

Attachment B

Memo from Opticos Design on Missing Middle considerations



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To: Karen Fink, AICP
Housing Program Manager/Housing Ombudsperson
Tahoe Regional Planning Agency
Stateline, NV 89449
kfink@trpa.org

From: Tony Perez, Senior Associate

Re: Recommendations for Missing Middle Housing Implementation

Thanks again for inviting Opticos to help raise awareness for Missing Middle Housing. It was great meeting you all. Below, I've provided some recommendations and additional information for moving forward with enabling and achieving Missing Middle Housing.

1. Understand where Missing Middle Housing types can serve the community.

- Missing Middle Housing is defined as House-scale buildings with multiple units in walkable environments. A walkable environment consists of a center - the amenity within short walking distance - and some or much Missing Middle Housing. The center can range in its size and intensity from as small as a crossroads or a corner store to a neighborhood main street and up to a downtown.
- Check if your Comprehensive Plan or Regional Plan identifies existing and planned centers and if it identifies if they are intended as walkable environments. For those that are intended as walkable environments, then check that the Plan has language to support those areas as the locations where Missing Middle Housing is allowed so that implementation is clear and supported: making those areas 'Missing Middle Ready'.
- Advocate for housing choice through the entire palette of Missing Middle Housing types. The palette consists of nine types and they offer different housing choices all within house-scale buildings. It's important to communicate that some of the palette fits lower intensity neighborhoods and some of it fits moderate intensity neighborhoods, including corridors. But, it's not intended that the entire palette be used in all situations.

2. Utilize Missing Middle Housing types to transition between more intense areas and single-family neighborhoods.

- Missing Middle Housing adjacent to centers provides new housing choices in close proximity to retail and services. Over time, there can be pressure on side streets in these locations to convert single-family lots to conventional multi-family development. It's possible to neutralize the potential for incompatible transitions by only allowing Missing Middle Housing in these transition locations (e.g., the first or few lots on the side street around the corner from the adjacent center).

- Using Missing Middle housing types as a transition from a center to the adjacent single-family houses also avoids single-family houses from being immediately next to the larger, commercial or mixed-use buildings that could be developed in the adjacent center.
- Consider opportunities in commercial centers where Missing Middle Housing could be located on underused portions of the center. Further, consider opportunities to entirely reconfigure these centers and their commercial uses into a small neighborhood main street flanked by Missing Middle Housing that provides a compatible transition to the adjacent single-family neighborhoods.

3. Review policy and development standard for barriers to housing choice.

- Check the comprehensive/regional plan and zoning standards for the following:
 - a. **Numerical Limits.** Does the comprehensive/regional plan or zoning limit the number of units below what is necessary for missing middle housing options? The Missing Middle Housing palette of types begins with the Duplex at 8 units per acre or 5,445 square feet of lot area per unit. At the other end of the range, the Multiplex large needs 44 to 55 units per acre or 792 to 990 square feet of lot area per unit. Of course, there are 7 other types in between these two ends of the spectrum and all of these numbers need to be tailored to your needs but the key message here is that the zoning needs to recognize the realities of MMH types differently than how it treats multi-family development. This issue needs more education and discussion because existing density maximums are much lower than what most MMH types need. As I mentioned in the presentation, this is mostly because the density tool and the resulting maximums are typically developed with larger pieces of land in mind and not the individual infill lot.
 - b. **MMH is not “Multifamily”.** Does the zoning essentially lump Missing Middle Housing in with general multifamily standards? Does the zoning use one set of standards for all sizes of multi-family housing? As stated in the presentation, Missing Middle Housing is not another version of conventional multi-family residential development and needs certain standards to be fully enabled and predictably generate house-scale buildings.
- The following are examples of how key zoning standards might need to be adjusted to support and fully enable Missing Middle Housing:
 - c. **Parking: Amount.** As stated in my presentation, the impact on a person’s ability to afford a dwelling is affected by the amount of parking that must be provided for each unit. Research¹ shows that requiring one additional parking space can effectively raise the income required for affordability by 42 percent. This becomes more significant as the size of the building and site decrease, which is why the larger suburban projects easily comply by using more land. But on an infill lot within an

existing neighborhood, the impact on affordability can quickly make a project infeasible.

We recommend reducing the minimum required parking to 1 space per unit, but only within the areas mapped as walkable environments where Missing Middle Housing is expected ('Missing Middle Ready' locations). These areas need to be within short walking distance to a walkable center (e.g., a transit stop with nearby services, food or shopping). Last, either do not require guest parking or allow adjacent on-street parking to satisfy this requirement to make use of the lot for on-site tenant parking and a back yard.

