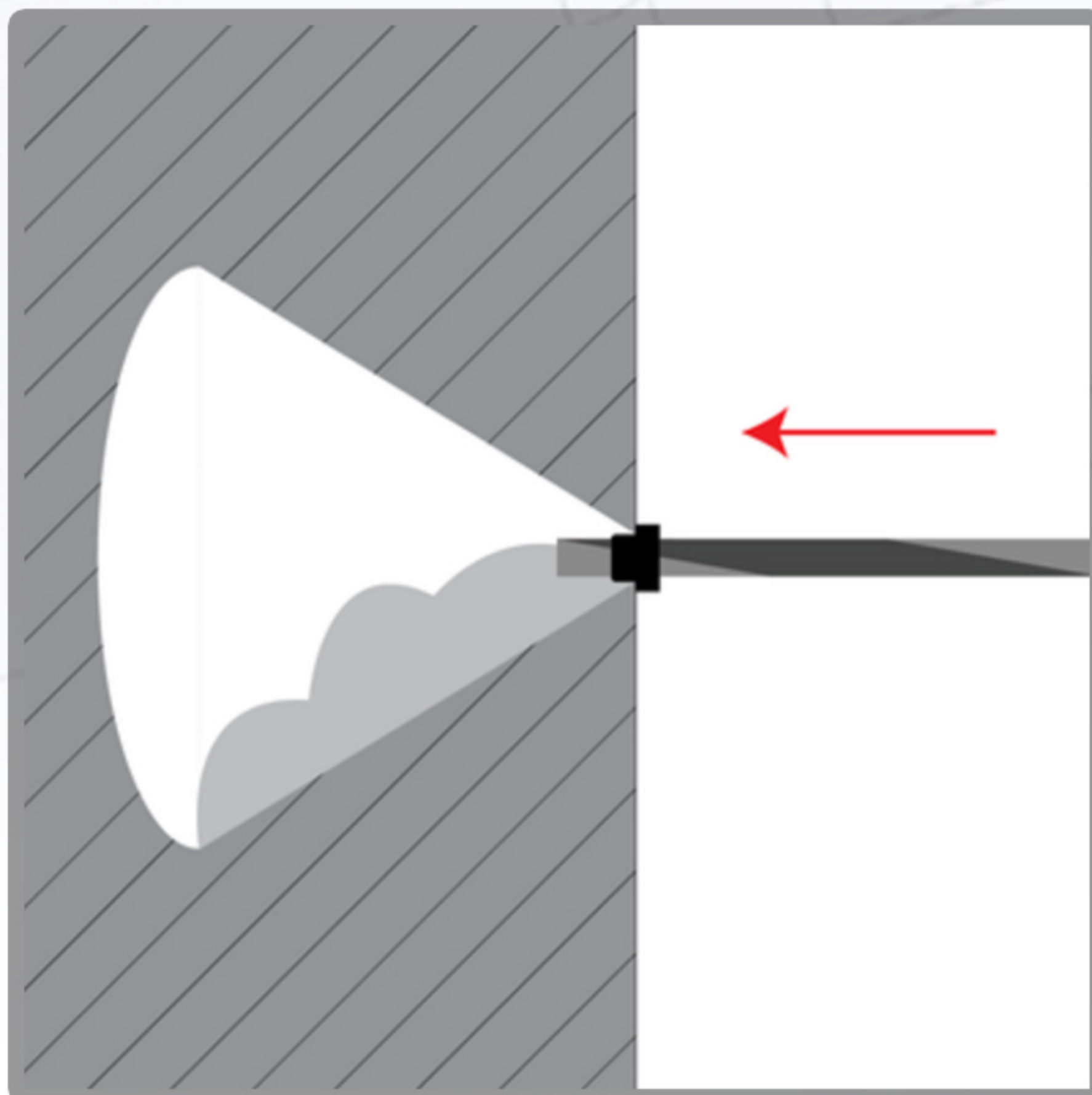
1. Drill Hole



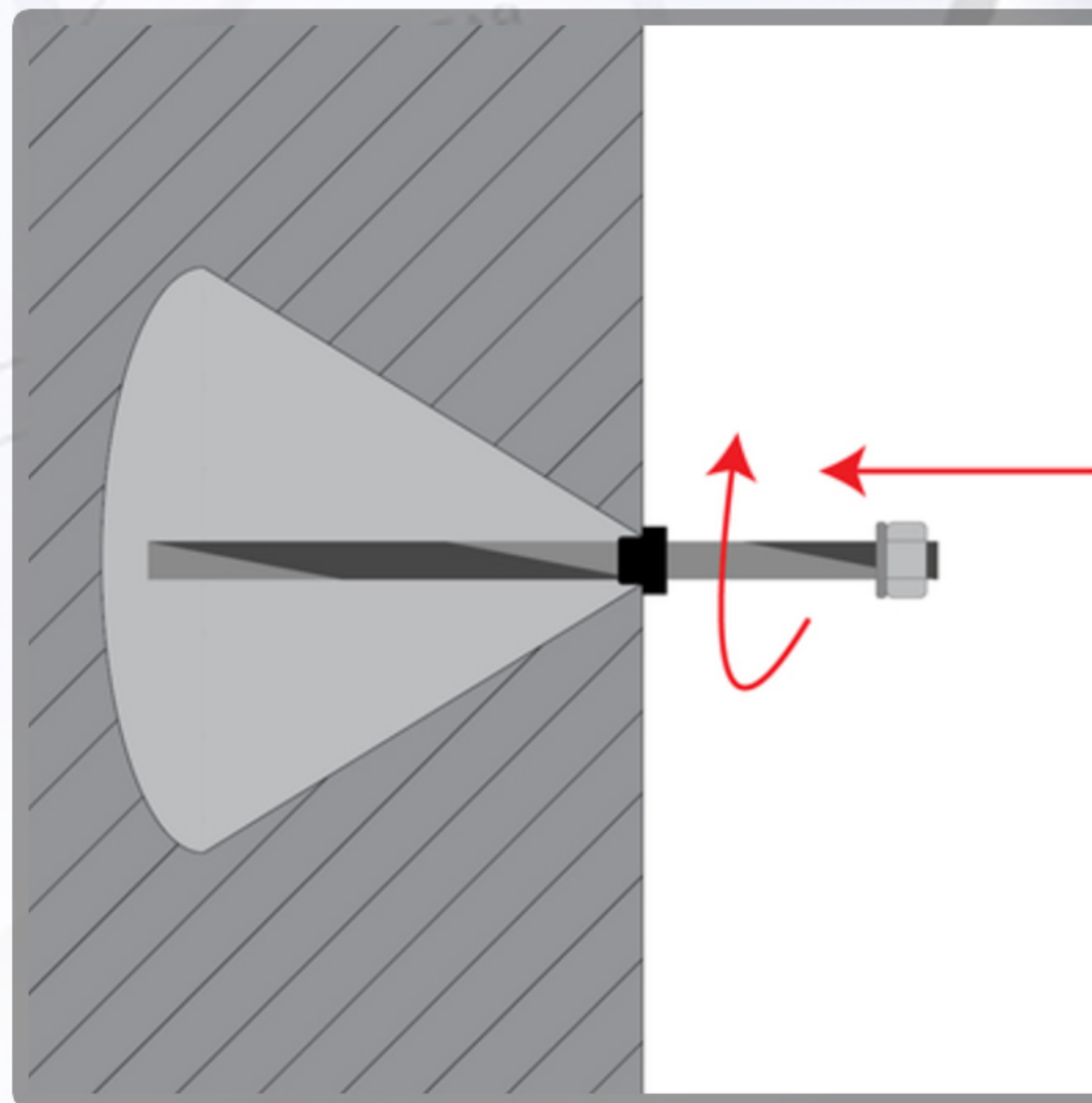
2. Remove dust



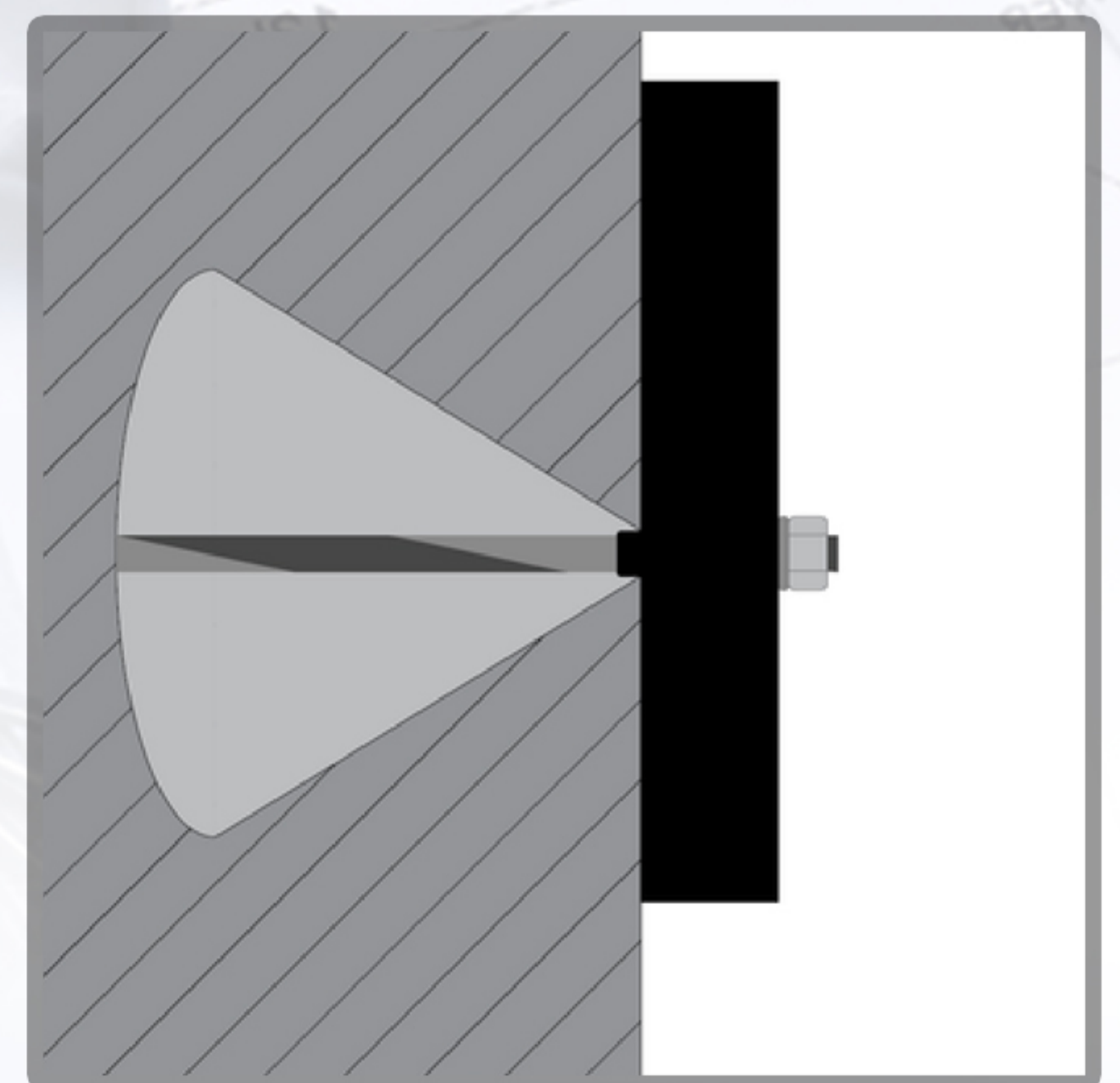
3. Insert Sleeve or wall plug



4. Inject Epoxy substance



5. Insert Bolt



6. Fixing Bracket & Screw

Example:  
*Sika Anchorfix,*  
*Statheros EAC80 Epoxy*



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# IBS VPLUS PANEL FENCING

INSTALLATION OF VPLUS PANEL  
FOR FENCING WALL

# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING



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## A) Site preparation

