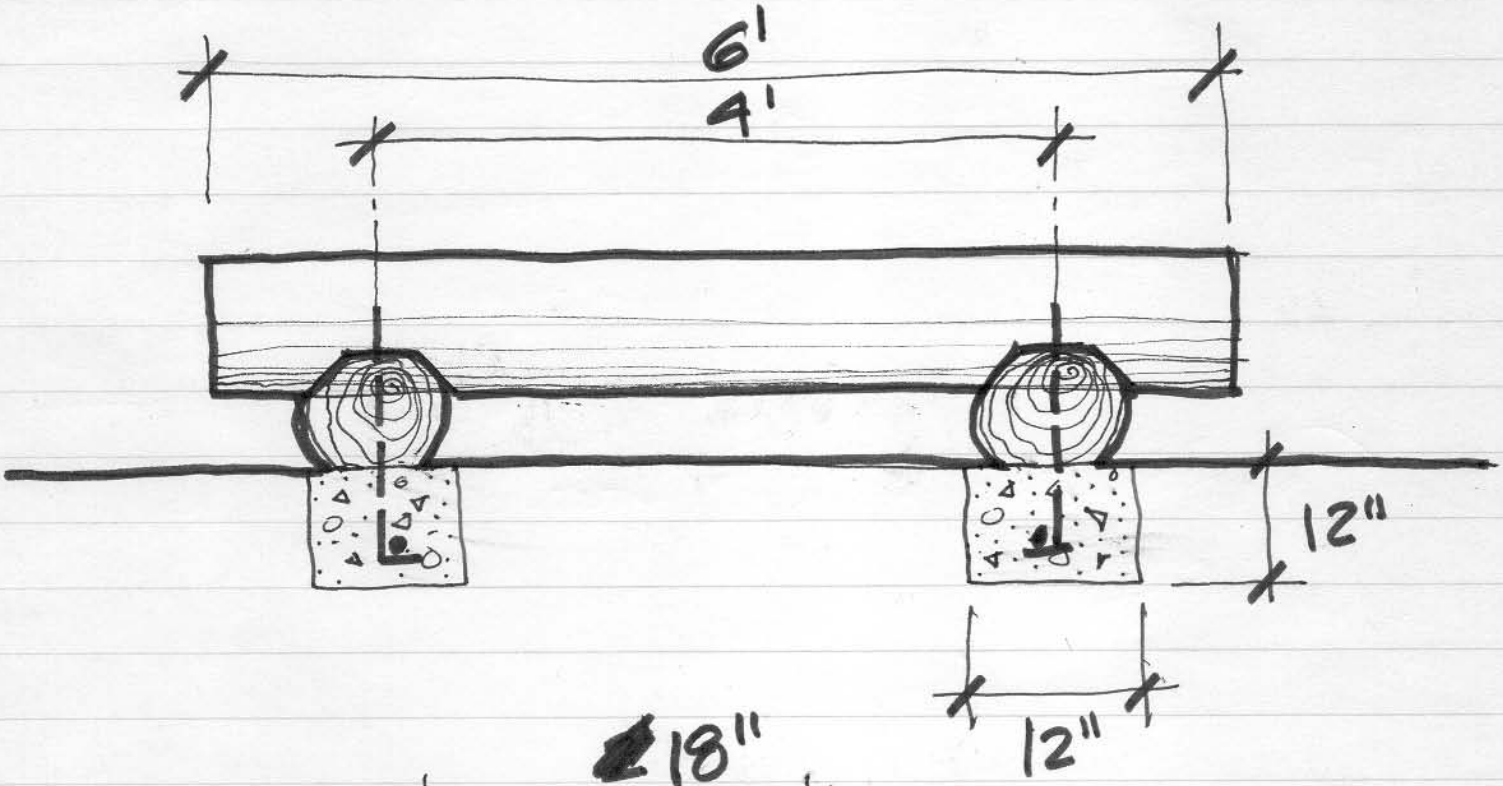