- d. **Parking: Location.** A few questions were raised about the location of parking in the examples I showed. The first part of the approach is to keep each parking area small. This is done by keeping each lot the same or about the same size as a typical single-family house lot, or two lots in the case of the upper end of the MMH spectrum. Second, use one side of the lot for a driveway to the middle or rear of the lot where parking can be located. This is to maintain the pedestrian-oriented streetscapes while accommodating vehicles. As the topography of a lot increases past about 10 percent grade, this approach needs to be adjusted to let parking be closer to the street.
- e. **Lot Size requirements.** Most zoning codes require that each lot contain a minimum amount of square feet (lot area) based on the zoning district. In our experience, regulating lot width is more effective than regulating lot area. Lot depth is also important but for existing blocks it is already set and so the focus needs to be put on width instead of depth. In addition, lot area requirements are often not coordinated with the types of buildings that can fit on those lots, resulting in the need to assemble additional parcels. Assembling multiple parcels typically results in larger buildings that can easily be out of scale with the neighborhood. Missing Middle Housing types fit on lots that accommodate single-family houses. But because Missing Middle Housing types are often put into the general multi-family residential category, their smaller footprint and scale are not reflected or addressed in the standards. For example, a Duplex is often only allowed on a lot size that could easily accommodate other Missing Middle Housing types. So check your zoning standards to see if they enable Missing Middle Housing types through lot width requirements instead of lot area requirements.
- f. **Maximum Density requirements.** As with the topic of lot size, the maximum allowed density requirements in most zoning codes do not consider or allow Missing Middle Housing. There is a significant difference between Missing Middle Housing and multi-family development - urban or suburban. The typical multi-family project is usually on a large site and includes more than one building. The typical Missing Middle Housing type is on a lot that is the size of those for a single-family house and with only one house-scale building.

Larger sites with multiple buildings typically result in a density calculation that is numerically lower than the single-lot Missing Middle house-scale building. For

example, consider a set of 3-story buildings with 502 units on a 53-acre site that calculates to a density of 9.47 units per acre. Compare that to one, two-story, 8-unit courtyard building on a lot that is 100 feet wide by 120 feet deep lot that fits well in a single-family neighborhood but calculates to a density of 29 units per acre.

These two projects are not similar in size, form or intensity. Further, the 'density per acre' calculation leads a person to think that the lower the density, the less building and smaller size. However, the 3-story multi-family buildings, although they might be very nicely designed, are at least twice the footprint of the Missing Middle Housing courtyard building.

If it is ultimately necessary to keep maximum allowed density or minimum lot area per unit as standards, we recommend that the maximum for Missing Middle Housing be calculated separately and that those higher resulting numbers only be allowed for Missing Middle Housing buildings.

- g. **Open space requirements** (common and private). Check if the zoning standards require private open space. This is important because decks, balconies and other required on-site open space can quickly complicate these small buildings and add expense for little benefit. In addition, requiring private open space often ends up being used for bicycle storage, doesn't really address the intent of such space, and can clutter the building's appearance. We recommend that for Missing Middle Housing, only require common open space for the Cottage (Bungalow) Court and the Courtyard types. The other MMH types have a back yard that functions as the open space. The ability to consistently achieve a useable back yard instead of leftover, unbuilt area, is tied to coordinating this standard with the lot coverage standards or building footprint standards if they exist. Also, the open-space requirement is typically intended for large developments where including such a feature makes physical sense.
- h. **Building Height.** The Missing Middle Housing types are primarily 2 stories with an occupied attic space that provides a partial 3rd story but, within the form of the room so that the perceived height and scale is 2 stories with a roof (2.5 stories). There are two exceptions to this: a) the cottage (Bungalow) court that should only be allowed at 1 story maximum, and b) the Courtyard and the Multiplex large that can be up to 3 stories.

We recommend making it clear that the maximum height is not the same for all of the Missing Middle Housing types to ensure that the appropriate MMH types are allowed only where they fit well.

- i. **Lot Coverage.** Many zoning codes consider buildings, carports, patio covers and impervious ground surfaces as the same when it comes to lot coverage. In our experience, buildings should be in one category and everything else in another. Otherwise, it's common to see conflicts with a building having to compete with carports and patio covers for allowable space. We typically see MMH types needing

between approximately 25 and 50 percent for the building alone. Regarding minimizing impervious coverage for groundwater recharge purposes,* limits on coverage depend on local needs and can vary from approximately 25 to 50 percent.

