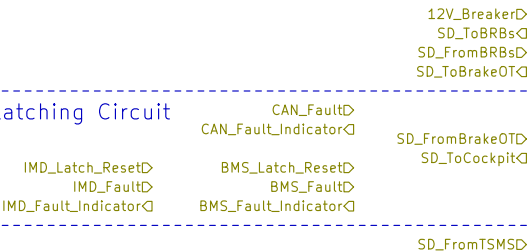


SEE ALTIUM SCHEMATIC FOR FINAL IMPLEMENTATION

Latching Circuit



- D12V_BrakeLight
- D12V_RadiatorFan
- D12V_Battbox
- D12V_Dashboard
- D12V_Pump
- D12V_MotorController
- D12V_BattboxFansL1
- D12V_BattboxFansL2
- D12V_BattboxFansR1
- D12V_BattboxFansR2

GND

- CAN_L
- CAN_H
- CAN_S

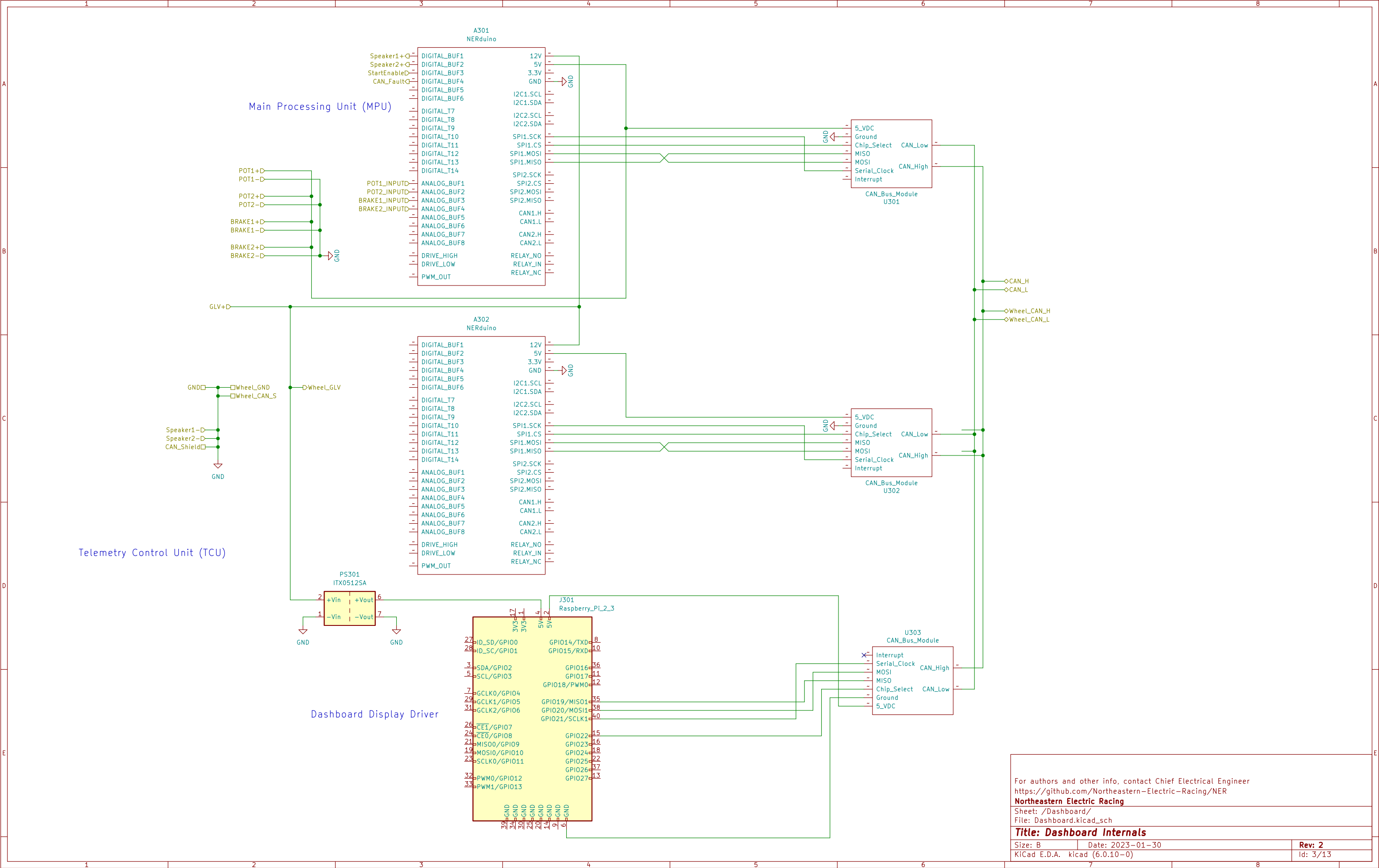
For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>

Northeastern Electric Racing

Sheet: /Power Distribution/
File: PDU.kicad_sch

Title: Power Distribution Board

Size: A	Date: 2023-01-23	Rev: 1
KiCad E.D.A. kicad (6.0.10-0)		Id: 2/13



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Northeastern Electric Racing

