* ADJ11
  + Takes IR bits 10:0 and sign extends them, and then shifts those bits left by one. This is used only for JSR with PCoffset11.
* Gen7
  + This unit generates the signal “111” which is used to select R7 as a destination register. Gen7 is used for JSR and TRAP.
* ADJ8
  + Takes IR bits 7:0 and zero extends them, and then shifts those bits left by one. This is used only for the TRAP instruction with trapvect8.
* Strip0
  + This unit takes a word input and outputs the least significant bit. Its purpose is for choosing between high/low byte for STB and LDB instructions.
* ByteRep
  + ByteRep takes a word input, and then replicates the lower byte to the upper byte. The purpose for this part is for STB, where the corresponding byte will be written to memory depending on the location chosen.
* SEXT6
  + Takes IR 5:0 and sign extends it. This is used for STB, STI, STR, LDR, LDI, and LDB.
* ALU
  + The modifications to this part were for adding shifting functionalities. The word goes into input A and is shifted by the amount on input B of the ALU, depending on the function selected. This feature is used for the SHF instruction.
* ADJ5
  + This unit takes IR 4:0 and sign extends it, then shifts that result left by one. The ADJ5 is used for immediate ADD and immediate AND.
* ZEXT4
  + ZEXT4 zero extends IR 3:0. The purpose is for the SHF instruction.
* SplitWord
  + Takes a word and splits it into its high and low bytes. This feature is useful for LDB, where a single byte is needed form the MDR to be zero extended.
* ZEXT8
  + Takes a byte and zero extends to a word. This unit is used for LDB after the SplitWord block.