


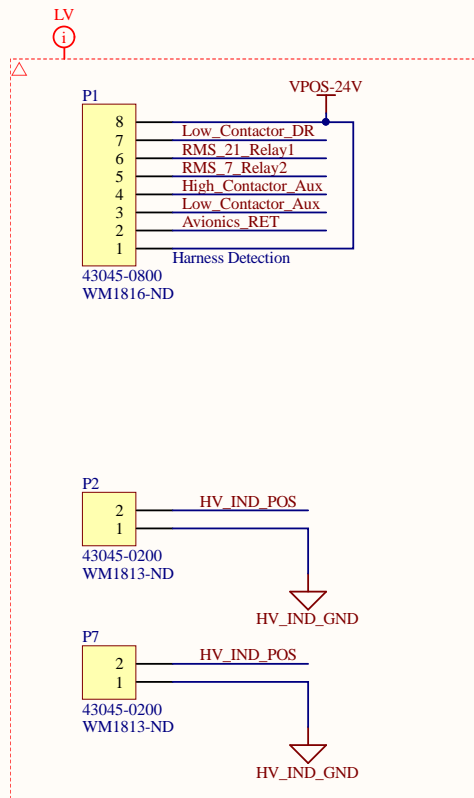
PRECHARGE

POD 5

REV 1

Title <i><b>Precharge</b></i>			Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706		
Engineer: <b>Shelby Riggleman</b>		Revision:1			
Date: <b>2/10/2020</b>	Time: <b>9:41:08 PM</b>	Sheet <b>1</b> of			
File: <b>precharge.SchDoc</b>					

