

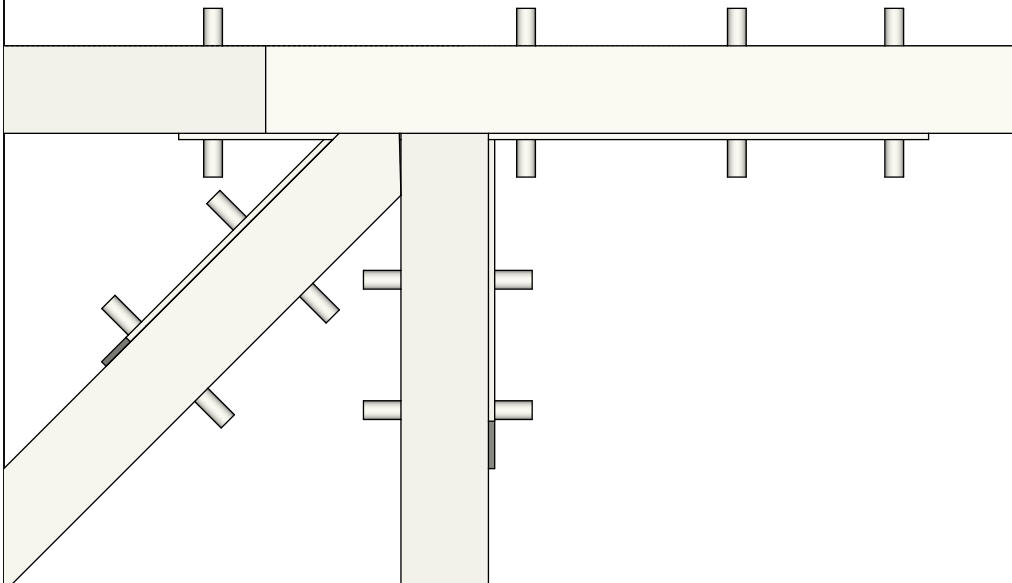
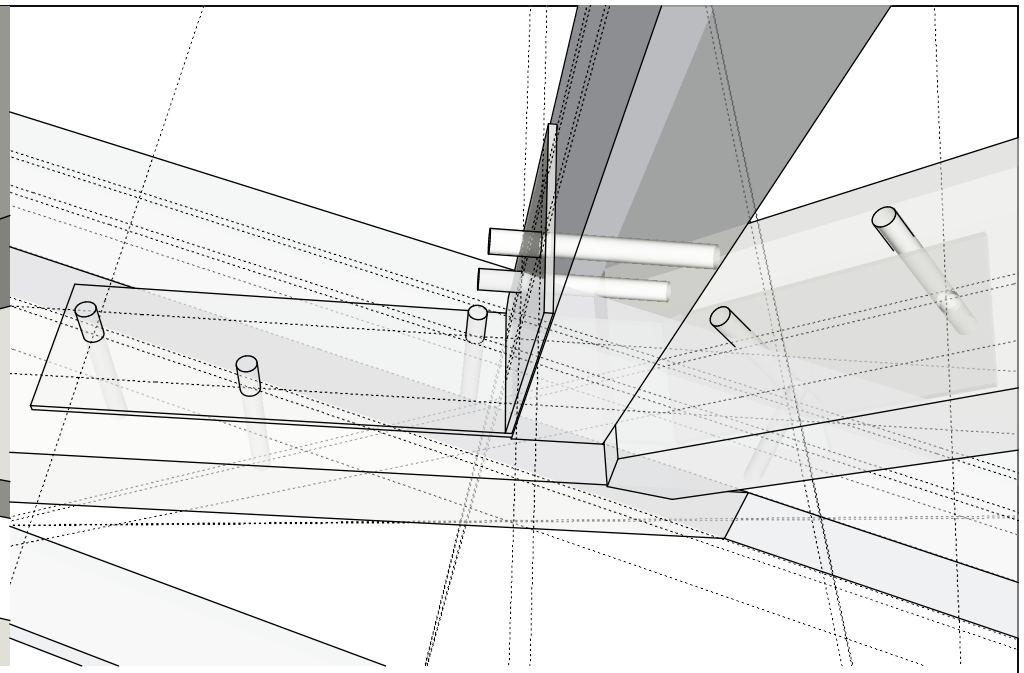
