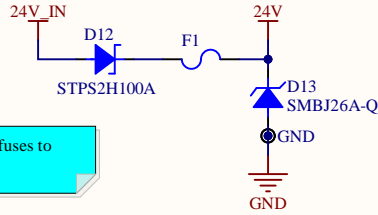
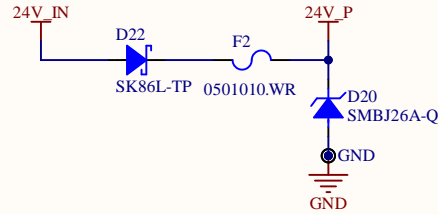


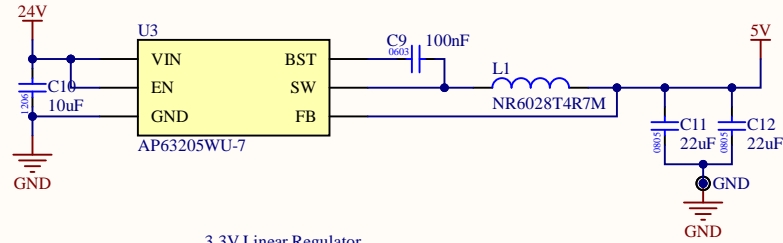
Input Protection



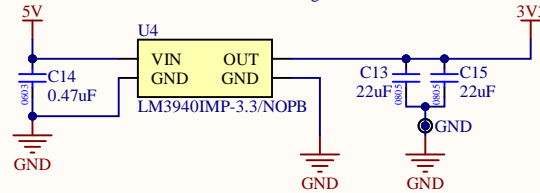
Pump Input Protection



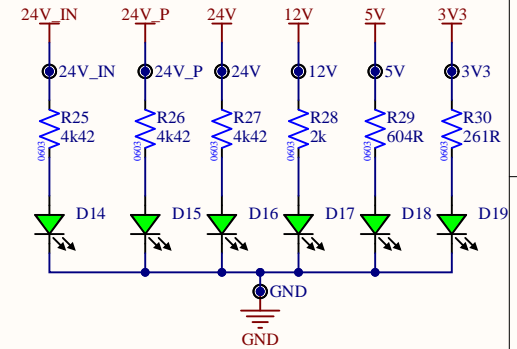
5V DC-DC Buck Converter



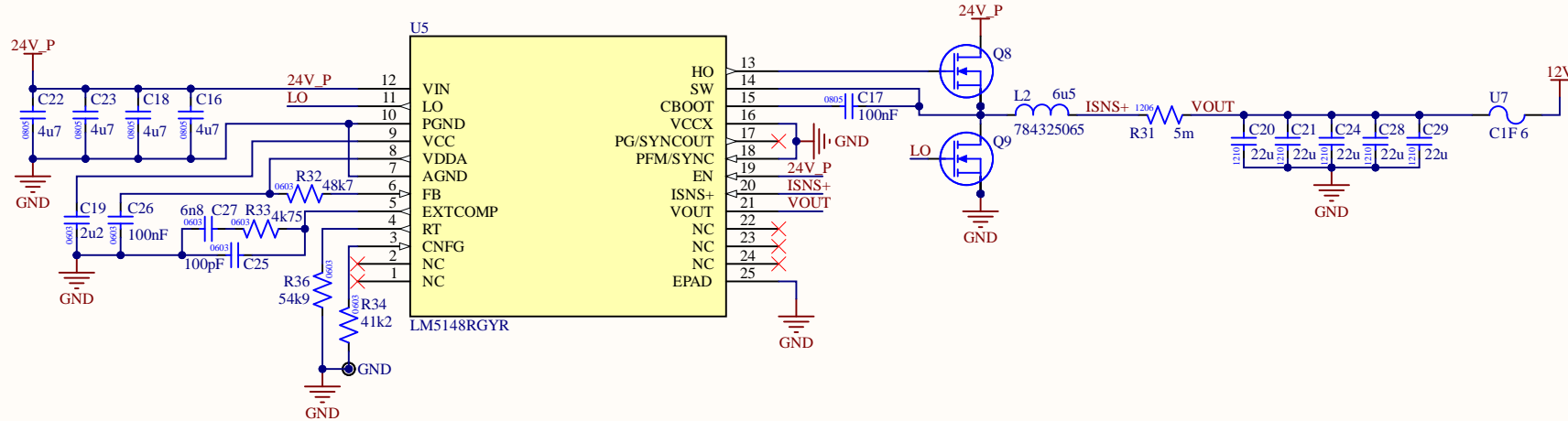