Sheet: /Dashboard/
File: Dashboard.kicad_sch

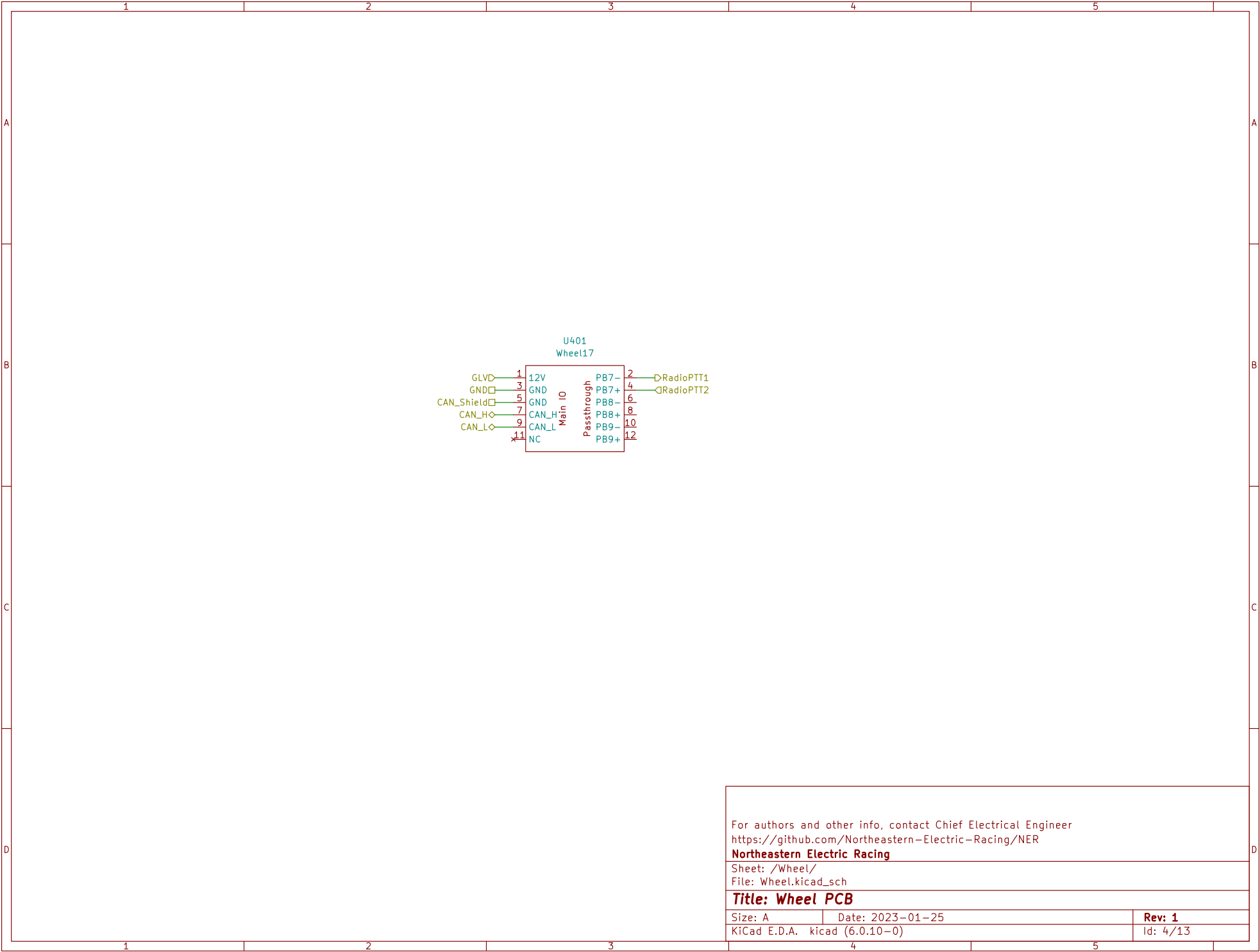
Title: Dashboard Internals

Size: B Date: 2023-01-30

KiCad E.D.A. kicad (6.0.10-0)

Rev: 2

Id: 3/13



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Sheet: /Wheel/
File: Wheel.kicad_sch

Title: Wheel PCB

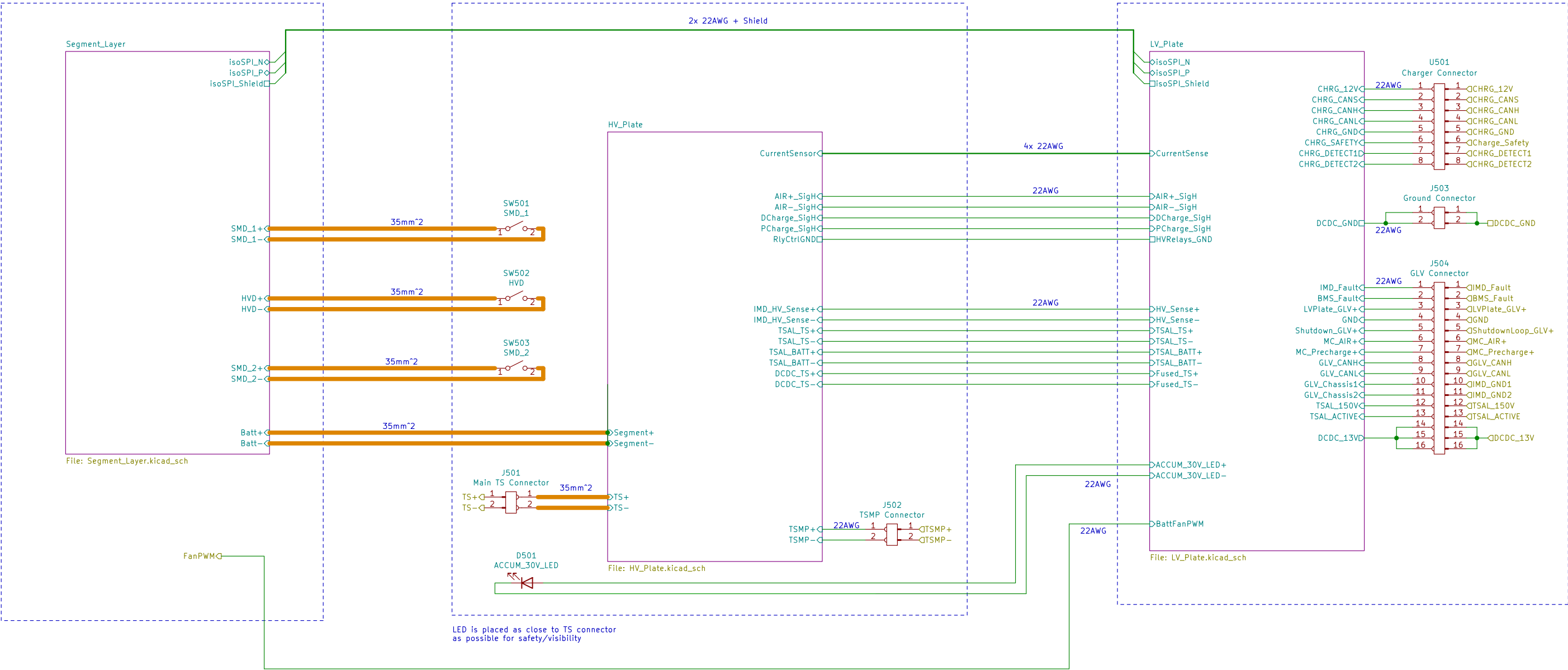
Size: A Date: 2023-01-25
KiCad E.D.A. kicad (6.0.10-0)

