

Yihui Wang

October 11, 2022

ECE 6240

Lab#8 Interconnect Delay Optimization

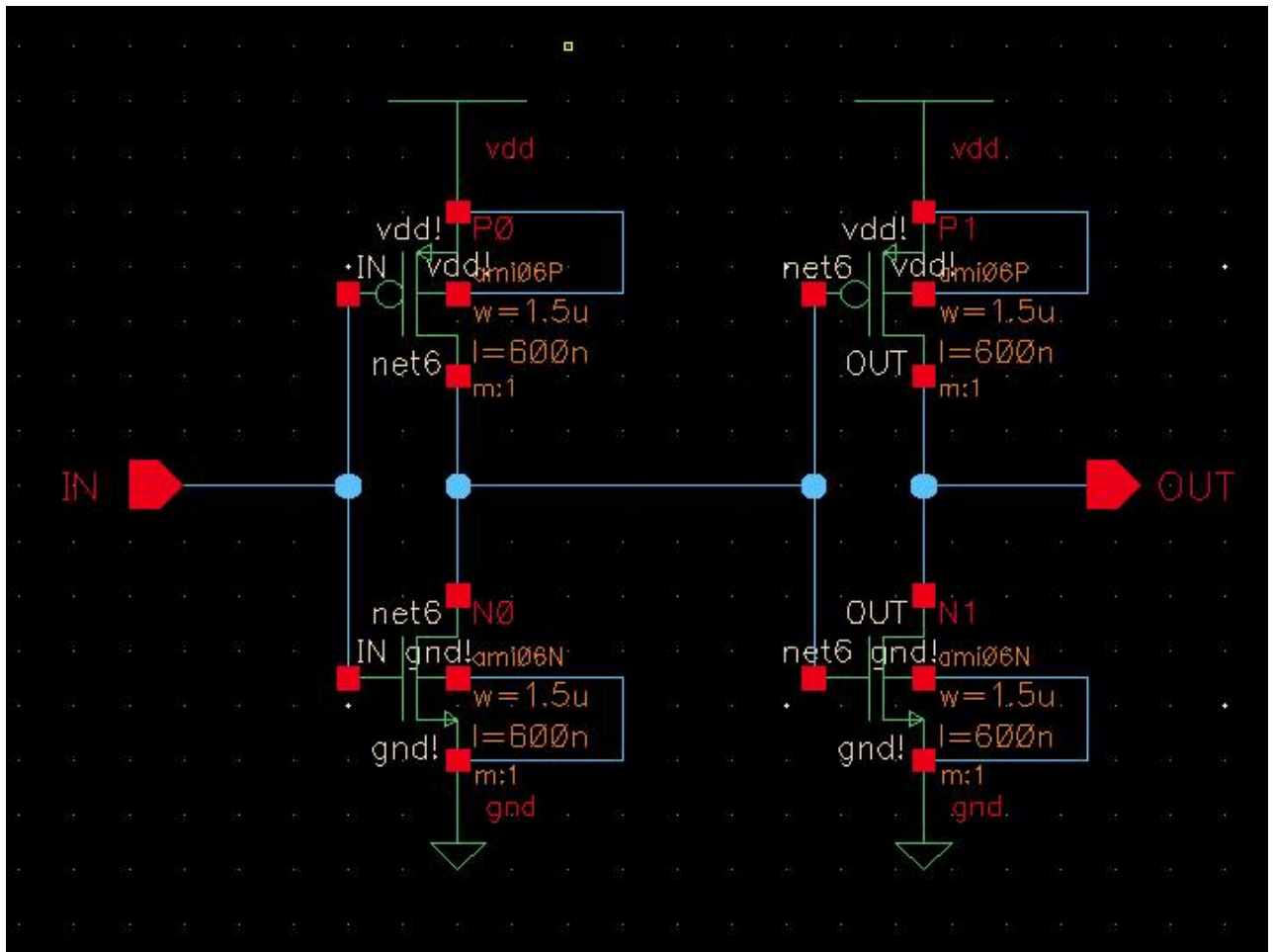


Figure 1 Schematic of Buffer

