

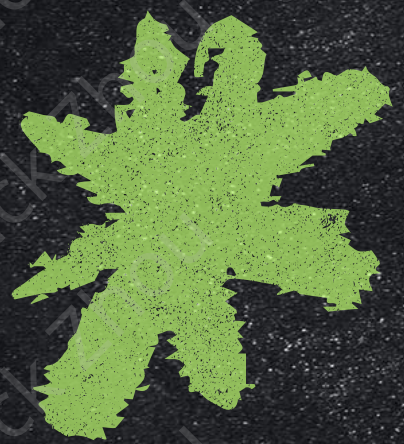


Door Guardian



By Patrick Zhou

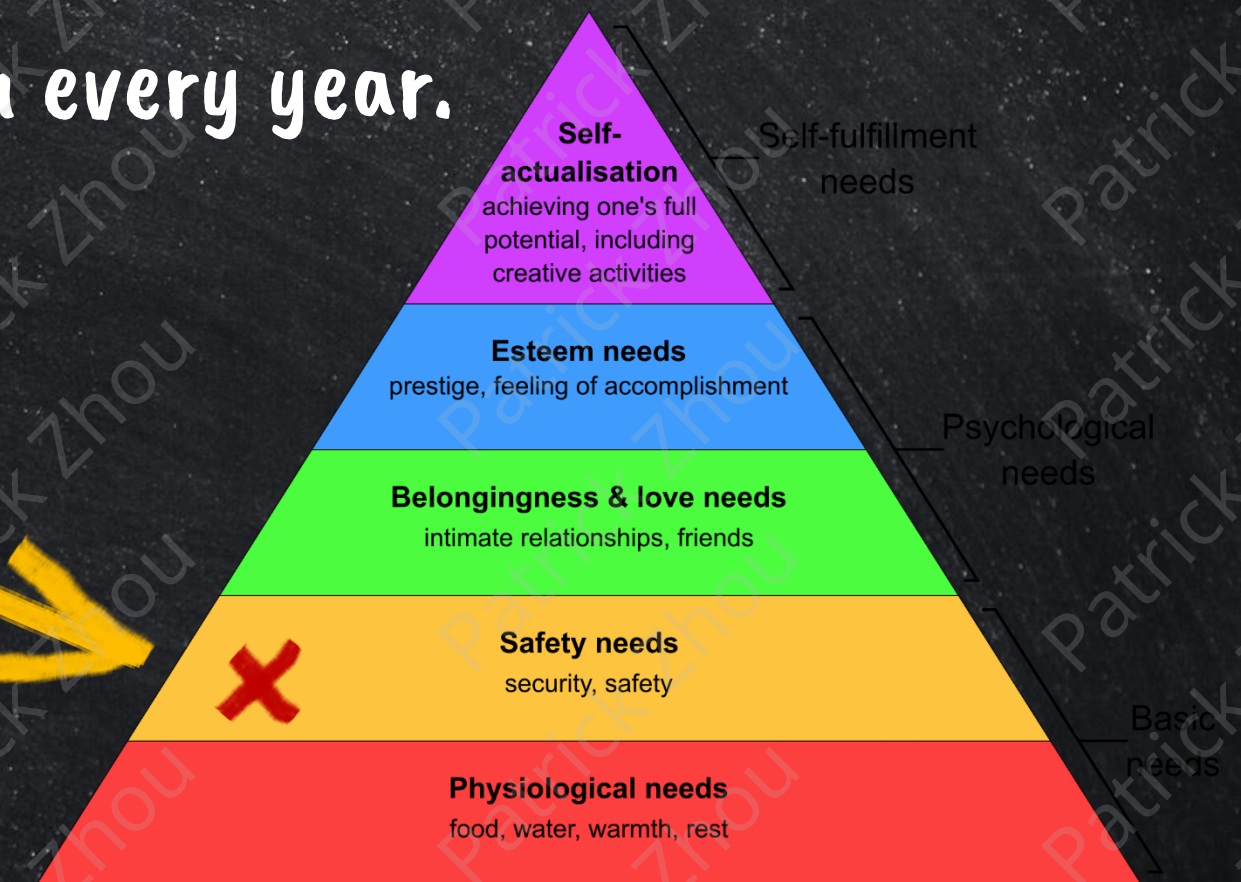




PROBLEM



- In the U.S., gun violence is the number 1 cause of death among children.
- CDC is categorizing gun violence as a serious public health crisis.
- Mass shooting at school is getting more common every year.
- **The wellbeing of children is threatened.**



