



How to **STRIPE A 3D CROSSWALK**  
and Improve Driver Safety



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**G**overnments and safety organizations are constantly on the lookout for ways to improve pedestrian and driver safety by slowing down traffic as it approaches an intersection. Reducing speed limits and installing asphalt or recycled rubber speed bumps have been a go-to alternative for many situations, but an innovative approach that relies only on pavement marking is being tried in several countries.

Essentially a three-dimensional (3D) design, these crosswalks when finished appear to float above the pavement, giving drivers the initial impression of a raised impediment on the pavement and causes them to tap the brakes.

This how-to-guide will uncover the steps it takes to layout and stripe a 3D crosswalk — improving driver safety as traffic approaches.

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## The Starting Point and Optical Lines

Contractors will begin by measuring and painting the white crosswalk bars as normal. In many ways the striping of a 3D crosswalk is similar to striping a normal crosswalk.

However, to achieve the 3D appeal, contractors will need to measure 16 feet from the leading edge — the edge the drivers approach the crosswalk — and mark the starting point

### Starting Point





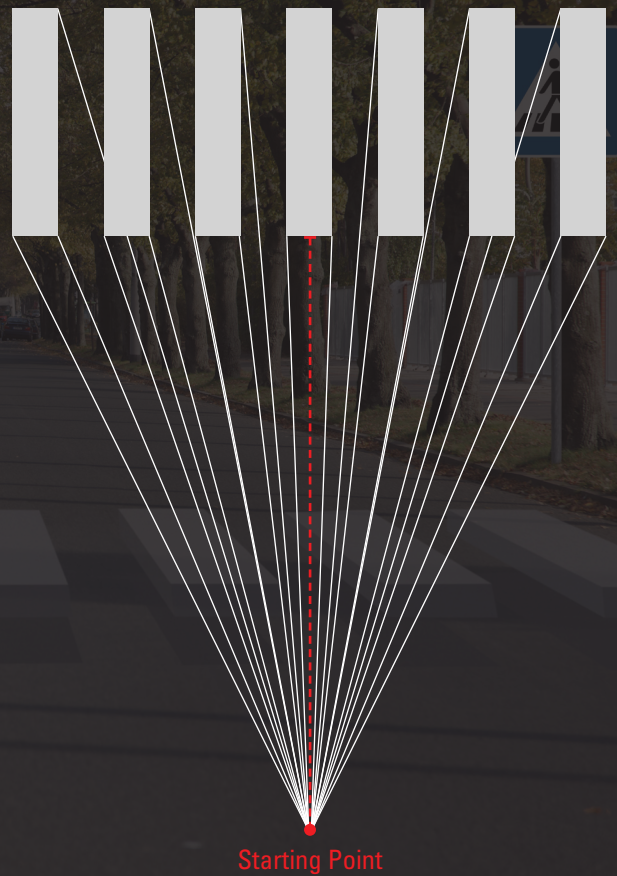
## STEP 1

From this point, chalk optical lines to each corner of each white bar. Do not extend an optical line to the farthest back corner of each bar. One stripe, the stripe the driver would see head-on, only needs two chalk lines — one to each of the closest corners.

A third line will be added to each stripe, from the starting point to the closest back corner of each stripe.

Note: A greater distance of 16 feet is utilized in this method to provide drivers with more time to react and slow down. In this step, the crosswalk is designed for a one-way street. If contractors want to utilize this method for a two-way street, a second starting point — 16 feet away from the intersection — would need to be marked as well and the process would need to be completed from both sides.

