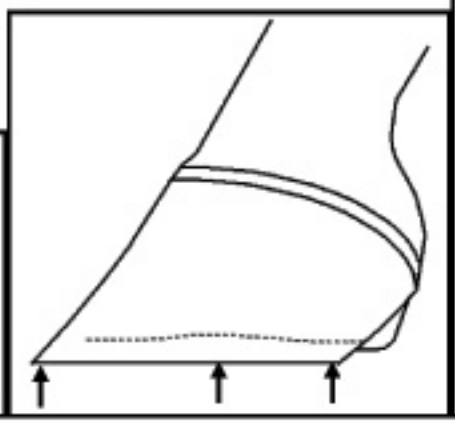
13 Step Natural Balance Shoeing Protocol

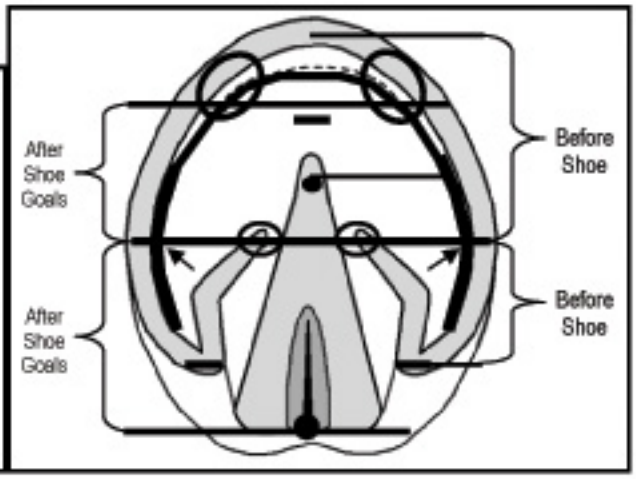
(Steps 1 – 4 are the same as the Live Sole-Hoof Mapping Protocol)

Hoof Preparation

1. **Recognize Hoof Distortions**
2. **Exfoliate the Foot**
3. **Map Out the Foot**
4. **Evaluate the Ratio**

Sample Drawings of a Foot with common Toe, Heels, Bars & Frog Distortions. Foot has already been Exfoliated & Marked-Up. Notice the Ratios have more mass ahead of the widest part of the foot than behind.





5. Trim the Heels

A. Start just behind the pillars with half your nipper blade out of the cut. (The starting point will coincide with a line drawing even with the tip of the frog.)

B. Try to aim or visualize a straight line through the heels, so that the trimmed heel is still about 1/8" to ¼" inch of wall is higher than the exfoliated sole. Because the sole in the quarters generally dips down, your nippers may be more than 1/8" or ¼" from the sole as you cut through that region

C. As you pass through the quarters, continue the cut straight through the heel.
   - *Your finished heel should be at the level of the frog buttress or slightly lower, unless the frog is severely atrophied.*

D. Final heel preparation consists of rasping a flattened area at the heel buttress enough to include an ample portion of the bars, and produce a substantial landing. The finished heel should be about 1/8" higher (or closer to the ground when the foot is on the ground) than the live sole in the V (seat of corn) formed by the heel and bar union.
   - *The heel generally ends close to the back of the frog, which is good rule of thumb; however, use the live sole as the primary guide and the back of frog as a secondary guide.*

6. Trim the Toe

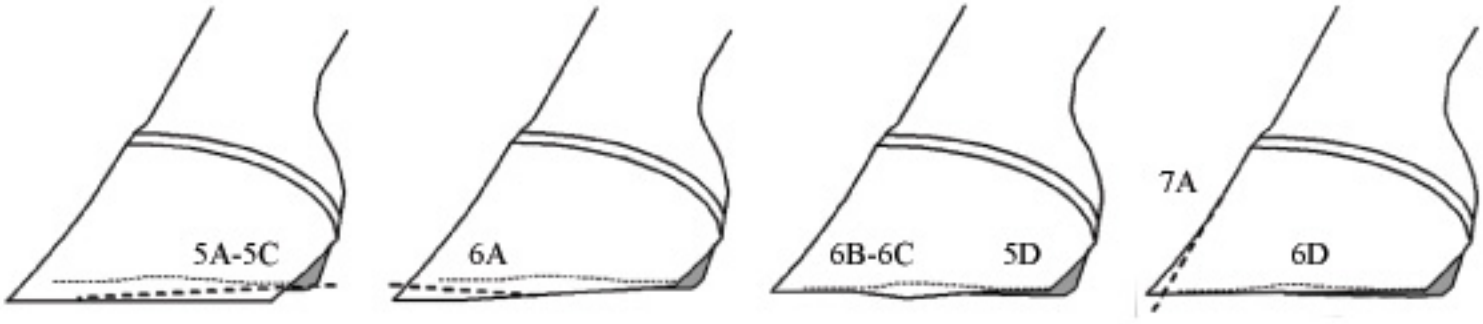
A. Nip or Rasp the wall close to the line drawn around the toe, just above the level of the pillars and across the sole callus. Be aware to **leave the black line** that identifies the pillars and the sole callus/wall junction around the toe. Be aware of the angle of your nipper blade so that you do not trim more outer wall than inner wall. This could lead to needing to over trim the inner wall and sole in order to make a flat landing.