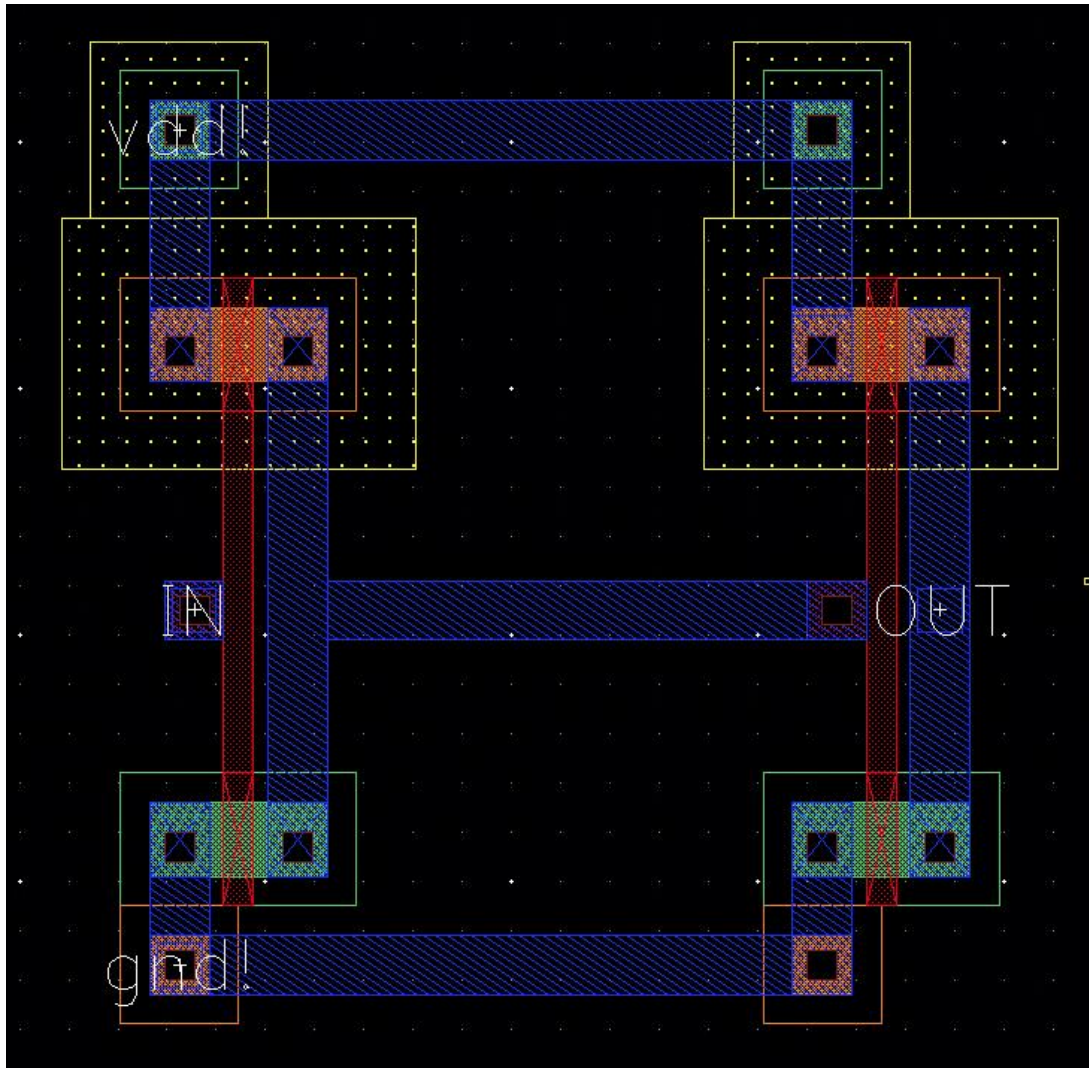


Figure 2 Layout of Buffer

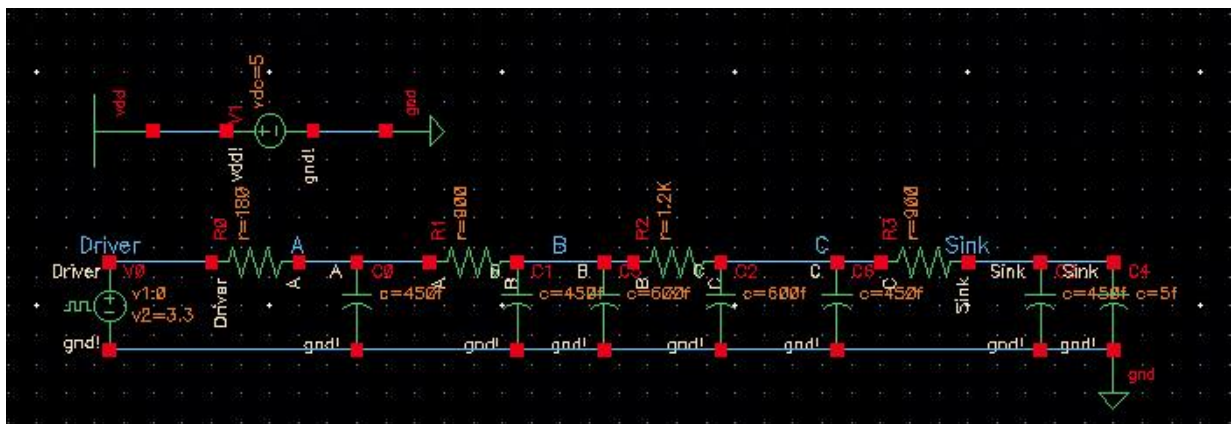


Figure 3 Schematic of Testbench

