[0005] In some implementations, a manufactured ceiling finish system can include at least one ceiling channel fastened to a ceiling side of a ceiling/floor panel, and at least one ceiling panel grid and light rail clip configured to engage the at least one ceiling channel. The manufactured ceiling finish system can also include at least one ceiling panel grid and light rail configured to engage the at least one ceiling panel grid and light rail clip, and at least one acoustical ceiling panel configured to engage the at least one ceiling grid rail.

[0006] In some implementations, the at least one ceiling channel can include a lengthwise planar aperture configured to slidably receive the at least one ceiling panel grid and light rail clip, and wherein the at least one ceiling panel grid and light rail clip can include a planar portion configured to be inserted into the lengthwise planar aperture of the at least one ceiling channel. In some implementations, the at least one ceiling panel grid and light rail clip can be configured to be secured in place within the lengthwise planar aperture of the at least one ceiling channel via a fastener inserted through the at least one ceiling panel grid and light rail clip and into the at least one ceiling channel.

[0007] In some implementations, the at least one ceiling panel grid and light rail clip can include a ceiling panel grid and light rail clip aperture configured to receive a ceiling panel grid and light rail protrusion of the at least one ceiling panel grid and light rail. In some implementations, the at least one ceiling panel grid and light rail includes a first acoustical ceiling tile retention section and a second acoustical ceiling tile retention section.

[0008] In some implementations, the at least one ceiling panel grid and light rail can include a ceiling track that extends from a distal end of the at least one ceiling panel grid and light rail beyond a first acoustical ceiling tile retention section and a second acoustical ceiling tile retention section. In some implementations, the at least one ceiling panel grid and light rail includes at least one electrical power conductor.

[0009] Some implementations can include a manufactured interior bathroom wall finish system including a solid surface base member attached to a bottommost metal hat channel, and a plurality of first extrusions each having a first opening configured to engage a

[0021] FIG. 2B is a diagram of a cross section of an example ceiling panel grid and light rail clip, and ceiling panel grid and light rail, in accordance with some implementations.

[0022] FIG. 3 is a diagram of a cross section of an example ceiling channel in accordance with some implementations.

[0023] FIG. 4 is a diagram of a cross section of a ceiling panel grid and light rail clip in accordance with some implementations.

[0024] FIG. 5 is a diagram of a cross section of a ceiling panel grid and light rail in accordance with some implementations.

[0025] FIG. 6 is a diagram of an example manufactured ceiling finish system in accordance with some implementations.

[0026] FIG. 7 is a diagram of an example bathroom having a bathroom interior wall finish system in accordance with some implementations.

[0027] FIG. 8 is a diagram of a cross section of a wall having the bathroom interior wall finish system in accordance with some implementations.

[0028] FIG. 9A is a cross sectional diagram of an example first embodiment of a manufactured bathroom interior wall finish system in accordance with some implementations.

[0029] FIG. 9B is a diagram of a cross section of an example extrusion/pultrusion for a first embodiment of a manufactured bathroom interior wall finish system in accordance with some implementations.

[0030] FIG. 9C is a diagram of a cross section of an example closure extrusion for a first embodiment of a manufactured bathroom interior wall finish system in accordance with some implementations.

implementations permit simple repair of damaged panels using a process that can include removing the snap closure extrusion (no tools required), replacing the panel, and then snapping the panel extrusion back in place.

[0054] Some implementations can include an accessible design that permits electrical devices, plumbing pipes, and HVAC duct work to be easily accessed behind the finished panel system. In some implementations, the snap closure angles can include drilled holes (e.g., at 12 inches on center) to permit hanging televisions, paintings, etc. Some implementations can include a vertical shelf extrusion that permits placement of shelving, cabinets, and countertops.

[0055] As designers and builders search for lower cost ways to meet the built environment needs of people, one of the potential solutions is an integrated solution. An integrated solution can include two (or more) components that are traditionally separate products and installations to be integrated into one product solution. Some implementations of the manufactured ceiling finish system described herein is an integrated solution that uses the same support to hold ceiling panels, to provide electrical power, and to support ceiling light fixtures. By integrating low voltage wiring into the ceiling support system of the manufactured ceiling finish system, multiple traditional systems can be reduced or eliminated.

[0056] By mounting ceiling channels on a normal ceiling and using the combination ceiling panel grid and light rail, some implementations can quickly provide a high-quality acoustical ceiling with flexible possibilities for adding lighting fixtures anywhere along the light rail. The ceiling panel grid and light rail can be held in place by a ceiling panel grid and light rail clip. This clip can permit the installer to move the rail to the desired location quickly and secure the rail in place.

[0057] In some implementations, acoustical ceiling panels can be located between the rails by rotating the ceiling grid track to accommodate each next acoustical ceiling panel. The procedures for completing a ceiling mounting, including light fixtures, can take just a few minutes.

[0058] In some implementations, ceiling channels can be mounted to a traditional ceiling or mounted to a prefabricated floor/ceiling panel at the factory. In some implementations, field installed ceiling panel grid and/or light rails are cut to length at a factory and contain low voltage conductors that permit light fixtures to be clipped onto the light rails anywhere along the length of the light rails.

