Reviewer's report

Title: Highway proximity associated with cardiovascular disease risk: the influence of individual-level confounders and exposure misclassification.

Version: 4 Date: 3 September 2013

Reviewer: Sandrah Eckel

Reviewer's report:

The authors were very responsive to my last set of comments. I appreciate that I could see the track changes in this version. The refined presentation of statistical methods and investigation of the effects of continuous exposure variables (allowing for non-linear relationships via GAM) have added to the paper. I have a few last minor comments, but I do not need to see this manuscript again. It seems suitable for publication, if the other reviewer and editors agree.

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Minor essential revisions:

1. I appreciate the authors’ responsiveness to my comment that they were overemphasizing the impact of “rarely included confounders” since there was no clear demonstration of novel or major impacts from controlling for these additional confounders, but it seems a bit over-zealous to remove so much text regarding confounding. Confounding is, of course, an important issue. To ensure the reader that confounders are considered carefully, I recommend reversing the deletion of confounding in the following places:
   - abstract, background: line 3
   - intro, background, end of 2nd paragraph
   - last paragraph of intro, keep: “and consideration of a large number of potential confounders.”
   - first line discussion, keep: “and considering a large number of potential confounders”
   - conclusion paragraph, retain the line on individual-level confounding

2. My comment about cutting Figure 2 must have been a typo, I think you were correct that I was thinking about replacing Table 3 with supplemental Table 4. I do recommend this change unless you have a strong justification otherwise. Readers will be more interested in the impacts of refined geocoding methods in confounder adjusted models rather than in crude models.

3. The geocoding method used to produce the first sentence of the results section of the abstract should be stated.

4. Top of p. 11. Do you mean that “Estimates were predominantly biased towards the null…” rather than just the 95% CI?
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare I have no competing interests.