3.3V Linear Regulator



Power Rail LEDs

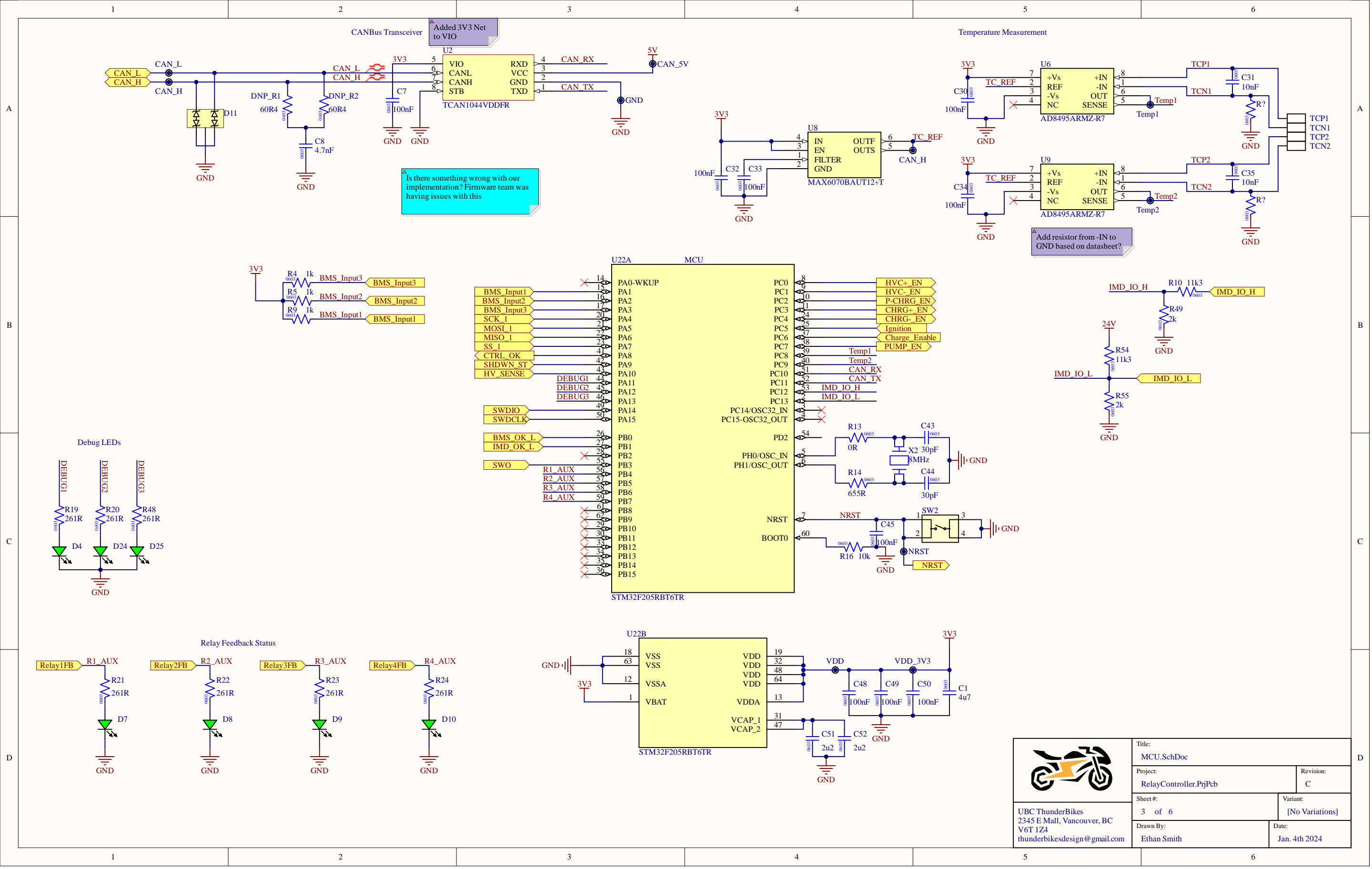


12V DC-DC Buck Converter



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Title: Power.SchDoc	
Project: RelayController.PrjPcb	Revision: C
Sheet #: 2 of 6	Variant: [No Variations]
Drawn By: Ethan Smith	Date: Jan. 4th 2024



