

Ventilation

Cut Sequences

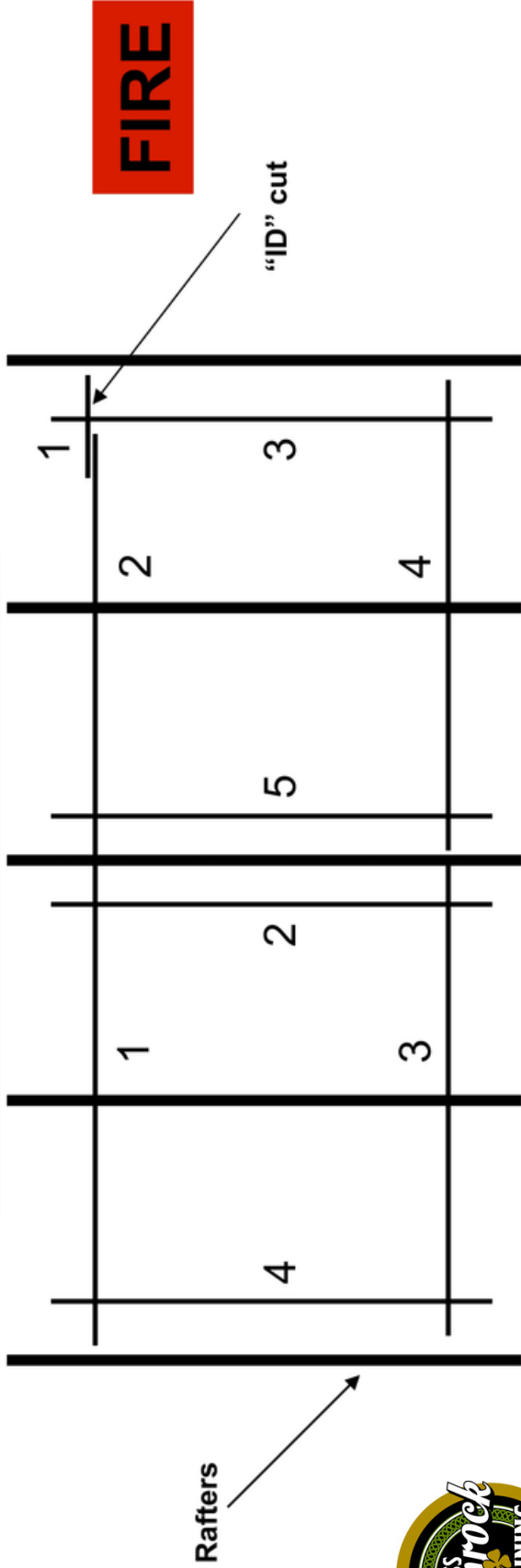




Pitch



Work towards the egress...from an area close to the fire.



1st cut ("ID" cut) is made 12"-18" down from and parallel to the ridge. This cut identifies the outside rafter (closest to fire). Cut #2 is begun from #1 and completes the top cut. Cuts #3, #4, & #5 are made to complete the ventilation hole moving towards the egress. Remember, you must roll the rafter with cuts #2 and #4 on the first hole.

The second hole is started with the top cut about 4" from the end of cut #2 and #5 of the first hole. No "ID" cut is needed.

Complete cuts in the same sequence (minus the "ID" cut) moving towards the egress. Roll rafters on cut #1 and #3.

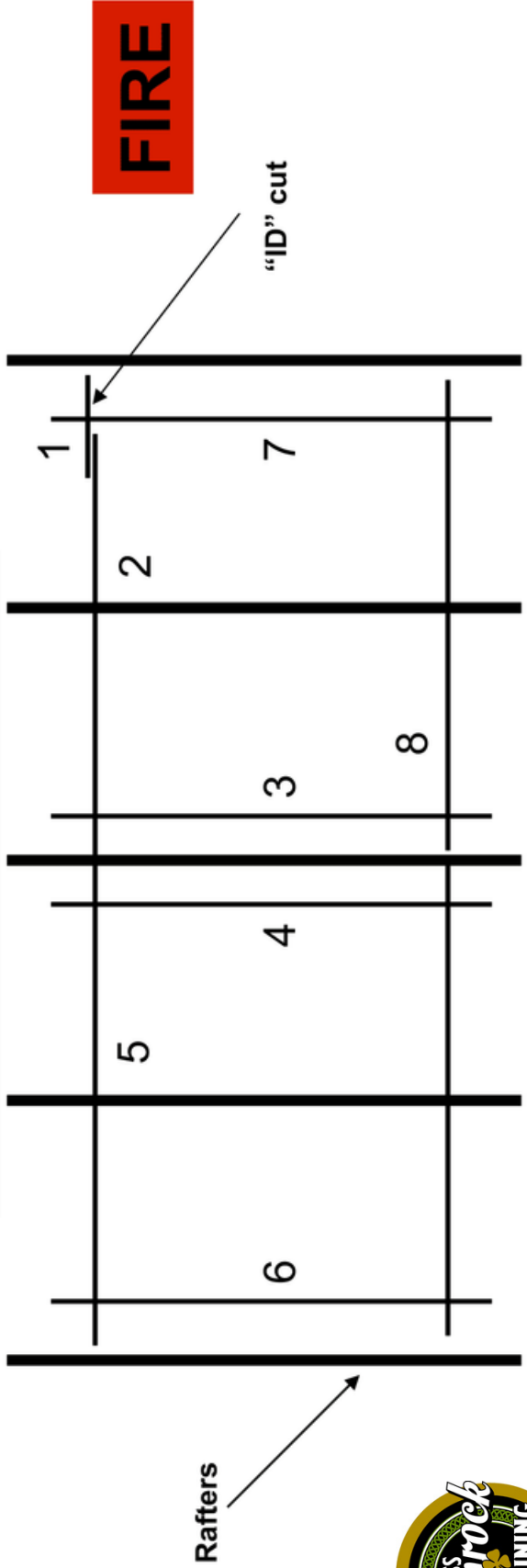
Note: If smoke from first hole makes cutting the 2nd hole difficult, move down vertically from the 1st hole as opposed to horizontal. See Steep Pitch slide for example (minus the roof ladder).



