

feet. If you can get a tape that measures up to 200 feet, that's even better. Have a large supply of spikes (big, heavy nails) on hand. I would suggest having 12-15 spikes available, and a hammer to drive them into the ground, if it is hard and dry. *Carefully count the number of nails you bring out to the field, and make sure you do not leave any of them on the field when you are done.* Then, it is best if you have as many as three long strings, one long enough to run the width of the field, and two long enough to run the length. Or, you can have one REALLY long string that can do all three of these in one shot.

The basic approach is to locate the center of the goal line at one end of the field, then mark all the lines at that end, using the center of the goal mouth as the basic reference point for all measurements. You then run the touch lines (sidelines) to the other end of the field, locate the center of the other goal mouth, and mark all the lines at the other end. Mark the halfway line last, and draw the center circle.

Lining Materials -- Paint or Gasoline?

Fields look best if you line them with paint, but paint does not last very long, and is very expensive. At this writing, a case of white spray paint (12 cans, 20 oz. each) costs about \$45. Ignore what the paint can says, it will take more than half a case of paint to do a single field -- more like three cases to do all four fields at Overlook. Try to coordinate with the county so that you don't paint the lines just before the fields are mowed, or all your hard work will be for nothing. In any case, fields lined with paint will at best last two weekends, so be prepared to repeat your work several times during a season.

The cheapest method of lining is to spray a mixture of gasoline and diesel (two parts gas to one part diesel works good). The gasoline is more effective in killing the grass, and the diesel serves to make it more visible where you have sprayed. Pure diesel will almost not work at all. I think you can just about get one field lined with five gallons of gasoline, and 2.5 gallons of diesel. Containers in the locker at Overlook are red for gasoline, blue for diesel. In the late summer, when the grass is growing rapidly, you will almost certainly have to line the fields twice per season. If it rains a lot, maybe a third time will be necessary before cold weather sets in. If you do the lines well in the fall, one lining session in the spring should carry you through the season. In the Spring, you have to wait until the grass starts greening up before you line.

Basic Steps in Lining

I assume you are laying out a field from scratch. The steps you take are the same whether the field is 60 or 70 yards wide, only (some of) the measurements are changed. You will need a dozen or so nails, and one string a bit longer than the width of the field.

The steps you take to line the first end are to:

- Mark the goal line and locate the center of the goal mouth,
- mark the goal area,
- mark the penalty area,
- make the penalty-kick mark, and
- draw the "D".

Then you shoot the touch lines to the other end of the field.

At the far end, repeat what you did at the near end to make the goal line, goal area, etc.

Then mark the halfway line and center circle.

Marking the Goal Line

- (1) Figure out generally where you want the field to be. You may use a nearby fence or an old goal line, and determine a line parallel to these. Use a string and **nine** nails/spikes. Save the largest three nails for steps (2) and (5) below. Lay a string down along the line which will be the goal line, securing the ends with two of the nails. Make it at least as long as, or longer than the goal line, and pull it tight enough so that the entire length of the line is straight.
- (2) Put your third (and biggest, strongest) nail in the center of the goal line, where the center of the goal mouth will be. If you have a long tape measure, keep it at this nail, because the longest distances you need to measure come from this mark.
- (3) Find the intersection of the goal line and the goal area by measuring from the center nail (point GM) to a point GG exactly 30 feet away (see the diagram). Do again for GM to GG'. Put nails four and five at GG and GG'.
- (4) Find the intersection of the goal line and penalty area by measuring from the center nail (point GM) to a point GP exactly 66 feet away (see the diagram). Do again for GM to GP'. Put nails six and seven at GP and GP'.
- (5) Find the corners of the field by continuing to measure along the goal line, away from GP (GP') an additional 39 feet (exactly). Put nails eight and nine at these points, GT and GT'. The distance from GM to GT will now be 105 feet (35 yards, half the total length). If you have a long measuring tape, check the 105 feet measurement. From GT to GT' is 70 yards. Anchor the goal line string onto these last two nails, and you can pick up nails 1 and 2 and use them later for the goal and penalty area marking.
- (6) Spray the goal line. If possible, align the sprayer so that the **string is on the outside edge** of the field, since the line itself is a part of the field of play. It is also best if you not spray the string itself any more than necessary (this will keep the string from getting messy to handle).
- (7) At the 11 yard point from each of the corners, put a hash mark one yard long, perpendicular to the goal line, **outside the playing area**. This mark is optional, and assists the referee in judging how close defenders may approach when corner kicks are taken.

Marking the Goal Area

The basic trick here is to get the goal area corners to be at right angles. Two tape measures makes this easy. You need two more nails for the corners of the goal area (you already have two at points GG and GG').

- (1) Anchor tape measure #1 at the goal mouth center (GM), and the tape measure #2 at the intersection of the goal line and the goal area (GG). Pull the tapes out into the field so that you are 18 feet from the goal line along tape #2 and simultaneously exactly 35 feet (and 0 inches) along tape #1. Put a nail at this point, called GC.
- (2) Repeat the process (1) for the other corner at GC'. Double check if you want that GC and GC' are

60 feet apart.

(3) Anchor a string along the goal area, from GG to GC to GC' to GG'. Mark the goal area so that the string is on the outside edge of the box (that is, the line will be closer to the goal mouth than the string).

(4) Do NOT pick up the nails on the goal line (marking GG and GG') -- you will use these to make the PK mark.

Marking the Penalty Area

You mark the penalty area in much the same way as the goal area, just the rectangle is bigger.

