



HOSE COMPANY 2 - WESTBURY FIRE DEPT.

COMPANY TRAINING

VACANT STRUCTURES & BOARD UPS

VACANTS - BOARD UPS





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VACANT STRUCTURES are not uncommon in our district

Working Fire:

[3/10/15 – 541 Madison St](#)

[4/26/15 – 240 Sheridan St](#)

2 of our last 3 most recent fires – were boarded up
“Vacant” Residential Structures.





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These structures create more problems for us as firefighter –
more so than our “Bread and Butter residential structure fire” – WHY?

1 . Our #1 Priority - LIFE

1st Ours and then others

These structure tend to be more hazardous due to:

Structural issues – Holes in floors, weaken roofs, missing
Stairs, Holes in walls , increasing advancement of fire ...

Boarded up = limited means of egress until opened,
limited /delayed ventilation, delayed entry , required more personnel ...

Biological Hazards – Used Needles, Urine, Excrement



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Create problems:

1 . LIFE

What about civilian life, It's Vacant ?

We as firefighter can never **assume** a structure is truly vacant without verification. *This is more difficult with vacant's because the home owner or occupant isn't going to come to you telling you everyone's out ...*

There needs to be an effort to validate - but using extreme caution

REMEMBER: RISK vs REWARD - *Great Risk for a Great Reward*

HERE WE HAVE GREAT RISK and REWARD is QUESTIONABLE

What started this fire – “It's Vacant” or Why was it started ?

Things to consider...



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Our 2nd Priority as Firefighter is the Protection of Property

2. PROPERTY

These structure have been abandoned, foreclosed, have structural issues are condemned, had a previous fire inside ...

Where is our Priority for Property Conservation?

OUR EXPOSURES ! - Contain, Control Advancement of this Fire ,
Then Assess before interior attack initiated.



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The Nassau County Fire Service Academy put out an information Bulletin in April 2012 explaining the [NYS – Unsafe Building Placard Building Code – Section 311](#) - which states: Any building or structure determined to be unsafe pursuant to Section 107 of this section, shall be marked as follows:

Placard Location – placard shall be applied on front of structure and be visible from the street. Additional placards shall be applied to the side of each entrance to the structure

Placard size – 24” x 24” with Red Background – with white reflective stripes and white reflective border – both 2” wide

Placard Date: the placard must bear the date it was applied to the structure And the date of any and all recent inspections.



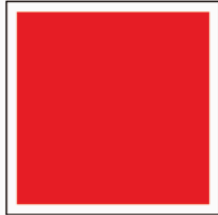
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Placard Symbols



This Placard means the structure had normal conditions at the time of marking



This Placard means the structure or interior hazards exist and interior firefighting or rescue operations should be conducted with **Extreme Caution**.



This Placard means the structure or interior hazards exist **to a degree that consideration should be given to the limit firefighting to exterior operations only**, with entry only occurring for a known Life hazard.



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Placard Symbols



You may come across Placards with additional letter on the Placard:

R/O = ROOF OPEN

S/M = STAIRS, STEPS or LANDINGS MISSING

F/E = AVOID FIRE ESCAPE

H/F = HOLE IN FLOOR

or

F/O = FLOORS OPEN

Another thing to consider is date – if we see the top Left R/O and date posted was 7/10/11 - what can we expect now that its 5/15?



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When we've done our assessment and determine the structure is structurally sound for interior operations or there is an immediate need to enter one of these structures, we should always proceed with a heightened awareness to what's going on around us.

- Interior condition can deteriorate very rapidly
- There can be rapid fire movement due to structural issues
- Board up – prevent smoke release , making conditions poor
- Rapid emergency egress is limited due to board up

- Entering and searching off a charged hose line can afford some protection if need be, **but note** – Use of that hand line in one of these structures can do more structural damage to an already weakened environment.



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Tactics With Board Ups

As Teams enter these structures,
it is important to get multiple truck teams ready to open these board up.

Does this mean – Open these board ups right away?

NO

Like any ventilation they need to be coordinated with the interior attack.