Pitch (Two-Panel)



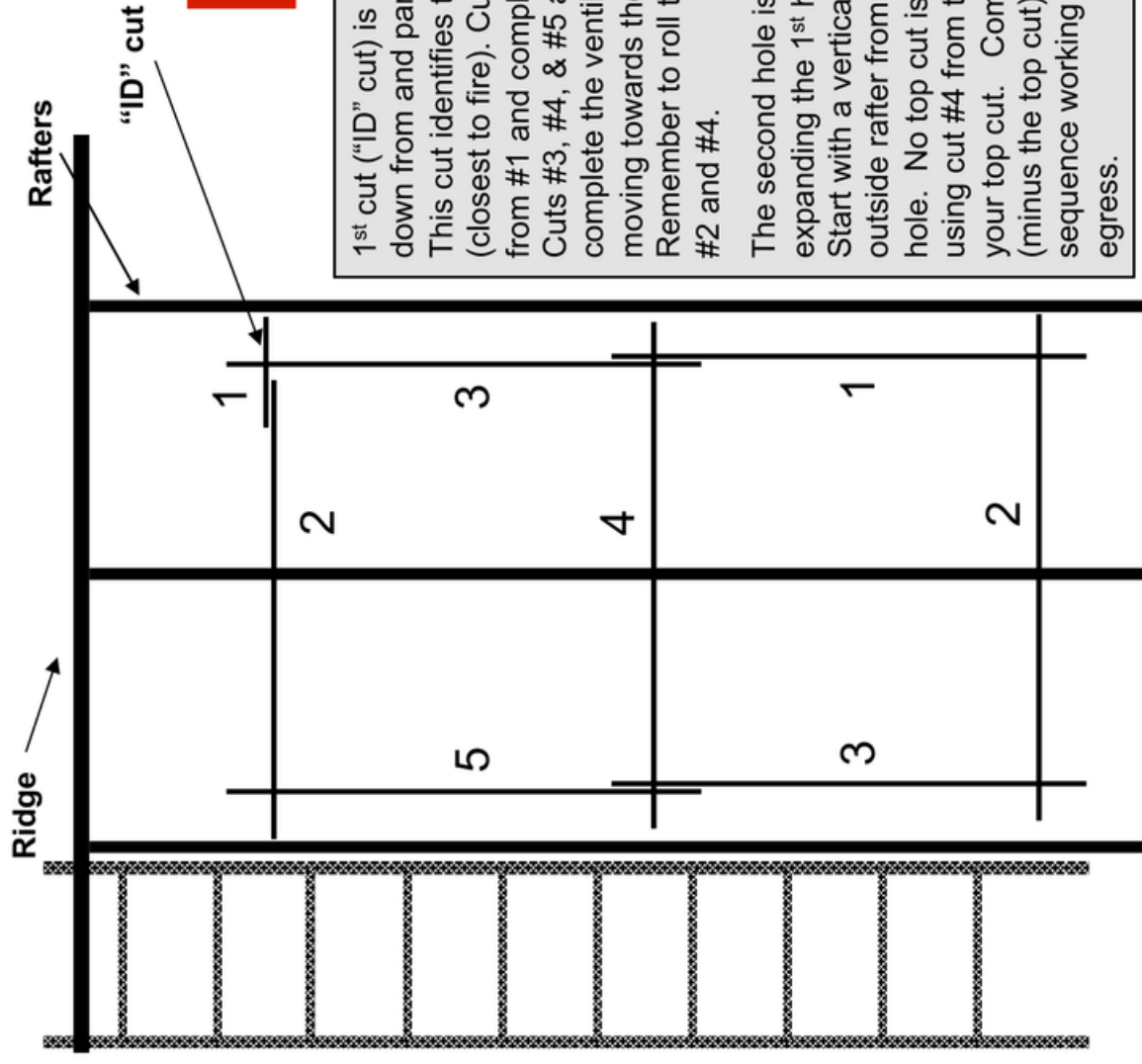
Work towards the egress...from an area close to the fire.