- j. **Building Footprint.** Check the zoning standards to see if they address the maximum footprint of buildings or if they only address lot coverage. If only lot coverage is regulated, that is not enough to ensure house-scale buildings that fit well into or near lower intensity neighborhoods. We recommend zoning standards for the maximum footprint of the Missing Middle Housing types to keep these buildings ‘House-Scale’ (typically no more than 60 to 75 feet overall in any direction). This can be achieved simply through overall standards for a building footprint or through a two-part approach: Main Body, and Wing(s). A wing is a secondary part of the massing that is smaller in footprint than the main body and sometimes one story less. This two-part approach enables the building to be larger than just the main body but in a way that doesn’t just look like more building. Setting the standards for this is best done through a public process that demonstrates to all involved the reasons for regulating this important factor and shows the examples of what is intended and what is not allowed.
- k. **Articulation / Massing requirements.** These standards typically require changes in height or in the plane of a façade. These standards are very necessary for large buildings, say anything taller than 2 stories and longer than 75 feet. However, because all Missing Middle Housing types are house-scale (up to 2.5 stories, 60 to 75 feet overall in any direction), these standards are not necessary. Check the zoning standards to see if such standards exist and if they will apply to MMH.
- l. **Converting SF Homes to MMH.** While converting existing houses into one of the MMH types is possible and can be effective way to deliver new housing choices, there are several factors to keep in mind when considering this approach. Although there are several practical issues with conversion of a house into a MMH type, if the house is in a walkable place, that’s the first test for considering such a project. Next, it’s important to keep in mind that converting a house into simply more bedrooms is not the intent of this approach. Therefore, a significant factor in a conversion project is retrofitting the house to have additional kitchens or kitchenettes and additional bathrooms for each unit. This includes the expense of those rooms and their details as well as the expense of retrofitting the plumbing and sewer systems. The other significant factor is the addition of parking for the new units. Depending on the number of units and other factors, there are also accessibility issues to address through local building and fire code requirements.
- m. **Allowed Uses.** The question of which non-residential uses should be allowed in MMH types and whether or not to allow mixed-uses at all goes back to the intended physical character of the underlying zone. What’s the intent of the zone? When reviewing these types of questions, we generally recommend that the list of allowed uses in walkable places be longer than in areas farther away. We also recommend that the

list of allowed uses in walkable places be tied to the size of the allowed buildings. For example, allowing 'retail' or 'office' without specifying anything about size can lead to those uses being too large for the neighborhood. However, by specifying the maximum amount of square feet that such uses can occupy, that sorts out the larger uses from ever being interested in House-Scale buildings. The above approach allows for 'mixed-uses' at the House-Scale to maintain the neighborhood's physical character.

- n. **Processing/Review requirements.** Check that the zoning standards allow for Missing Middle Housing building types as simply as is practical. For example, smaller MMH types such as triplexes and fourplexes should be approvable at the administrative level and larger MMH types such as the multiplex large may need more review. Be sure to not regulate simply by density, leaving the important size and scale issues to be determined through the review process. This approach can invite unintended consequences as well as delay and complicate the review and approval process. We recommend clear standards for lots and buildings coordinated with the sizes of MMH types and where they are expected. It may turn out that the larger MMH types (e.g., Multiplex, Courtyard) are only allowed in certain areas and the smaller types (e.g., Duplex, Fourplex, Cottage Court) are allowed in other areas. Some communities are using Form-based standards to implement MMH while others are using Objective Design and Development Standards (ODDS).

4. Review for potential financial barriers such as utility impact fees, zoning and permit review fees and other development fees.

- Work with local lenders and builders to understand the fiscal factors that impact feasibility for Missing Middle Housing.
- Consider tiered fee-pricing to encourage smaller scale development. Larger multi-family apartment projects can better absorb the cost of utility impacts because of their project size. Missing Middle Housing is often implemented one lot at a time and as a result, the utility cost impacts can often be higher.

5. Identify potential pilot projects to identify code modifications that would incentivize Missing Middle Housing types and increase public awareness and support.

- As I mentioned in the presentation, pilot projects have worked in other communities to produce positive results and an understanding about what types of changes are needed in zoning or other requirements.
- Pilot projects can be on publicly-owned land and built by developers through a RFP process or, local jurisdictions can test demonstration standards to incentivize private development of these types. A demonstration standard is either of the following: a) an entirely different set of standards resulting from the desired form and design of the pilot project or, b) a targeted set of adjustments to be made to the existing zoning. In

either case, the starting point should be the desired outcome. If the community receives the pilot project positively, the numerical limits then take their direction from the resulting building/project.

- As an alternative to pilot projects, potential changes to zoning standards can be tested on selected lots before amending the code. An example shown in the presentation is the lot analysis in South Bend, Indiana that identified the range of Missing Middle Housing types that fit well on the existing lots. This allows the jurisdiction to test what is possible, discuss it with the community, and then determine what types of changes are desired.