Rev: 1
Id: 4/13

Segment Layer

HV Plate

LV Plate



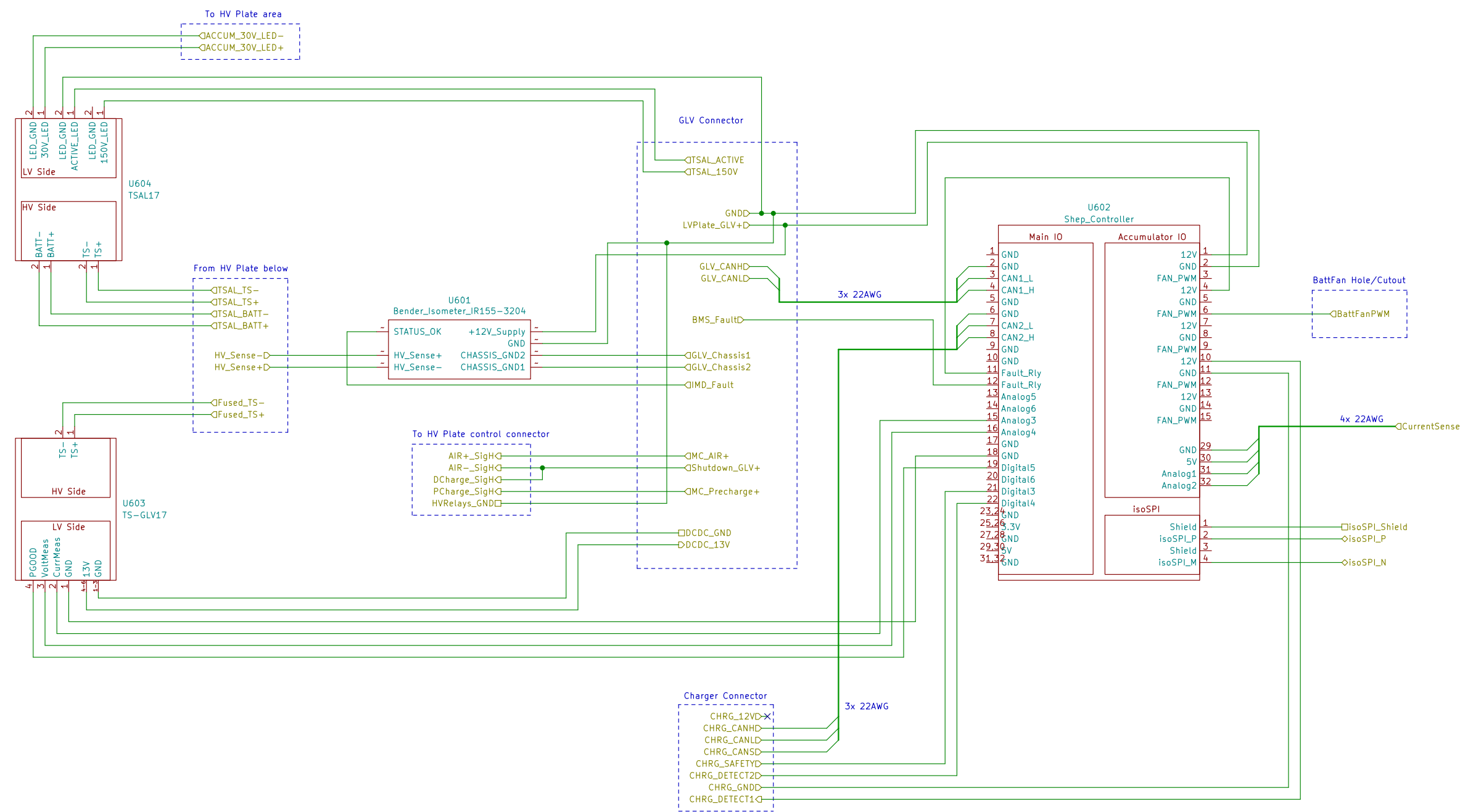
For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>

Northeastern Electric Racing
Sheet: /Accumulator Container/
File: Accumulator_Container.kicad_sch