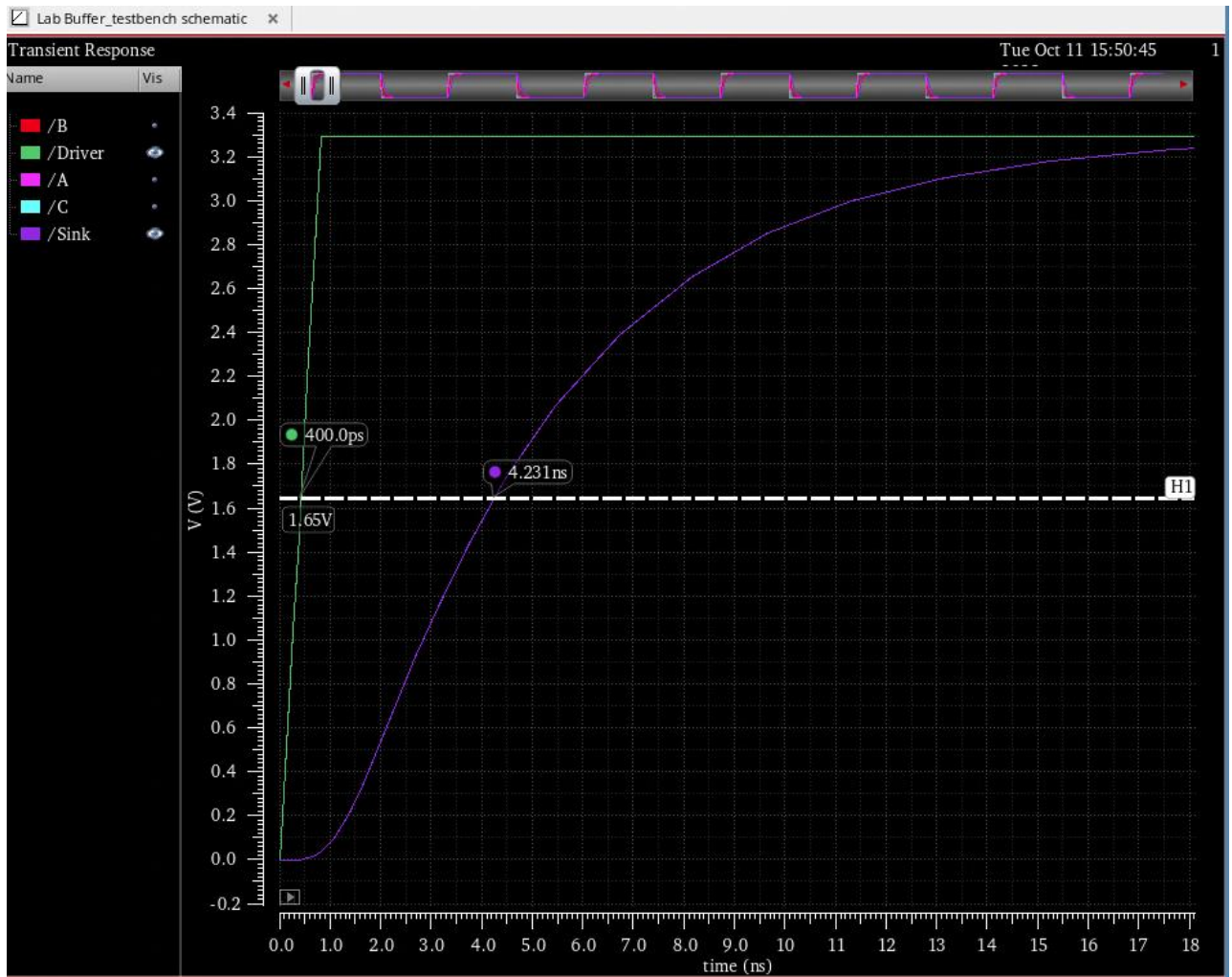


Figure 4 Without Buffer delay is $4.231\text{ns} - 400\text{ps} = 3.832\text{ns}$