- a) The column/beam/common brick/shear wall should be accurately aligned, with good surface in order for V-PLUS panel to be joined properly.
- b) Beam surface must be levelled and clean from debris before set out the marking line.

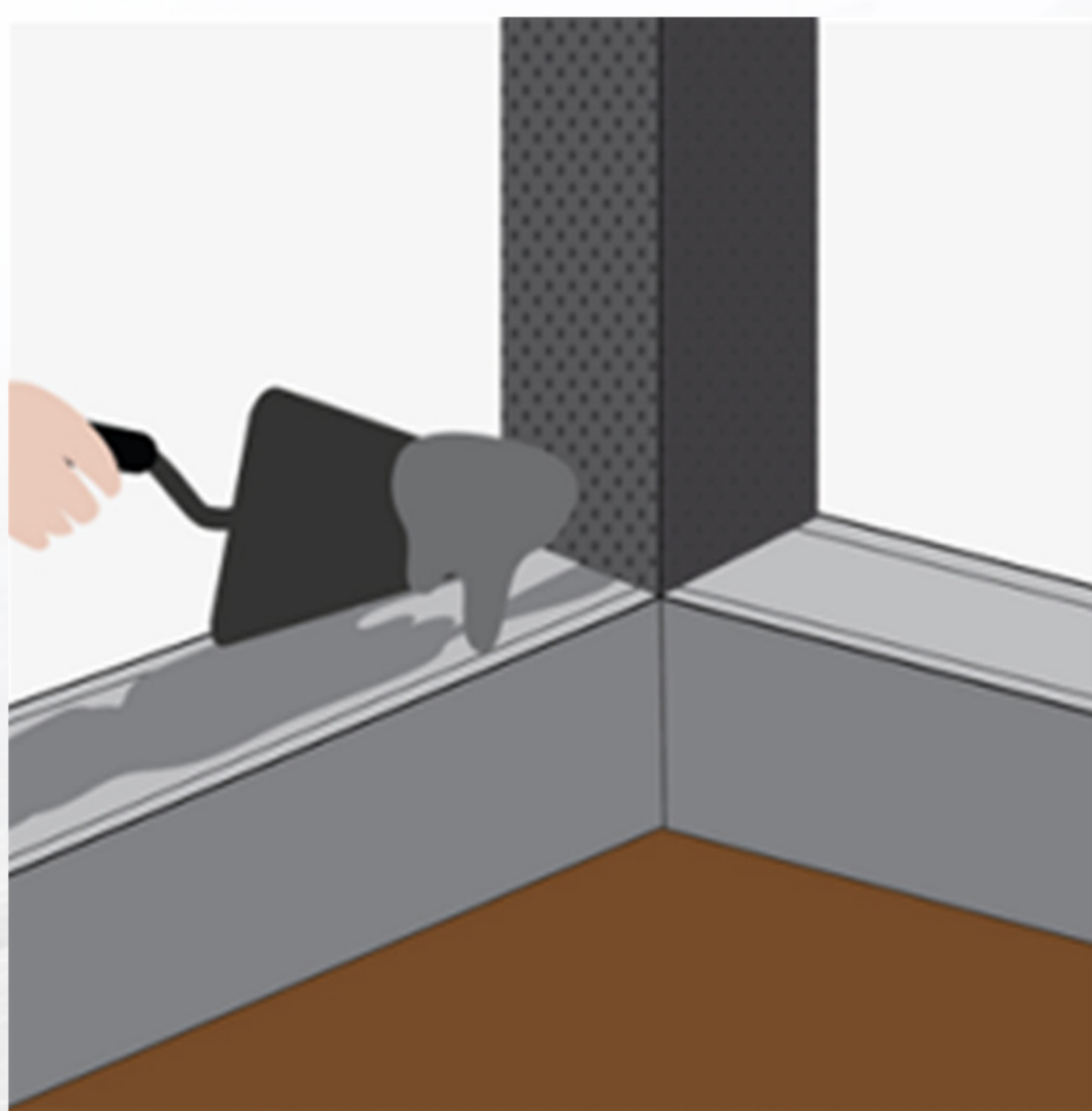
## B) Setting out & measurement



**1** Set the concrete structures neatly, clear from any debris and marking.

**2**

Mix the cement adhesive with 4:1.25 ratio to the water using blender.



**3**

Apply cement adhesive on the beam before installing every V-PLUS Panel.

**4**

Paste the mixed cement adhesive on the side of V-PLUS Panel.



# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING

## C) VPLUS Panel installation types & arrangement

### i) 2 common types of V-PLUS Panel installation for fencing:

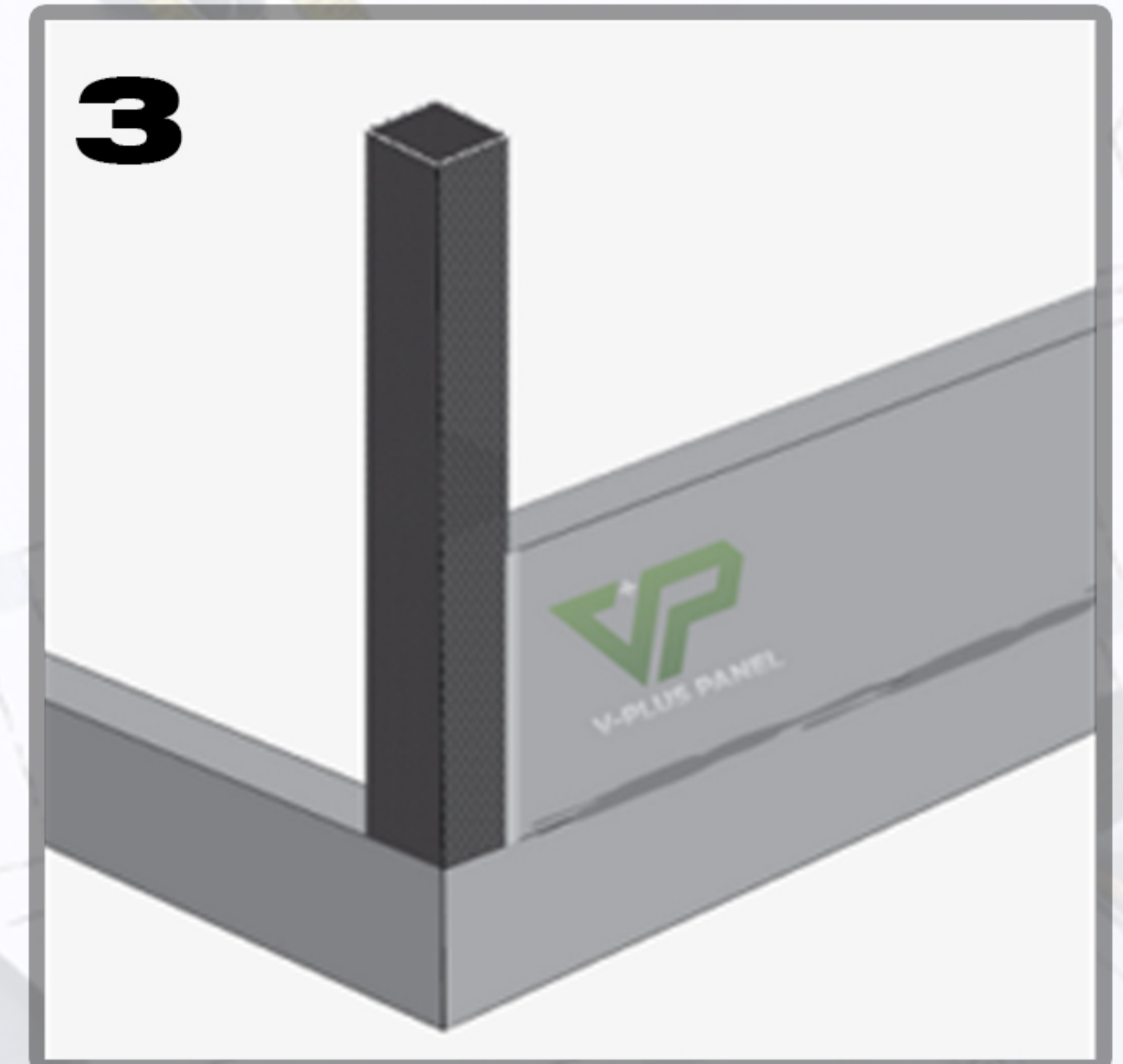
#### V-PLUS Panel to concrete column



**1**  
Install V-PLUS Panel horizontally attach to column.

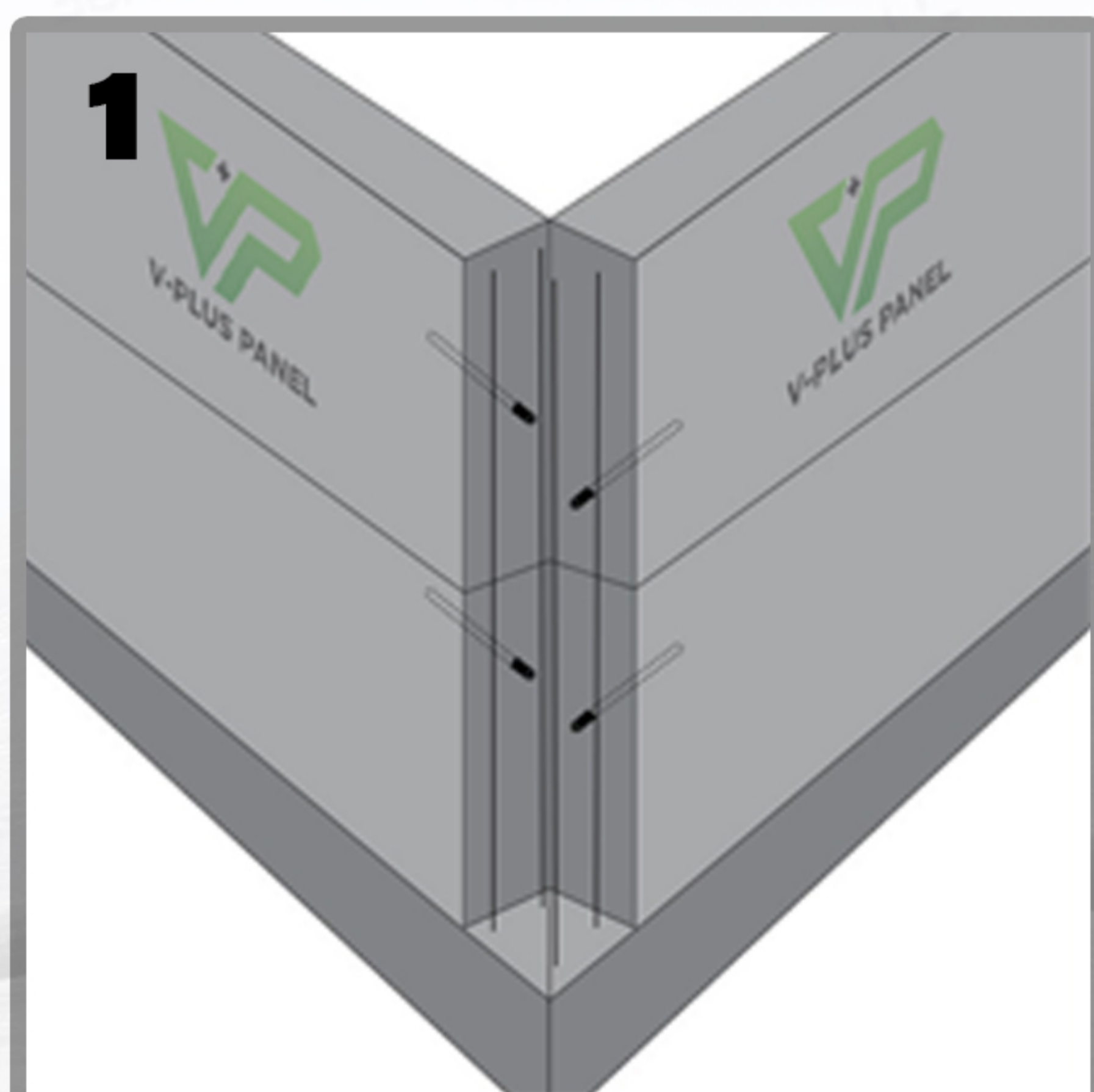


**2**  
before column jointing, Install 6 inches Y10 steel rebar into the column (3 inches in & 3 inches out).



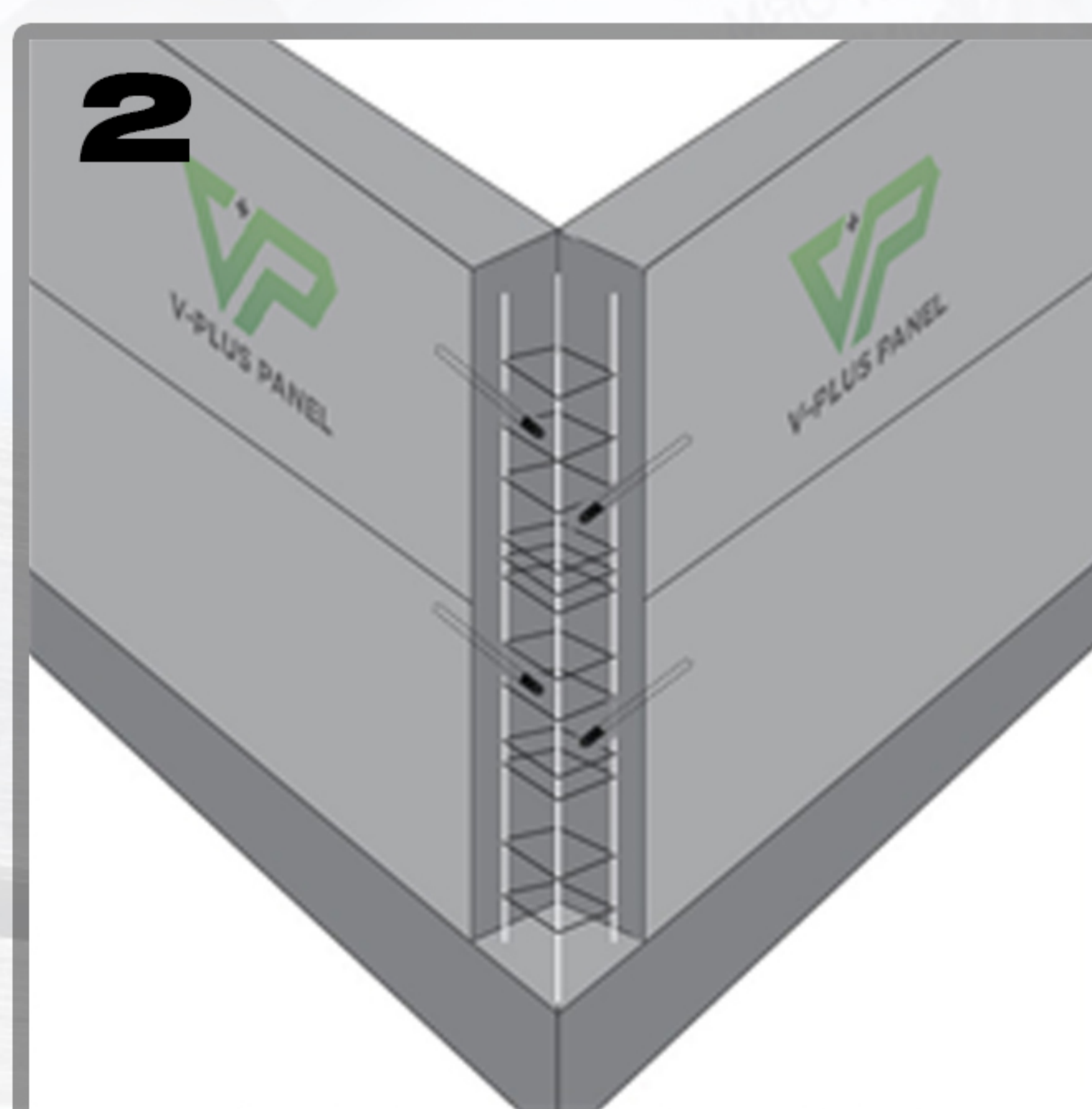
**3**  
Ensure panel attachment aligned to the installed Y10 rebar.