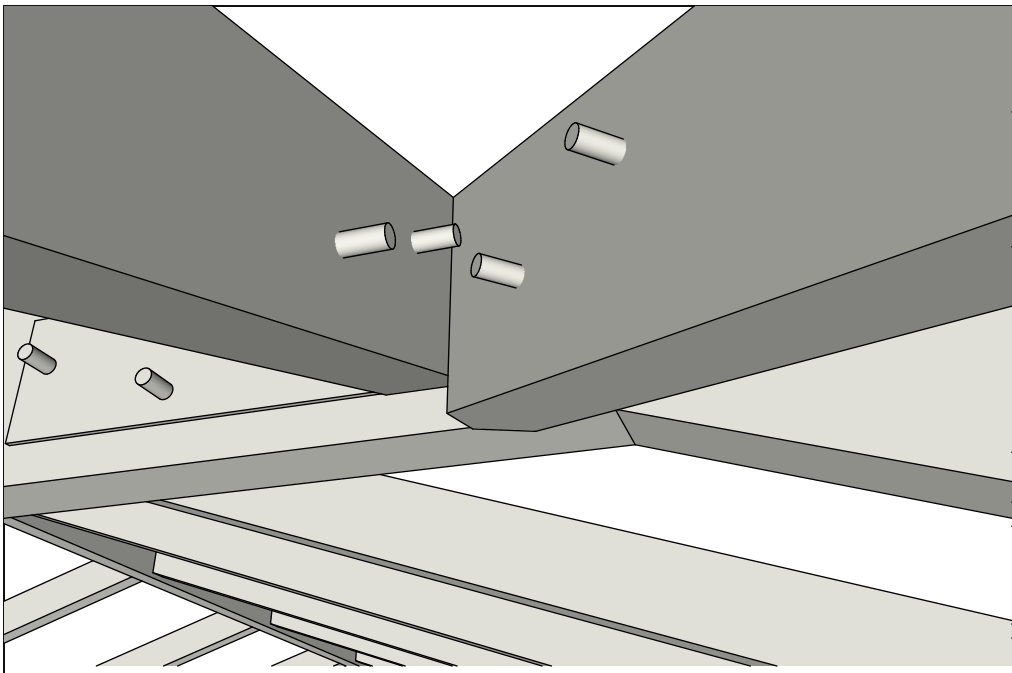
# Hip Collar-Tie Bracket for 4:12 pitch roof