Just know, its going to be more time consuming than breaking a window,
so prepping for their removal can commence immediately.

How does one accomplish this?

Getting these board ups weakened and to a point where 1 or 2 movements
will immediately release them.



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Tactics With Board Ups

There are many types of board ups:

- How they are affixed to structure – *Nails, screws, bolts...*
- The material they are made out of – *½" ¾" Plywood, flakeboard ...*
- Who put them there – *owner, professional board up company ...*
- How secure are they really? *Was it already forced and placed for continual entry*
- What is it protecting – *Burned out house, foreclosed perfect house ...*

All these factors will play a part in how easy they are to remove.

Like with any of our operations,
it all begins by taking a step back, Taking a deep breath
and sizing up what we have.



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Tactics With Board Ups

There are many types of board ups:



How Secure do you think this board up is?

Not Very

How would you remove this?

This appears to be either just nailed or Screwed to the frame of the window or Into the sheathing of the house.

Should be able to just pry off



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Tactics With Board Ups

There are many types of board ups:



What about this board up ?

Basically same as the last one, just done neater – nailed to screwed to frame of the window.

How would you remove this?

This is a bit harder than last one because a pry point is recessed in brick bump out.

Should be able to just pry off once we get a Purchase point .

Drive pike of halligan through flakeboard and pull outwards – should work.



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Tactics With Board Ups

There are many types of board ups:



What about this board up

How has things changed for us ?

Will this be something easily forced by prying off?

No, Why ?



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Tactics With Board Ups

There are many types of board ups:



This is the inside view of that last side.

This is also the HUD standard most, Villages, Towns...require contractors use when contracted to do a board up and *in a good number of cases* will be the types board up we will encounter.

Is this something you are going to force off by prying, now seeing from the inside?