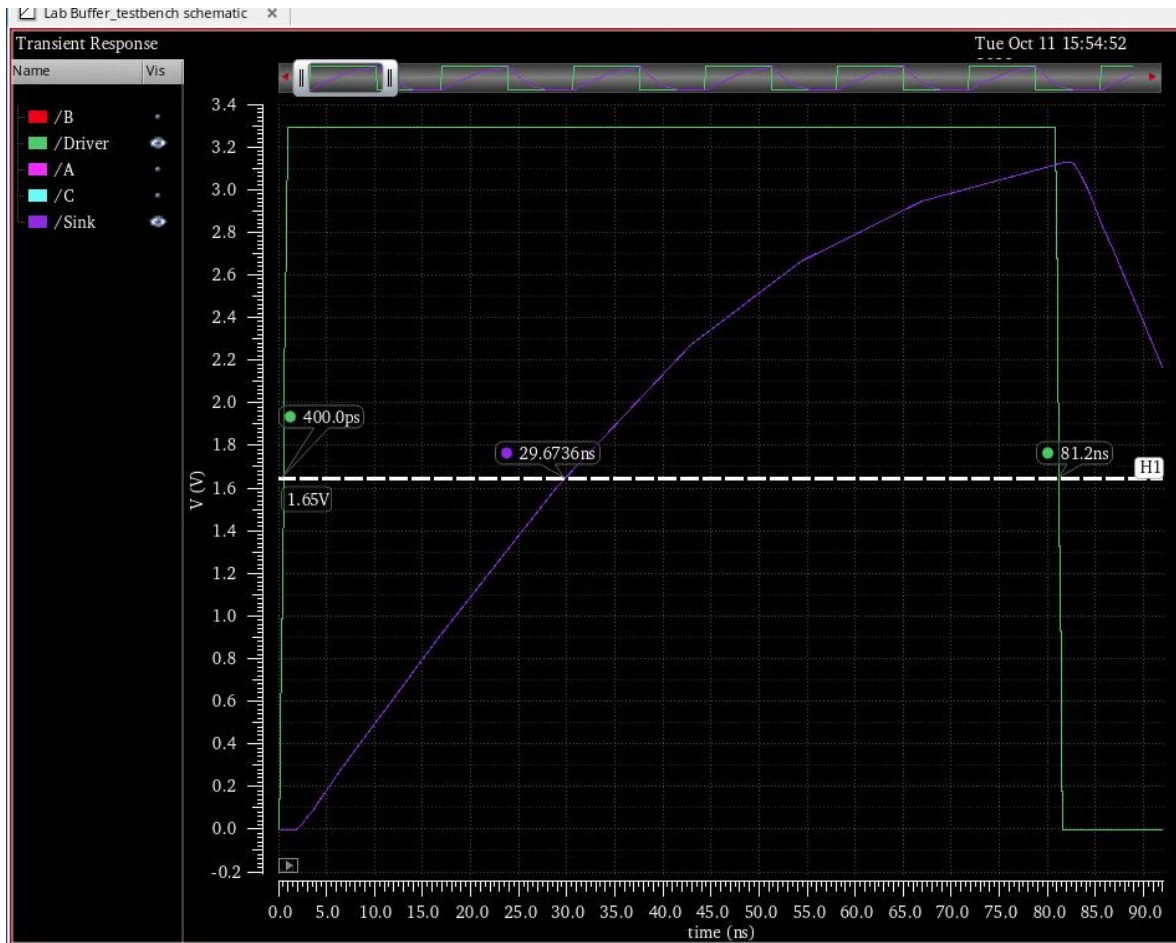


Figure 5 With Buffer Inserted in B the delay is $\underline{29.6736\text{ns} - 400\text{ps} = 29.2736\text{ns}}$