by Joseph Oster  
[www.wingo.com/SketchUp](http://www.wingo.com/SketchUp)

design study for John Morrall  
Wainiha, Kauai, Hawaii

wingo.com  
web site design

August 12, 2010



**INSTALL INSTRUCTIONS:**

- 1) drill one bolt hole for hip end of "collar plate".
- 2) install that bolt, washer(s) and nut.
- 3) level the bracket on the collar-tie, drill a second hole and install bolt, washer(s) and nut to hold the "collar plate" level.
- 4) cut common and hip rafters to fit, drop them into place in bracket.
- 5) drill common and hip rafters at bracket holes, install remaining bolts, washers and nuts .

bottom views

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Hip Collar-Tie Bracket, 4:12

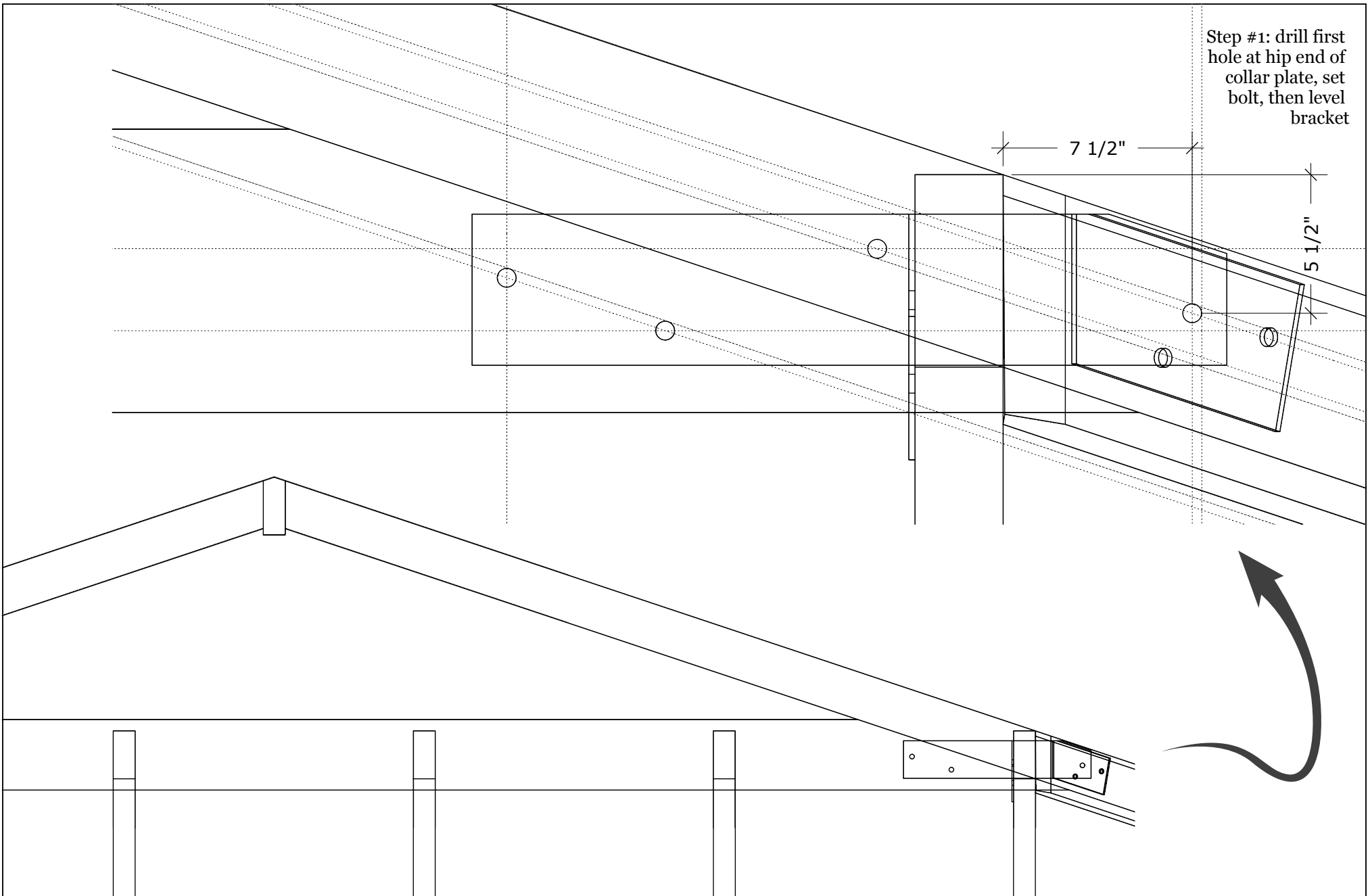
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Step #1: drill first hole at hip end of collar plate, set bolt, then level bracket



