andy

| Cursor = 20,000ns<br>Baseline = 0 |            |          |                                   |                                     |                                   |   |   |   |   | Tir                                     | neA = 20,000ns  |
|-----------------------------------|------------|----------|-----------------------------------|-------------------------------------|-----------------------------------|---|---|---|---|---|---|
| Cursor-Baseline = 20,000ns        |            | 18,000ns | 18,200ns                          | 18,400ns                            | 18,600ns                          | 18,800ns                                | 19,000ns                                | 19,200ns                                | 19,400ns                                | 19,600ns                                | 19,800ns  |
| Branch                            | 0          |          |                                   |                                     |                                   |   | •                                       |   |   |   | i i   |
|                                   | 'hxxxxxxx  | xxxxxxx  |                                   |                                     |                                   |   |   |   |   |   |   |
| Jump_and_Zero                     | 0          |          |                                   |                                     |                                   |   |   |   |   |   |   |
|                                   | 'hxx       | xx       |                                   |                                     |                                   |   |   |   |   |   |   |
| MemRead                           | 0          |          |                                   |                                     |                                   |   |   |   |   |   |   |
| MemWrite                          | 0          |          |                                   |                                     |                                   |   |   |   |   |   |   |
| MemtoReg                          | х          |          |                                   |                                     |                                   |   |   |   |   |   |   |
| ① Out4[31:0]                      | 'h00000004 | 00000004 |                                   |                                     |                                   |   |   |   |   |   |   |
| → PC_add_out[31:0]                | 'h00000320 | X 0 0 0  | o <b>▶</b> X o o o <b>▶</b> X o o | 0 0 <b>) )</b> 0 0 0 <b>) )</b> 0 0 | 00 🕽 🗸 0 0 0 🗗 🗸 0 0              | ) o <b>)</b> \ \ 0 0 0 <b>)</b> \ \ 0 0 | o <b>&gt;</b> X o o o <b>&gt;</b> X o o | o <b>▶</b> X o o o <b>▶</b> X o o       | o <b>&gt; X</b> o o o <b>&gt; X</b> o o | o <b>&gt;</b>                           | o <b>&gt;</b> X o o o <b>&gt;</b> X o o o <b>&gt;</b> |
| → PC_in[31:0]                     | 'h00000320 | X 0 0 0  | o <b>▶</b> X o o o <b>▶</b> X o o | ) o <b>)</b> \                      | 0 0 <b>X</b> 0 0 0 <b>X</b> 0 0   | ) o <b>)</b> \ \ 0 0 0 <b>)</b> \ \ 0 0 | o <b>▶</b>                              | o <b>▶</b> X o o o <b>▶</b> X o o       | o <b>&gt; X</b> o o o <b>&gt; X</b> o o | o <b>&gt;</b> X o o o <b>&gt;</b> X o o | o▶ X o o o▶ X o o o ▶                                 |
| PC_out[31:0]                      | 'h0000031C | X 0 0 0  | o <b>&gt;</b>                     | o <b>)</b> X o o o <b>)</b> X o o   | o <b>)</b> X o o o <b>)</b> X o o | o <b>)</b> X o o o <b>)</b> X o o       | o <b>&gt; X</b> o o o <b>&gt; X</b> o o | o <b>&gt;</b> X 0 0 0 <b>&gt;</b> X 0 0 | o                                       | o <b>&gt;</b>                           | 0 0 0 0 0 0 0   |
| ReadData1_out[31:0]               | 'hxxxxxxxx | xxxxxxx  |                                   |                                     |                                   |   |   |   |   |   |   |
| ReadData2_out[31:0]               | 'hxxxxxxxx | xxxxxxx  |                                   |                                     |                                   |   |   |   |   |   |   |
| ReadData_out[31:0]                | 'hxxxxxxxx | xxxxxxx  |                                   |                                     |                                   |   |   |   |   |   |   |
| RegDst                            | х          |          |                                   |                                     |                                   |   |   |   |   |   |   |
| RegWrite                          | 0          |          |                                   |                                     |                                   |   |   |   |   |   |   |
| Shift_left_2_32_out[31:0]         | 'hxxxxxxX  | xxxxxxX  |                                   |                                     |                                   |   |   |   |   |   |   |
| Sign_extended_out[31:0]           | 'hxxxxxxxx | xxxxxxx  |                                   |                                     |                                   |   |   |   |   |   |   |