(1) Anchor tape measure #1 at the goal mouth center (GM), and the tape measure #2 at the intersection of the goal line and the penalty area (GP). Pull the tapes out into the field so that you are 54 feet from the goal line along tape #2 and simultaneously exactly 85 feet 3.3 inches along tape #1. Put a nail at this point, called PC. Do this measurement as accurately as possible, because you will be relying on the placement of point PC (and PC') to make a perpendicular touch line later.

(2) Repeat the process (1) for the other corner at PC'. Double check if you want that PC and PC' are 132 feet apart.

(3) Anchor a string along the penalty area, from GP to PC to PC' to GP'. Mark the penalty area so that the string is on the outside edge of the box (that is, the line will be closer to the goal mouth than the string).

(4) Do NOT pick up the nails marking PC and PC' -- you will use them later to shoot the touch lines.

Making the PK Mark

(1) Keep tape measure #1 anchored at the goal mouth (GM), and go into the field 36 feet. Anchor tape measure #2 at the corner of the goal area and goal line (pick GG or GG'), and measure out 46 feet 10.3 inches. Bring both tape measures to the same point, and that is the center of the PK mark. Put a nail there (the point is PK on the diagram).

(2) If you want, verify that PK is also 46 feet 10.3 inches from the other of GG or GG'.

(3) Draw a short line, about a foot long, parallel to the goal line, centered on the PK nail.

Drawing the "D"

(1) Using the nail at PK, you want to draw the arc of a circle 30 feet in radius, with PK as its center, and wherever the circle is outside the penalty area.

(2) Anchor a tape measure at PK, have one person hold the tape measure at the 30 foot mark while walking around the arc of the "D" as a second operates the sprayer.

(3) Pick up the nail at the PK mark.

Running Touch Lines to the Other End

This is the part of the exercise that is most prone to error, assuming you want to get the corners of the field squared off exactly. If your longest tape measure is 100 feet long, then we will use the inside-the-field corner of the penalty area to help define a perpendicular touch line. If you have a 200 foot measure, then we will use the nail at the goal mouth again.

(1) Anchor tape measure #1 (the longer of your tapes) at the corner of the field (point GT), and walk it out the full 100 feet along the general direction of the touch line. If you have a longer tape, go the full 165 feet to the halfway line. In this case, put down two marker nails, about two yards apart, both 165 feet from the corner, such that one nail is likely to be inside the field, and the other outside the field. Then put a short string between these two nails.

(2) Use (2a) if your longest tape measure is 100 feet, (2b) or (2c) if you have a measure that goes 200 feet. You only need to do one of (2a), or (2b), or (2c).

(2a) Anchor tape measure #2 at the corner of the penalty area (point PC), and measure out, exactly as possible, 60 feet, 3.75 inches. Make the two 100 foot tape measures meet (at those lengths) at a point -- call the point T. The point T is on the desired touch line, so put a nail there.

(2b) You can locate point T a bit more accurately if one tape measure will reach 145 feet. T should be 145 feet exactly from the goal mouth GM, and 100 feet exactly from the corner GT. Make the two tape measures meet at these distances, and you have T.

(2c) If the longer tape measure will go up to 200 feet, then you can shoot all the way to the halfway line and locate the point H, which is where the halfway line and touch lines meet. If you have put two nails down about where point H is (in (1) above), then you can pick up the long tape, and anchor it at the goal mouth again. Draw out toward the direction of your two marker nails, and find where the line that goes between those nails intersects the longer tape at exactly 195 feet, 6.9 inches. That is the halfway point H.

(3) Lay a tight string along the line defined by the corner of the field and the nail at T (or H) from (2) above. Keep the string going in a straight line all the way to the other end of the field.

(4) If you have located the point T, then at 165 feet along this string, put a nail down to mark the point H where the halfway line intersects the touch line. (If you were able to do (2c) above, then you already have located H.) You already have a marker at 100 feet, so use another tape measure to make another 65. Then, keep going another 165 feet to locate the far corner of the field. Put a nail there.

(5) Repeat (1) - (4) above for the other touch line. You will need a second string as long as the touch line (or else you'll have to pick the first string up and use it for the other side of the field too).

Now you have the two far corners located, at least approximately.

(6) Anchor one tape measure at each of the far corners, measure towards the center of the goal mouth at the far end of the field. You need 105 feet for each tape measure, or a measure that will reach longer than 100 feet, so maybe you'll need to improvise, or get a third short tape measure for the last 10 feet. Readjust the positions of the corners (slightly I hope) so that they are exactly 210 feet (70 yards) apart, and while you are at it, locate the center of the far goal mouth at 105 feet, putting a sturdy nail there.

(7) Once you are happy with the position of the touch line(s), spray the first of them, walking the machine down to the other end of the field, where you will next do all the lines there. When you spray the touch lines, also spray the 1 yard (3 feet) radius corner quarter circles for corner kicks.

Lining the Other End of the Field

- (1) You are an expert now. Just repeat what you did at the first end of the field.
- (2) You already have located the far corners and the goal mouth at the far end. Stretch a tight string and spray the far goal line.
- (3) Mark the goal area, and the penalty area as before.
- (4) Make the far PK mark and the far "D".

Marking the Halfway Line and Center Circle

- (1) You already should have nails at the two ends of the halfway line, at points H and H'. Stretch a string from one to the other, and find the center of the field, which should be at exactly 105 feet from each of H and H'. Put a nail at the center of the field.
- (2) Spray the halfway line.
- (3) Anchor a tape at the center of the field, and in a fashion similar to the way you made the "D", have one person walk a tape measure held at 30 feet around while the second person operates the sprayer.
- (4) You are done. **Make sure you pick up ALL the nails as you clean up.**