bracket context

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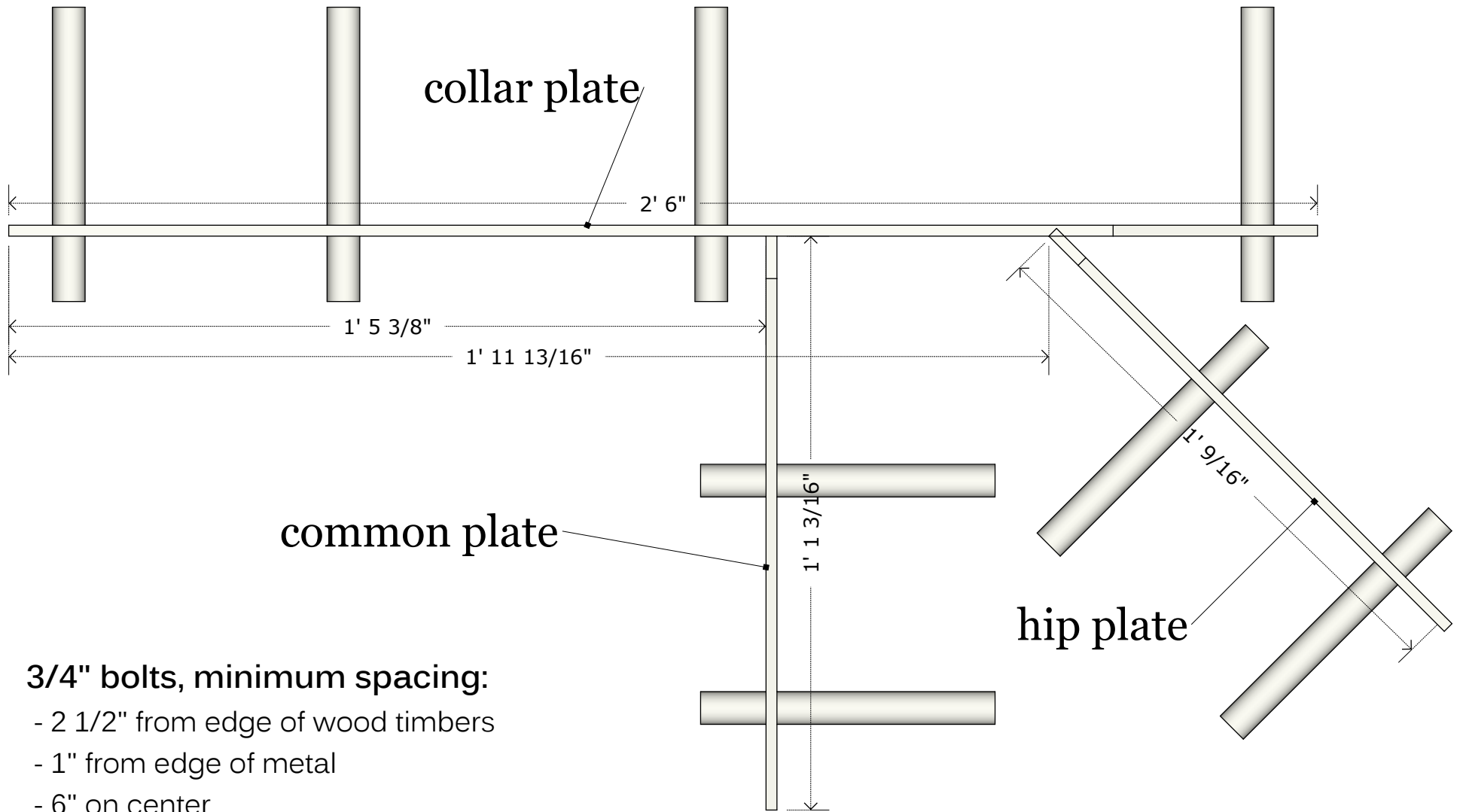
Hip Collar-Tie Bracket, 4:12

