

# Bella Ridge Golf Club

Johnstown, Colorado

6' - 8' high fence or net to help stop any shots in this area. Due to the distance from the tee, balls hit into this area will likely be rolling or bouncing on the ground, not flying through the air.

**Hillsborough Ditch**  
Property line shown in the center of the ditch.

**Hillsborough Ditch 50' Easement**  
70' easement area shown to provide an additional 20' buffer with construction activities and permanent improvements.

6' - 8' high fence or net as backstop to trees and to control public access to the Hillsborough Ditch. This is the only area where the public has access to the ditch. The short game area will be oriented so that shots are generally not hit towards the ditch, but the only shots in this area will be in the 45 yard length and shorter range.

Pine trees planted on berm as further separation between public access and Hillsborough Ditch.  
Mounding to be constructed in this area.

Mounding to be constructed in this area.

275-yard envelope showing where the vast majority of golf balls will be landing. Very few recreational/public golfers can hit the ball much longer. Most male golfers except for the pro's and top national amateurs average between 200 and 275 yards in distance with their driver. Additionally, offline shots do not travel as far as the intended shot if it is hit straight.

Storm water drain lines

Public access is limited to this area.

Storm water drain lines

## General Safety Envelope Design Parameters for the Practice Range

Two books published by practicing golf course architects have been used as reference to provide guidance on what dimensioning to use in establishing the safety envelope around the practice range:

**From "Golf Course Architecture, Design, Construction & Restoration" by Dr. Michael Hurdzan (Blue lines):**

- 92% of all golf shots will fall within a 15 degree angle from the intended line of play. This standard has been expanded to account for longer golf shots, newer golf balls, better equipment, etc.
- The standard used for Bella Ridge has been expanded. It is a 17-degree angle to the left or hook side for right-handed golfers, which comprises the vast majority of golfers. On the right/slice side for right-handed golfers, 23-degrees is being used as the envelope within which almost all golf balls will fall.
- Additionally, this safety envelope is established from the very extreme end and back of the tee, encompassing all other tee locations and creating a much wider margin for the vast majority of tee locations.

**From "Routing the Golf Course, The Art & Science That Forms The Golf Journey", by Forrest Richardson (Red lines):**

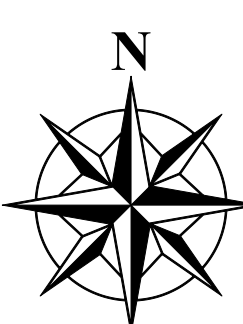
- The landing area of the range should be 30% wider than the teeing area with additional safety margins established outside of the tee width. The 200' wide tees have an additional 50' of safety margin added on either side of the tee in order to establish the width of the landing area. This means the tee width is now  $200' + 50' + 50' = 300'$  wide.  $300' \times 130\% = 390'$  of width needed on the range.
- I've set the end point for this safety envelope at 300 yards from the front edge of the tee areas, which means that the length to the end of the safety envelope shown from the back of the tees is about 345-350 yards. The end of the property to the west is another 70-80 yards away, well beyond the reach of just about all golfers.

Additionally, the design of the practice range has been uniquely set-up with two separate teeing areas specifically so that the players can be directed and focused into the middle of the range. The road on the south and the Hillsborough Ditch on the north have been considered and the tees oriented to keep players hitting away from both.

- The target greens and more importantly the target fairways also help to direct the players focus to the middle of the range.



**Arthur Schaupeter**  
GOLF COURSE ARCHITECTS



SCALE: 1" = 200'  
0 400' 800'

**Golf Hole Safety Envelopes**

June 21, 2024