#### V-PLUS Panel to concrete column (Shuttering)

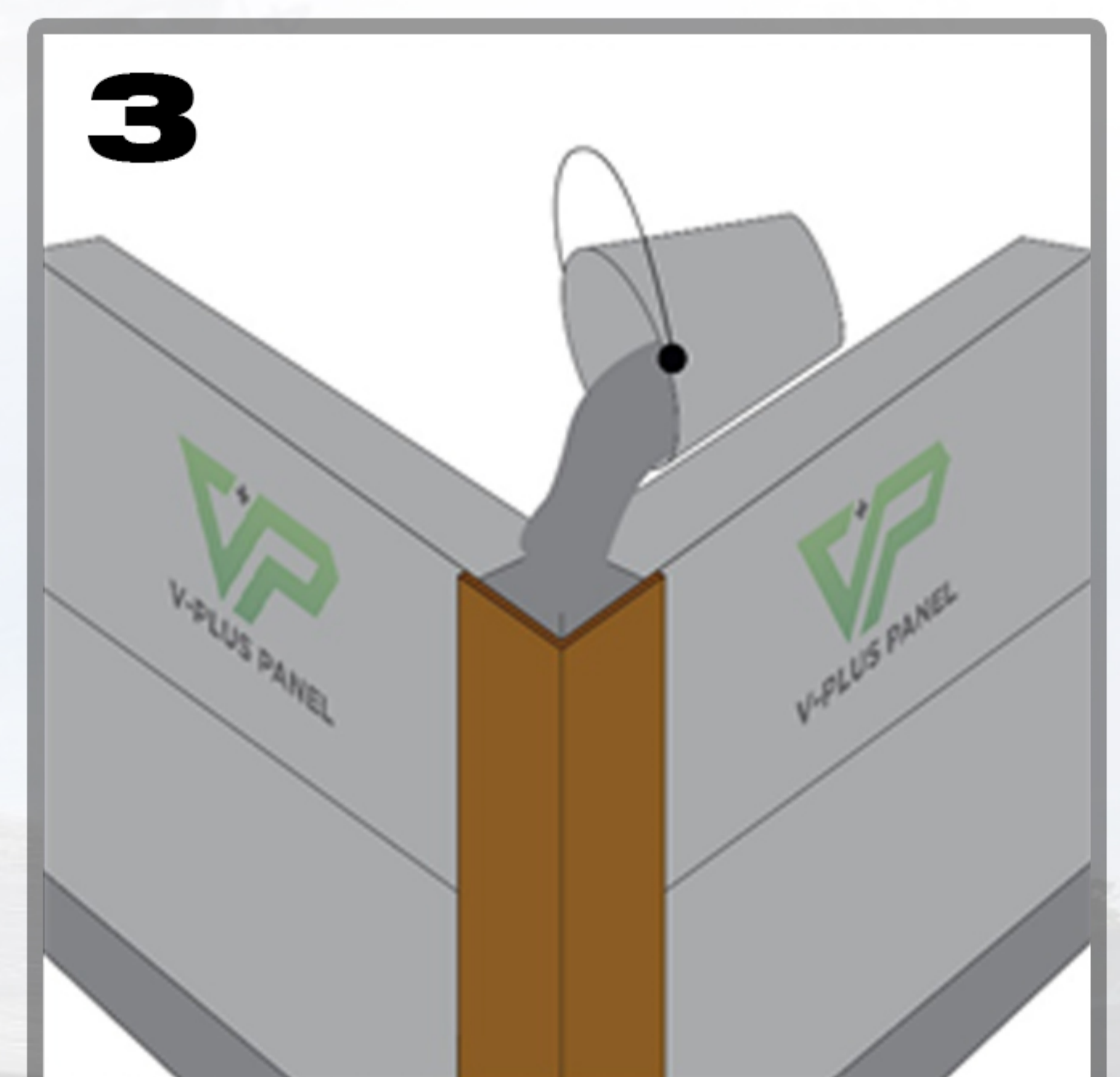


**1**  
Placing V-PLUS panel horizontally to the beam, put join to edge-to-edge of the panel.

Install 10 inches Y10 steel into the column (5 inches in & 5 inches out)



**2**  
Column steel rebar and links steel bar installation.



**3**  
Mixing & pouring concrete into column shuttering formwork

# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING

## C) VPLUS Panel installation types & arrangement

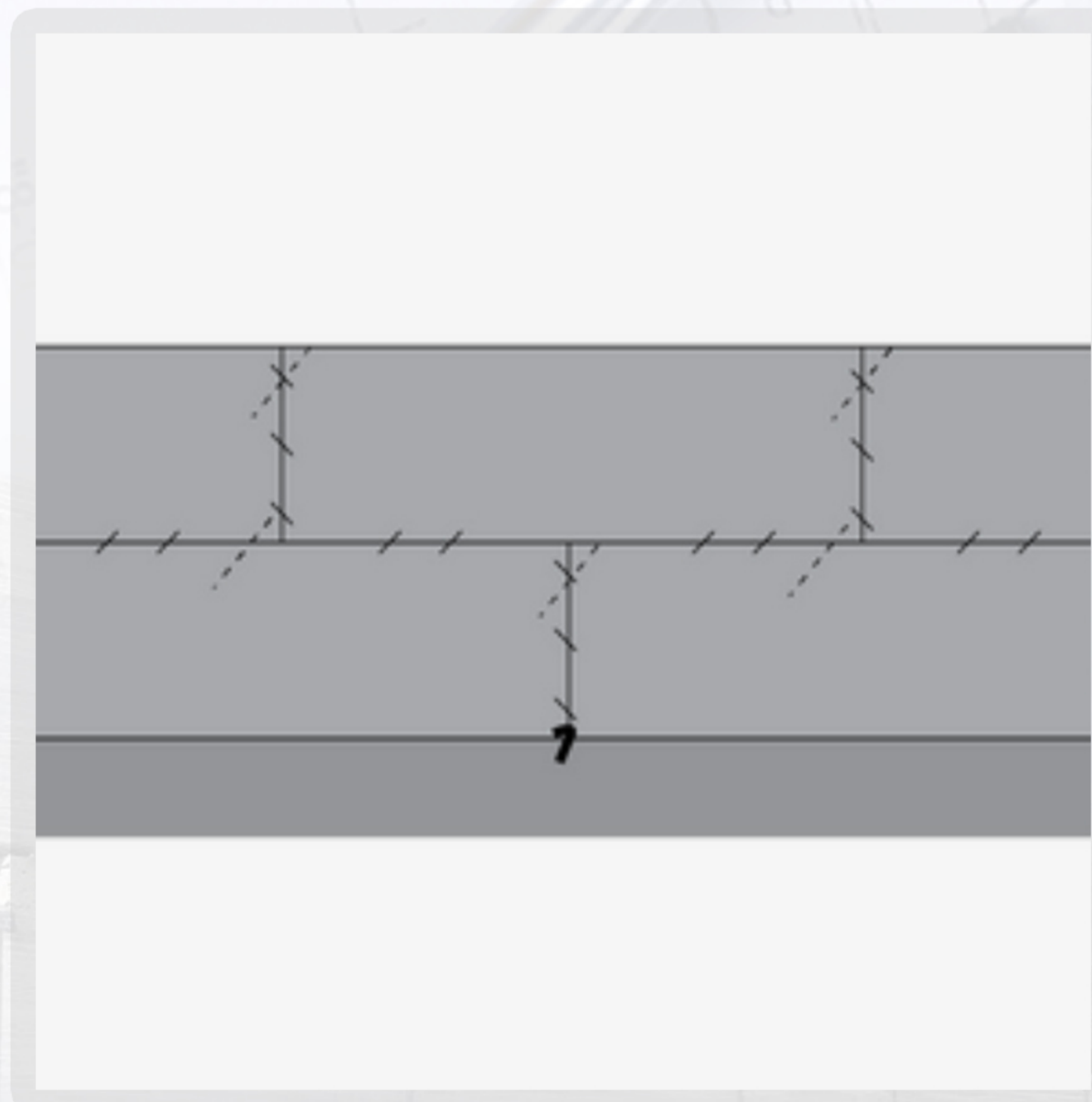
### ii) VPLUS panel arrangement for fencing



**1**  
Install V-PLUS Panel horizontally  
attach to column.



For upper layer, install VPLUS according  
to 'running bond' pattern for better  
stability and aesthetic.