B. Rasp the wall down close to the level of the exfoliated sole ridge (callus). You might just touch the line with your rasp, but do not rasp so much that you eliminate the line. Leaving the line will ensure you have not gotten too close.

C. Use your rasp to flatten the wall in the quarter, between the finished toe and heel platforms. Check to see that the wall is flat from front to back and side to side to guarantee a solid base for attaching the shoe.

7. Pre-Finish the Outer Wall

A. Before fitting the shoe, rasp any flares that exist
   - *Rasp from the middle of the hoof wall to the ground from the most prominent growth ring. Your goal is to make the wall straight from the hairline to the ground if possible.*
   - ***You should achieve a uniform wall thickness all the way around at the ground level.*** *(See Illustration on the Back)*
   - *Try not to rasp further than the white zone at the bottom of the hoof wall (about ½ the original wall thickness). If you have reached this position but have not eliminated all of the flare, stop anyway. The wall growth and orientation will change over time and you will be able to completely eliminate the flare over the next few shoeings.*



Fitting and Applying Shoes

8. Re-Check your Hoof Mapping

A. After trimming and dressing the wall, make sure all your marks are still visible and accurate. If there is a lot of distortion that needed to be removed, occasionally you will need to re-investigate some areas of the sole for additional exfoliating material, and in doing so will inadvertently remove some of your lines. Make sure your widest part of the foot line and your breakover line are clear and accurate, as those lines will help you determine shoe size and fit.

B. Make sure that your shoe surface is flat and that you have sole clearance, especially around the toe.

9. Select the proper shoe size for the foot

A. If using a Natural Balance Shoe or other shoe with a point of breakover built-in behind the leading edge of the shoe, place the shoe on the foot so that the breakover point is directly over the line on the foot you have established as the position for break-over.

- The shoe should fit in the toe quarters and quarters (width), and should extend slightly behind the heel and end close to the back of the frog, or more specifically end at the dimple in the central sulcus.

B. *If using a flat shoe or unmodified rim shoe, the above criteria must still be met, which usually requires forging a roll into the toe so that the point of breakover is produced 3/8" to ½" behind the leading edge of the shoe. The roll should continue slightly around the toe quarters and not perfectly straight across the toe. This will allow for easy individualizing of the direction of breakover by each foot of each horse, as determined by the direction the knee bends.*

C. VERY IMPORTANT: Keep in mind that the majority of horses have somewhat mismatched feet, and some so much so that a different size shoe may be required for different feet of the same horse. Do not be afraid to use the proper size shoe for each foot. This will service the needs of each foot individually; hence service the needs of the horse better.

10. Shape the shoe to fit each foot

A. The shoe should be altered so that the following criteria is met:

- The shoe is fit so that the shoe and outer wall are flush from the toe quarter to just behind the widest part of the foot.
- From the just behind the widest part of the foot, the shoe can fit just slightly wider than the outer wall as you get to the heel. This extra width will be gradual from the widest part back so that you have about 1/8" of shoe wider than the wall at the heel when you are done.
- If the heels of the foot curve in severely or the heels are somewhat contracted, the heels of the shoe **may** fit wider than the wall from the widest part of the foot to the end of the heel. As much as 3/16" of an inch of "expansion" is acceptable, however you may need to re-evaluate your toe quarter fit if the shoe ends up too triangular in shape.
- Do not kink or bend the heels of the shoes in sharply to match narrow, curved heels, especially if it covers part of the frog buttress. The heels should not be much narrower than the toe pillar area of the shoe. *(Maybe consider a pad, different shoe or smaller size.)*

11. Hot Seat the Foot *(OPTIONAL)*

A. Hot seating the foot can be a good practice for the following reason or circumstances:

- Too much sole has been accidentally removed or the soles are extremely sensitive.
- The wall has been taken down too much and the flattened area on the sole is wider than 3/8".
- The foot is extremely hydrated and the sole callus is difficult to find (hot seating dehydrates the foot).
- It helps to level the foot for cases when getting the wall flat has been difficult.

B. Because a Natural Balance shoe is so well seated out on the foot side, a plain, flat, wide-web shoe may be handy to use as a "hot -seating shoe". (Example – St. Croix Extra EZ Front or Hind)

12. Nailing On the Shoe

A. Most horseshoes will provide 4 nail holes on each side, however if using a modified shoe, you may lose the ability to use the first (toe) nail hole. Typically 3 nails to each side is sufficient, but if you feel it is necessary to punch extra holes, please feel free to do so. The Natural Balance Shoes come with 4 to 6 usable nails holes depending on model, but you will typically only need to use 3 on each side.

13. Clinching and Finishing the Foot

A. Your normal or preferred clinching procedure is suitable for the examination.

B. Since you have already finished the wall before applying shoes, there is very little rasping that should be required on the dorsal wall. However, if there is any wall extending over the shoe (primarily in the toe region), simply turn your rasp to a 15° to 25° degree angle (about the same as the roll in the shoe), and slightly undercut the amount hanging over. DO NOT attempt to take the dorsal wall back to the shoe's perimeter in a vertical manner. This will weaken the dorsal wall and can cause instability within the hoof capsule.