A

B

C

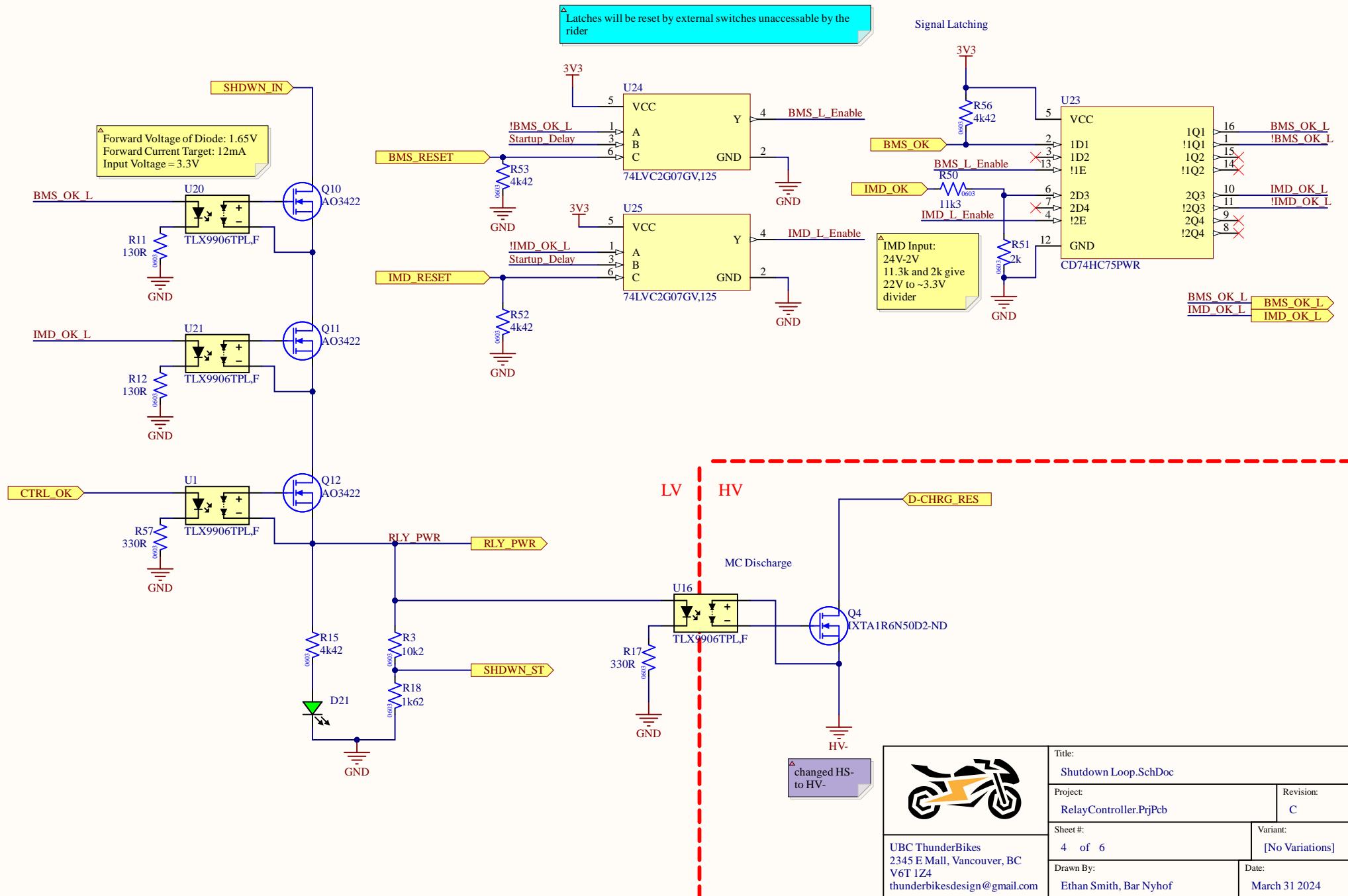
D

A

B

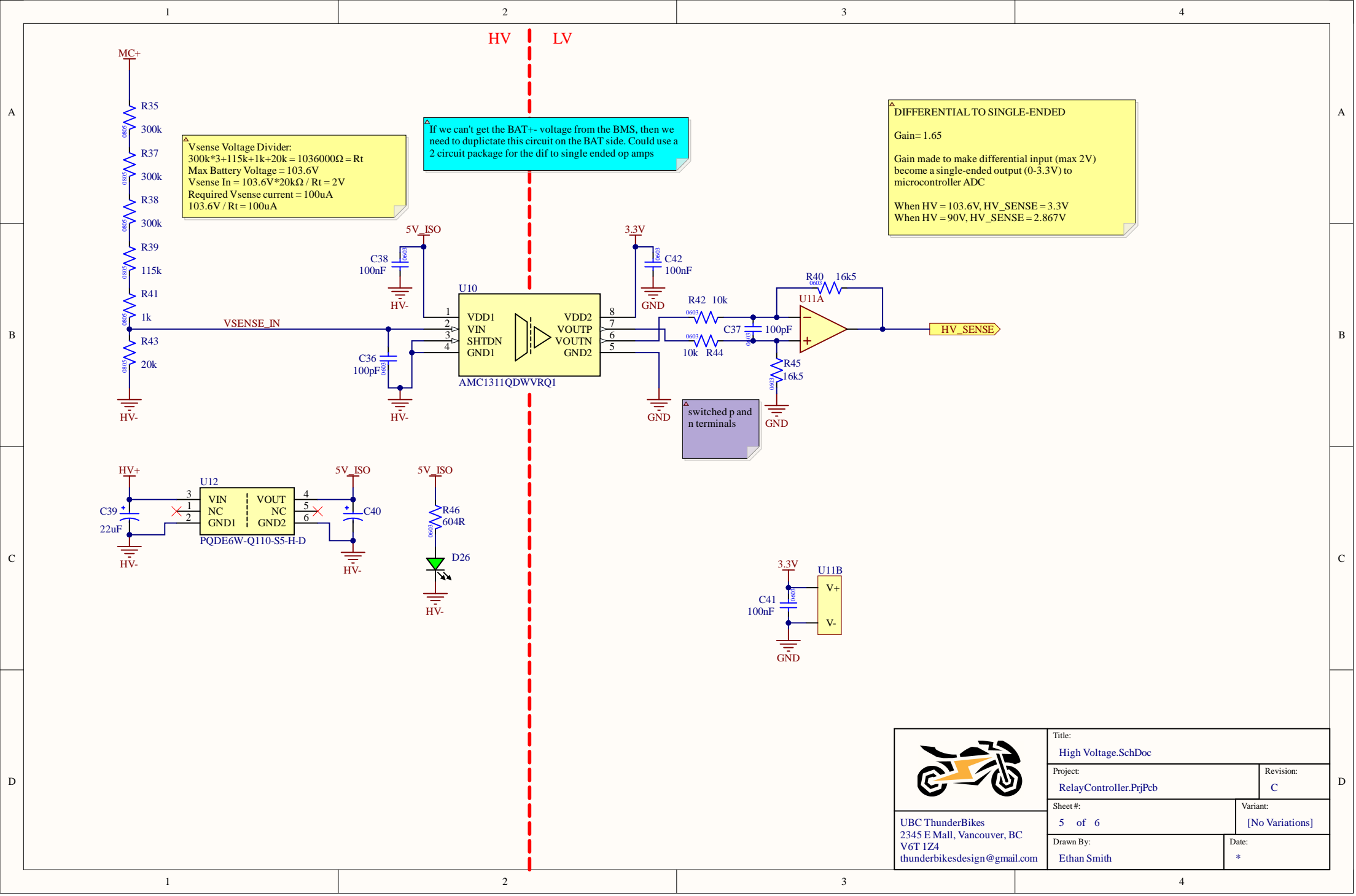
C

D

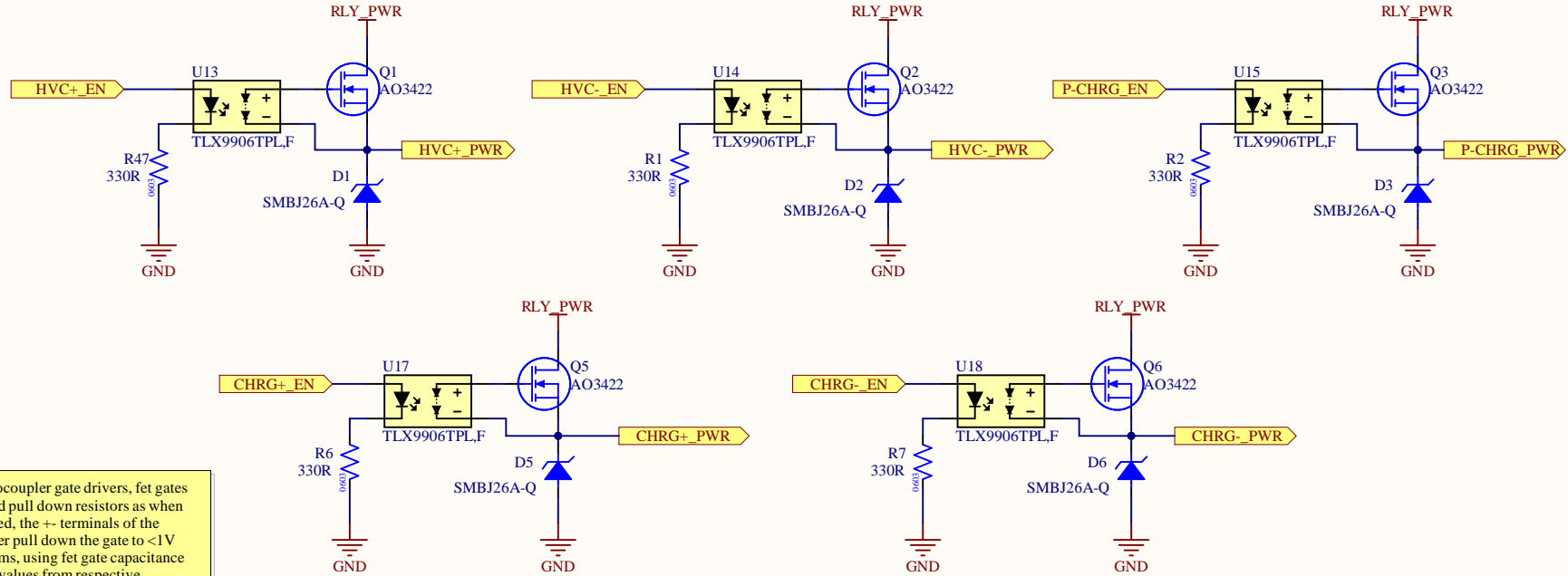


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Title: Shutdown Loop.SchDoc	
Project: RelayController.PrjPcb	Revision: C
Sheet #: 4 of 6	Variant: [No Variations]