### Optical Lines



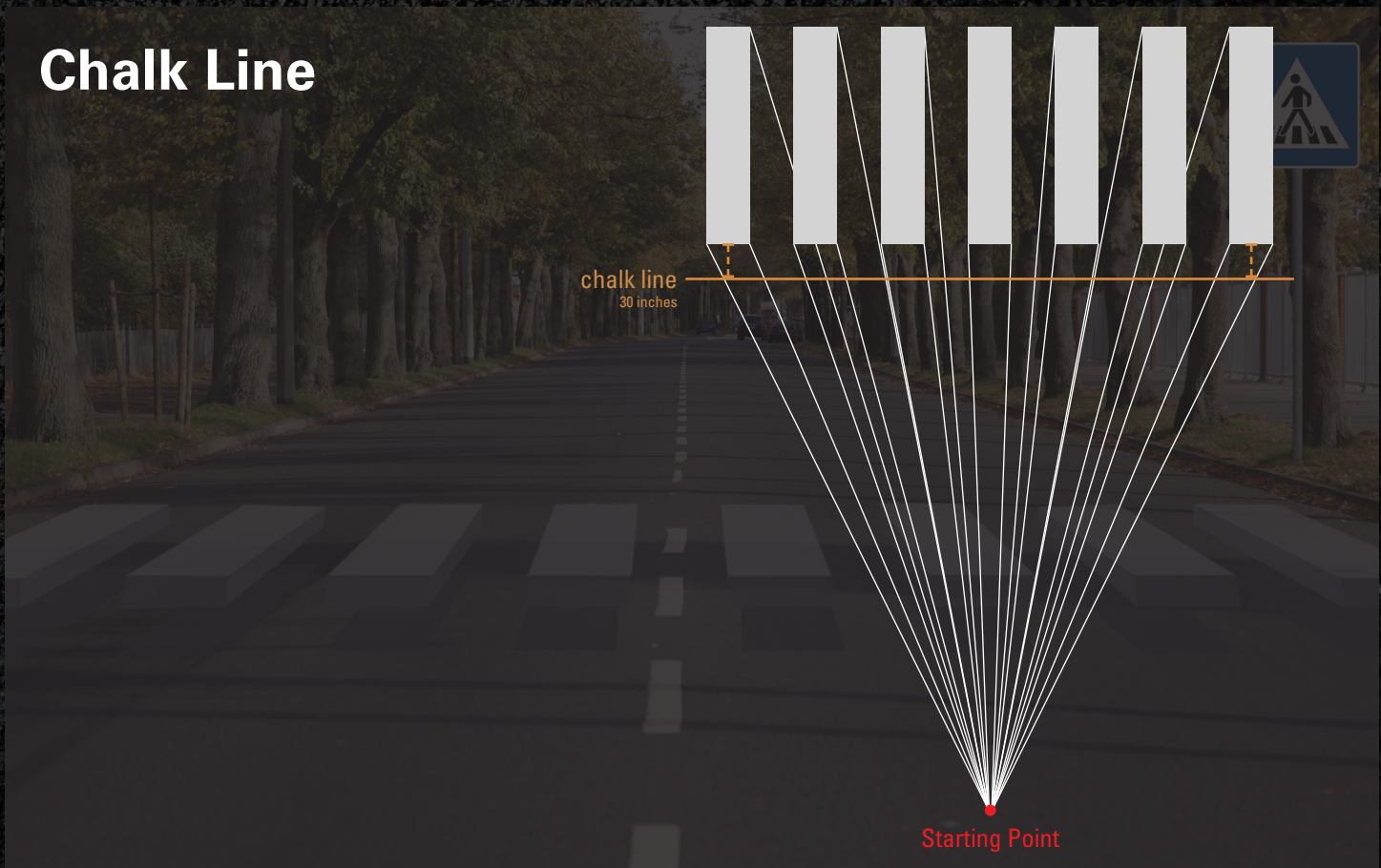


## Determining Bar Thickness

Measure from the leading edge of the bars toward the starting point a distance equal to how thick you want the bars to appear to the driver. Chalk this line the length of the crosswalk.

Note: A recommendation of 30 inches is used, but the distance can vary.

## Chalk Line





## Creating the Shadow

From the leading edge of the white bars, measure five feet out towards the starting point. Chalk this line the length of the crosswalk. This line plays an important

role throughout the rest of the layout process as it gives you the leading edge of the black shadow.

