

Progress Update

# E-Bike Conversion Kit

Group 2

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Mechanical  
Update

Machine Shop



Team met with Steve in machine  
shop



Reviewed our original sketch



Gave advice on how to produce  
the Inventor/CAD drawings

# Mechanical Update

## Parts enclosure



Design changed from a full enclosure, to a partial enclosure



Top of enclosure open



Prototype - easy accessibility to contents



Quicker turnaround in machine shop



Less material used --> less weight

# Mechanical Update

Mounting system for parts enclosure

## Support

- Horizontally connected to under seat
- Vertically connected to center of rear wheel

This proposed design may be subject to change pending Steve's critiques/recommendations at next meeting.



<https://amzn.to/2TvjTRs>



<https://bit.ly/2vx4rfz>

# Mechanical What's Next

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FINALIZE INVENTOR  
DRAWINGS



STRESS ANALYSIS  
CALCULATIONS



IMPLEMENTATION  
OF DESIGN

# Electrical Update

## Components Were Changed

- No availability of Brushless Motors
- Changed motor to 250W 24V Brushed Motor
- Consequence of this is motor controller change

## Parts Ordered and Received

- 250W 24V Motor and Controller
- Battery Management System (BMS)
- 18 x 3.7 2500mAh LG HE4 Lithium-ion
- Battery Assembly Kit and Charger

Team also meet with Craig Seaboyer

# Electrical What's Next



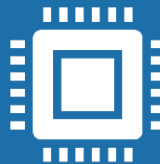
## AutoCAD Electrical Diagrams

Describes  
interconnections  
between electrical  
components



## Assembly of Battery Pack

Planning on going with  
two 7s2p configuration  
Battery layout still  
needs to be  
determined



## Wiring of Components (Final Assembly)

# Updated Project Timeline



## Week 5

- Machine shop meetings
- Finalizing CAD drawings for Steve



## Week 7

Testing /analyzing prototype



## Week 6

Assembling initial prototype



## Week 8

- Making any required changes to prototype
- Testing/analyzing again if necessary





Questions?



Sources are Included in the Update Report