NO

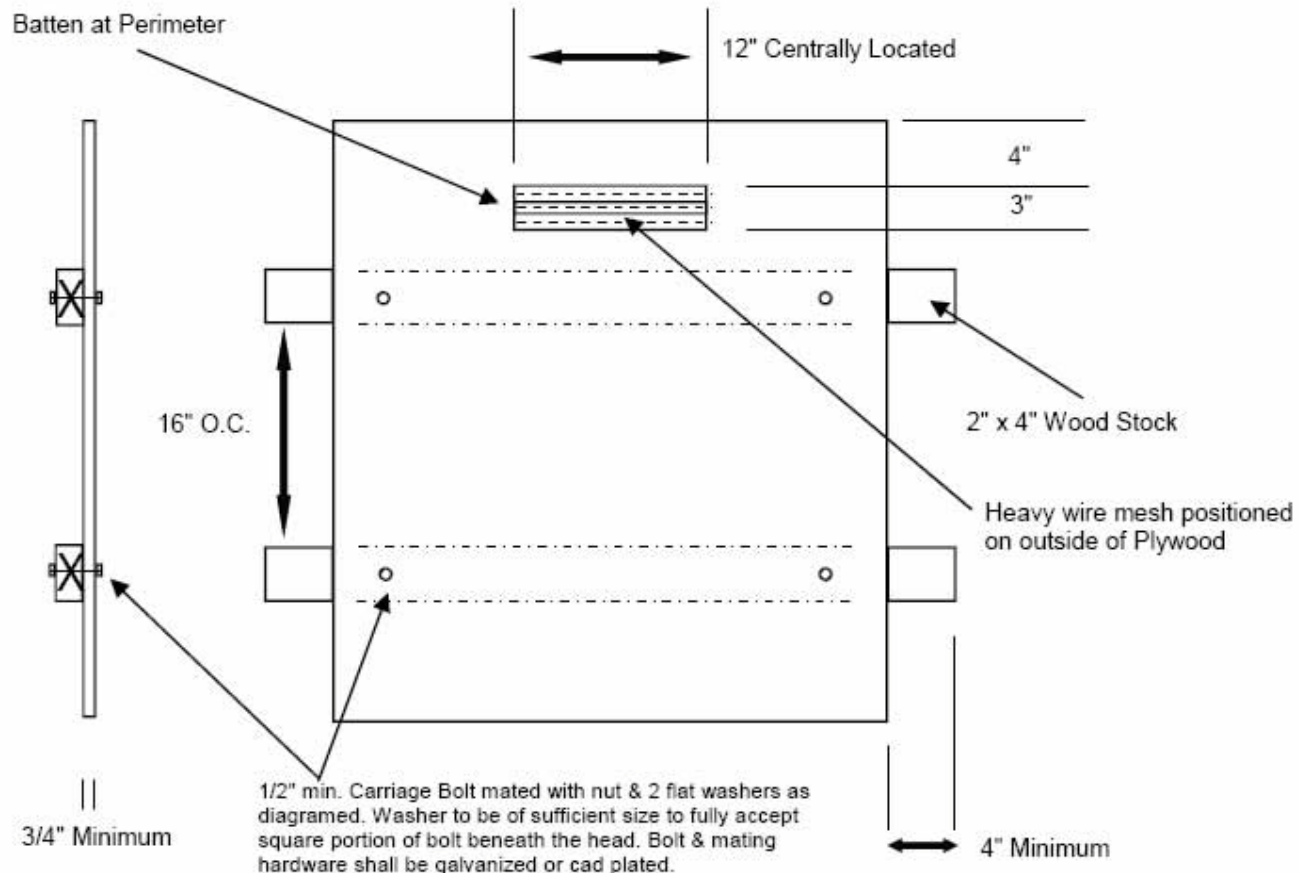


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BOARD-UP SPECIFICATIONS





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Tactics With Board Ups

There are many types of board ups:



The clue you have this HUD type board up are the 4 Bolt heads in the board up

What we don't know , does the inside cross bracing run

Horizontal

or

Vertical



From outside they will look the same
best to assume the shortest distance



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Tactics With Board Ups

There are many types of board ups:



To remove:

With wood blade saw



- Cut 3 overlapping cuts around each bolt starting from top set to bottom
- the depth of cut only needs to be the depth of the sheathing and we don't need to cut the cross bracing
- Once both bolts are cut ways from a cross brace, the brace will fall off the sheathing freeing it



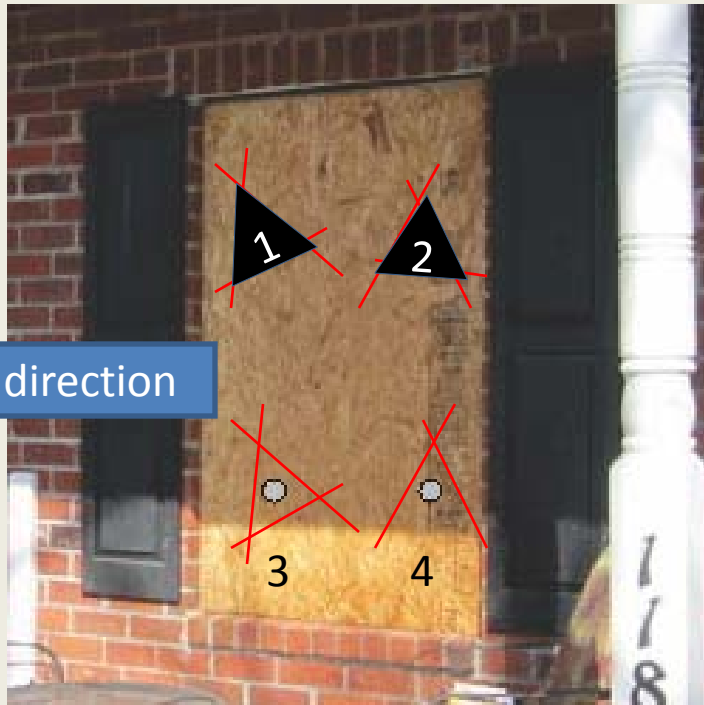
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Tactics With Board Ups

There are many types of board ups:



To remove:

- Once top ones are cut, then proceed to the bottom set.