1st cut ("ID" cut) is made 12"-18" down from and parallel to the ridge. This cut identifies the outside rafter (closest to fire). Cut #2 is begun from #1 and cut moving in the direction of egress. Cuts #3 and #4 are downward cuts. Cut #5 is begun from the top of cut #4 and made just as cut #2 was done. Cut #6 is a downward cut off the ending of cut #5. to complete the ventilation hole moving towards the egress. Remember, you must roll the rafter with cuts #2 and #5 parallel and equal to cuts #3 and #4. The firefighter walks around the hole to where the cut was started to complete cut #7. Then the final cut is a skim (or can be rolled) cut connecting cuts #7, #3, #4 and #6.

Note: When making cuts #4 and #5, the firefighter should position themselves on or as close to the rafter closest to the egress as possible. Caution should also be used when making cut #7.

Steep Pitch (roof ladder)



FIRE

1st cut ("ID" cut) is made 12"-18" down from and parallel to the ridge. This cut identifies the outside rafter (closest to fire). Cut #2 is begun from #1 and completes the top cut. Cuts #3, #4, & #5 are made to complete the ventilation hole moving towards the egress. Remember to roll the rafter on cuts #2 and #4.

The second hole is made by expanding the 1st hole vertically. Start with a vertical cut on the outside rafter from cut #3 of the 1st hole. No top cut is needed...you're using cut #4 from the 1st hole as your top cut. Complete cuts (minus the top cut) in the same sequence working towards the egress.

Dicing

Skip-sheeting boards

Ridge

Rafters

FIRE

Dicing is used for roofs with skip-sheeting, horizontal, or diagonal sheeting. Skip-sheeting is commonly found on shake roofs, while horizontal and diagonal are found on older roofs.

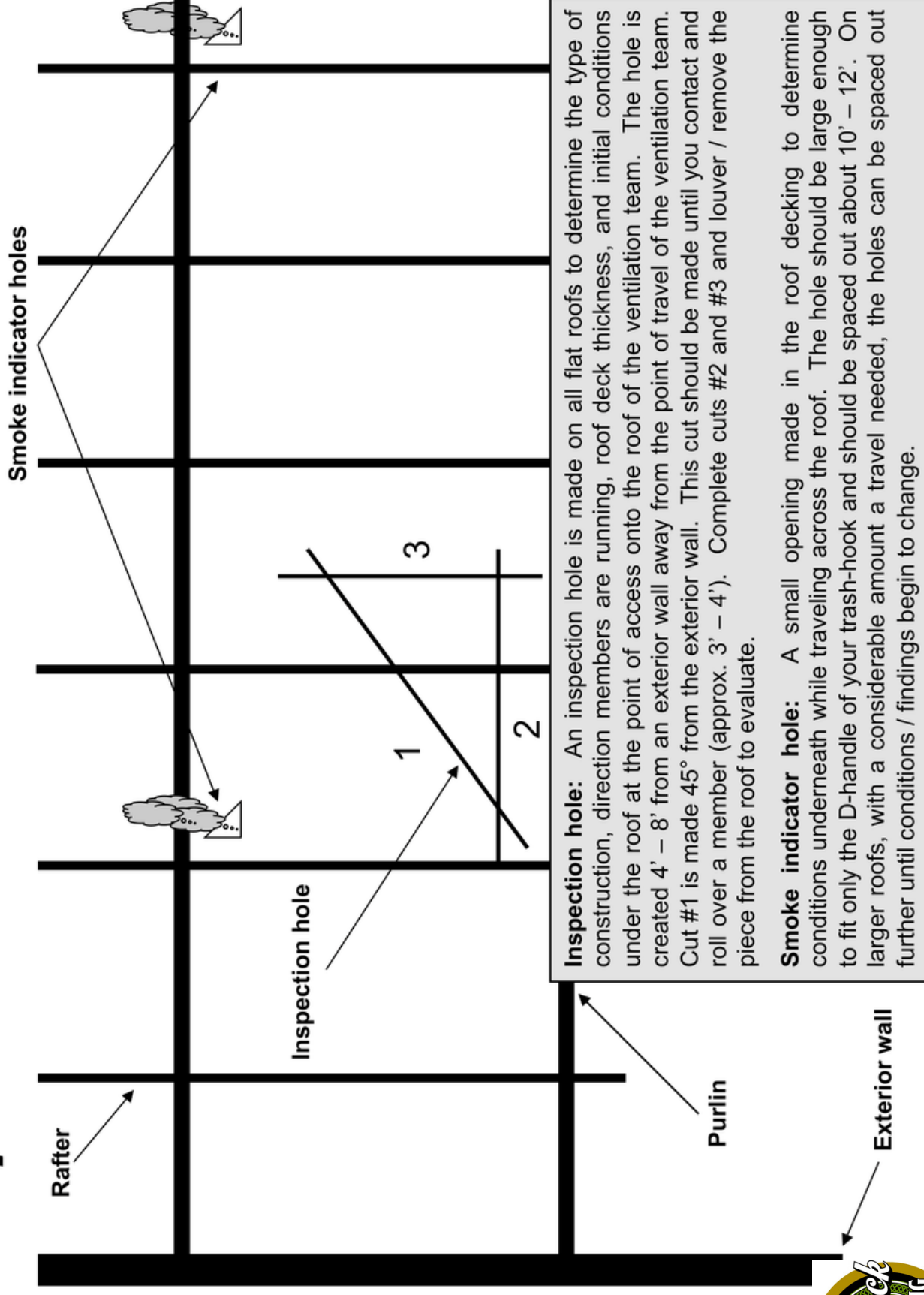
The 1st cut ("ID" cut) is made 12"-18" down from and parallel to the ridge. This cut identifies the outside rafter (closest to fire). Cut #2 is begun from #1 and completes the top cut by rolling two rafters, stopping at the 3rd.