Advisable upper first layer to be cut  
5 feet and then 10 feet alternately.

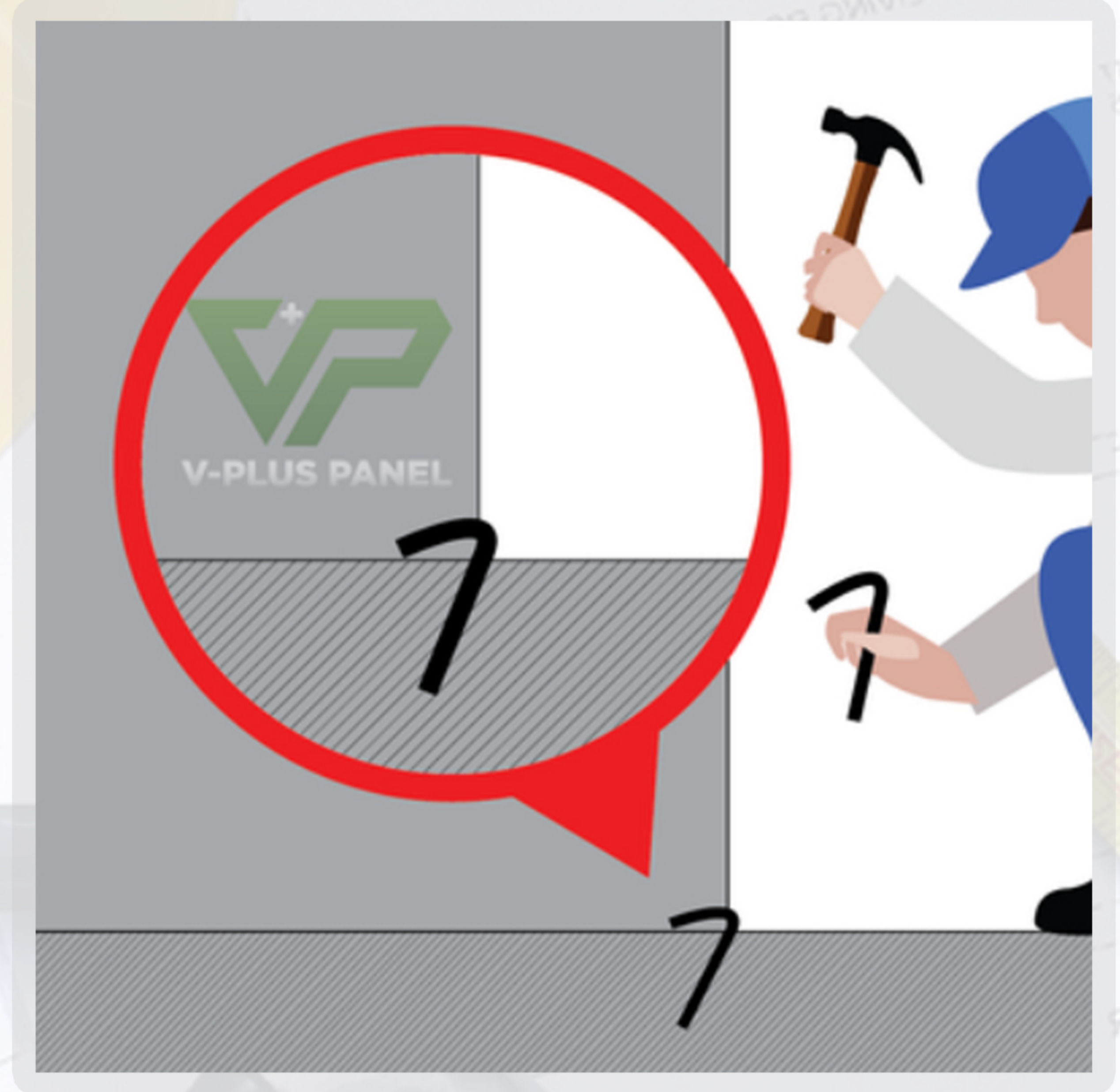
# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING

## D) VPLUS Panel Locking System

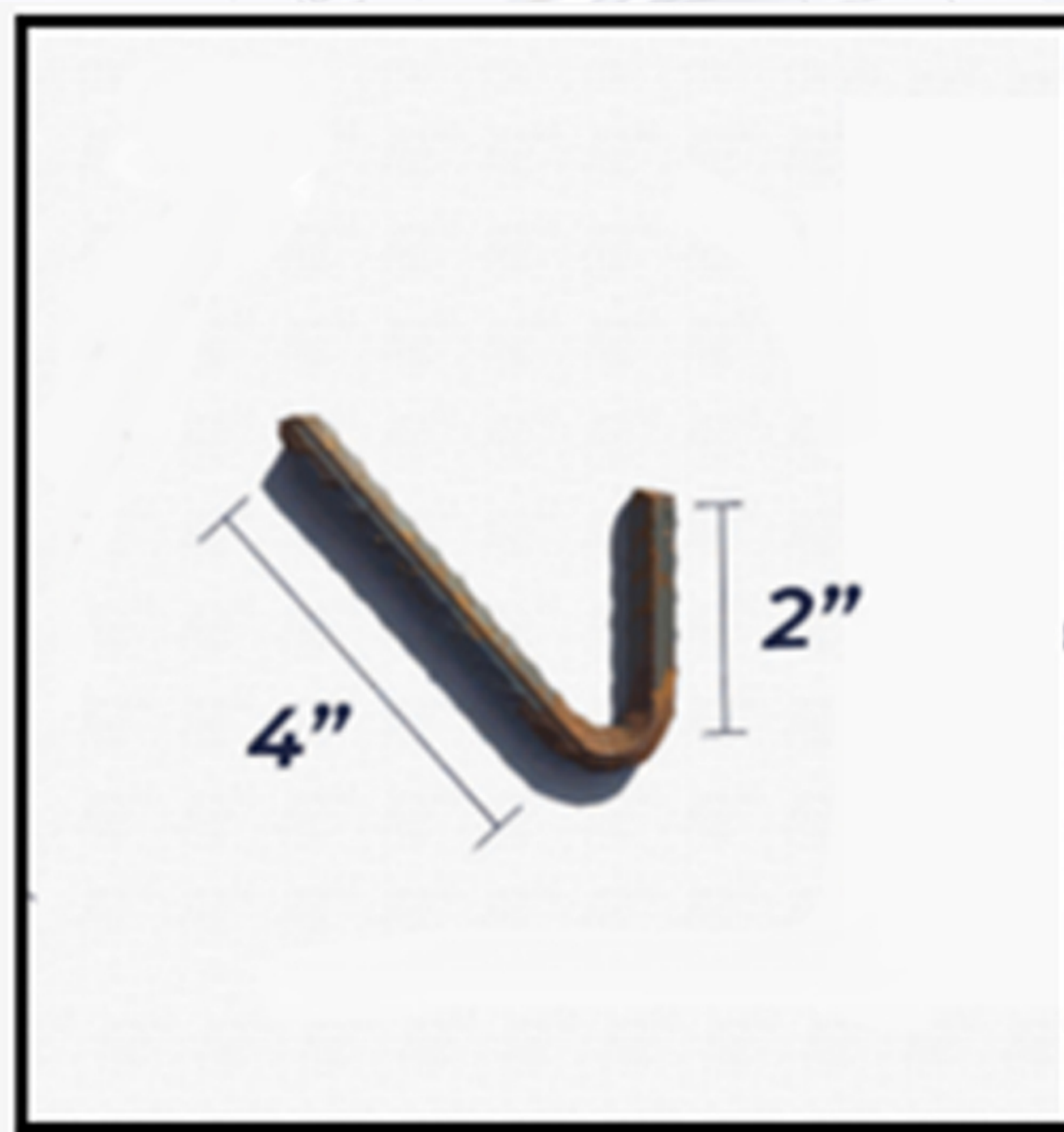
### i) VPLUS panel - bottom locking



Drill the hole into the beam concrete for bottom locking slot at the edge of the Panel.



Lock the bottom of every panel installed using '7 shaped' Y10 bar with length 6-7 inches.