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NOTE: need left and right pair of brackets

top view

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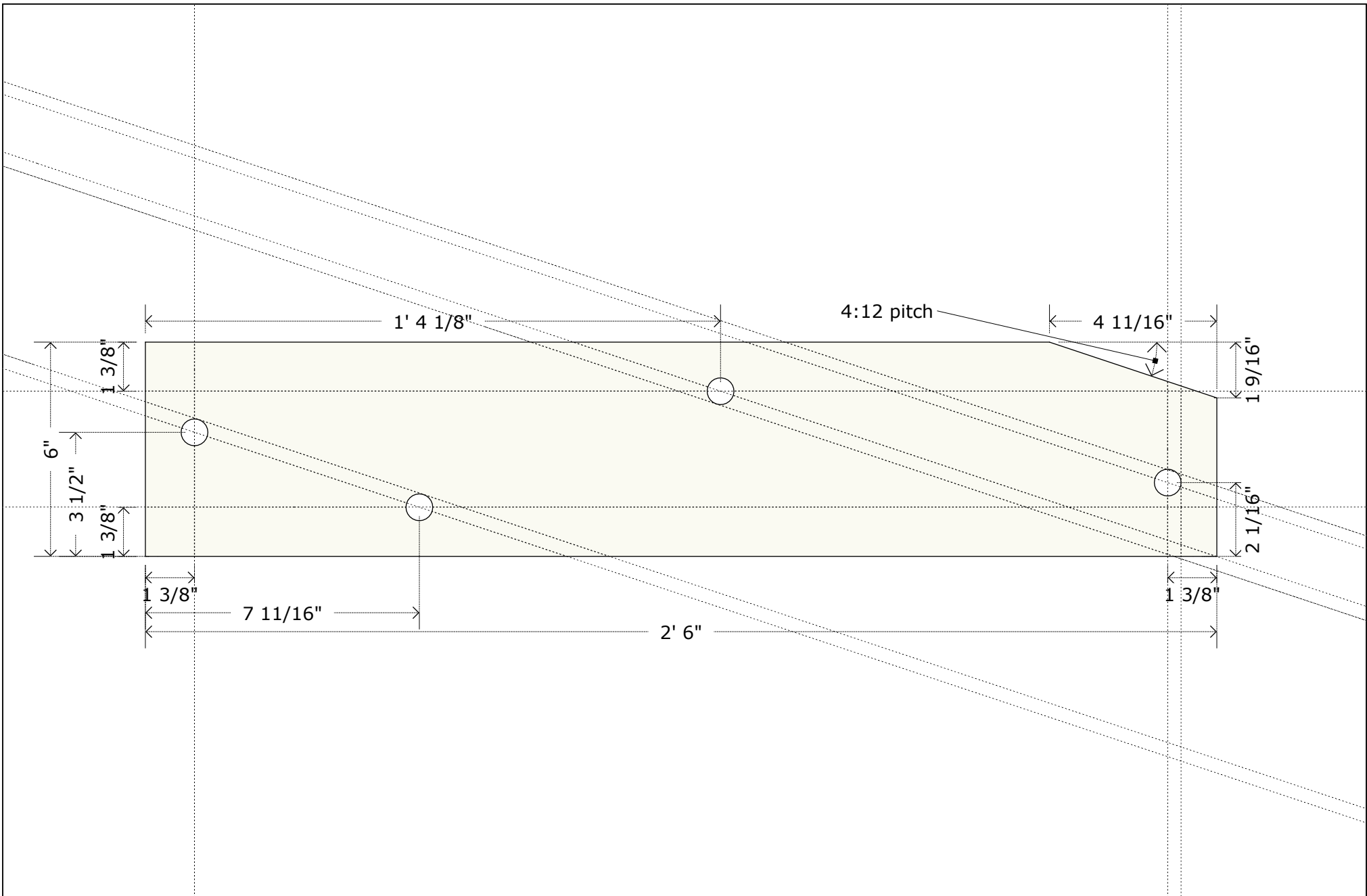
Hip Collar-Tie Bracket, 4:12