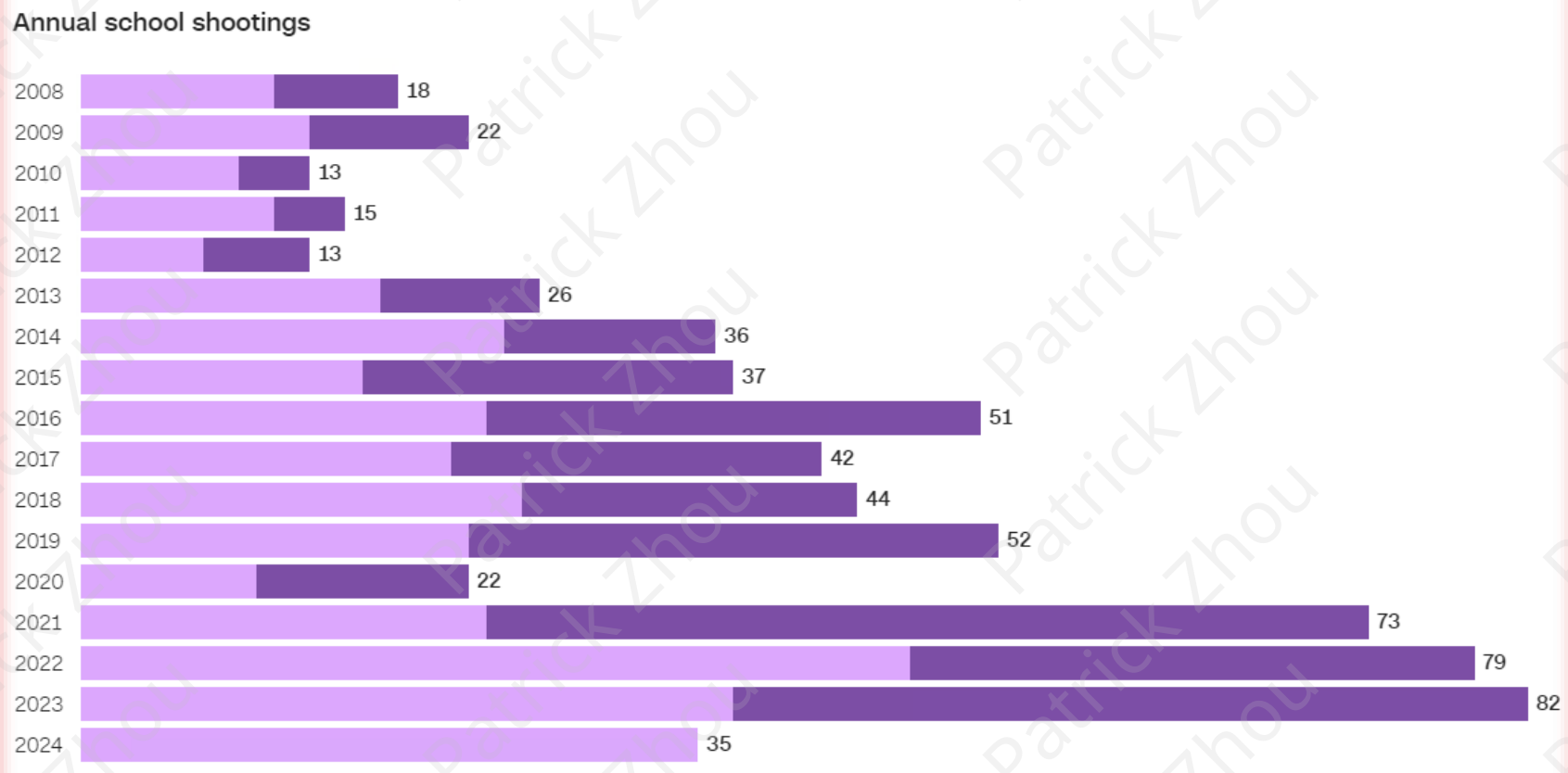
Maslow's Hierarchy of Needs



Here Are Some Grim Statistics



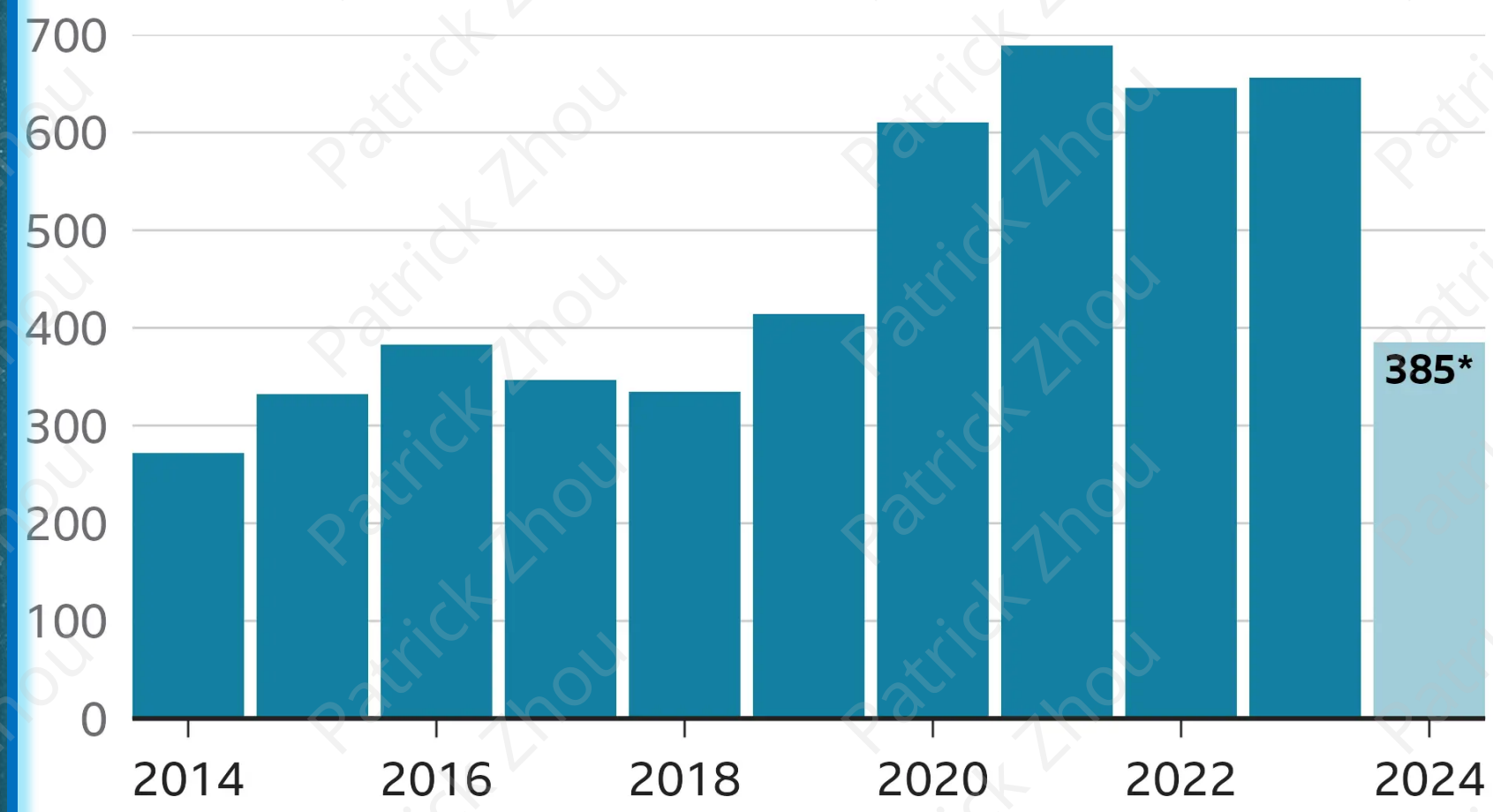
How school shootings so far this year compare to the same point in past years
As of **July 11** – the 193rd day of the year – there have been **35** school shootings in the United States in 2024. **Light purple** indicates the number that had occurred by the **193rd** day of each year.



Note: CNN reviewed incidents reported by the Gun Violence Archive, Everytown, and Education Week.
Source: CNN school shootings database
Graphic: Alex Leeds Matthews, CNN

Mass shootings in the US

Incidents in which four or more people were killed or injured



Source: Gun Violence Archive (*data up to 5 September) **B B C**

FAILED LEADERSHIP

What have our leaders done to curb gun violence? Not much... ..

- Visited mass shooting sites
- Made speeches and promises
- Some usual lines said by the politicians:
 - “We must defend our right to bear arms.”
 - “Guns Don’t Kill People, People Kill People.”
 - “Let’s ban violent video games.”
 - “We have a mental disorder epidemic.”



What substantive
progress have we
made?



NONE

adverb

by no amount; not at all.



Life-Saving Measures I Have Analyzed

Why It Is Not Feasible

Bullet-Proof Backpacks

Kevlar insert is light-weight but is unable to defend against AR-15. A metal plate insert can defend against AR-15 but adds at least 8 lbs. weight to the backpack.

Metal Detector at Entrance

This measure does not prevent an outside shooter from entering the school by force.

Teachers carrying handguns

This will require firearm training for millions of teachers. There will likely be an increased rate of firearm accidents at schools.

Question for The Teachers

Here is a Hypothetical Scenario:



While you are teaching a class and you suddenly hear **gunshots** coming from an unknown location, what would you do to keep your students **safe**? Do you know what direction to **run** or where to **hide**?