# Precharge Board Connectors



MH1  
4-40 Mount Hole

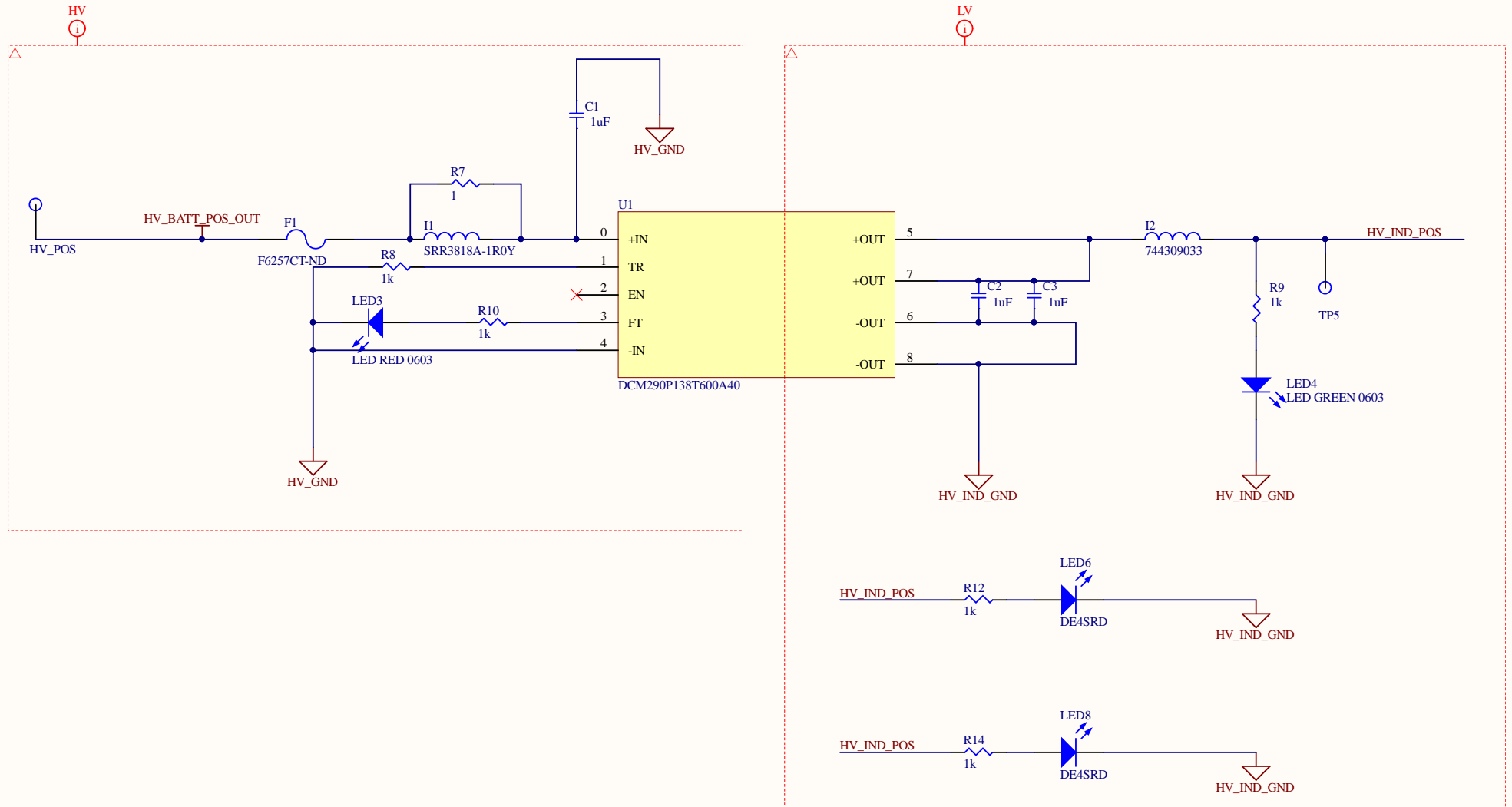
MH2  
4-40 Mount Hole


MH3  
4-40 Mount Hole

MH4  
4-40 Mount Hole

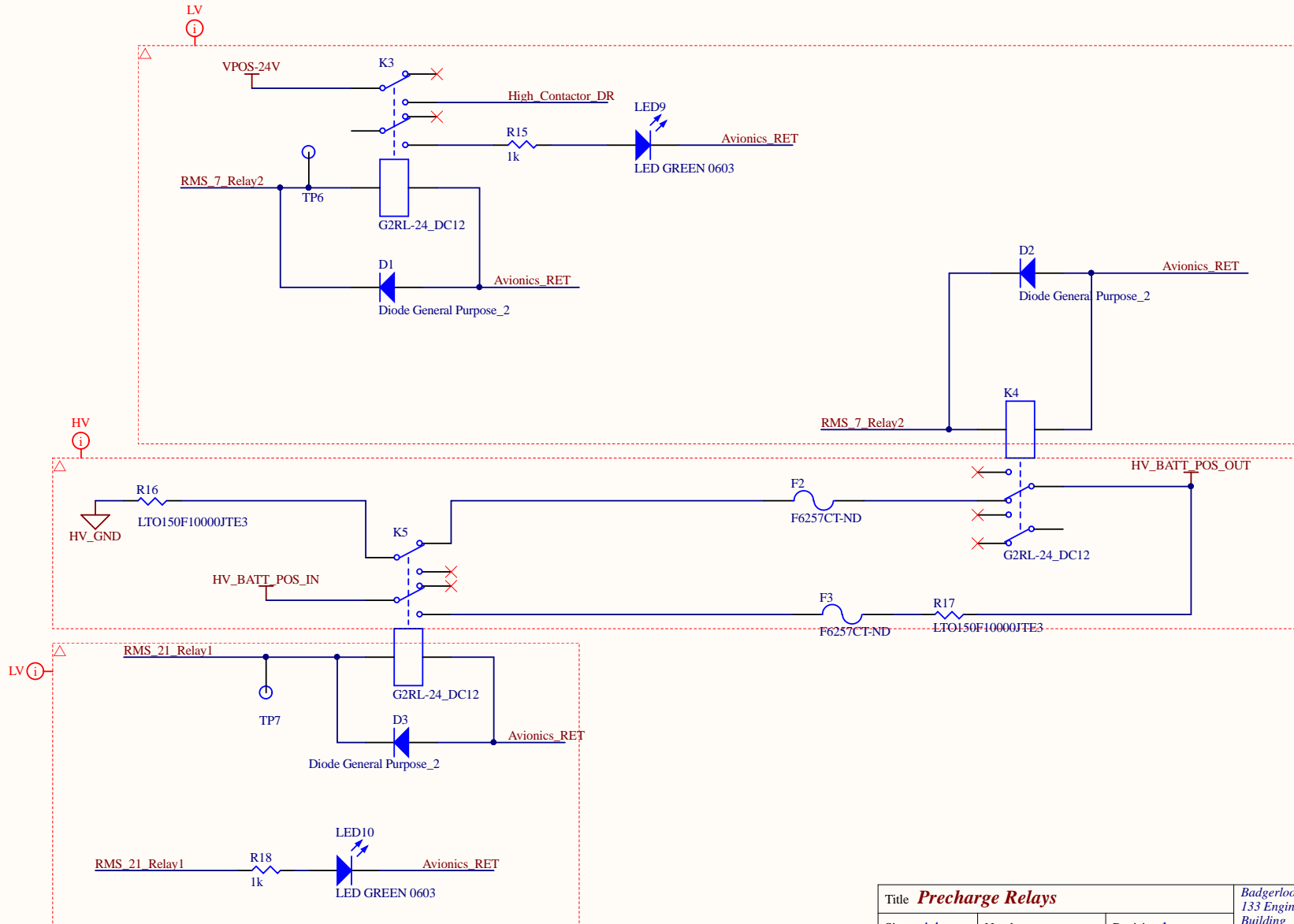
Title <b>Connectors</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: <b>Shelby Riggleman</b>	Revision: <b>1</b>	<div>BADGER LOOP</div>	
Date: <b>2/10/2020</b>	Time: <b>9:41:08 PM</b>		
File: <b>connectors.SchDoc</b>	Sheet <b>2</b> of		