After cutting the top ones, if the brace doesn't free from sheathing, this means the cross brace is vertical and will free once the matching bottom bolt is cut free.

Once top bolts are cut free, a 2nd firefighter should hold the sheathing in place, as the bottoms are cut, so it doesn't fall on cutting firefighter.

As stated earlier, all cuts can be made but 1 prepping for immediate removal once required.



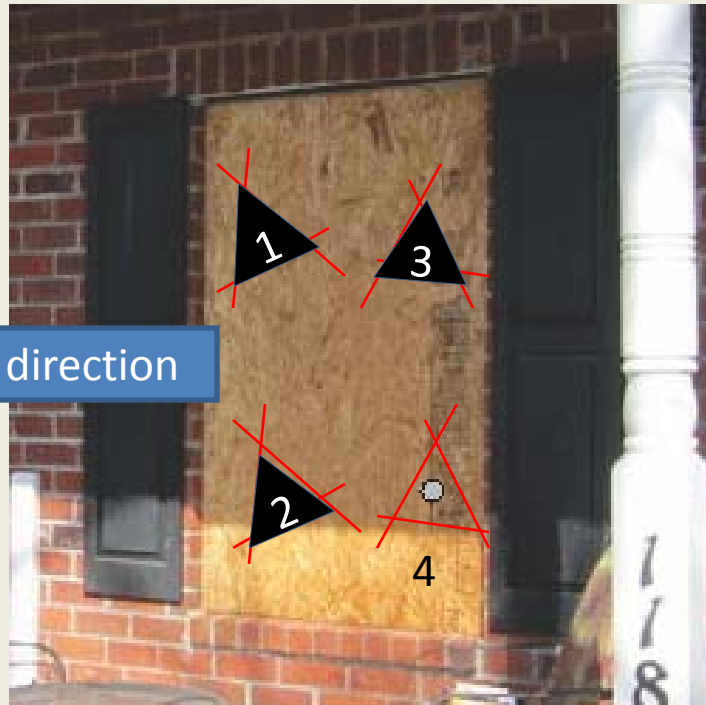
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Tactics With Board Ups

There are many types of board ups:



To remove:

When we are removing board ups from upper floors – **off a ladder**, we will cut top to bottom starting the wind direction side of window **First**

When Possible and Available, use AERIAL PLATFORM over a Ground Ladder.

We will then **reposition Ladder** to opposite side of window and proceed top to bottom on this opposite side

This way, when board up is released, the smoke should go away from cutter.



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Tactics With Board Ups

There are many types of board ups:



To remove:

As stated earlier, all cuts can be made but 1, prepping for immediate removal once the call for their removal is made – without delay.

This will allow the saw to move to other windows if needed, prepping them.

If needed 4 quick cuts in 4 different windows will quickly free the board up, instead of 12 in each window.

It also allows teams inside to force quickly if needed under emergency conditions



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Tactics With Board Ups

There are many types of board ups:



To remove:

Sometimes when the board up is removed, the window and or frame is still intact beneath.

Depending on conditions this may also need to be cleared.

In a good amount of cases, with double hung windows, both windows will be moved to center and the cross brace places above and below. This way when the board up is removed, the windows will be completely operational.



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Tactics With Board Ups

There are many types of board ups:



To remove:

How has this changed thing for us?

Here there is an added outside cross brace making the board up stronger.

Can we attack the Bolts the same way with our 3 overlapping cuts?

Yes – Our saw cut depth will just need to be deep enough to cut the 1.5” cross brace **and** the 1/2” , 5/8” or 3/4 ” sheathing .



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Tactics With Board Ups

There are many types of board ups:



To remove:

What if we're waiting for a saw, can we do something with our set of irons?

*Remember the sooner we get these free
The safer it will be for operating crews inside.*

We can drive the pike end of the Halligan - Bolt height between bolt and end of board. Done to all 4 bolts – splitting the wood

Once split – we can peel the 2x4 cross brace Off the sheathing



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Tactics With Board Ups

There are many types of board ups:



To remove:

Now the 2x4 Cross Brace is gone, we now just have the bolts but we're still waiting on a saw, can we do something with our irons to combat these bolts?