Cuts #3, #4, & #5 are vertical cuts that are centered between each rafter you rolled over on cut #2. A bottom cut will only be needed with cutting operations on diagonal sheeted roofs.

The trash-hook is then used to pull the cut sheeting from each of the rafters. The hole can easily be expanding by continuing vertical cuts #3, #4, & #5 and pulling more boards with your trash-hook.

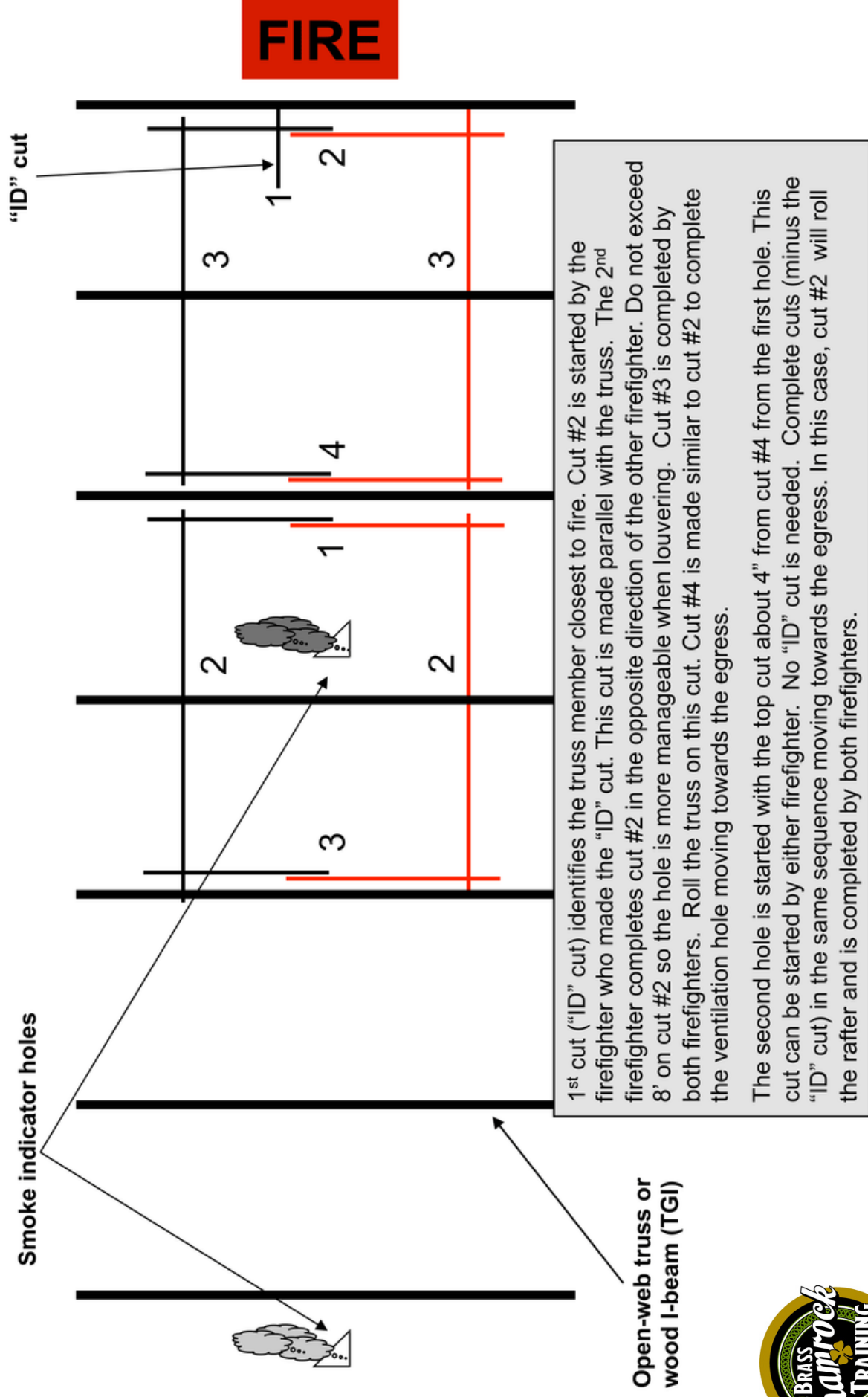


Inspection / Smoke Indicator Holes



Flat – Commercial (truss / I-beam)