# High Voltage Indicator Light



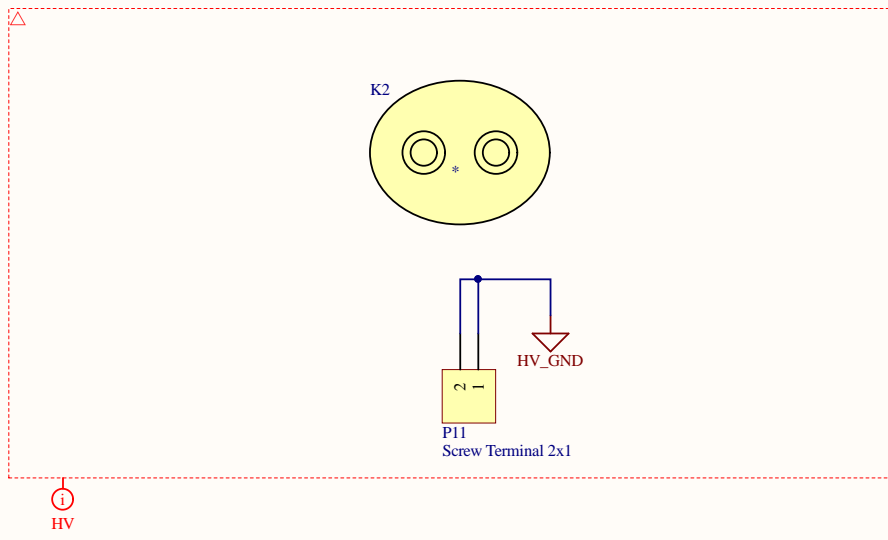
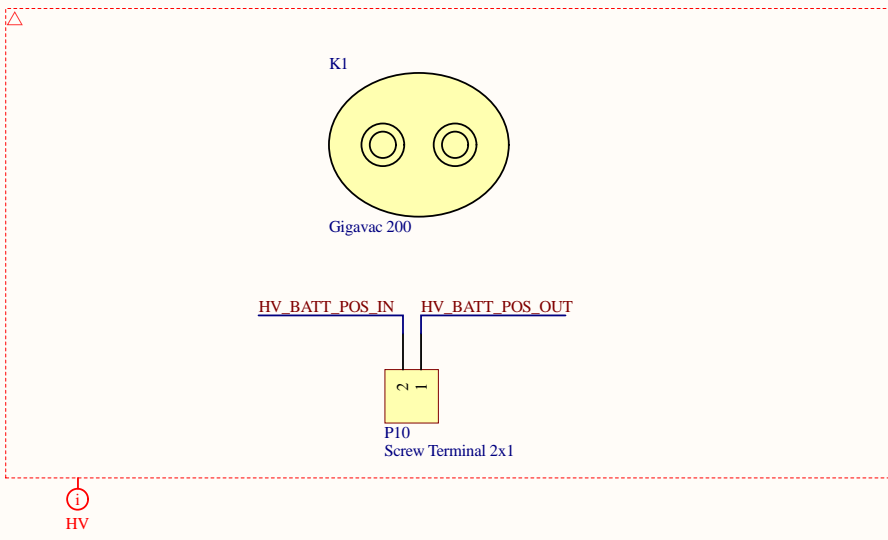
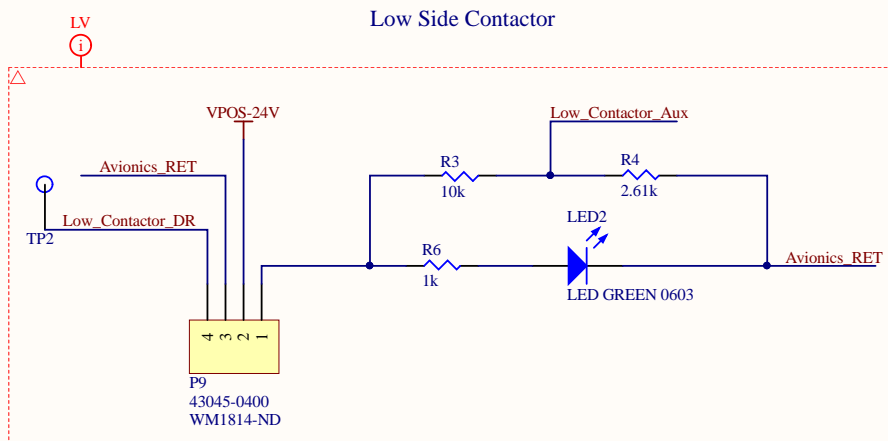
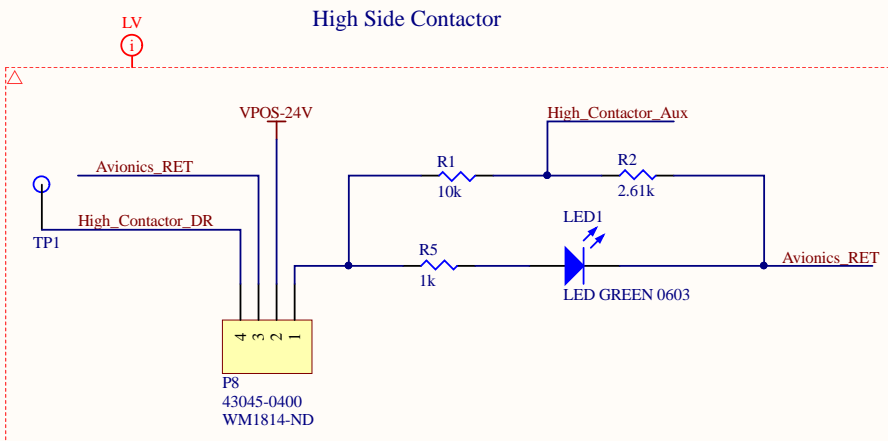
Title <b><i>HV Indicator Light</i></b>			Badgerloop 133 Engineering Research Building Madison, WI 53715	
Size: <b>A4</b>	Number:	Revision:1		
Date: <b>2/10/2020</b>	Time: <b>9:41:09 PM</b>	Sheet 3 of		
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\indicator_light.SchDoc				