Title: Accumulator Container

Size: B	Date: 2023-01-25	Rev: 8
KiCad E.D.A. kicad (6.0.10-0)		Id: 5/13

ALL WIRES 22AWG EXCEPT WHERE LABELED

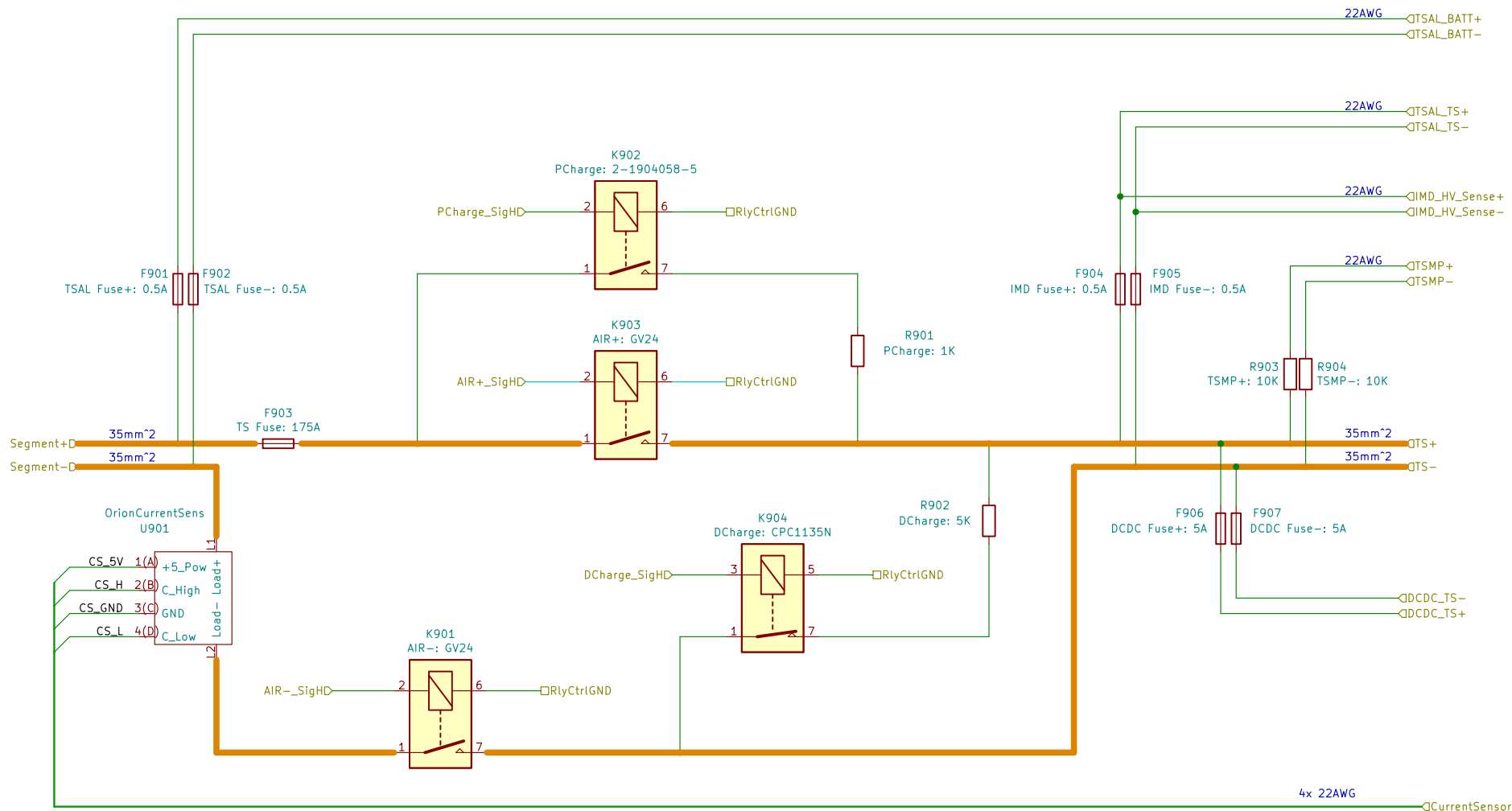


For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>
Northeastern Electric Racing
Sheet: /Accumulator Container/LV_Plate/
File: LV_Plate.kicad_sch