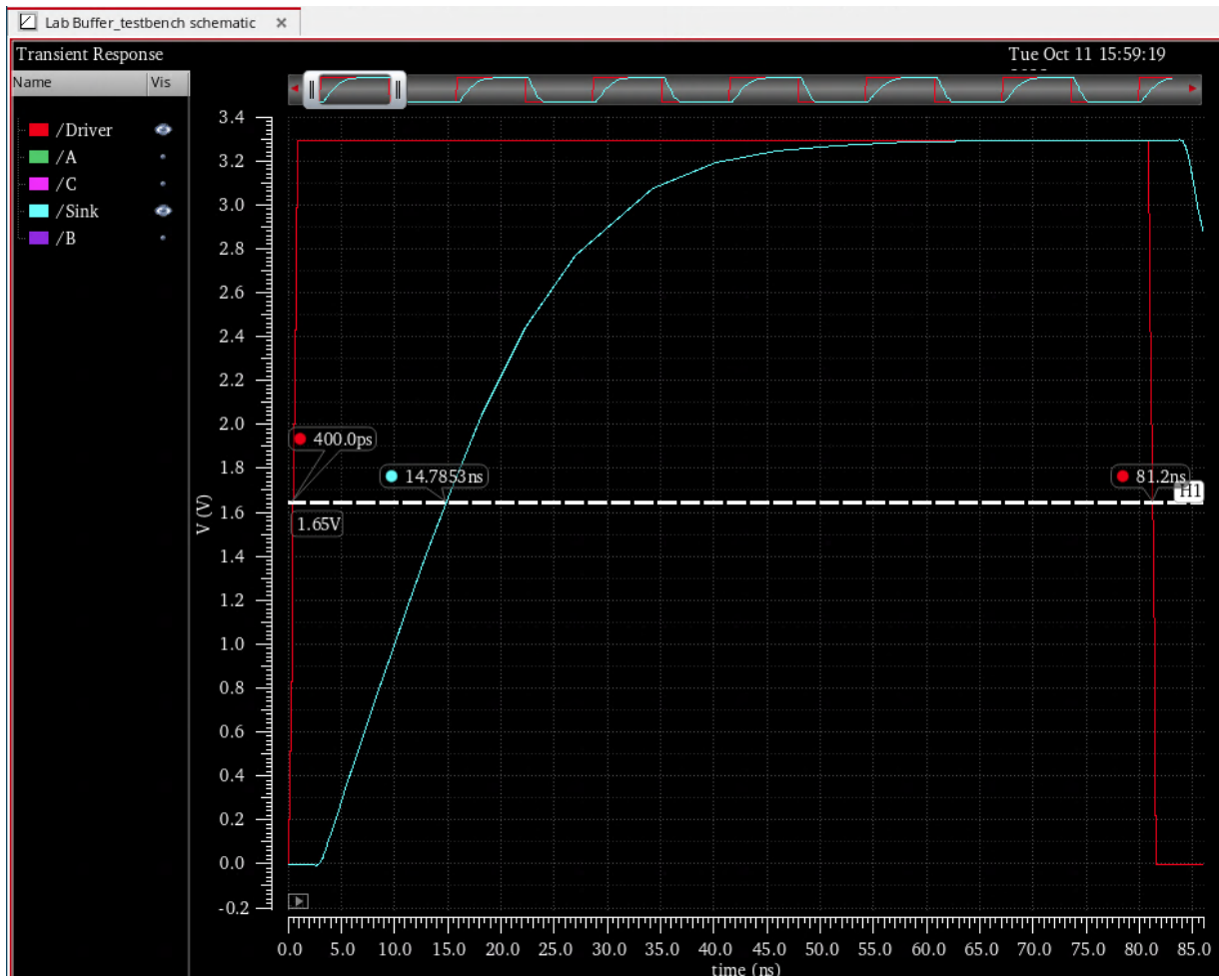


Figure 6 With Buffer Inserted in C the delay is $\underline{14.7853\text{ns} - 400\text{ps} = 14.3853\text{ns}}$

