In the intro, provided a clearer sense that the dissertation falls thematically into roughly two parts: first a deep dive into complexity, and then applications. This better helps calibrate expectations.

Revised all chapters to state explicitly that I individually created the software and tools under discussion: OSMnx and Pynamical. This was merely implied previously. Revised and more clearly explained the reasons for developing OSMnx in chapter 5.

Added more thoughts on future urban planning research to the conclusion, including research questions that scholars and planners can ask with OSMnx.

Clarified how I am using the terms density, resilience, and connectedness in chapter 4 for the rest of the dissertation.

Clarified resilience for automobility versus pedestrians in the discussion section of chapter 6 and in the future research section of chapter 8.

Revised all side-by-side visualizations to ensure same scale.

Tables throughout have been revised for readability, including body re-formatting and the inclusion of explicit indicator names/descriptions rather than the less-immediate variable names exported directly out of the computational analysis. Also added clear signposting to the extended discussions and definitions elsewhere in the dissertation of these indicators when they appear in tables. Finally, I briefly recapitulated the interpretations of these indicators in chapter 7’s methodology section, just before they are presented in several tables, for easier reference.

Further explanation of the spatial scales and units of analysis is provided in chapter 7, particularly in 7.4 and 7.8. The importance of scale and what makes each unit of analysis interesting is discussed in chapters 7 and 8. State-level aggregations and their limits are better contextualized in sections 7.5 and 7.6. More discussion of how scale matter is added to 7.8 and the conclusion.

Added new visualizations of street networks to section 7.6 to clearly demonstrate what these places look like and what their density and connectedness look like.

Added new visualizations to section 7.7 to illustrate the street networks in the different neighborhoods of San Francisco.

Added several paragraphs of new material to section 7.7 to discuss the planning history of certain SF neighborhoods to better illustrate the reasons why their street networks look the way they do, and in turn illuminate the statistics presented with a clearer real-world story.

Add connections to planning – dead-ends, fine-grain, etc.

David – I accepted most of your stylistically suggestions as they didn’t conflict with other professors requests. However, you had commented that the introduction/abstracts felt long-winded and overly detailed, but I kept this format as-is because it was Paul’s requested structure and format (likewise for the tutorial tone in chapter 2).

I added some more critical depth and citations to the Jacobs-planning-complexity stuff. Also gave a fuller picture of the roots of complexity as you suggested in the conclusion of chapter 2, mainly by listing roots and offering references for more info.

At the beginning of the graph/network term definitions, I added more citations.

In Chapter 6, added discussion and caveats to the effects of bounding boxes on the network – namely peripheral edge effects and artificial centers.

Figures 7.1 and 7.2 were changed from representing urban areas by their shapes to representing them as equal-sized circles, for improved readability

The color ramps throughout chapter 7 were revised to scale from low (pale yellow) to high (dark red) for easier interpretability.

Problems with types I/II/III complexity. First, it was somewhat confusing having this typology at the beginning of the chapter and then having the main typology the chapter was building toward come at the end. Second, the “type” terminology was a bit vague. Third, the whole thing was a bit glossed-over. I have clarified the language referring to this throughout the dissertation. I addressed these issues by explicit calling it a “framework” rather than typology for disambiguation and more accurately calling the types “categories” instead. I added additional material throughout chapter 4 to explain the framework more clearly, and to the discussion in chapter 7 to unpack the findings a bit more clearly in its context. Finally, I added better signposting throughout when this framework is referred to again.

Another key issue here is the type 1/2/3 measures of complexity.  These don't seem compatible with one another.  How can high complexity at the same time be low order, medium order and high order?  The other issue here is that you introduce these concepts with little emphasis but repeatedly return to them both here and later (in C7 for example).  The incompatibility of the three 'types' (are they types of complexity of or complexity metric?) need not be fatal, if each relates to some aspect of complexity that it is important for planners to recognize and track.  I think a more complete discussion of this framework is needed to enable this framework to do all the work you ask of it.

C3/4 in the transition here, I think you elide the fact that a network approach largely drops the dynamic and processual out of the picture, except by implication. This is probably the most important weakness of the dissertation as a 'thesis'. You can defend it but you need to acknowledge the weakness. Recognize what is lost when you focus on a network representation and lose the dynamics. How do we relate networks to the dynamics they sustain? This is a central question for your approach, which you have to address, I think

how measures of network structure (essentially static) relate to complexity (essentially processual and dynamic)

3.7 - What is lost when we emphasize the structure in the analysis over the processes?

4.4.6 - how these measures of network structure relate to complexity

4.5 - loss of temporal measures seems problematic, or at least should be more prominent in the discussion

4.6 - linkage between network measures and complexity that needs greater emphasis: These attributes influence the way an urban system’s physical links can structure complex interactions, connections, and dynamics.

What un-answered question does your work help close a specific knowledge gap?

more on how OSMnx be used to probe the complex dimensions of street networks and how this in return will lead to …. XXXX (… to efficiency gains; better road investment or management decisions; more resilience in transportation system designs; safer streets, ????)

additional step to clarify contemporary policy questions and debates