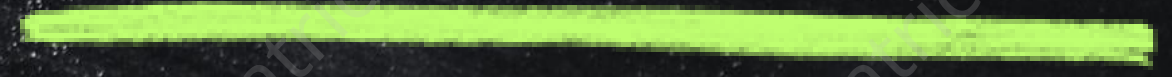
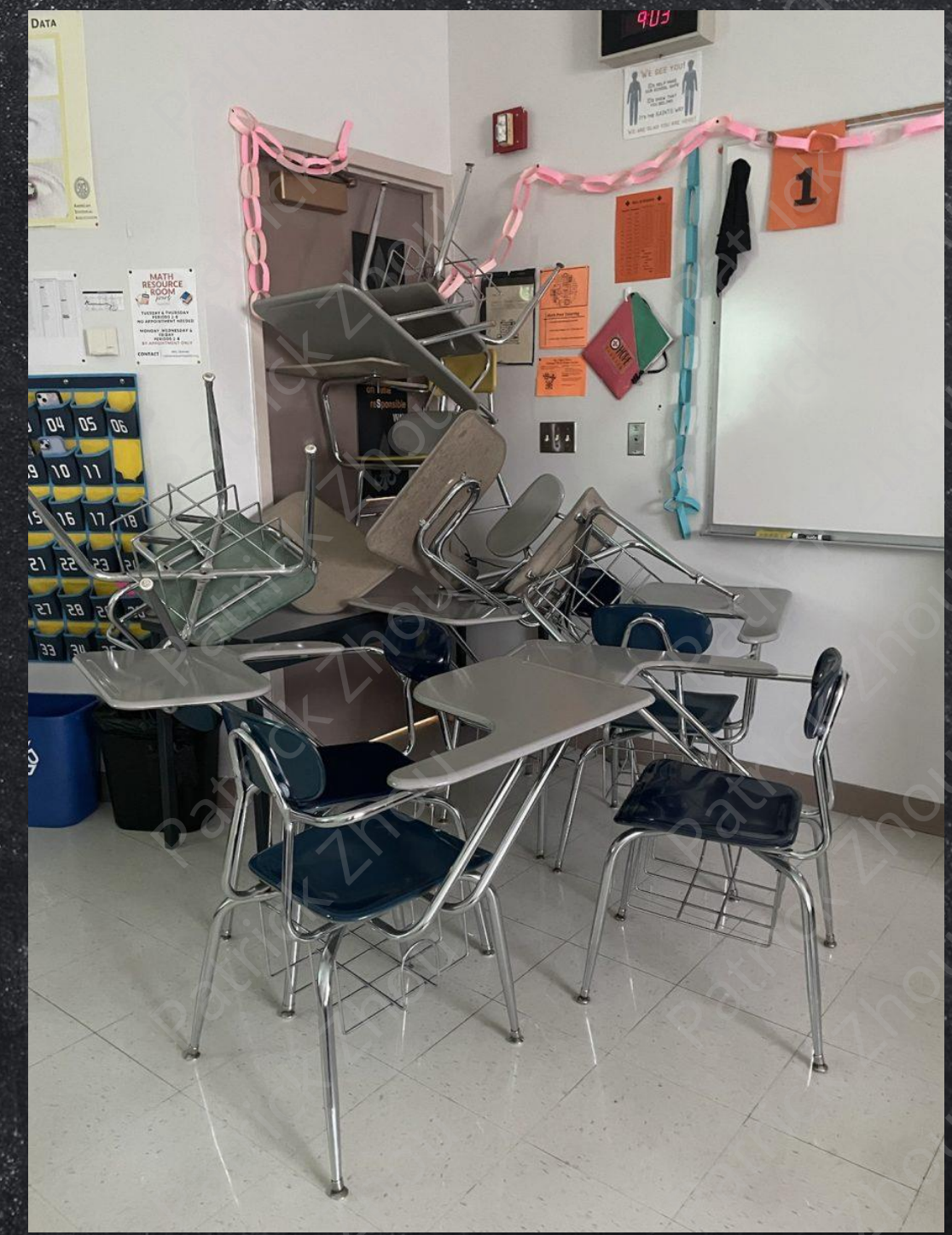


Current Active Shooter Drill



Hint:

It does not work



MY SOLUTION



OBJECTIVES:

- My solution is focused on saving lives by making every classroom a saferoom that is nearly impenetrable.
- Students and teachers can hunker down and stay alive in the classroom until the authority arrives.

REQUIREMENTS:

- The solution must prevent attackers from forcibly entering the classroom, even under violent attacks like kicking or gunfire from an AR-15.
- It must be cost-effective for schools to implement.
- The design should be user-friendly and easy to operate in an emergency.

THE DESIGN

Reinforce the classroom door with galvanized steel schedule 40 pipes sitting on heavy-duty steel U-shaped brackets, anchored by twelve 3-inch screws into the king stud.

Why not just use a cheaper 2 x 4 lumber instead? Because power of the 5.56 NATO rounds from an AR can easily break the lumber in half.