# Precharge Relays



Title <i><b>Precharge Relays</b></i>			Badgerloop 133 Engineering Research Building Madison, WI 53715	
Size: <b>A4</b>	Number:	Revision:1		
Date: <b>2/10/2020</b>	Time: <b>9:41:09 PM</b>	Sheet <b>4</b> of		
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\precharge_relays.SchDoc				

# High Voltage Contactors



Title <b><i>HV Contactors</i></b>			Badgerloop 133 Engineering Research Building Madison, WI 53715	
Size: <b>A4</b>	Number:	Revision:1		
Date: 2/10/2020	Time: 9:41:09 PM	Sheet 5 of		
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\Contactors.SchDoc				



1

2

3

4

A

A

B

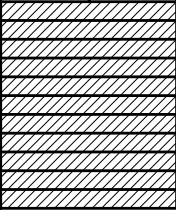
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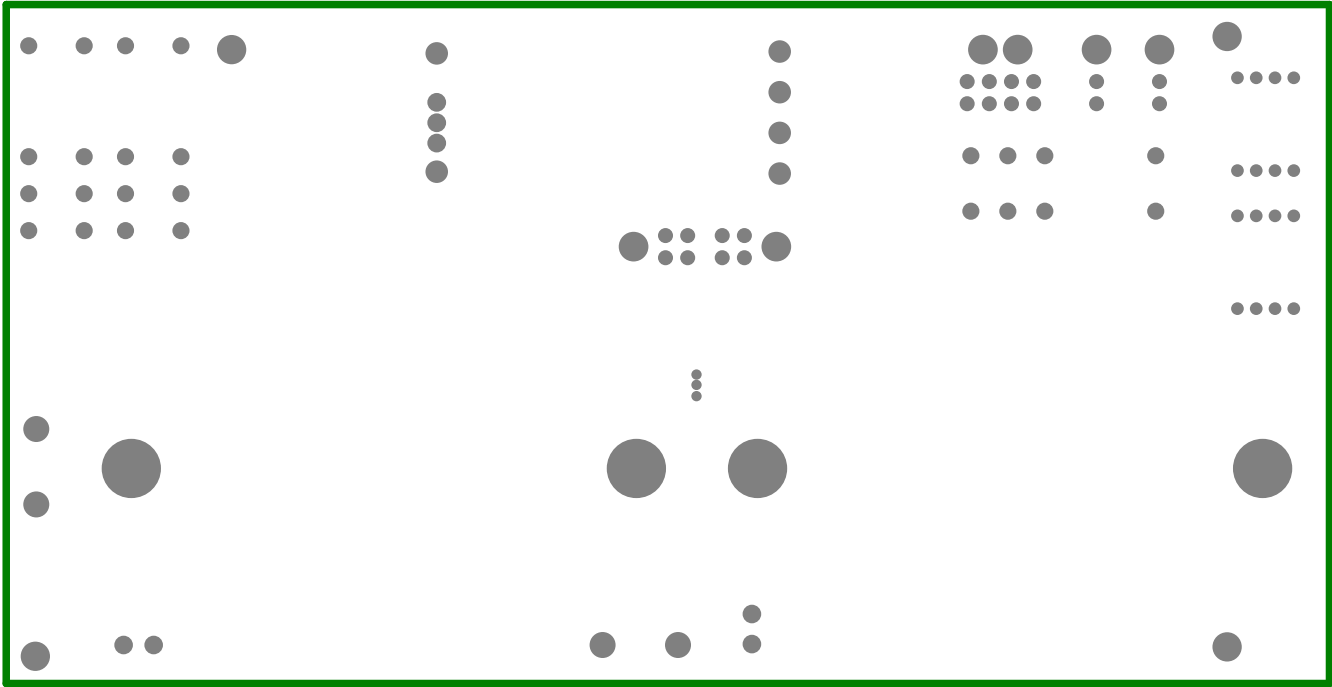
C