Coordinated cuts with two firefighters

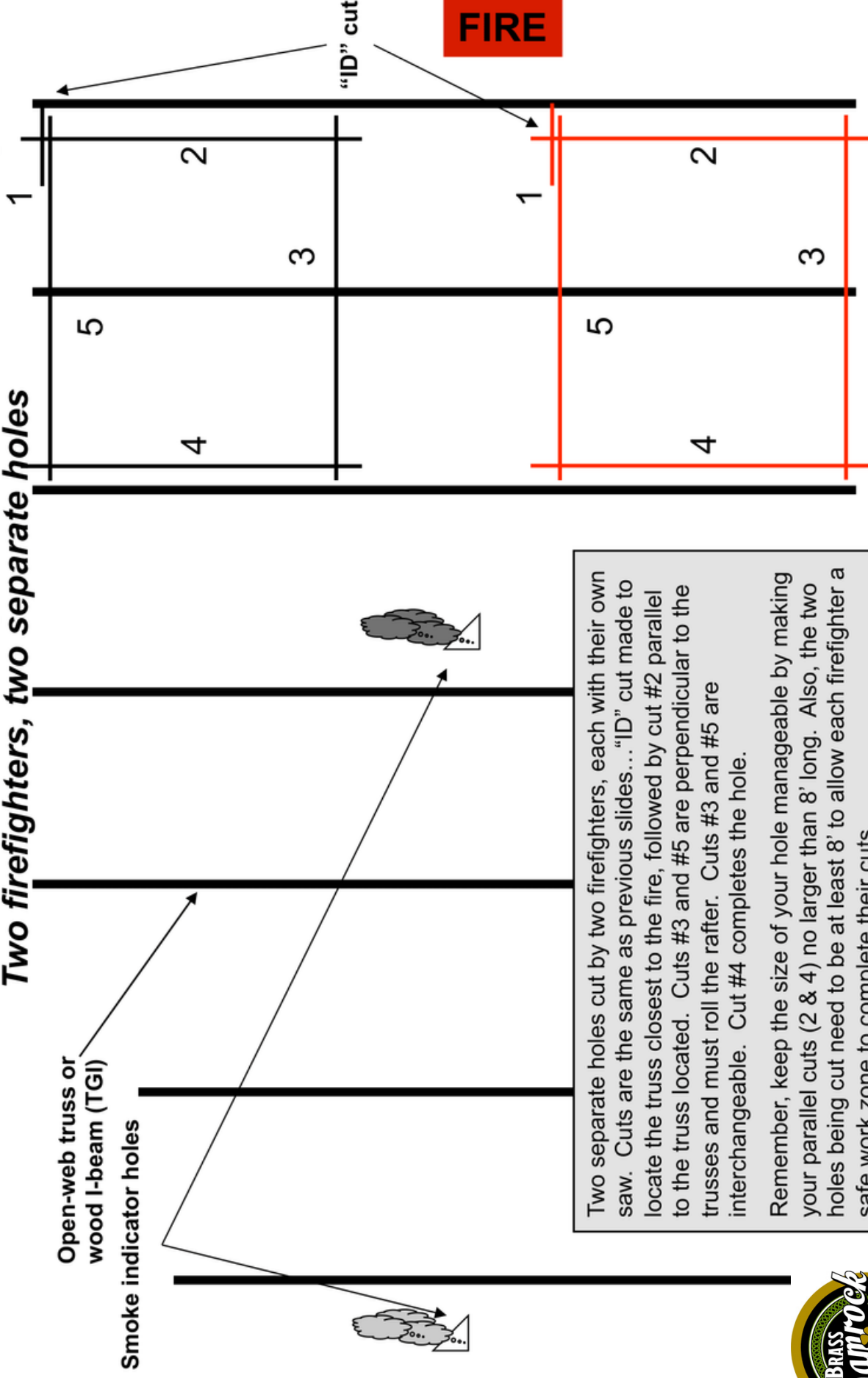


Flat – Commercial (truss / I-beam)

Two firefighters, two separate holes

Open-web truss or
wood I-beam (TGI)