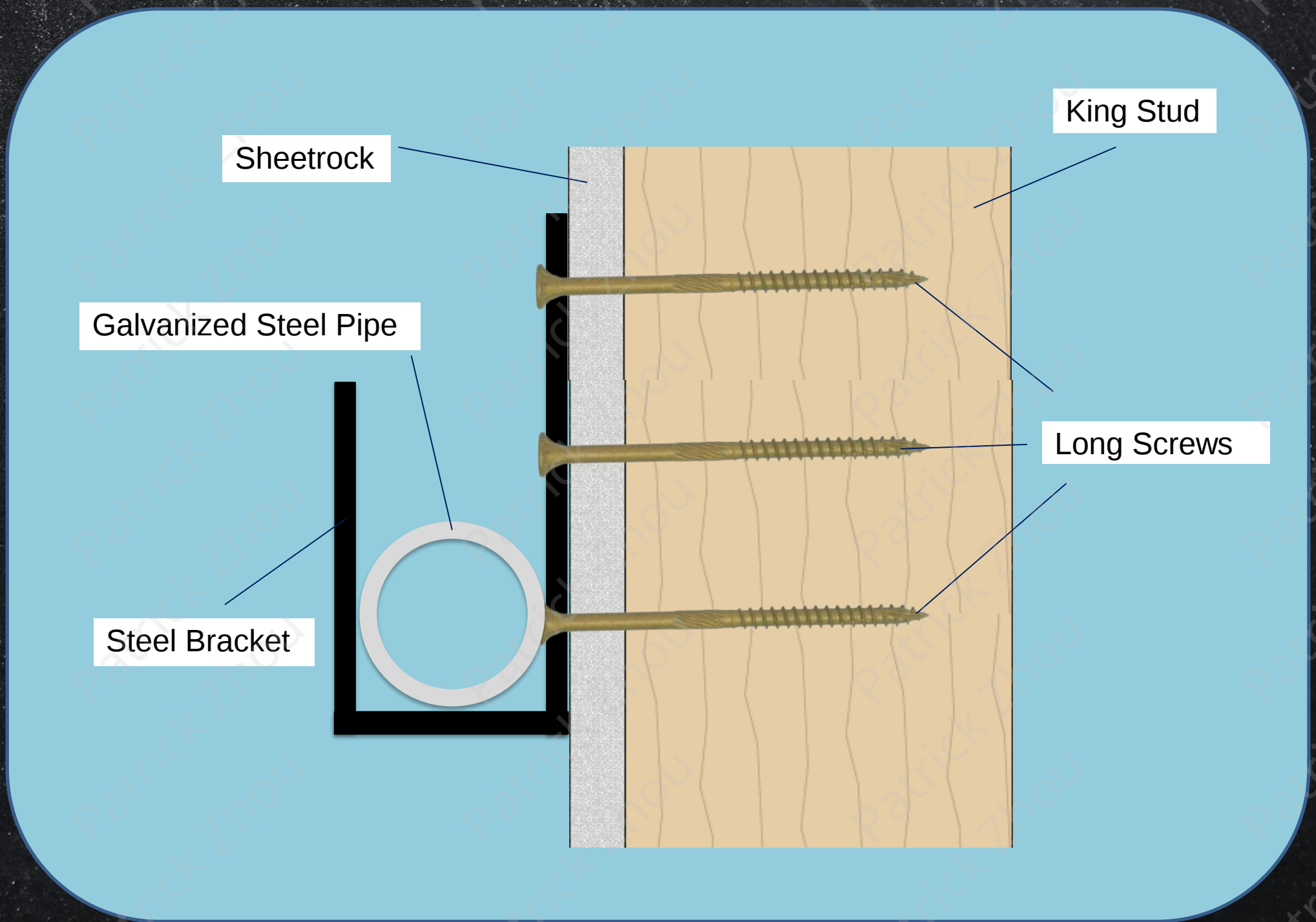
