AIA Austin

July 23, 2024

Honorable Mayor
Honorable City Council Members

Re: Joint AFD, ATCEMS, DSD memo regarding Single-Stair Point Access Buildings

Dear Mayor Watson and City Council Members,

AIA Austin is devoted to advocating for policies that shape and improve our built environment. As the professional organization representing Austin's architecture community, we draw on the diverse experience and expertise of our members to make meaningful contributions. We thank the Mayor and Members of the City Council for considering a local amendment to the International Building Code (IBC) that would allow for an increase in the number of residential stories served by a single exit. This is an important step in providing Austin with the type of housing that will facilitate safe, family oriented, walkable neighborhoods as our city continues to grow.

We also thank Austin's emergency response teams who have clearly outlined their concerns regarding this proposed amendment in a memo dated June 26th. Their concerns are based on lived experience and as experts in their field we take their suggestions seriously. We are excited to have this opportunity to work alongside them and appreciate what they have brought to the table.

Some of the concerns listed in the memo relate to architectural requirements, to which we offer our own considerations. We hope these are viewed in a collaborative light and are not meant to diminish the need for robust life safety measures. Our considerations are offered as points of clarification to build upon the concerns listed in the memo.

Summary
As architects, we understand the complexities of competing interests when it comes to designing to meet building codes, zoning requirements, life safety requirements, designing for equity, as well as ensuring projects financial feasibility. Fundamental building components like stairs, elevators, and connecting circulation space, in addition to plumbing cores, mechanical, and sprinkler risers take up space that could otherwise be part of a habitable unit. Stairs are large and costly; corridors bisect buildings.

Single-Stair Point Access buildings offer numerous benefits, including unit diversity and flexibility, floor plate efficiency, increased access to sunlight and natural ventilation, smaller building footprints, and a more fine-grained urbanism. This typology is a core building block of urban areas throughout the world at many different scales, and has significant precedent in the US as well.

In addition, larger multi-family projects get overly complex, making it hard for users/visitors to know how to get to a unit and/or for occupants to exit. Similar to IBC 2021 1010.2.98 Exception 1, which allows an assembly space such as a restaurant not to have panic hardware on the main entry door since people will intuitively go to that door to exit because that is where they entered, having only one stair with a short corridor makes for easy decision-making for the inhabitants. And while this would make it seem that there is only one way out, after living in a four-story walk-up in Brooklyn with only a single stair, it was clear that our windows as well as access to the roof were also ways out in case of an emergency.

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Currently the IBC allows a single exit to serve four residential units per story up to three stories. Anything beyond that requires two exits connected by a corridor, which leads to large buildings composed mainly of studio and one-bedroom units. This amendment would allow a single exit to serve taller buildings, by mitigating risk through passive and active fire-safety systems and reducing the overall load.

Benefits
Single-Stair Point Access buildings allow for a greater diversity of residential unit types and sizes by eliminating the need for a long, double-loaded corridor that splits the building in two. These units have the flexibility to be larger with more bedrooms or communal areas. In addition to being more family friendly, the single staircase and condensed corridor act as a central gathering place, encouraging connections and interactions among tenants.

The current double-loaded corridor model for multifamily in the US results in units with windows along only one side, opposite the corridor, leaving much of the unit in shadow. These units must rely on artificial lighting and mechanical ventilation. Single-Stair Point Access buildings allow for units to wrap around the condensed circulation core, gaining access to multiple walls of windows. This design facilitates better natural lighting and cross ventilation, reducing the overall energy consumption.

Similar to what is currently allowed in the IBC, this amendment limits the number of units to four per story and shortens the distance of the allowable egress path. These constraints ensure smaller building footprints, helping to bring ‘gentle density’ multifamily infill options to urban neighborhoods. While the current code tends to encourage larger multifamily buildings that require considerable land and capital to construct, this scaled-down typology presents an opportunity for smaller developers to help contribute to achieving the city’s housing goals.

Additionally, reducing the internal circulation of the building also allows for better floor-plate efficiency—less area devoted to stairs and corridors, more area for living—which lowers the overall cost of housing.
There are other benefits as well—the scale of these buildings align nicely with the Affordability Unlocked density bonus, larger residential units tend to be better for accessibility, urban density facilitates more transit options, healthier tenants when used as a walk-up, smaller building footprints are more compatible with the existing urban fabric. Ultimately, we feel Single-Stair Point Access buildings are an important tool to help build out the Austin we’d like to see, and especially important to have in place before construction starts in many of our newly up-zoned pockets and corridors.

Response to Specific Concerns
With only one exit serving multiple floors of residential units, it is essential the amendment provides adequate fire safety provisions protecting the path of egress to allow for a safe and speedy exit while also allowing the emergency responders to safely do their jobs. We agree with the memo fully that this is the inherent risk that needs the most consideration. Thankfully, Seattle has allowed these buildings, up to six stories in wood construction since the mid-70’s and their fire department does not consider them any greater risk. Their code amendment is an excellent place to start. By considering the elements of compartmentalization, incorporating additional active systems like sprinklers and a pressurized stairway, and relying on egress strategies already built into the IBC, we believe these buildings can mitigate that inherent risk and strengthen overall life safety.
It is important to note – these Single-Stair Point Access buildings are not more likely to catch fire, or be more flammable in any way, than their double-loaded corridor counterparts. In fact, the increased fire protection makes them less flammable, and the smaller footprint puts fewer lives at risk.