Title: LV Plate

Size: B	Date: 2023-01-25	Rev: 2
KiCad E.D.A. kicad (6.0.10-0)		Id: 6/13

SEE ALTIUM SCHEMATIC FOR FINAL IMPLEMENTATION



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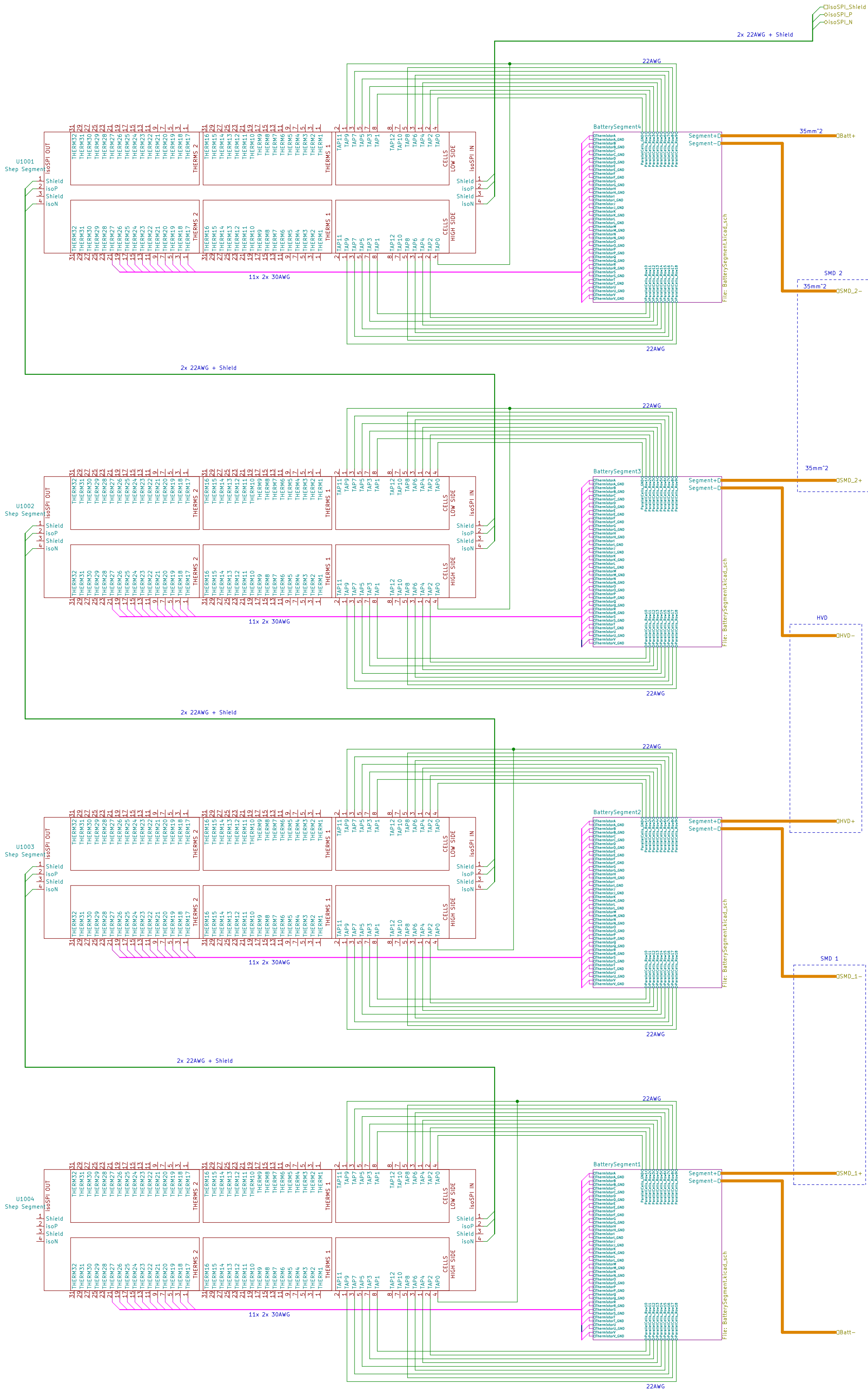
Northeastern Electric Racing

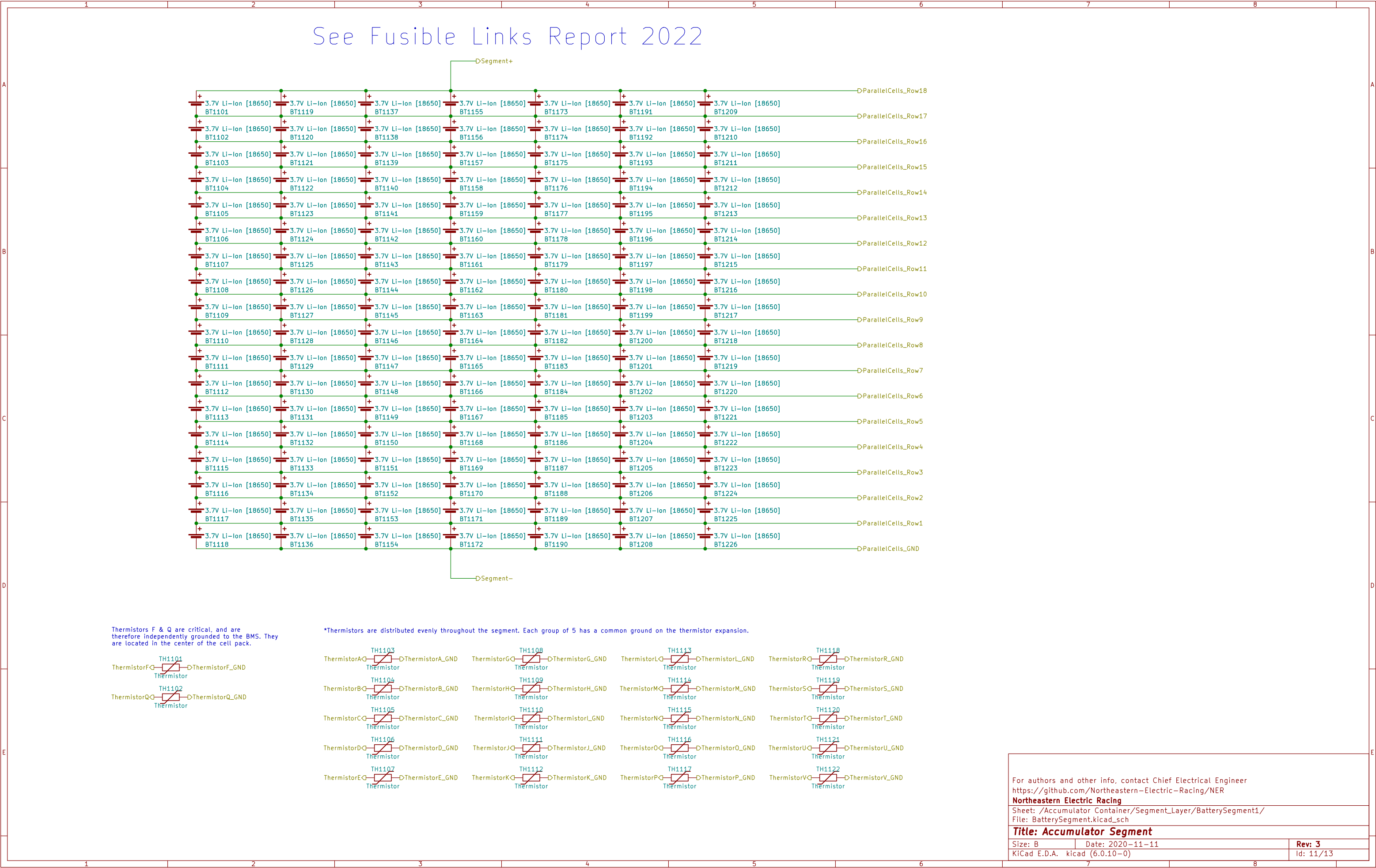
Sheet: /Accumulator Container/HV_Plate/
 File: HV_Plate.kicad_sch