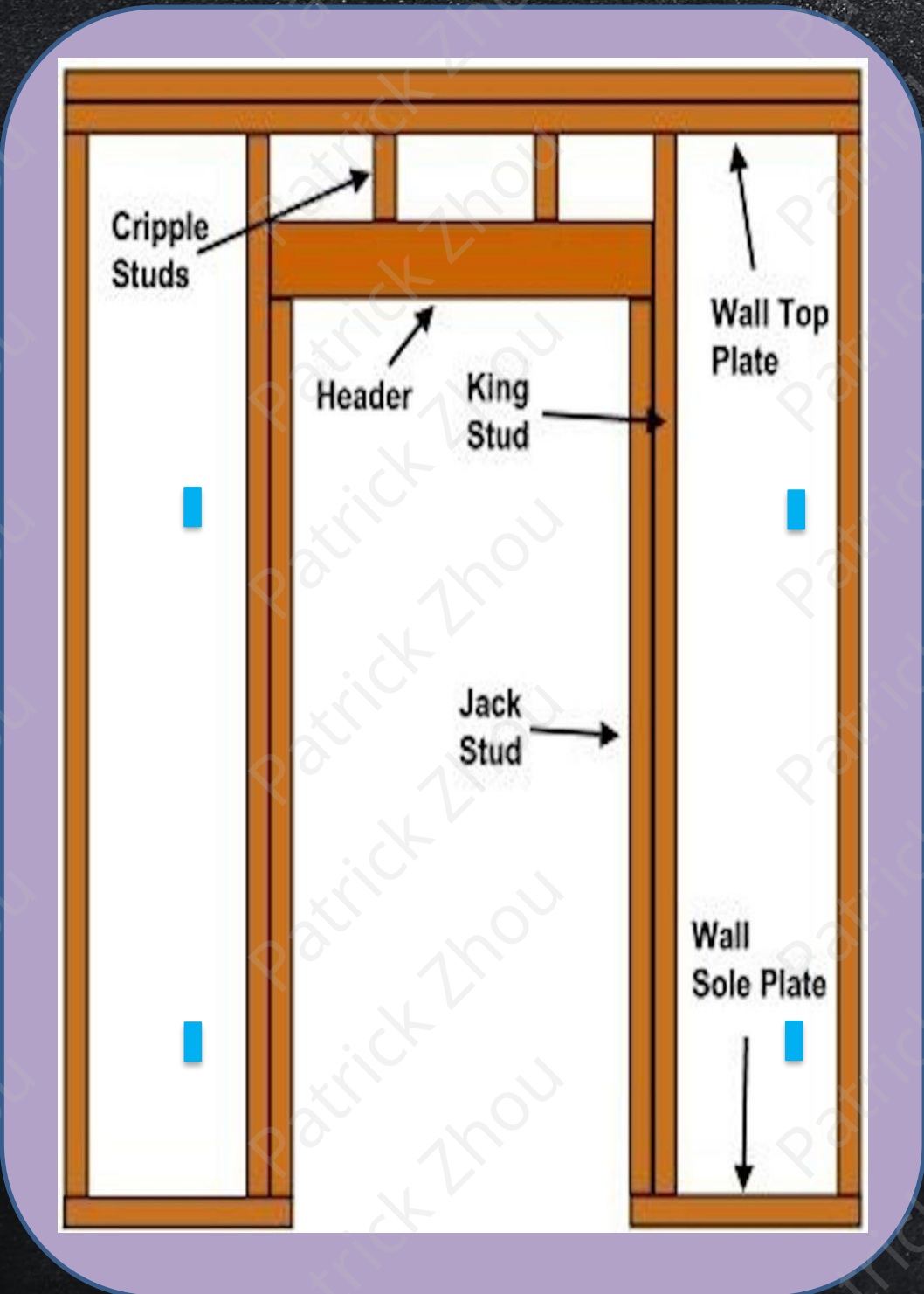
Inward opening door