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collar plate

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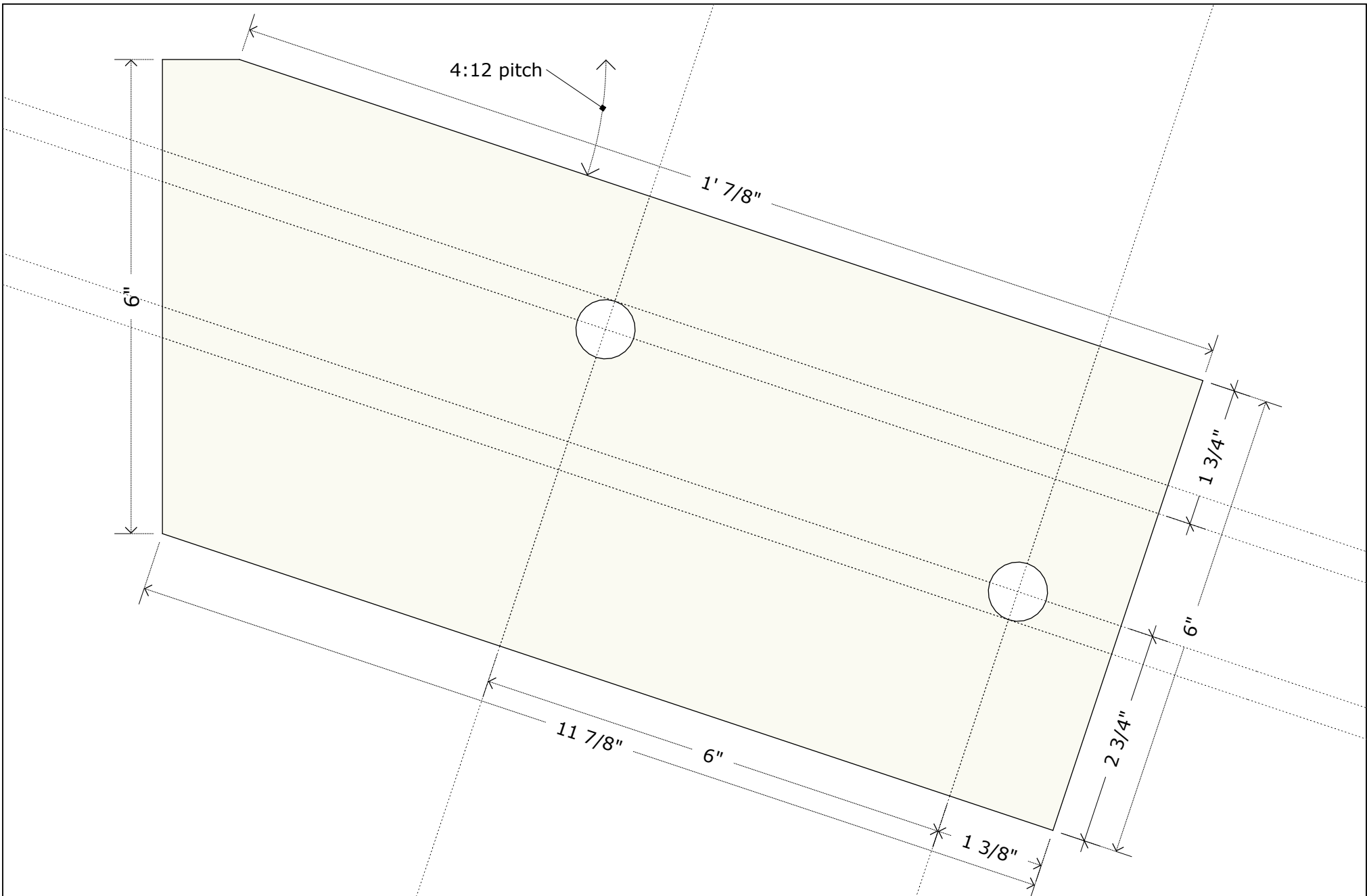
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common plate