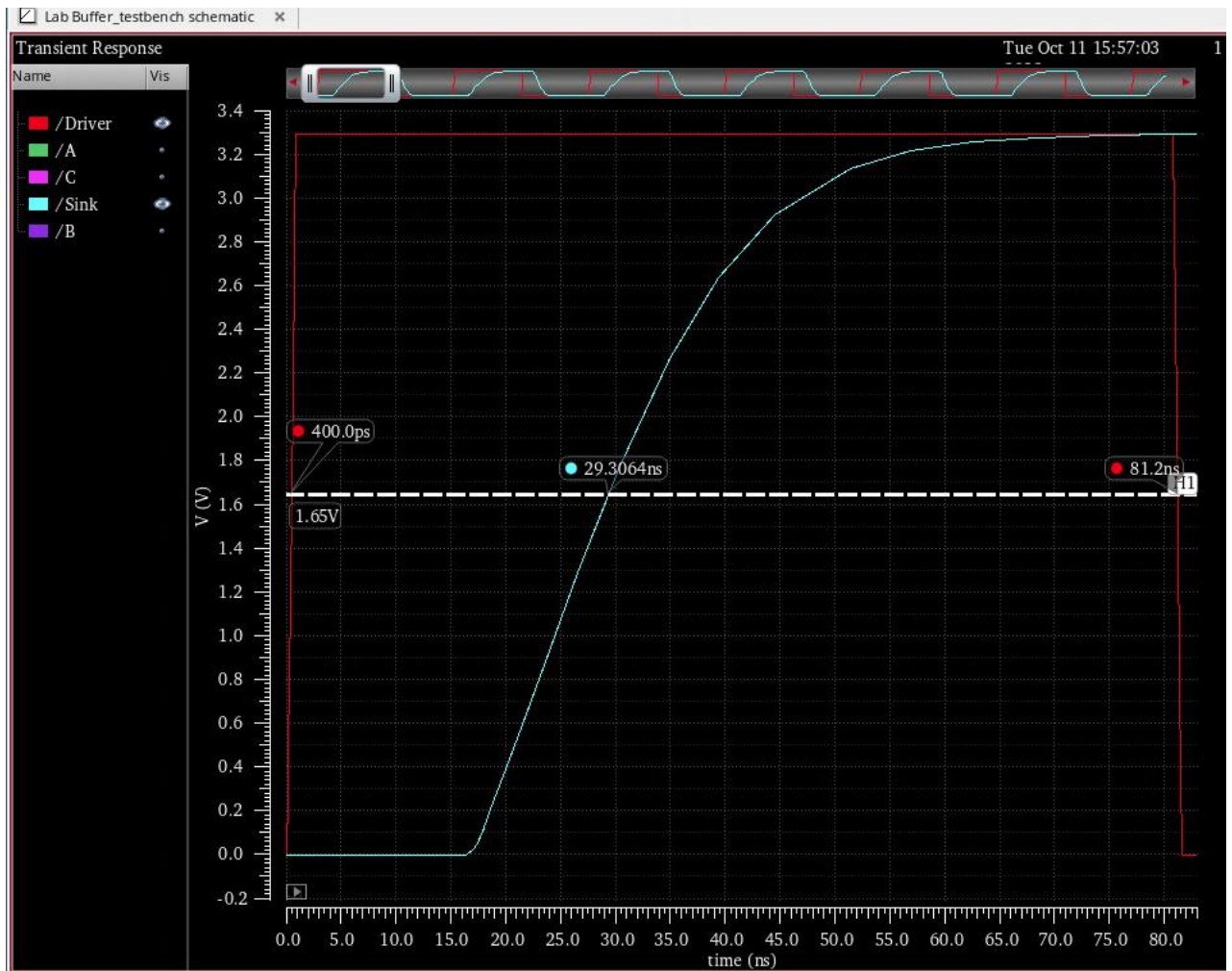


Figure 7 With Buffer Inserted in both B and C the delay is 29.3064ns-400ps=28.9064ns