


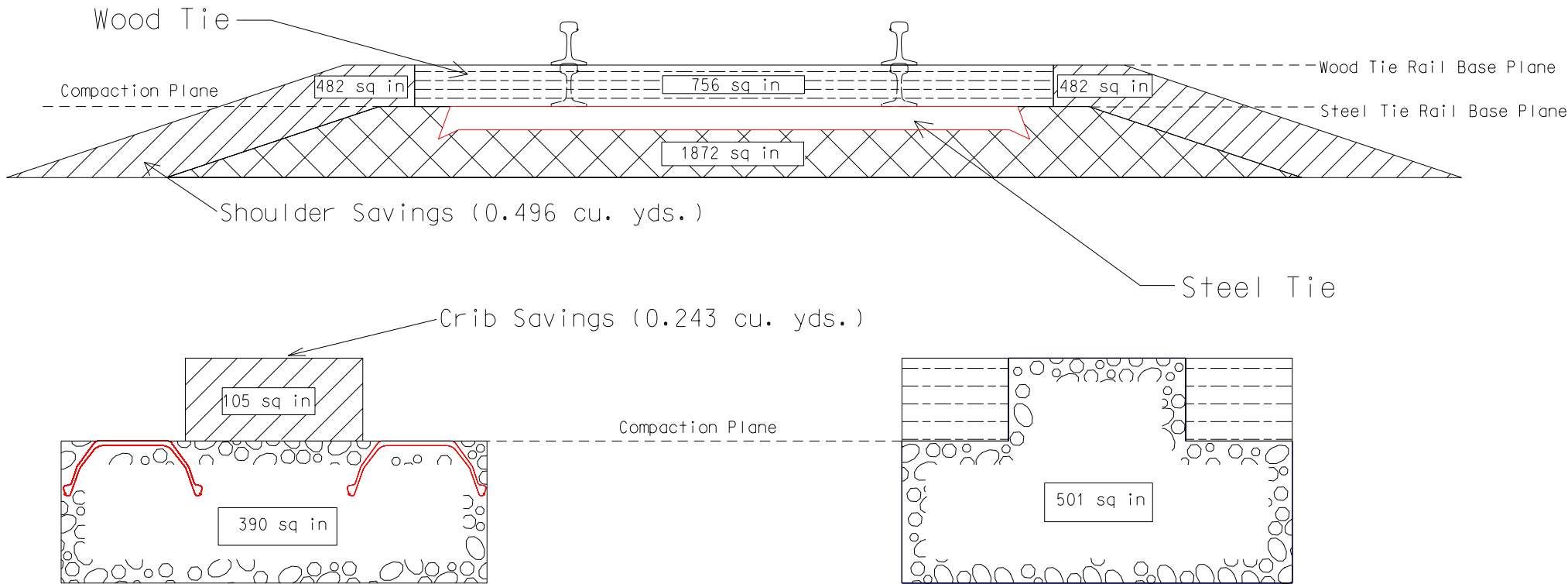


# Ballast Comparison Steel v. Wood

Ballast Savings 43.8%

-  Total area of shoulders - 482 sq in
-  Area of crib - 756 sq in
-  Total area of ballast needed for Steel Tie - 1872 sq in

Cubic Yards Per Tie  
 Wood Tie - 1.701 cu. yds.  
 Steel Tie - 0.0131 cu. yds.



NOTE: Compaction plane is the same for both wood and steel ties. 12" ballast depth under tie and 12" shoulder width