Drawn By: Ethan Smith, Bar Nyhof	Date: March 31 2024

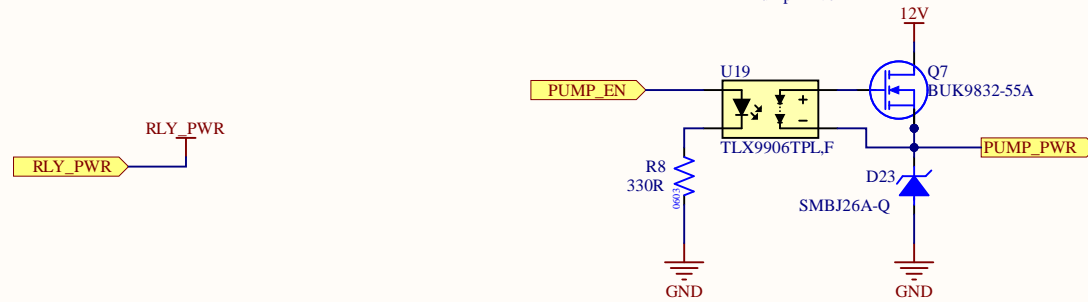


Relay Controller Circuits



Using optocoupler gate drivers, fet gates do not need pull down resistors as when not powered, the +- terminals of the optocoupler pull down the gate to <1V within 0.1ms, using fet gate capacitance of 100pF (values from respective datasheets.)

Pump Driver



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Title: Relay Control.SchDoc	
Project: RelayController.PrjPcb	Revision: C
Sheet #: 6 of 6	Variant: [No Variations]
Drawn By: Ethan Smith	Date: *