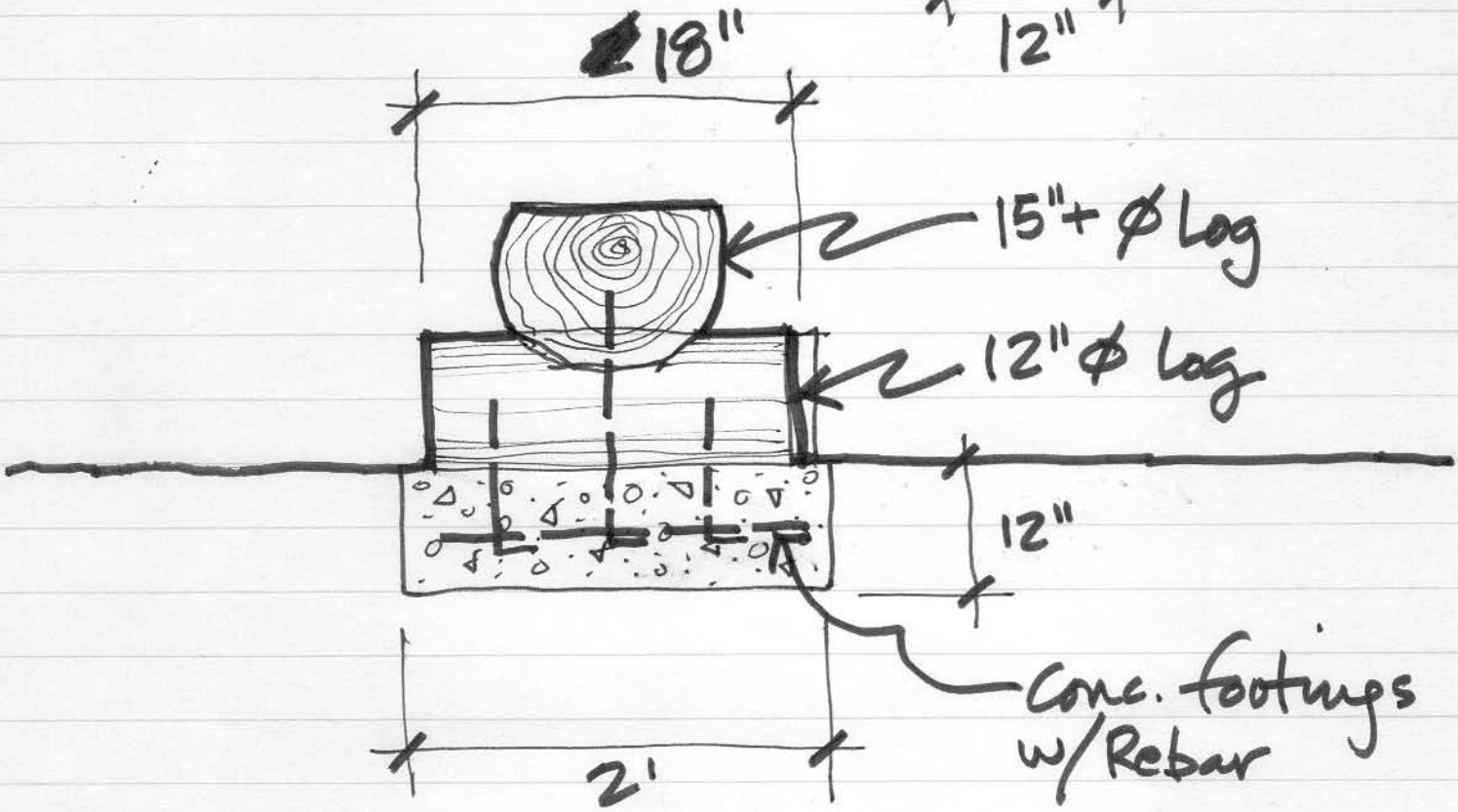LOG BENCH NOT TO SCALE