Title: HV Plate

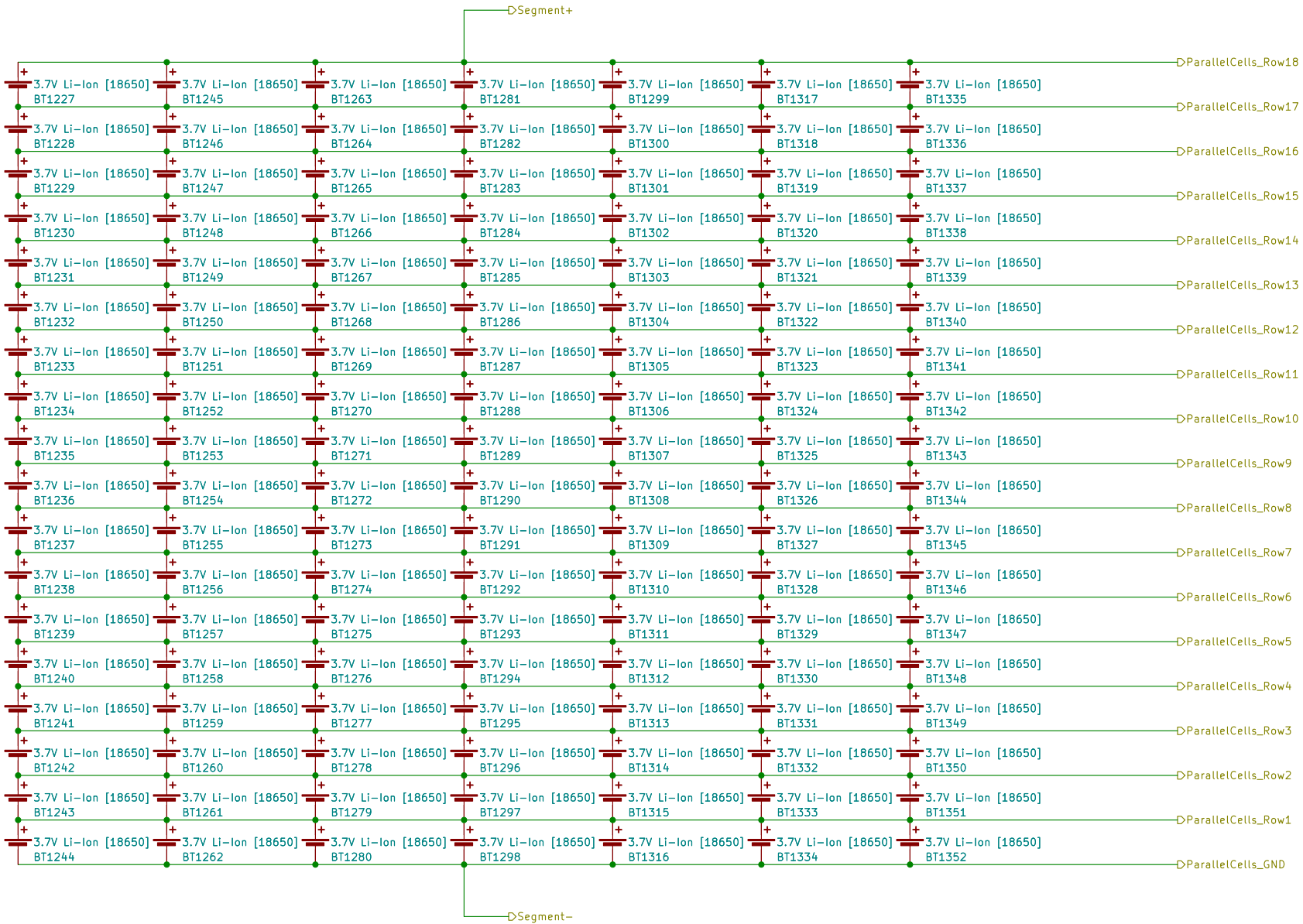
Size: A Date: 2023-01-24
 KiCad E.D.A. kicad (6.0.10-0)

Rev: 2
 Id: 9/13





See Fusible Links Report 2022



Thermistors F & Q are critical, and are therefore independently grounded to the BMS. They are located in the center of the cell pack.

*Thermistors are distributed evenly throughout the segment. Each group of 5 has a common ground on the thermistor expansion.



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Northeastern Electric Racing

Sheet: /Accumulator Container/Segment_Layer/BatterySegment2/
File: BatterySegment.kicad_sch

Title: Accumulator Segment

Size: B	Date: 2020-11-11	Rev: 3
KiCad E.D.A. kicad (6.0.10-0)		Id: 12/13

See Fusible Links Report 2022

The main schematic shows a grid of battery cells labeled from BT1353 to BT1478. Each cell contains the text "3.7V Li-Ion [18650]". The cells are organized into rows, each identified by a label on the right such as DParallelCells_Row18 down to DParallelCells_GND. All positive (+) terminals are connected to a common top rail labeled "DSegment+", and all negative (-) terminals are connected to a common bottom rail labeled "DSegment-".

Thermistors F & Q are critical, and are therefore independently grounded to the BMS. They are located in the center of the cell pack.

*Thermistors are distributed evenly throughout the segment. Each group of 5 has a common ground on the thermistor expansion.