Smoke indicator holes

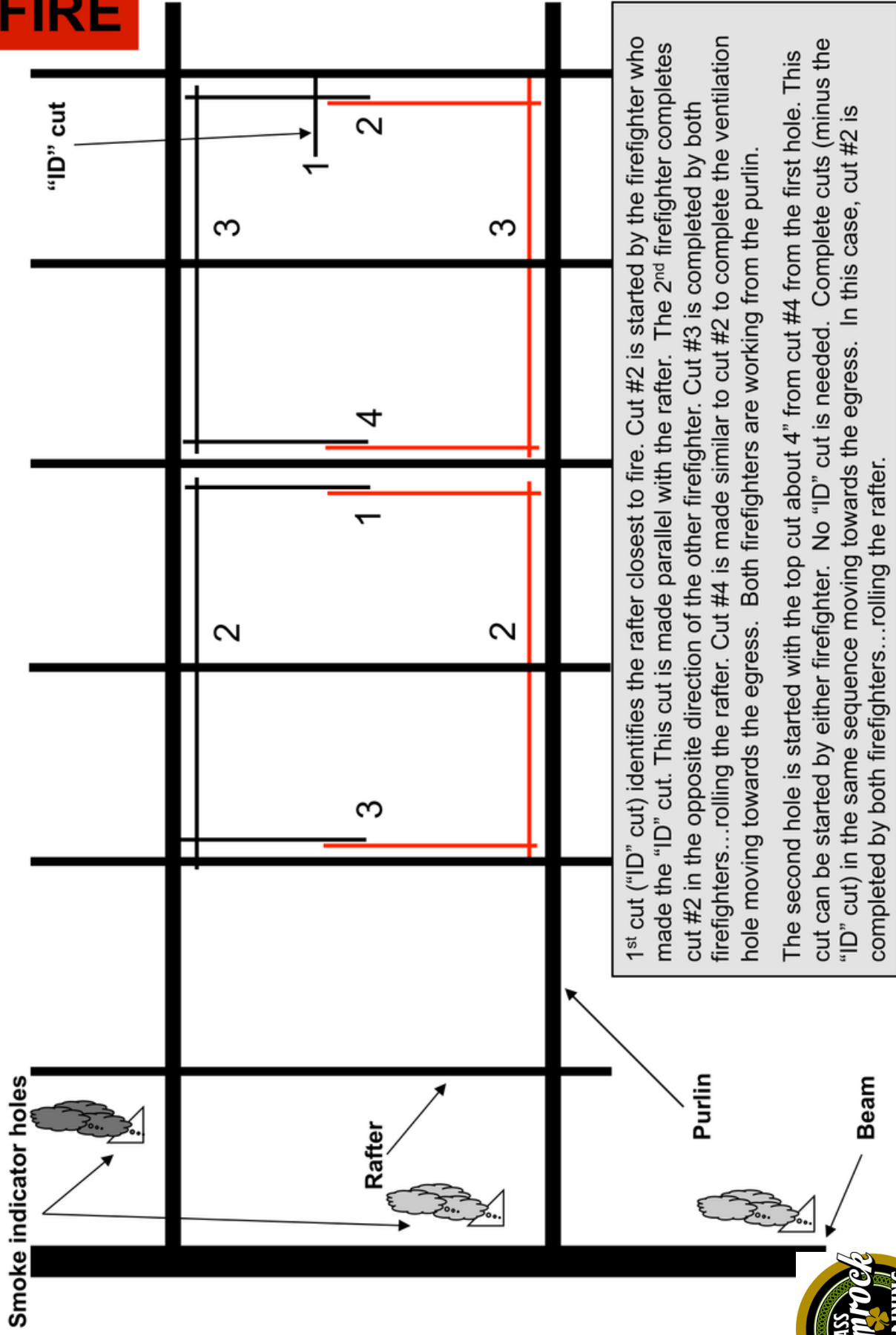


Two separate holes cut by two firefighters, each with their own saw. Cuts are the same as previous slides... "ID" cut made to locate the truss closest to the fire, followed by cut #2 parallel to the truss located. Cuts #3 and #5 are perpendicular to the trusses and must roll the rafter. Cuts #3 and #5 are interchangeable. Cut #4 completes the hole.

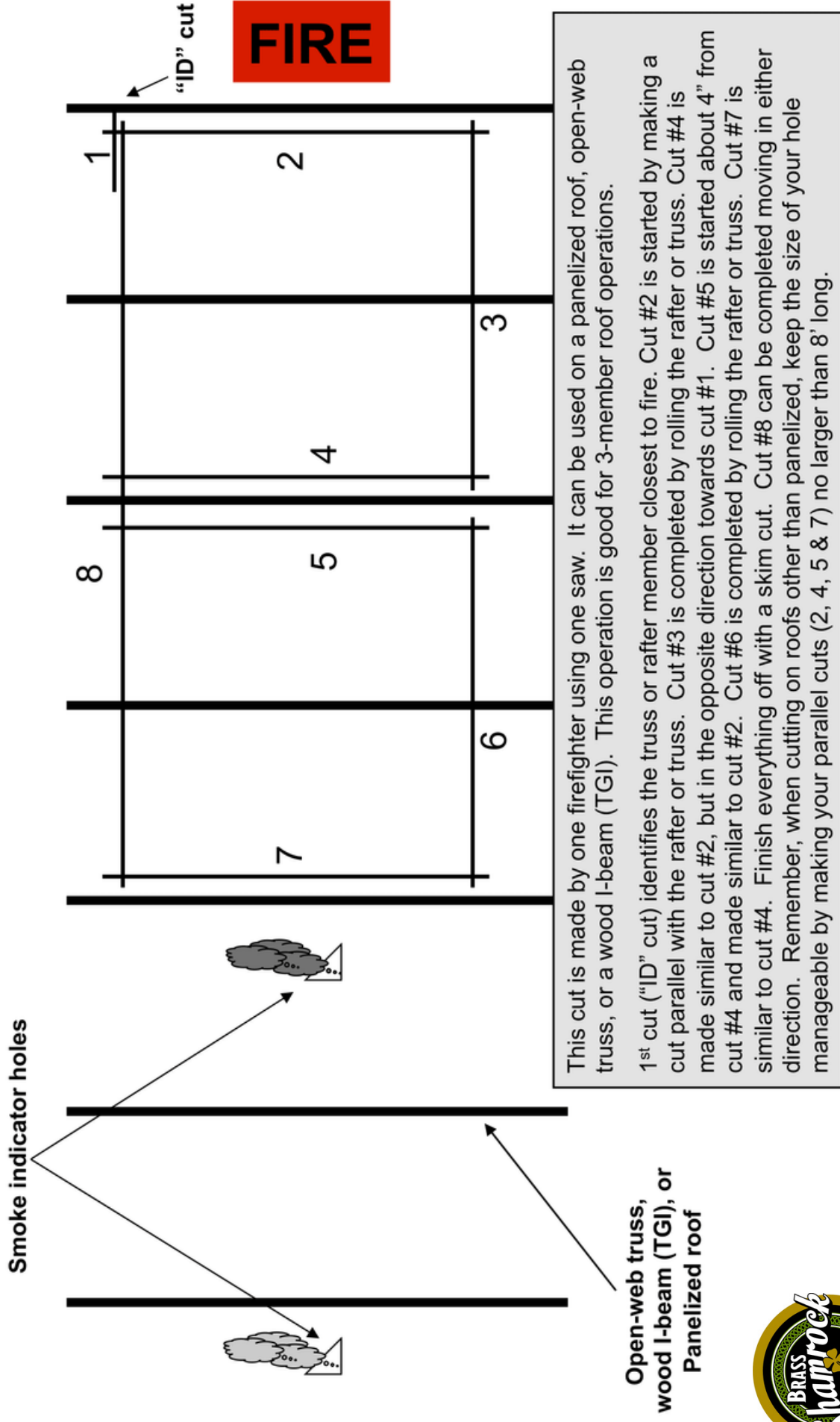
Remember, keep the size of your hole manageable by making your parallel cuts (2 & 4) no larger than 8' long. Also, the two holes being cut need to be at least 8' to allow each firefighter a safe work zone to complete their cuts.