## Y10 Steel

With '7' shaped & length  
6 - 7 inches

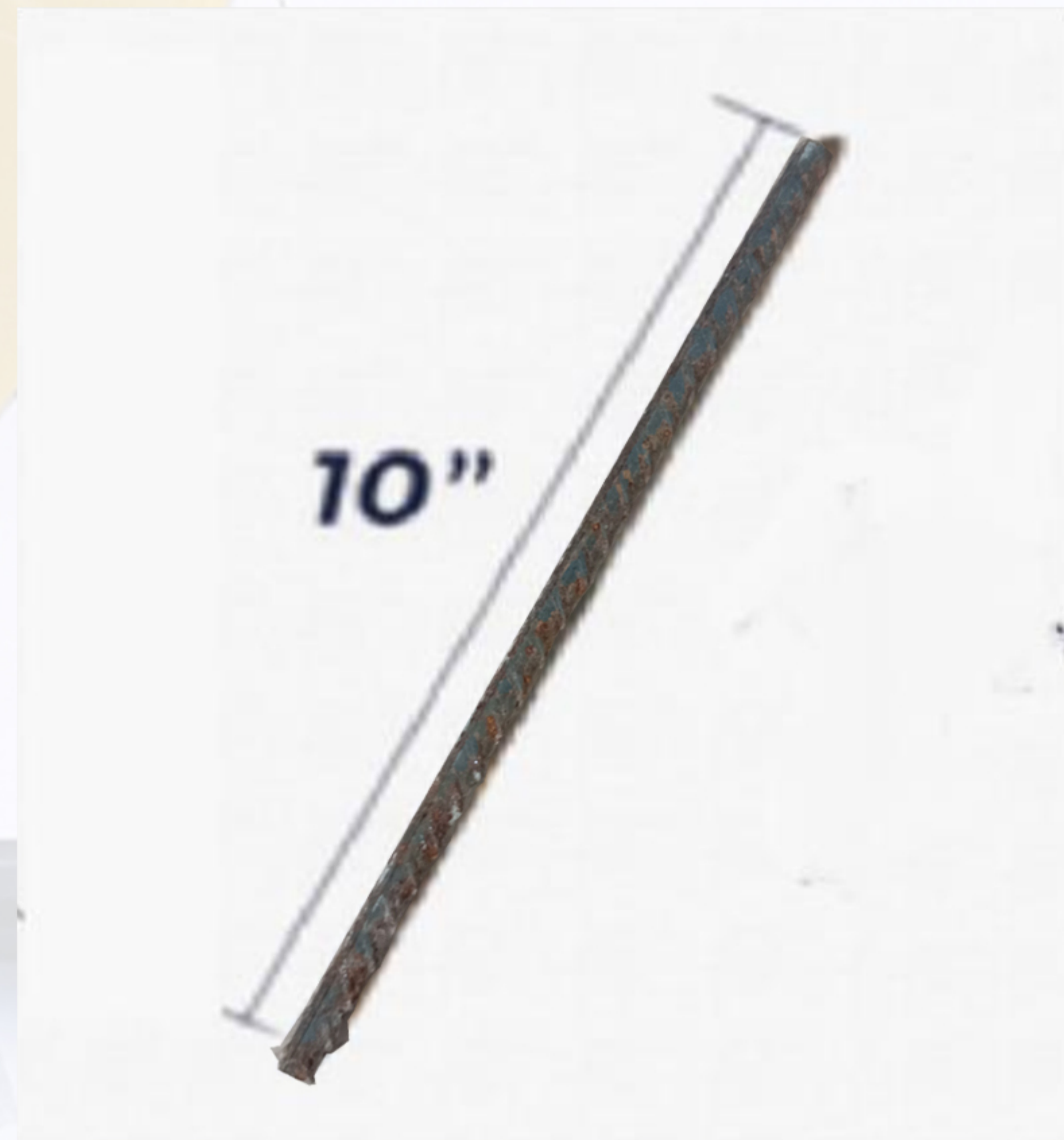
# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING

## D) VPLUS Panel Locking System

### ii) VPLUS panel - top locking

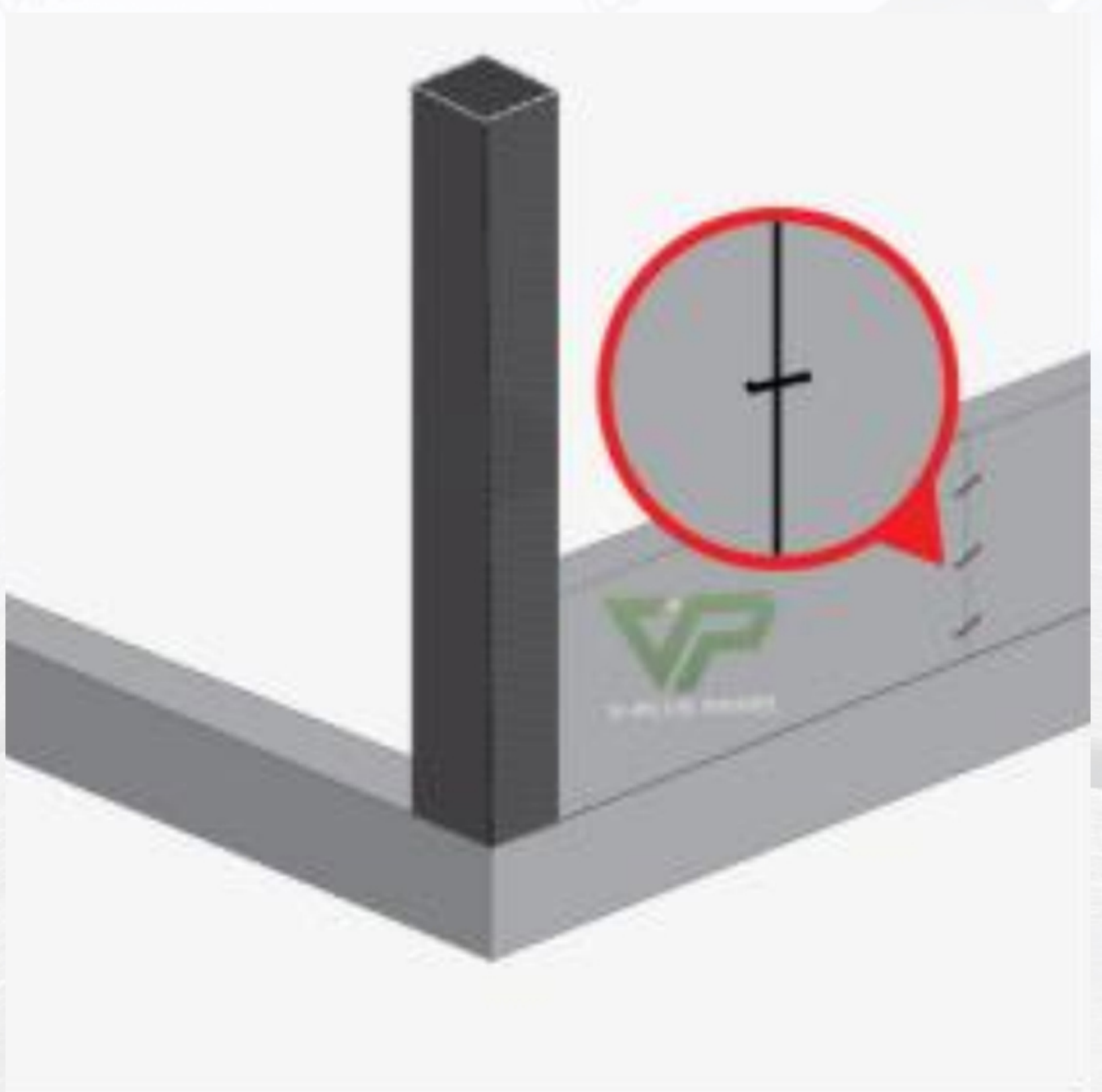


Lock every panel at the top using Y10 rebar with 10 inches length

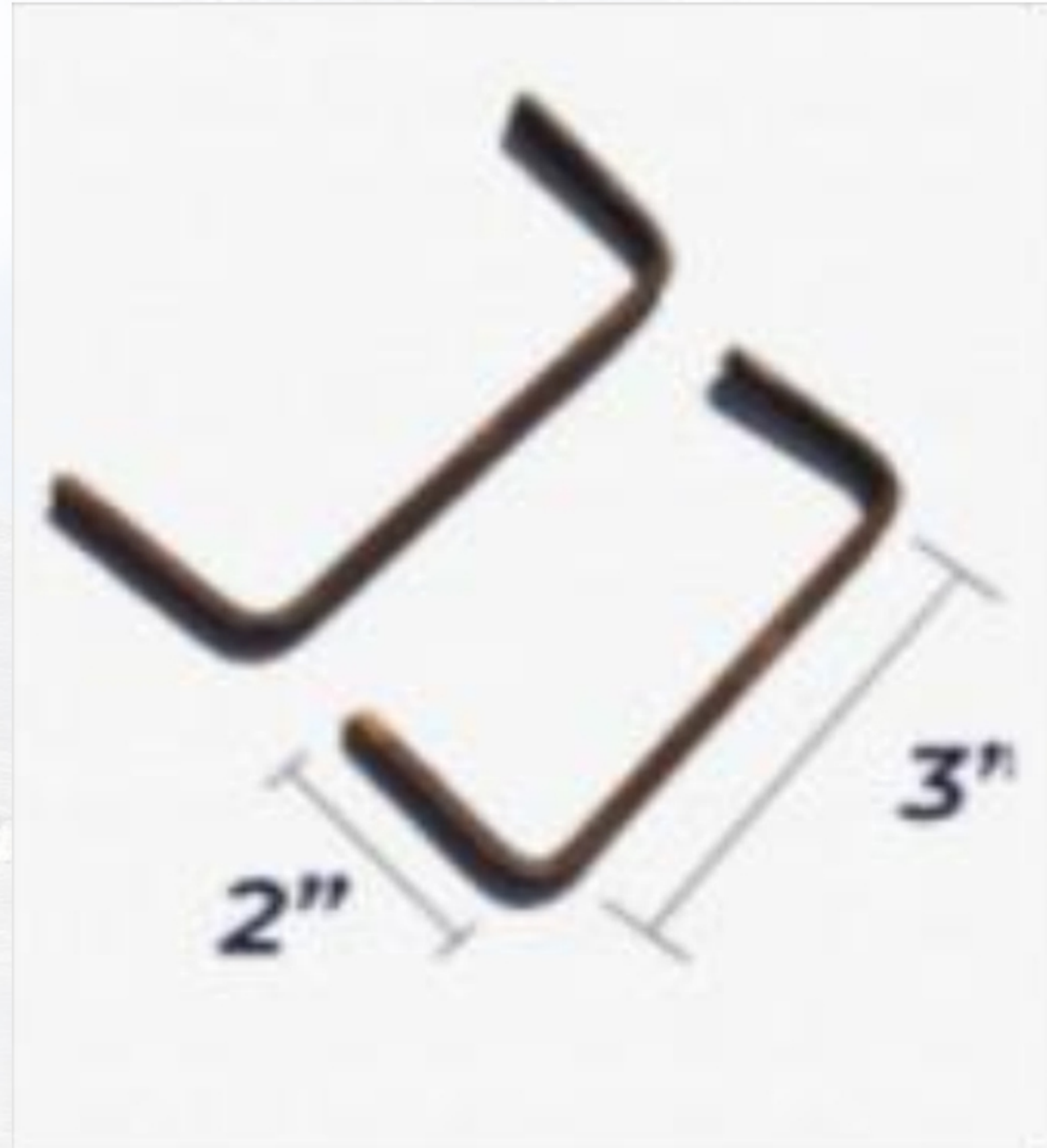


Y10 rebar

### iii) VPLUS panel - surface locking



Lock every panel jointing using R6 steel bar with 'U' shape. Minimum 5nos to be used, 3nos outside and 2nos inside OR otherwise.

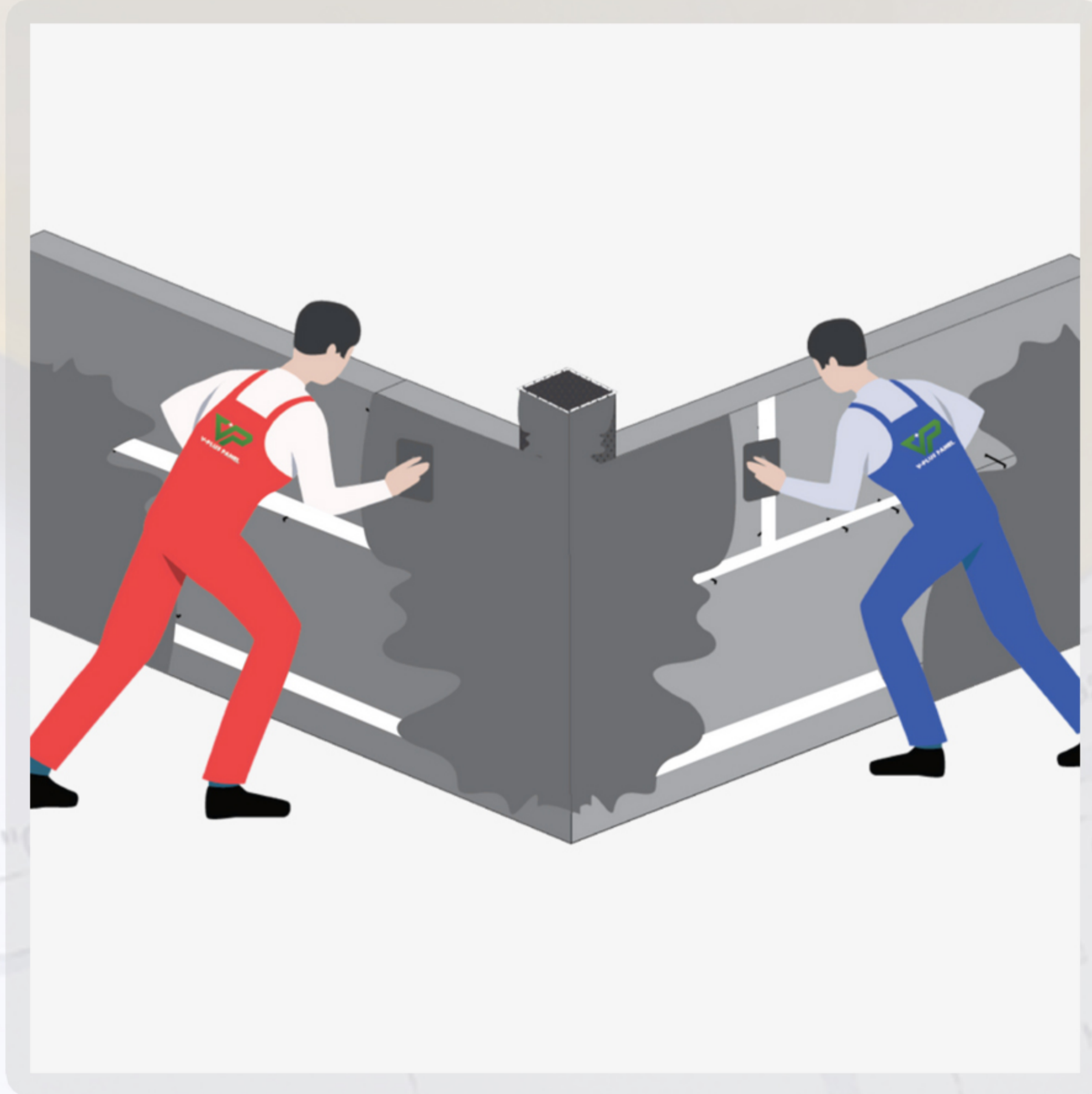


R6 bar with 'U' shape

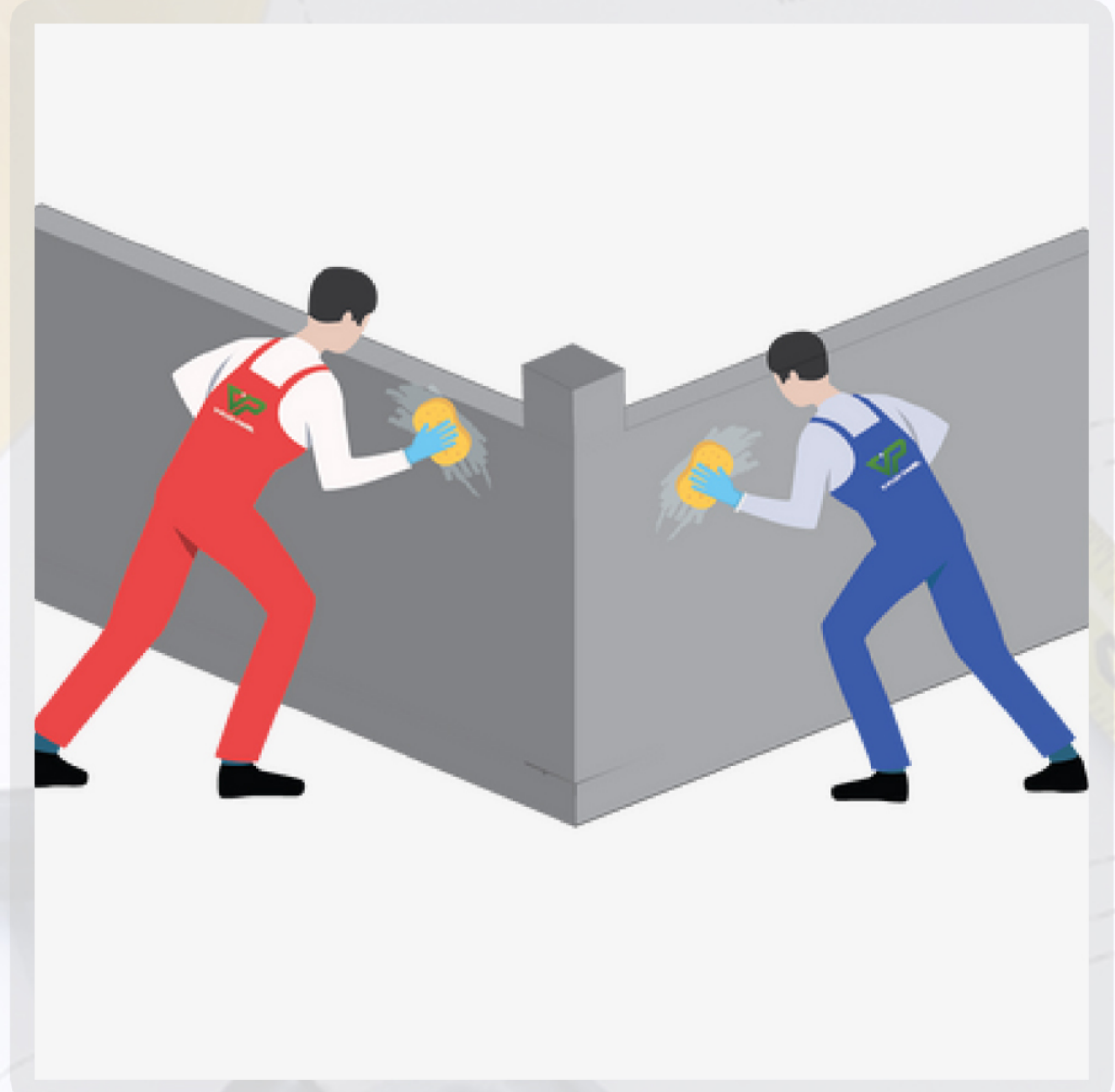
# METHOD OF STATEMENT V-PLUS FOR PANEL FENCING