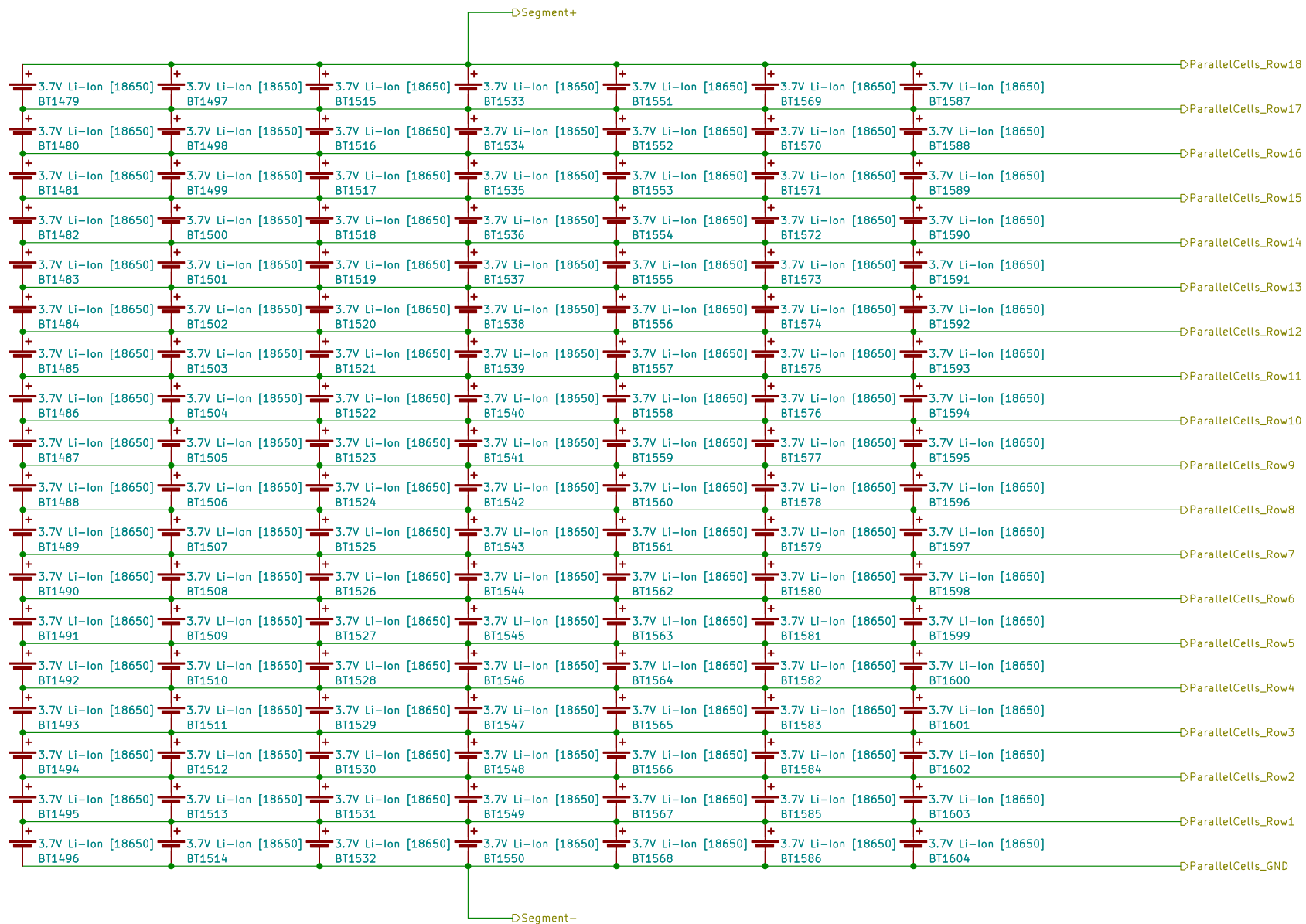
	TH1301 ThermistorF Thermistor	TH1302 ThermistorQ Thermistor	TH1303 ThermistorA Thermistor	TH1304 ThermistorB Thermistor	TH1305 ThermistorC Thermistor	TH1306 ThermistorD Thermistor	TH1307 ThermistorE Thermistor	TH1308 ThermistorG Thermistor	TH1309 ThermistorH Thermistor	TH1310 ThermistorI Thermistor	TH1311 ThermistorJ Thermistor	TH1312 ThermistorK Thermistor	TH1313 ThermistorL Thermistor	TH1314 ThermistorM Thermistor	TH1315 ThermistorN Thermistor	TH1316 ThermistorO Thermistor	TH1318 ThermistorR Thermistor	TH1319 ThermistorS Thermistor	TH1320 ThermistorT Thermistor	TH1321 ThermistorU Thermistor	TH1322 ThermistorV Thermistor
ThermistorF	+	-	+	-	+	-	+	+	-	+	-	+	+	-	+	-	+	+	-	+	-
ThermistorQ	-	+	-	+	-	+	-	-	+	-	+	-	-	+	-	+	-	-	+	-	+

For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>
Northeastern Electric Racing
Sheet: /Accumulator Container/Segment_Layer/BatterySegment3/
File: BatterySegment.kicad_sch