C

D

D

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



Internal Plane 1



Badgerloop  
ERB Room 133  
1400 Engineering Drive  
Madison, WI 53706

ENGINEER:  
SRiggleman, WDVorak

PCB DESIGNER:  
SRiggleman, WDVorak

DATE:  
2/10/2020

FILE NAME:  
precharge.PcbDoc

TITLE:  
precharge.PcbDoc

PART NO.:  
Precharge HV Board

REV:  
A

DWG NO:

SCALE:  
1:1

1

2

3

4

A

A

B

B

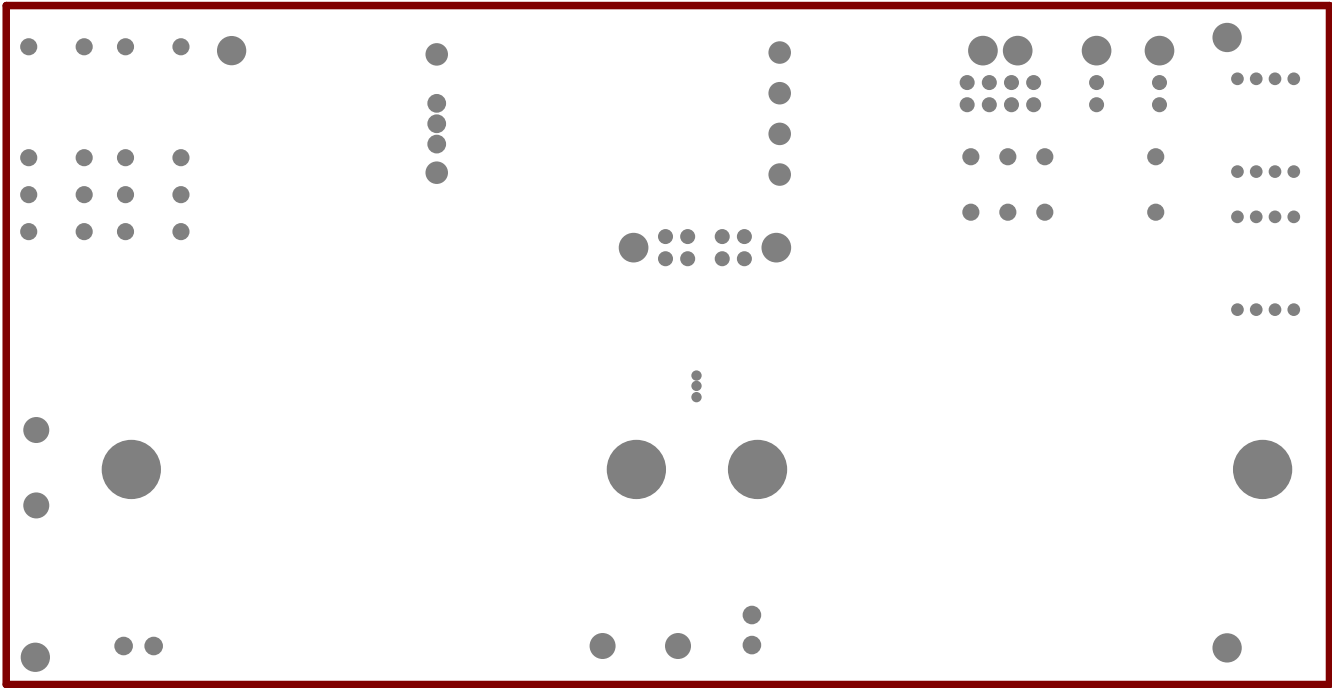
C

C

D

D

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



Internal Plane 2



Badgerloop  
ERB Room 133  
1400 Engineering Drive  
Madison, WI 53706

ENGINEER:  
SRiggleman, WDVorak

PCB DESIGNER:  
SRiggleman, WDVorak

DATE:  
2/10/2020

FILE NAME:  
precharge.PcbDoc

TITLE:  
precharge.PcbDoc

PART NO.:  
Precharge HV Board

REV:  
A

DWG NO:

SCALE:  
1:1



1

2

3

4

A

A

B

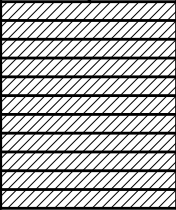
B

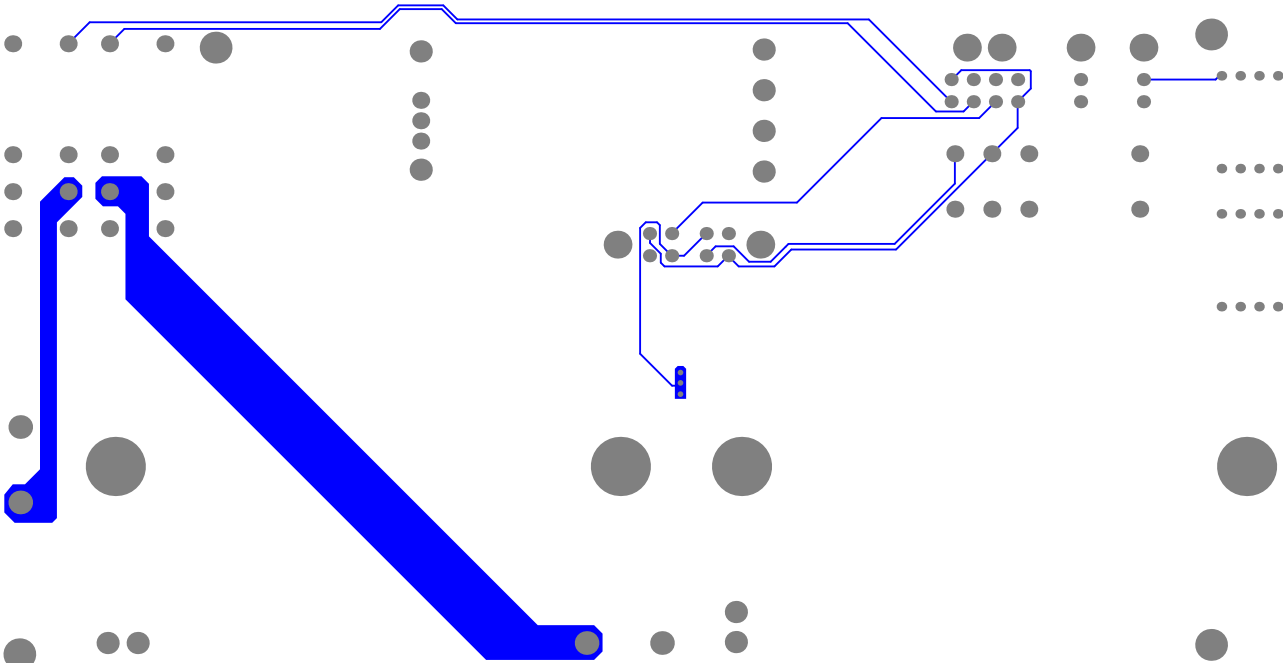
C

C

D

D

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



Badgerloop  
ERB Room 133  
1400 Engineering Drive  
Madison, WI 53706

ENGINEER:  
SRiggleman, WDvorak

PCB DESIGNER:  
SRiggleman, WDvorak

DATE:  
2/10/2020

FILE NAME:  
precharge.PcbDoc

TITLE:  
precharge.PcbDoc

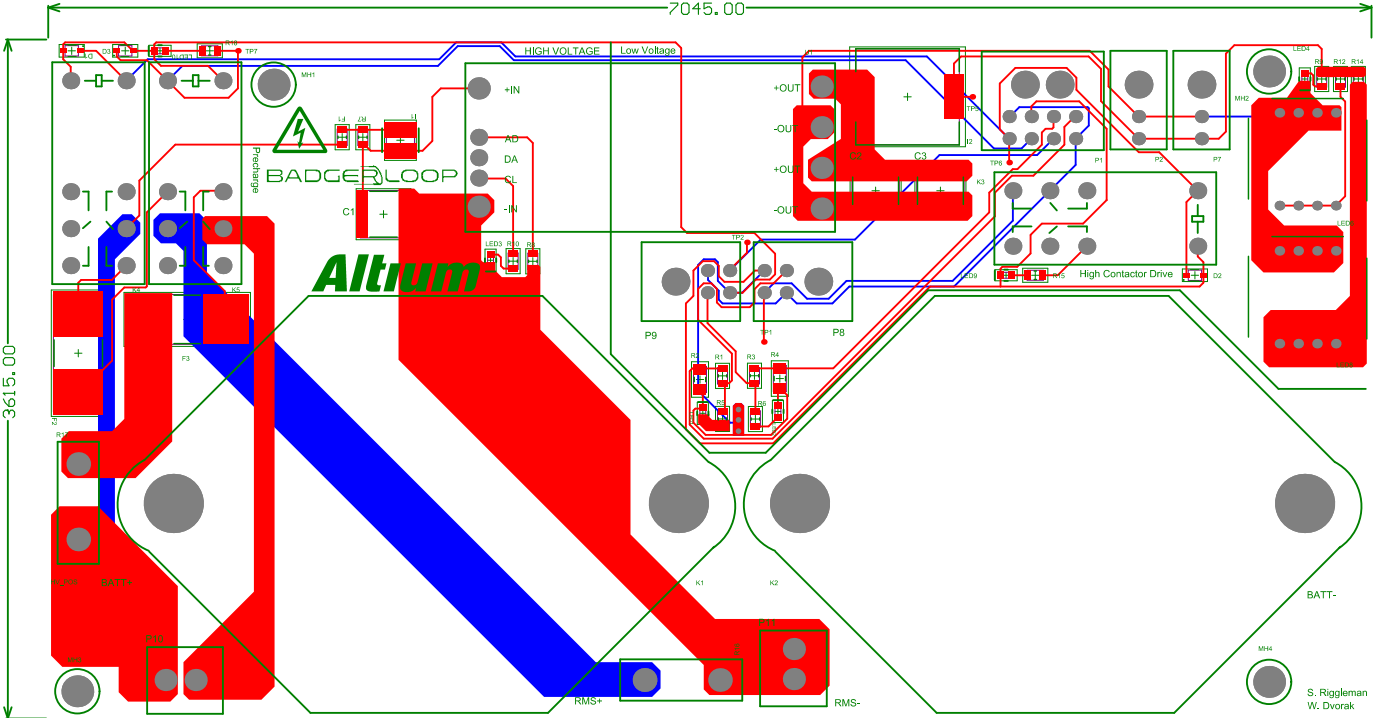
PART NO.:  
Precharge HV Board

REV:  
A

DWG NO:

SCALE:  
1:1

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



**BADGER  
LOOP**

Badgerloop  
ERB Room 133  
1400 Engineering Drive  
Madison, WI 53706

ENGINEER:  
SRiggleman, WDvorak

PCB DESIGNER:  
SRiggleman, WDvorak

DATE:  
2/10/2020

FILE NAME:  
precharge.PcbDoc

TITLE:  
precharge.PcbDoc

PART NO.:  
Precharge HV Board

DWG NO:

REV:  
A

SCALE:  
1:1