Flat – Commercial (panelized)

FIRE

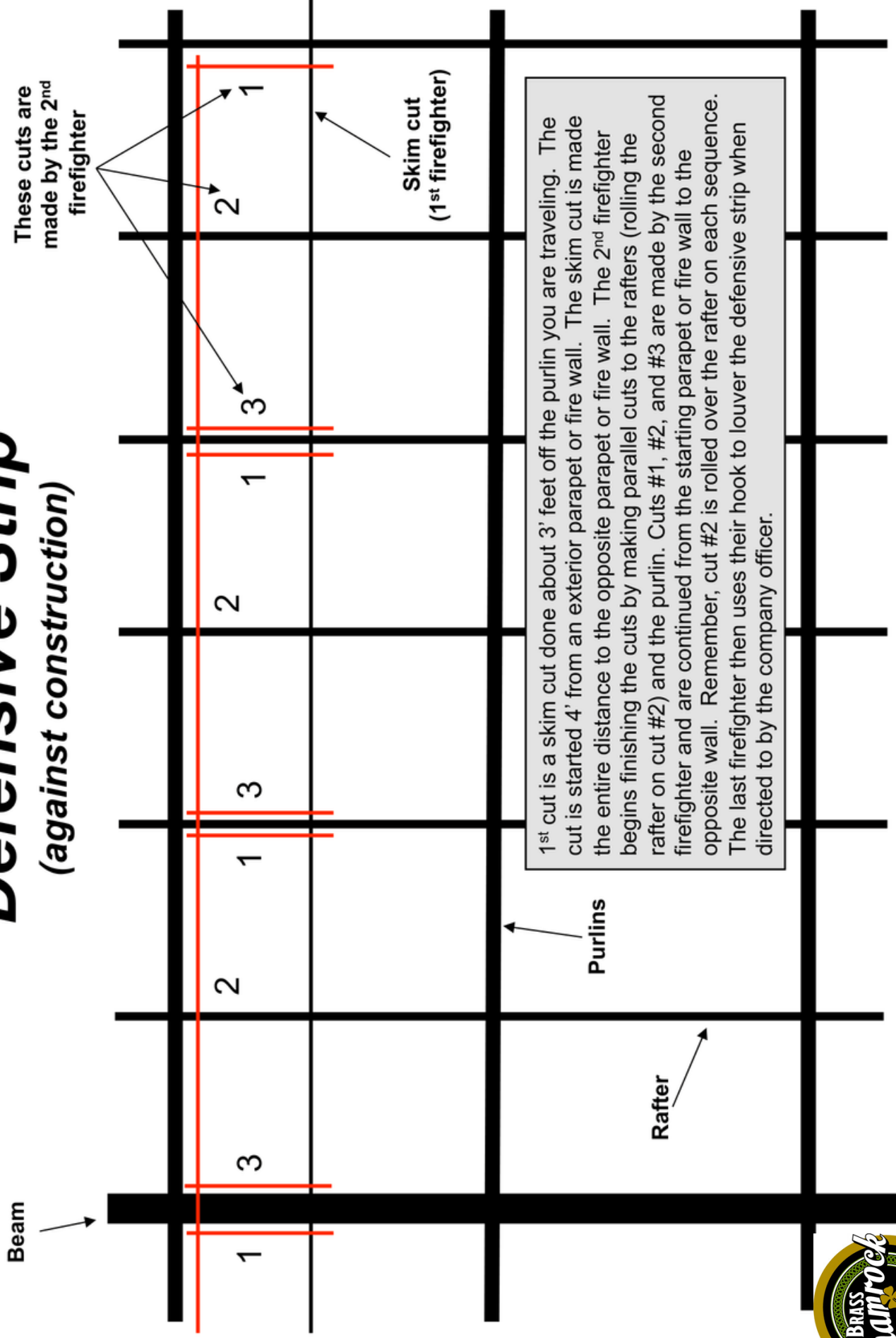


Flat – Commercial “Serpentine Cut”