Title: Accumulator Segment

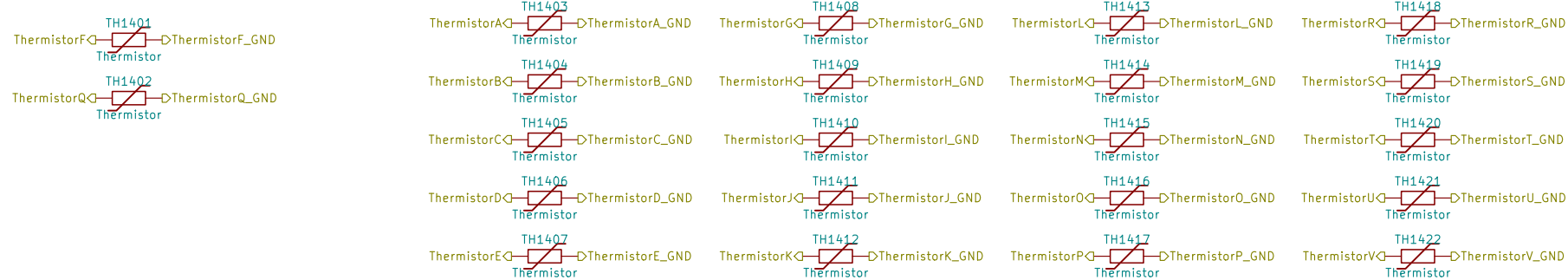
Size: B	Date: 2020-11-11	Rev: 3
KiCad E.D.A. kicad (6.0.10-0)		Id: 13/13

See Fusible Links Report 2022



Thermistors F & Q are critical, and are therefore independently grounded to the BMS. They are located in the center of the cell pack.

*Thermistors are distributed evenly throughout the segment. Each group of 5 has a common ground on the thermistor expansion.



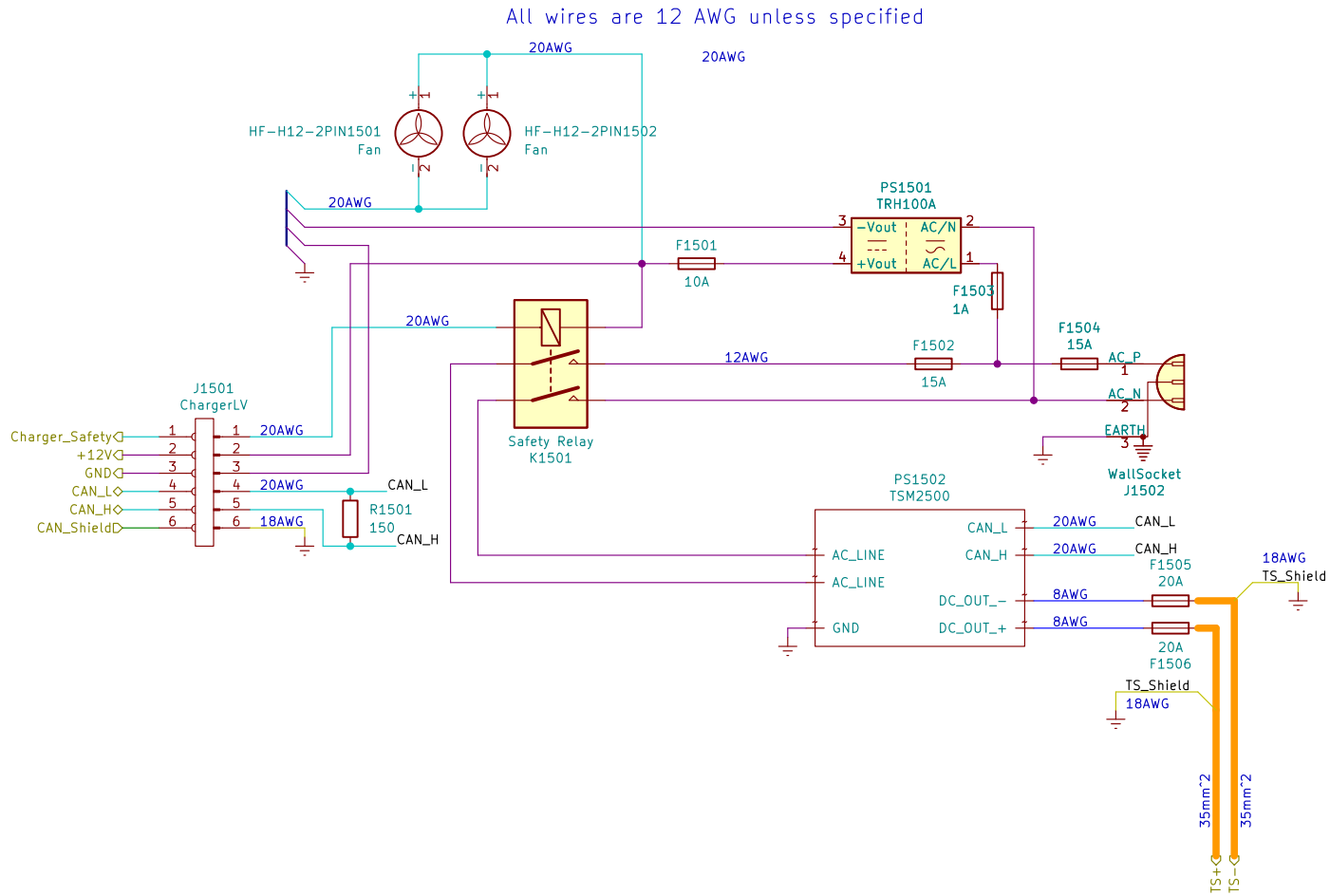
For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>

Northeastern Electric Racing

Sheet: /Accumulator Container/Segment_Layer/BatterySegment4/
File: BatterySegment.kicad_sch

Title: Accumulator Segment

Size: B	Date: 2020-11-11	Rev: 3
KiCad E.D.A. kicad (6.0.10-0)		Id: 14/13



For authors and other info, contact Chief Electrical Engineer
<https://github.com/Northeastern-Electric-Racing/NER>

Northeastern Electric Racing

Sheet: /Charger/

File: Charger.kicad_sch

Title: Charging System

Size: A Date: 2022-01-29

KiCad E.D.A. kicad (6.0.10-0)

Rev: 5

Id: 15/13