5. The floor-ceiling panel of claim 2, wherein the second mounting component includes a first angle member extending, at least partially, along a length of the frame.

6. The floor-ceiling panel of claim 1, wherein the ceiling panel comprises two stacked layers of fiberglass-clad gypsum boards.

7. The floor-ceiling panel of claim 6, wherein individual boards of the two layers are staggered such that seams between boards of one of the two layers are offset from seams between boards of the other of the two layers.

8. The floor-ceiling panel of claim 1, wherein the first layer comprises metal-clad cement board.

9. The floor-ceiling panel of claim 8, wherein a metal side of the first layer is against the frame.

10. The floor-ceiling panel of claim 8, wherein the second layer comprises magnesium oxide board.

11. The floor-ceiling panel of claim 1, wherein the shaped substrate comprises an insulating core and a metal sheet bonded to the upper surface, the metal sheet following contours of the channel defined by the upper surface.

12. The floor-ceiling panel of claim 1, wherein the first layer is longer in length than the second layer, the shaped substrate, or both.

13. The floor-ceiling panel of claim 12, wherein the first layer is longer in width than the second layer and the shaped substrate.

14. The floor-ceiling panel of claim 1, wherein the floor-ceiling panel is configured to accommodate a pre-assembled wall structure along a perimeter portion of the floor-ceiling panel.

15. The floor-ceiling panel of claim 14, wherein the shaped substrate and the second layer are shorter than the first substrate to define a ledge for supporting the pre-assembled wall panel.

16. A building including at least five stories, the building comprising:

a structural frame including a horizontal beam;

a pre-assembled floor-ceiling panel disposed between two vertically adjacent stories of the building, the floor-ceiling panel comprising:

a ceiling panel provided on a ceiling side of the floor-ceiling panel and defining a ceiling of one of the two vertically adjacent stories;

a floor panel provided on a floor side of the floor-ceiling panel and defining a floor of the other one of the two vertically adjacent stories; and

a panel frame disposed between and supporting the floor and ceiling panels, the panel frame comprising a plurality of joists which span a full length of a unit of the building; and

a first mounting component joined to the panel frame and connecting the pre-assembled floor-ceiling panel to the beam.

17. The building of claim 16, further comprising a unit on one of the two vertically adjacent stories, the unit comprising a floor defined by three or fewer pre-assembled floor-ceiling panels.

18. The building of claim 17, wherein the unit further comprises two opposing walls spaced by a distance and wherein each of the three or fewer pre-assembled floor-ceiling panels spans the distance between the two opposing walls.

19. The building of claim 16, wherein the pre-assembled floor-ceiling panels comprises at least one of: a radiant heating element provided within a depth of the floor panel, or a shower pan integrated into the floor panel.

20. A method of constructing a floor system for a building, comprising:

attaching a first pre-assembled floor-ceiling panel to a structural frame of a building;

joining a second pre-assembled floor-ceiling panel to the first pre-assembled floor-ceiling panel, each of the first and second pre-assembled floor-ceiling panels comprising a plurality of joists, a ceiling panel disposed below and attached to the plurality of joists, and a floor panel disposed above and attached to the plurality of joists, the floor panel comprising a first floor layer disposed above and attached to the frame, a second floor layer over and spaced from the first floor layer, and a shaped substrate provided between the first and second floor layers, the shaped substrate comprising a channel and an in-floor radiant heat element received in the channel; and

installing a floor finish material to the first and second pre-assembled floor-ceiling panels.

21. The method of claim 20, wherein the joining a second pre-assembled floor-ceiling panel to the first pre-assembled floor-ceiling panel comprises:

placing the second pre-assembled floor-ceiling panel next to the first pre-assembled floor-ceiling panel such that an outer joist of the first pre-assembled floor-ceiling panels is adjacent and spaced from an outer joist of the second pre-assembled floor-ceiling panel; and

joining a first angle member of the first pre-assembled floor-ceiling panel to a second angle member of the second pre-assembled floor-ceiling panel to attach the second pre-assembled panel to the first pre-assembled panel.

22. The method of claim 21, further comprising providing insulation in a cavity defined between the adjacent outer joists of the first and second pre-assembled floor-ceiling panels.

23. The method of claim 21, wherein the installing a floor finish material comprises attaching the floor finish material to the first and second pre-assembled floor-ceiling panels such that the floor finish material extends over a seam between the first and second pre-assembled floor-ceiling panels.

24. The method of claim 23, further comprising installing a ceiling finish material to the first and second pre-assembled floor-ceiling panels such that the ceiling finish material extends over the seam between the first and second pre-assembled floor-ceiling panels.