

# Mutant Vehicle 2.0

A place for technical information and notes about our 2027 Mutant Vehicle, now under construction

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# Base Vehicle

The base vehicle is a [Kawasaki NAV 4e LE](#)

It is

- electric
- Lithium Ion batteries
- officially seats 4
- brand new

# Design Goals

## **Small!**

Why?

- Golf cart sized MVs can be used to drive around the city and nobody minds if you park in their camp.
- With about 4-5 people you create the right size social group that doesn't result in faffing and multiple groups of people. There is one conversation, one destination, and one adventure. Because it is clear that the MV only holds a small group of people there isn't a sense of being "left out" that you might have with a larger car that could not seat the whole camp.

## **Weatherproof as heck!**

Compared to last year's version - we learned that all electronics must be 100% IP67 sealed

## **Ground Lighting**

You need to have low level ground lighting that allows the driver to see where you're going but without blinding people or distracting from the LED light show. A puddle of indirect, bright light from below the vehicle in front is perfect.

# Mohawk / LED roof lighting

One element of the LED lighting will be a large mohawk on the roof.

Current plan:

- About 50' of [3/8" OD hard fuel line \(aluminum\) tubing](#) creates the structure
- Neon, colorful **Cabaret Stretch Mesh** from Fabric Wholesale Direct will stretch between the fuel lines to create something colorful and pretty during the day
- The tubing will be wrapped with seed pixel LED pebbles, at 1.5 cm spacing. This uses a ton of LEDs but looks fantastic.
- With the pixels wrapped, you get about
  - 1" = 15 pixels
  - 1' = 180 pixels
  - 3' = 540 pixels
- This actually seems to work ok without power injection (needs more testing) so each "spike" can go up about 3' in height
- I ordered 150 meters = 10,000 pixels = 55 feet worth.
  - That would come to about 20 strands minimum

LED controls:

- Falcon controller like the F16V5 Pixel Controller, setup somehow to handle 32 strands
- xlights to define the "show". You render a sequence at home and then load it on:
- [Falcon Player](#) lets you use a raspberry pi or something tiny to run the show