YES

With Pike of our Halligan we can drive the bolts through the sheathing

OR

With our Flat axe or Sledge – again strike the bolts - driving them through the sheathing.
A Pike Axe also works well



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Metal Security Board ups



How has this changed things for us?

Will this board up removal be more difficult?

The problem for us is the bolts are not always visible from the outside.



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Metal Security Board ups

Outside view



When we see the location of the bolt on the securing cover .

We can attack like we did with the wood version, this time with a metal blade saw.

Or with a Axe and Halligan –
Place adz end of halligan between Bolt/Plate and security cover, drive downward with flat ax or sledge sheering the rod



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Metal Security Board ups

Outside view



To remove:

You may not see Bolt Plates but Rivots

With the Rivots – they can be attacked the same way we did with the bolts on the wood while waiting for a saw

We're going to drive the pike of the halligan into these rivots , driving them through.

In most cases this is faster then using a saw.



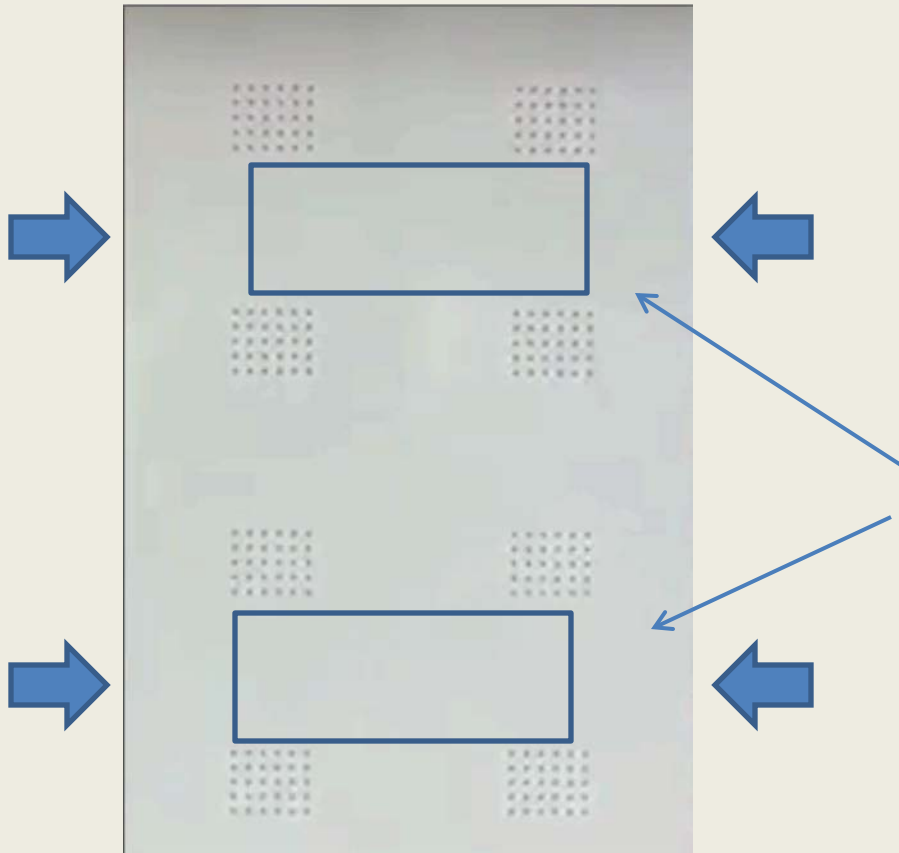
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Metal Security Board ups

Outside view



To remove:

If there are no visible bolts -
Try Prying Outward – with Halligan
at points displayed by the arrows .

If moves outwards , it should leave an
Indentation in the Metal board up where
the bolts are.