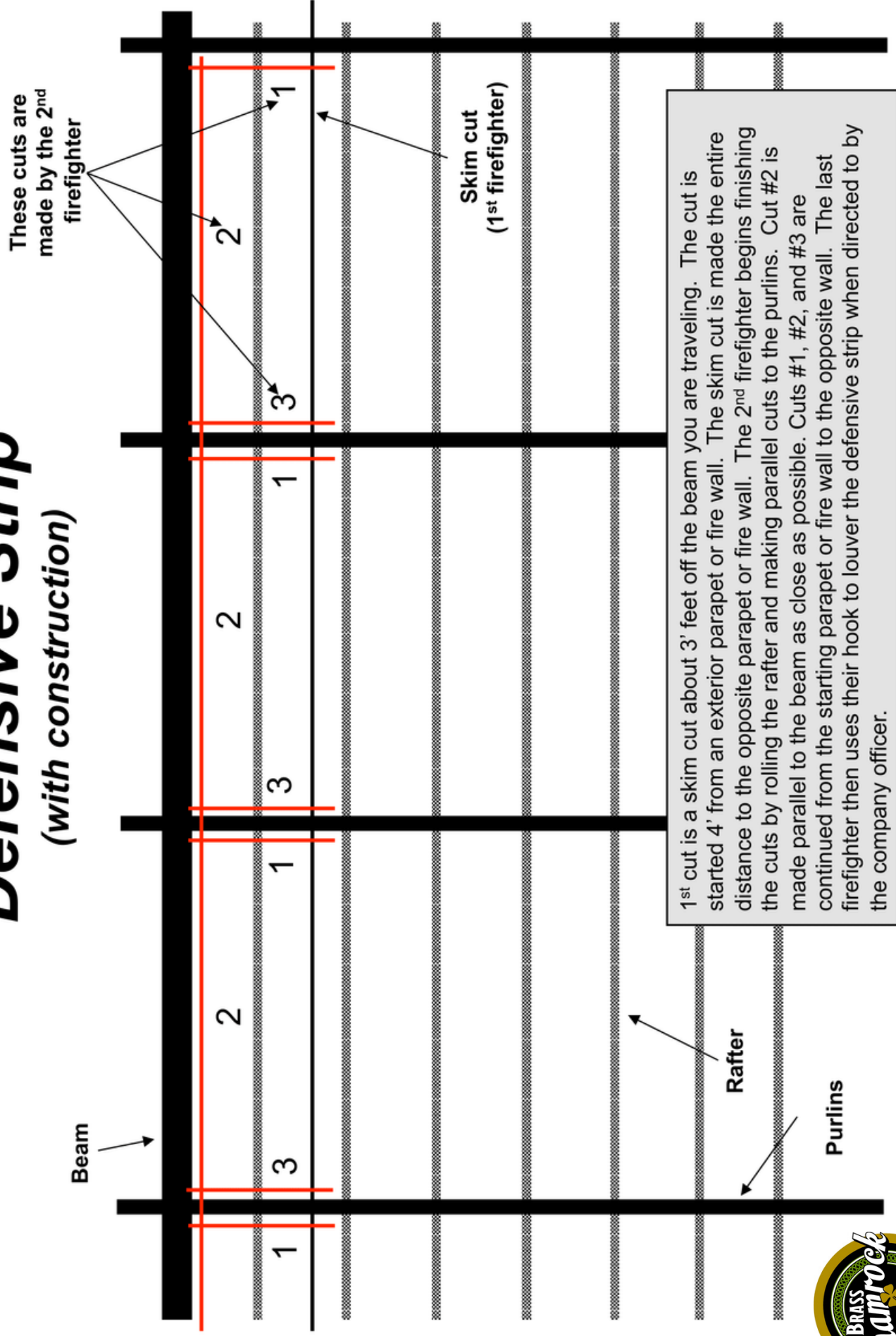
Defensive Strip

(against construction)



Defensive Strip

(with construction)



1st cut is a skim cut about 3' feet off the beam you are traveling. The cut is started 4' from an exterior parapet or fire wall. The skim cut is made the entire distance to the opposite parapet or fire wall. The 2nd firefighter begins finishing the cuts by rolling the rafter and making parallel cuts to the purlins. Cut #2 is made parallel to the beam as close as possible. Cuts #1, #2, and #3 are continued from the starting parapet or fire wall to the opposite wall. The last firefighter then uses their hook to lower the defensive strip when directed to by the company officer.