## Leading Shadow Edge



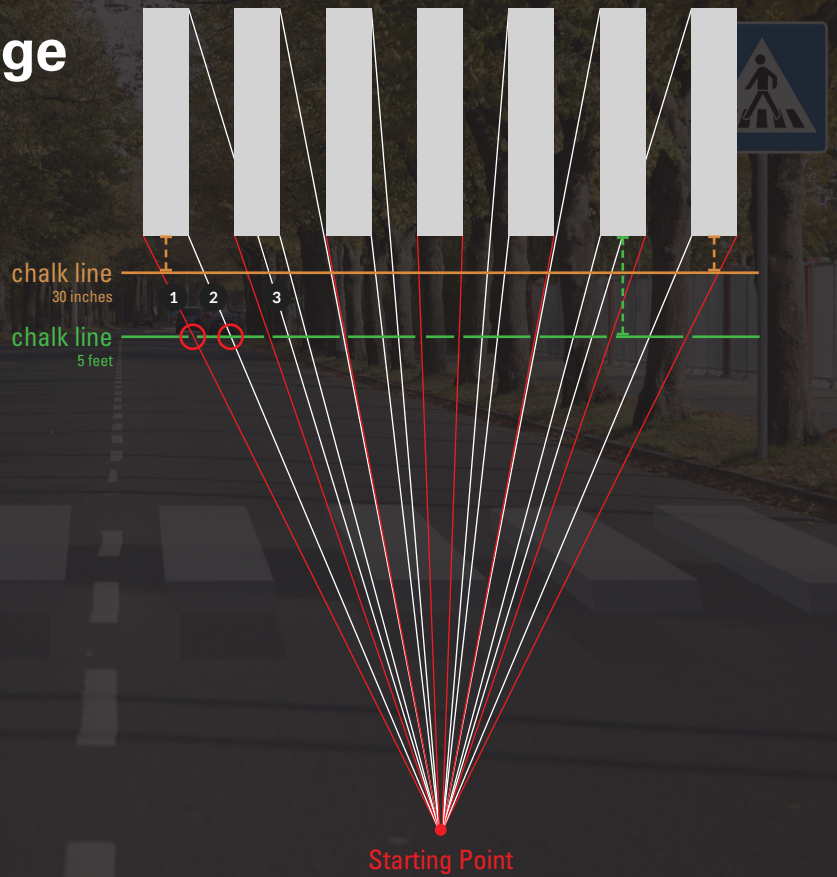


## STEP 3

In addition, the point where the five-foot line crosses the nearest corner of each bar (Line 2) from the starting point controls the position of the black shadow for each individual bar.

The shorter edge of the black shadow is controlled by the point where Line 1 intersects the five-foot line.

### Leading Shadow Edge



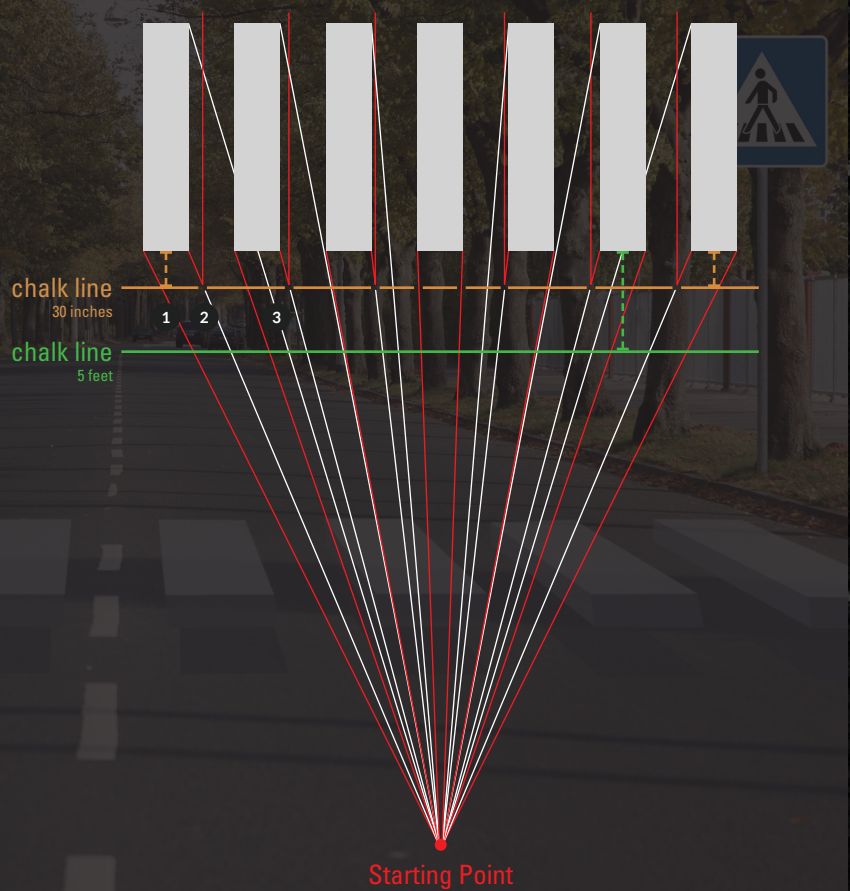


## Creating the 3D Edges of the White Bar

On each bar, locate the intersection where each second line (Line 2) intersects the orange 30-inch line. Chalk a line (Line 4) from this intersection point, parallel to the long side of each white bar.