With a Metal blade saw – cut around
this indentation – freeing from the
metal cross brace – Assure the saw
is not just cutting surface but *deep
enough to get the metal giving the
board up its rigidity* and holding the bolts



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Metal Security Board ups

Outside view



To remove:

If you attempt to pry and the security covering from the frame and it gives you a struggle, and it does pull way enough where you get an indentation in the center, you probably have the spring loaded cross bar type locking system.

These slightly visible pin on the sides as you attempted to pry will be your indication you have this type securing the security covering to openings frame.



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Metal Security Board ups

Outside view



To remove:

To combat this locking method -
Cut using a metal saw – 6” in from the visible pin
From top to bottom – and deep enough to cut
The inside cross supports – once completed
It will free the Security cover

Or

Drive the Pike end of halligan into the slot
with the visible pin, Once you’ve made a
good purchase, peel the security cover
from the frame, at all points where
secured to the frame with a pin.



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This leave 1 more question :

What if you are on the inside, the Board up is not removed yet and your in trouble or need it removed Immediately?

How can we accomplish this?

Do we have a saw inside with us ?

What Tools do we have that we can utilize ?

What else should we be considering if conditions are that critical, if we don't succeed?



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The Wood Version:



This may be easier than some may think

- with a flat axe – strike the center of each cross brace
- with enough force to break the cross brace in half
- This needs to be done to both cross braces
(remember these can be Horizontal or Vertical)
- Once both are split in half, the sheathing can be push outward releasing from the window frame.

Note: we still may need to contend with the windows themselves before we can use as emergency egress.



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The Metal Version:

Thankfully the metal version is much less commonly use, do to there increased cost.

This is a good thing for us, since it's much more challenging for us to force these from the inside.

The method would be similar to the wood except:

- instead of striking the center, you want to strike **between the bolt and the window frame** – closer to the bolt
- with enough force to crease the Channel Iron Cross Brace
- once its crease or dents inward, this will allow you to continue to bend cross brace inwards towards you until its at a 80-90 degree angle w/ pike or forks of halligan.
- This will need to be done at 4 points not 2 like the wood
- once all 4 points done, should be able to push outwards





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The Metal Version:

Again, we still may need to contend with the actual window before we can use this as an emergency egress point.

When an Incident Commander sees any board ups, but especially metal ones (like security bars) they should be getting Extra Truck Companies quickly to scene to attack this problem for us.



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With the Cable type:

You'll need to pry the locking plate
From the channel iron cross brace

Once released cut the cable with
a heavy gauge cable cutter .

**Do you have these in your gear?
You Should For Yours Safety**



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Tactics With Board Ups



For DOOR Board ups:

In a good number of cases, the board up will be the same as one we presented with a window. Just a larger version, so this means of freeing them will be the same.

Note with doors, there won't just be 2 sets of cross bracing there may be 3 or even 4 sets.

In some cases, its best to cut an inverted V, free the bottom portion of the door board up, let the line get in the door and then spend time getting the rest freed from door opening. Remember the quicker we get water on the Fire the quicker conditions will get better.



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It is imperative to get these board up open as quickly as possible, for the safety of members operating inside, if the case.

If Not the case and an exterior attack is to be initiated, these board ups also need to be removed since they will be our path to get water into the structure.

Getting this accomplished all begins training, training, training!
Practice with knowing saw use, reading the structure, reading the Board up and applying safe practices, building that muscle memory!



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Points to Remember with Board ups:

These scene are more dangerous for us
for a bunch of reasons

PROCEED WITH CAUTION !

GREAT RISK – FOR GREAT REWARD

**Take that extra second and take everything in,
we as firefighter see fire and sometime get that tunnel vision,
In these cases, more so then other, jumping in without assessing
properly will cause you serious problems .**



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The next part of this drill,

We will be going to station 2 training building where :

1. Review opening a board up on 1st and a 2nd floor – from inside and outside
2. Run through a fire at a vacant **scenario**
 - will require getting a line established
 - choose its proper use and placement
 - initiate proper tactics for a safe operation
 - removal of board ups (Door and Window)
 - open board ups in coordination with the line
 - use communication of found hazard – if any
 - maintain scene accountability – if “collapse” is to occurs - roll call