

Tesla Wall Charger Adapted to Ceiling Mount with Retracting Cable  
 GT - 2018

## CAUTIONS:

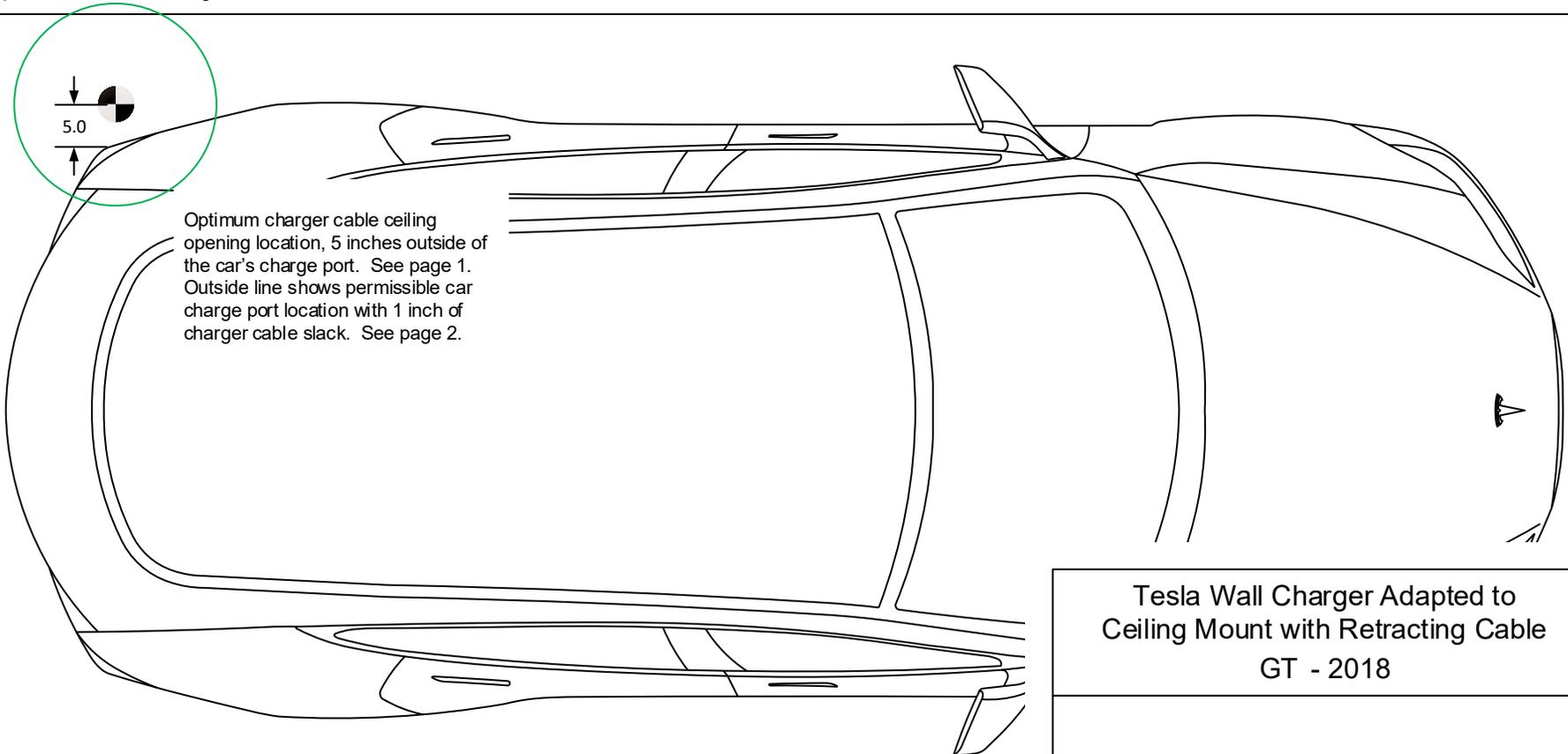
- Route all electrical wiring clear of moving parts.
- Maintain safety factor (around 4X or so) in the cables and pulleys ratings to compensate for dynamic loadings.
- Install lifting pulley system with a pure vertical lift (plumb) for safe and satisfactory operation.
- Add 2"x4" blocking between joist to support charger mounting. Also, adding blocking is recommended for lifting pulley mounting locations to improve safety, allow proper alignment and smooth the operation.
- Clamp charging cable to blocking near charger to reduce stresses on charger body.

## Installation Notes:

- Wall charger and lifting system shown at 90° orientation relative to vehicle on page 1 for illustrative purposes. Page 2 shows another orientation. Counterweight, charger and pulley orientation are each independently orientable and must be oriented as needed for pulley, power feed, charging cable and opening to clear ceiling joists and other attic interferences.
- Counterweight of 22 pounds suggested as starting point for typical 8.5' charge cable system. Experimentation of weight suggested for desired operation.
- "Stops" (shown as grey box on lifting cable) should be installed on lifting cable to prevent over-travel damage i.e. hoist pulley or counterweight damaging ceiling. Additional ceiling protection recommended below lifting pulley and the counterweight. Cable length should result in a counterweight position minimally above ceiling when charging cable full retracted.
- This installation has the charger cable relocated to exit the back (top as shown) of the charger body for a cleaner, compact installation and to allow the maximum of 104 inch ceiling height with 8.5' cable.
- Charging cable length used in attic = wrap on ½ pulley plus vertical distance at pulley ( $\pi r + 2r$ ) + sheetrock and other. For typical 12 inch diameter pulley =  $3.14 \times 6" + 2 \times 6" + 2" = 33"$

## Recommended Parts:

- 12" Aluminum Hoist Pulley Wheel CBM1290 for the charger cable.
- Madison Electric Pull-it PN 104 for ceiling opening,
- 1/8 inch wire rope minimum for the lifting cable,



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