Occupant Risk Considerations - The occupancy of this building typology is still inherently low due to only having four units per floor and the size of the unit being bound to the max exit distances. There is little risk of occupants and first responders conflicting with each other in terms of access. There are so few units that those able to evacuate on their own will have evacuated while the emergency services personnel are on their way to the property and then those not able to get out on their own would be the ones assisted as the first responders also address the cause of the fire or issue at hand.

A 2022 International Association of Fire and Rescue report[1] shows that globally, many countries that allow single-stair buildings, even those that allow wood construction and those that do not require sprinklers, have a significantly lower death rate due to building fire than the US. The study is not conclusive, but it does point towards something else being the underlying factor for building fire death rates, not the number of exits.

Subject Matter Expert Findings – The ICC's rejection was based on the determination that this amendment should be implemented by local jurisdictions, as opposed to national. Austin is an ideal candidate as we have access to utilities, emergency response teams with the highest rating, and a population that continues to grow and densify in the urban core.

Hindered Evacuation Tactics – Designating one stairwell for evacuation and one for firefighting operations is counter to the intent of the IBC which sets occupant loads and egress requirements based on travel distance to the nearest exit. Requiring one exit for egress and one for ingress would potentially triple the allowable travel distance in the case of an emergency. Occupants exiting a Single-Stair Point Access building, with Seattle's requirements, would likely have a far shorter travel distance to the exit than occupants of a double-loaded corridor to even get to the nearest exit. Additionally, the limited size and occupant load reduces the risk of congestion significantly.

Insufficient and Aging Water Infrastructure in Residential Areas – Single-Stair Point Access buildings are no more taxing on the existing water supply than any other multi-family building that would currently be allowed. The developer would be required to work with the city to improve any insufficient infrastructure.

Obstructed Emergency Medical Services – Currently the code allows for a stairway as narrow as 36" wide for occupant loads less than 50. This is an excellent opportunity to enhance the fire protections by following Honolulu's lead and requiring the stairway be at least 48" wide, benefitting both the emergency service provider, and the escaping occupants. Going from two tighter stairways to one that is more generous makes carrying a wheelchair more straightforward, and eases circulation even outside of an emergency.

City Population Density – Seattle and New York City, the two precedent cities most often referenced, both have an average density greater than Austin's. However, Austin is continuing to see incredible growth, and strong initiatives from the City Council to help build pockets and corridors of density. When we look at specific neighborhoods, like West Campus and Rainey Street for example, we see densities of 15,703 and 6,338 people per square mile respectively, which is in line with Seattle's density of 9,024 people per square mile. We need this amendment passed urgently, now, not after we densify our corridors. The best time to plant a tree was 20 years ago, the second-best time is now.

In truth, we feel that this policy is being adopted late in the game, especially when you look at the amount of new construction there has been in the last 10-20 years. We have a dramatic lack of housing, and despite the incredible reforms taken by our council, we are still seeing Austinites fall behind. This policy will help build the

[1] https://www.ctif.org/sites/default/files/2022-08/CTIF_Report27_ESG_0.pdf

housing stock needed to meet the demands for market rate or affordable housing, specifically, the family sized infill options.

Height – Seattle allows five stories, up to six stories high, to be served by a single exit. This aligns with their increased allowance for six stories of Type 3 fire treated wood construction. Austin only allows five stories of Type 3 construction; however, those five stories are often built above a Type 1 concrete podium. Our recommendation is to allow a single exit to serve no more than five stories, up to 85' high. This matches the wording of the IBC table 504.3 for the allowable building height of a Type 3 sprinklered building with an R-2 occupancy. These five-over-one podium buildings are an inflection point for construction financing and have a higher fire resistance than what is allowed in Seattle. We are curious to know the reasoning behind the recommendation to limit the height to only five stories and to continue the conversation.

Max Floor Size – While allowable area as determined by IBC table 506.2 is one factor in determining the potential size of a building, limiting the egress travel distance also effectively limits building size. The proposed travel distance from the furthest point in the unit to the exit is limited to no more than 125', with only 20' allowable in the corridor. This ensures the majority of the travel will be within the unit with limited exposure to the corridor. This is an item where we feel we could work together to find an appropriate floor size maximum that works specifically for Austin, if this limit is not enough.

Impact on Construction Cost and Affordability – Of the three cities being compared and their requirements, the restrictions proposed in the memo would make Austin's the most conservative by far. This is too many belts and suspenders that will make the costs higher than the intent of the proposed amendment to the code. Let's discuss allowing NFPA 13R sprinkler system, not requiring the evacuation elevator, allowing all types of construction, and raising the building height to 85' with a limit of five stories served by the single stair. This would make more sense to provide more economically feasible projects of this scale.

Additional Considerations

Corridor Fire Rating – In order to ensure safe passage from the unit to the exit, we propose increasing all corridor fire-resistance ratings to a minimum of one hour in a Single-Stair Point Access building. This increases the protections for the entire Means of Egress path, not just the stairs, and would require fire doors at each unit, which results overall in better compartmentalization.

Conclusion

As previously mentioned, taking out costly building components that take up space will make a difference in the types of projects developers are incentivized to get to market. Smaller lots will be able to yield better units that can help add the options our city is severely lacking. And while it is true that the city cannot dictate the cost of the units to the inhabitants, we do know that as supply and demand rules the cost of everything else, more houses should curb demand, which should mean more affordability in the long run, which is the goal. We appreciate the advancements the Mayor's Office, City Council, Planning Commission, and Staff have made in housing reform. We look forward to further collaboration with our emergency response team and the DSD to craft a world-class Single-Stair Point Access building code amendment.

Sincerely,

Sophia Razzaque, AIA
AIA Austin President