6. **Review of Selected TRPA Standards.**

- As requested, we did a high-level review of the King's Beach Industrial Community Service District and TRPA's density approach to MMH and mixed-use development. The following findings are offered for consideration:

A. King's Beach Industrial Community Service District.

- **Maximum Allowed Density.** See discussion below in item 6B.
- **Allowed Uses.** Multifamily development requires a Minor Use Permit. We recommend that an easier process be provided for MMH projects by preparing standards with enough clarity and predictability about what the standards will generate. Second, that the public be highly involved in understanding the reasons for these different standards and where they could apply so that the resulting approval process is simpler for projects that comply with the standards. Also, we recommend applying the size-approach to non-residential uses in MMH and Town Center areas to distinguish them from larger uses in conventional commercial areas.
- **Height.** The maximum heights allowed in Chapter 37 look fine for MMH types. While overall height is certainly important, we recommend also measuring to the highest eave as this allows each story of the building to be more than just the minimum required by the building code. Also, we recommend specifying the number of stories and the maximum height to the highest eave so that the upper volume within steeper roof pitches on buildings of 3 stories or taller is prevented from becoming unintended additional stories. That's why you'll notice that our maximum height recommendation for MMH types is 2.5 stories with the understanding that the roof volume above the 2nd story can be used as occupied attic space, a partial 3rd story, but within the roof form for a 2-story building.
- **Parking.** The approach to regulate by bedroom is effective for smaller buildings (e.g., less than 6 units) and then after that, we recommend that a ratio of one space per unit be used. Again, we only recommend this approach for parcels within short walking distance of amenities (shops, services, transit).

- **Lot Size and Width.** The current minimum of 10,000 square feet does not allow the Duplex, Fourplex or Townhouse types and invites larger buildings that may not be compatible in size with neighboring houses. Also, the current minimum lot width of 60 feet leaves out effective lot designs for the Duplex type that can function on lots that are 45 feet wide. See discussion above in item 3.E regarding recommended approach to Lot Size.
- **Setbacks.** The current front and side setbacks of 10 and 5 feet respectively are fine but we recommend to make sure that there aren't any 'wedding cake' types of standards that require a 2-story building to be designed in ways that are really intended for much larger buildings. The current rear setback of 5 feet is too small for MMH types as it doesn't ensure that there will be a rear yard and it invites longer buildings instead of smaller footprint House-Scale MMH types need. See above discussion in item 3.i (Lot Coverage) and 3.j (Building Footprint) for our recommended approach.

B. TRPA Density Approach for MMH and Mixed-Use Development.

- **MMH.** The maximum allowed density relevant to MMH is the multifamily category which allows up to 15 units per acre (unless an area is designated as a Town Center, see next item). This maximum is enough to physically allow the Duplex and Townhouse types, and the very low end of the Cottage Court type (14-21 units per acre), but is not enough to allow the Fourplex, Multiplex, or Courtyard types. If these limits are adjusted, we recommend that it be done in coordination with the lot dimensions where the new limits will be applied. As shown in the presentation, density is a useful metric for several purposes but regarding physical form, it's very unpredictable and should not be used as an input but an output of the desired/intended physical form.
- **Mixed-Use Development.** The maximum allowed density in Town Centers is 25 units per acre. As shown in the presentation, the 2-story mixed-use building with shop space on the ground floor and two units above calculates to 22 units per acre. In order to achieve a third unit on that parcel, the resulting density increases to 34 units per acre. The addition of one unit increases the density on this parcel by 12 units per acre. However, the 3rd unit could fit at the rear of the second floor and not be perceivable from the street. We recommend testing the 25 per acre maximum on the lot sizes in Town Centers to understand if changes are needed. As with the MMH limits, we recommend that it be done in coordination with the lot dimensions where the new limits will be applied.
- **Last,** we have had economists tell us that in order to sustain neighborhood-serving shops and services within short walking distance, a rule of thumb is that the immediate area (5 to 10-minute walking distance) have an overall density of 16 units per acre. We recommend that you test your parcels in areas where MMH is desired and in Town Centers to see what the existing standards generate in terms of overall density.

Thanks very much for the opportunity to help the Tahoe region start using Missing Middle Housing to address its housing needs. I look forward to talking with you about these recommendations and your questions and ideas. If you're looking for more information on Missing Middle Housing, Dan Parolek's new book *Missing Middle Housing* is available from Island Press.

¹ Cost Impacts of Parking on Housing, Fregonese Associates. Changing the required number of spaces from 1 to 2 results changes the average monthly rent per bedroom from \$993 to \$1,404 and the income required for affordability from \$36,000 to \$51,000.



Mail

PO Box 5310
Stateline, NV 89449-5310

Location

128 Market Street
Stateline, NV 89449

Contact

Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

*TRPA postscript: In the Lake Tahoe Basin coverage is limited based on land capability classifications that were created to meet runoff and erosion control standards to protect lake clarity. Changes to any standards in the Basin must undergo rigorous environmental review to make sure these standards can still be met.