Outward opening door



Why the Door Guardian is SO Strong

Each of the four **heavy-duty** steel U-shaped brackets are anchored to the king stud, which is a part of the building structure, by **twelve** 3-inch screws. It takes approximately **300 pounds** of brute force to dislodge each screw from stud!



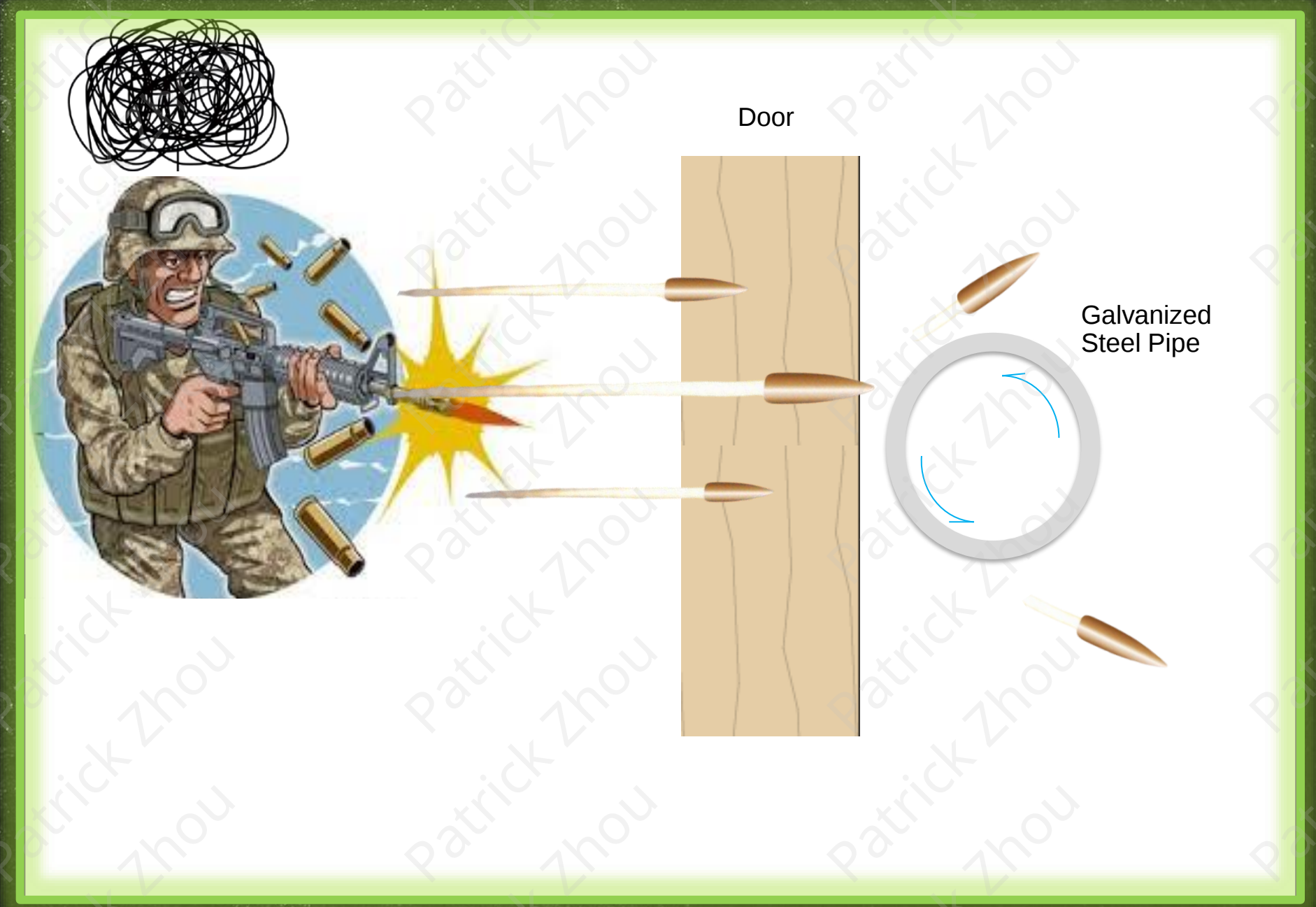
The Ultimate Anti-Breach Solution



Anti-Kicking



Anti-Shooting





DEMO

Yes, an actual product demo video has been made.

<https://www.youtube.com/watch?v=VAvuqKX0irg>



**VIEWER
DISCRETION
ADVISED**

Officer Sgt. Hamblin

- School Resource Officer for BASIS Independent Fremont
- Fremont Police Department's subject matter expert on school shootings

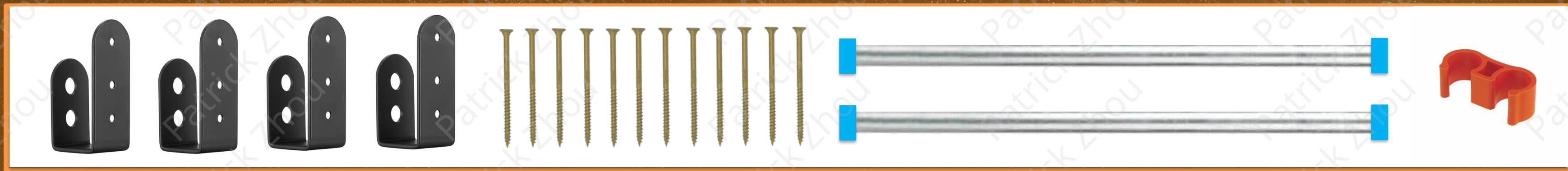


Here is what he wrote after reviewing the product:

The safety of students and staff is a top priority, and solutions like the **Door Guardian** could play a significant role in enhancing school security during critical incidents. Stopping and/or delaying the active threat is critical. Your proactive approach to addressing this issue is inspiring, and it's clear that you're committed to **making a real difference.**

Cost of the Door Guardian

Materials



Costs

Item	Quantity	Unit Cost	Item Cost
4-Foot Galvanized Steel Schedule 40 Pipe	2	25.00	50.00
Heavy-Duty Steel U-Shaped Bracket	4	7.50	30.00
#9 x 3-inch Wood Screws	12	0.05	0.60
Plastic Holder for Pipes	1	1.50	0.50
Shipping	1	15.00	15.00
TOTAL COST			96.10

FINANCIAL PROJECTION

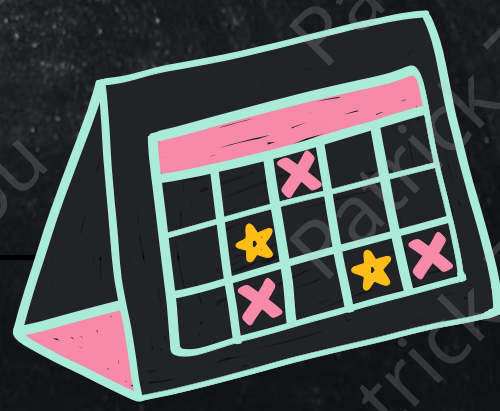


Income Statement

	2025 Q1	2025 Q2	2025 Q3	2025 Q4	2026 Q1
Revenue	2,500	5,000	15,000	90,000	720,000
Cost of Goods	2,000	4,000	12,000	72,000	576,000
Gross Margin	500	1,000	3,000	18,000	144,000
Marketing	500	500	500	1,500	4,000
General Admin	500	500	500	500	500
Operating Expense	1,500	1,500	1,500	1,500	2,500
Net Income	(2,000)	(1,500)	500	14,500	137,000

I will initially set per unit price at \$125.
However, I am confident that I will be able to cut the cost of goods by 50% when I purchase in bulk from a lower priced supplier.