## E) VPLUS Panel Skim Render

### Application of fibre mesh & skim coat



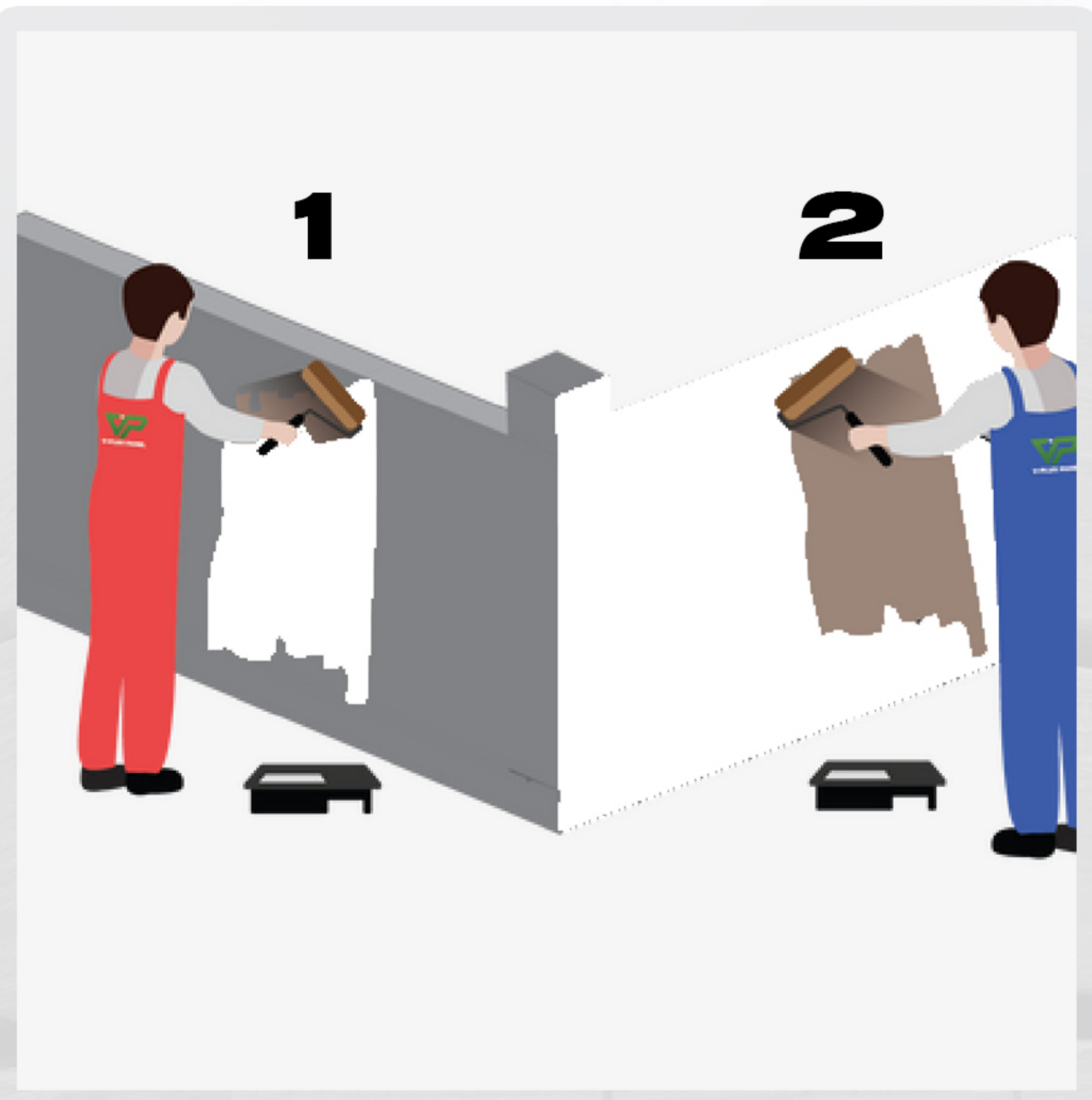
Install fibre Mesh at every jointing.



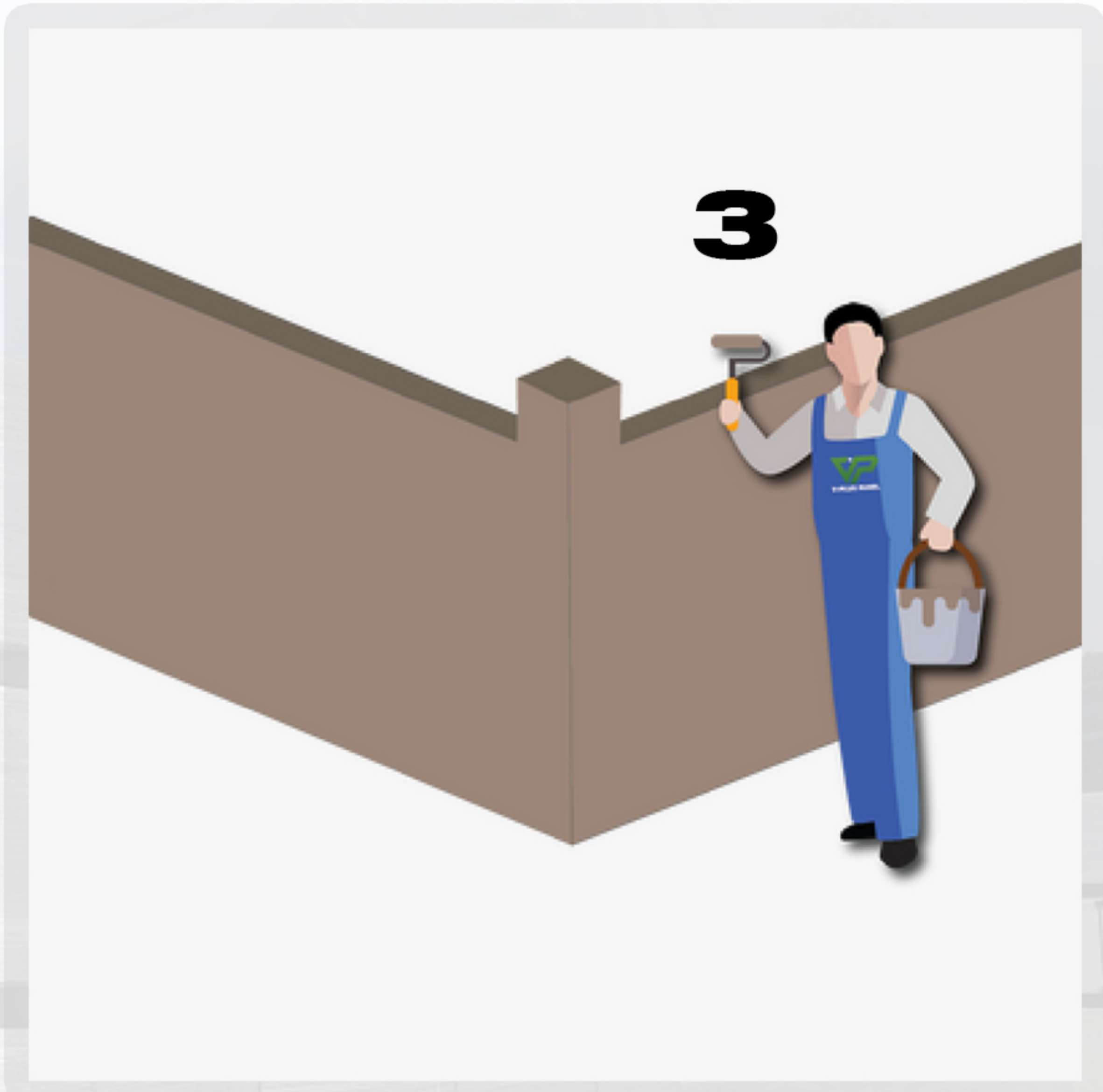
Apply skim coat to overall panel wall surface

## F) VPLUS Panel Wall Finishing

### Application of wall paint



- 1) Paint wall with wall sealer and left dry.
- 2) After sealer layer dried, finish the wall with color paint.



- 3) VPLUS Panel fencing work is done.