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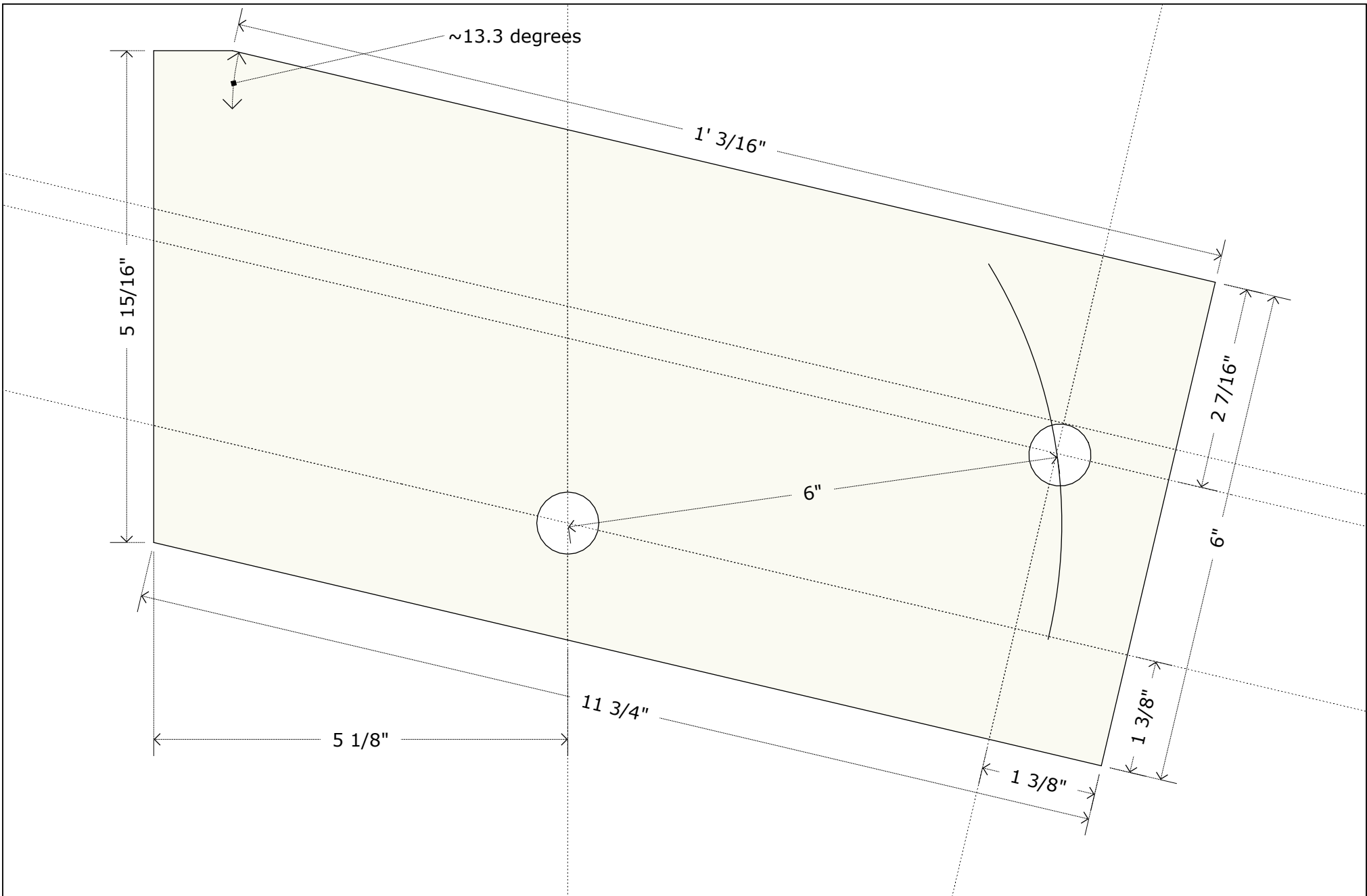
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Hip Collar-Tie Bracket, 4:12

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hip plate

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Hip Collar-Tie Bracket, 4:12

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