Assumptions



MARKET SIZE (U.S. Only)



School Type	School Count	Average Number of Classrooms	Total Number of Classrooms
College	4,500	200	900,000
High School	25,000	50	1,250,000
Middle School	13,500	35	472,500
Elementary School	67,000	30	2,010,000
	110,000	315	4,632,500

Total Classrooms 4,632,500 X Unit Price \$125 = **\$579,062,500**

MARKETING PLAN



NATIONALLY:

I will collaborate with leading anti-gun violence organizations to advocate for schools to adopt the Door Guardian as a life-saving, effective, and economical solution.

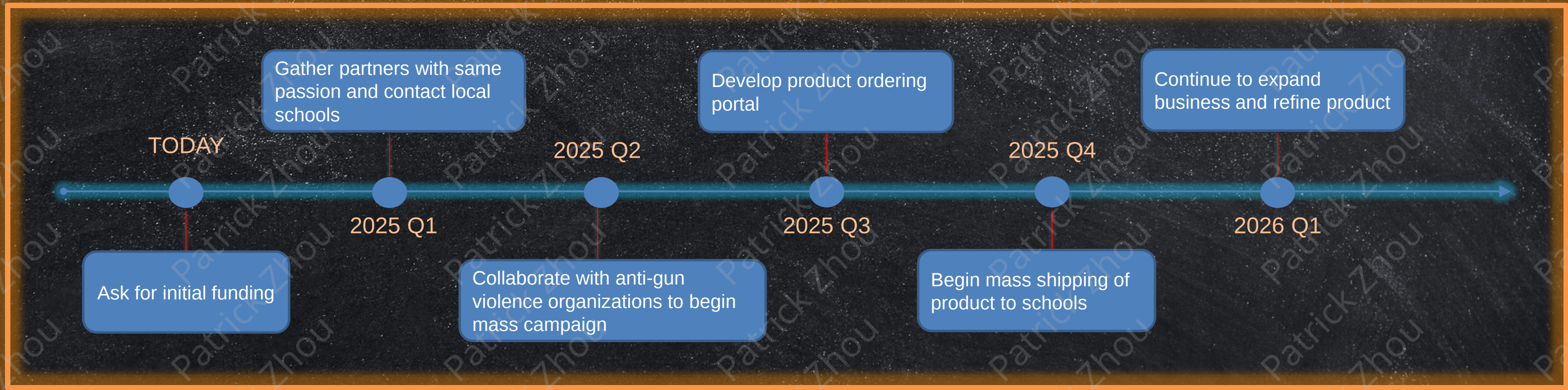
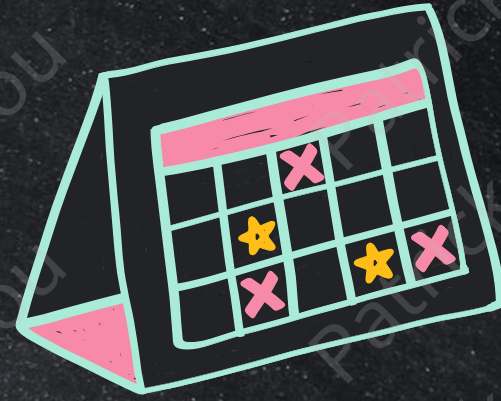
	Sandy Hook Promise
	Giffords
	March for Our Lives
	Everytown for Gun Safety
	Johns Hopkins Center for Gun Violence Solutions
	Brady
	Newtown Action Alliance
	Survivors Empowered
	Teachers Unify to End Gun Violence

LOCALLY:

I plan to personally visit local Bay Area schools to introduce and promote this product, engaging with school administrators, educators, and decision-makers to showcase its value and effectiveness in enhancing school safety.



ROADMAP



We Need to Take ACTION!

Mass shooting at school **WILL** happen again and again. We cannot sit here and just talk about it. This cannot wait. We must **ACT!**

To see the Door Guardian in action, please visit:
<https://www.youtube.com/watch?v=VAvuqKX0irg>

I welcome your comments, inquiries or product orders.
Please contact me at patrickchang44543@gmail.com



About Me

My name is Patrick Zhou, and I am a high school junior at BASIS Independent Fremont. I am passionate about making a positive impact in my community, particularly in areas like children's wellbeing and STEM education.

One of my most meaningful projects, the Door Guardian, reflects my dedication to addressing critical social issues. I am committed to turning this vision into reality, and your support is invaluable in helping me make a difference.

Thank you!!

Receiving Congressional Awards medal from U.S. Representative Ro Khanna



Receiving Presidential Volunteering Service Award medal from Fremont former Mayor Lily Mei and current Mayor Raj Salwan



THANK
YOU!