The combination of the lines from the starting point (Lines 1-3), the 30-inch line and the line formed parallel to the white bar outlines the 3D edges of each bar.

### 3D Edges





## Marking the Shadow Outline

Now it's time to connect the dots to create the outline of the shadow. The leading edge of the shadow (nearest the standing point) is marked by the point (A) where the 5-foot line and Line 2 cross.

Chalk a line parallel to the long edge of light gray bar. Mark the point (B) where this line crosses Line 3. This line AB is the edge of the shadow. The width of the leading edge of the shadow has already been determined; it's on the chalked 5-foot line, from A to

C (where Line 1 crosses the 5-foot line). This line is parallel to the leading edge of the bar.

To create the other edge of the shadow just chalk a line from C toward the stripe where it meets the bar thickness at D. To mark the back end of the dark shadow simply chalk a line from B towards E, parallel to Line A-C.

## Creating the Shadow



This process is repeated for each stripe in the crosswalk. Once you have finished each stripe, you're ready to paint.

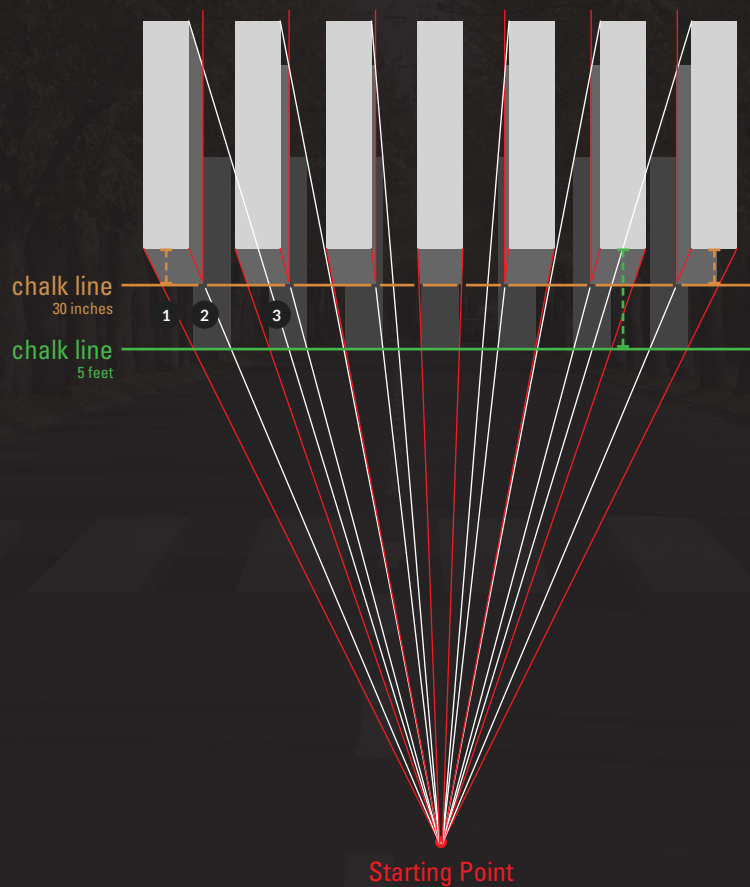
Note: During this process it is always a good idea to place yourself at the starting point to make sure you have the lines correct.



## Painting the Crosswalk

Striping requires at least two paint machines and a hand-held unit, each containing a different color. For best practices, paint in order of the darkness of color. The white crossing itself needs to be painted prior to the special effects.

Note: In rain or at night the 3D crosswalk loses some of its depth. To avoid this use vibrant colors of paint with additions of glass beads for reflexivity.





Information was compiled from the article, How to Layout and Stripe a 'Floating' Crosswalk, that originally appeared on forconstructionpros.com, and was written by Allan Heydorn, former Editor. The article was based off an interview with Gautur Ívar Halldórsson, co-owner of GÍH Vegamálun, a striping company in northwest Iceland.



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