[0059] In some implementations, acoustical ceiling panels can be easily removed in minutes and replaced if damaged. In some implementations, installation of the ceiling panel grid and light rail using the ceiling panel grid and light rail clips can be done quickly and at low cost compared with conventional ceiling finish and lighting systems.

[0060] Some implementations can include a flexible configuration layout that permits the ceiling system to be used in many different configurations and sizes. Living rooms, bedrooms, kitchens, and bathrooms can be finished using implementations of the system described herein.

[0061] Some implementations provide for flexible light fixture locations. Some implementations can accommodate various types of acoustical panels. Some implementations permit quick and easy access to ceiling wiring and utilities.

[0062] Manufactured Ceiling Finish System

[0063] Turning now to the drawings, FIGS. 1-6 show diagrams of one or more example implementations of a manufactured ceiling finish system in accordance with some implementations.

[0064] FIG. 1 is a top view of an example manufactured ceiling finish system in accordance with some implementations. The manufactured ceiling finish system includes a plurality of ceiling channels 102 fastened to a ceiling side of a ceiling/floor panel (as shown in FIGS. 2A and 2B). The manufactured ceiling finish system also includes a plurality of ceiling panel grid and light rails 104 connected to the plurality of ceiling channels 102. A plurality of acoustical ceiling panels 106 are supported by the plurality of ceiling panel grid and light rails 104.

[0065] The top view of FIG. 1 also shows other components of an apartment or building unit such as a door panel track 108, a floor panel edge 110 and 112, a window wall track 114, and a roller shade 116.

[0066] FIG. 2A shows a cross section of a ceiling channel 102 along the axis shown in FIG. 1 at 2A. FIG. 2B shows a cross section of a ceiling panel grid and light rail 104 along the axis 2B shown in FIG. 1.

[0067] As shown in FIG. 2B, the manufactured ceiling finish system also includes at least one ceiling panel grid and light rail clip 202 configured to engage the at least one ceiling channel 102. For example, the at least one ceiling channel 102 can include a lengthwise planar aperture 310 (shown in FIG. 3) configured to slidably receive the at least one ceiling panel grid and light rail clip 202, and wherein the at least one ceiling panel grid and light rail clip 202 includes a planar portion 402 (shown in FIG. 4) configured to be inserted into the lengthwise planar aperture 310 of the at least one ceiling channel 102. FIG. 2B also shows a ceiling panel grid and light rail 104 configured to engage the ceiling panel grid and light rail clip 202. An acoustical ceiling panel 106 is configured to engage and be secured in place and supported by the at least one ceiling panel grid and light rail 104.

[0068] FIG. 3 is a diagram of a cross section of an example ceiling channel 102 in accordance with some implementations. The ceiling channel 102 includes a lengthwise planar

aperture 310 configured to slidably receive a ceiling panel grid and light rail clip 202. FIG. 3 also shows flanges 302 and 304 that extend from the ceiling channel 102 and permit the ceiling channel to be attached to the ceiling using one or more fasteners (e.g., screws). The lengthwise planar aperture 310 is formed by first and second aperture sides 306 and 308, which define the width and height of the lengthwise planar aperture 310. The length of the lengthwise planar aperture is defined by the length of the ceiling channel 102.

[0069] FIG. 4 is a diagram of a cross section of a ceiling panel grid and light rail clip 202 in accordance with some implementations. The ceiling panel grid and light rail clip 202 includes a planar portion 402 and 404 configured to be inserted into, and engage, the lengthwise planar aperture 310 (e.g., engage the first and second aperture sides 306 and 308) of the ceiling channel 102. The ceiling panel grid and light rail clip 202 includes a ceiling panel grid and light rail clip aperture 406 configured to receive a ceiling panel grid and light rail clip protrusion 502 (shown in FIG, 5) of the one ceiling panel grid and light rail 104. The ceiling panel grid and light rail clip 202 can be secured in place within the lengthwise planar aperture 310 of the ceiling channel 102 via a fastener 204 (shown in FIG. 2) inserted through the at least one ceiling panel grid and light rail clip 202 and into the at least one ceiling channel 102.

[0070] FIG. 5 is a diagram of a cross section of an example ceiling panel grid and light rail 104 in accordance with some implementations. The ceiling panel grid and light rail 104 includes a first acoustical ceiling tile retention section formed by 504, 508, and 512; and a second acoustical ceiling tile retention section formed by 506 510, and 514. The first acoustical ceiling tile retention section and the second acoustical ceiling tile retention section are formed to receive, retain and support a respective acoustical ceiling tile.

[0071] The ceiling panel grid and light rail 104 includes a ceiling track 516 extending from a distal end of the ceiling panel grid and light rail 104 beyond a first acoustical ceiling tile

retention section and a second acoustical ceiling tile retention section. The ceiling panel grid and light rail 104 can include at least one electrical power conductor. For example, one or more power conductors can be provided on one or both sides of ceiling track 516 to permit a light fixture to receive power from the ceiling panel grid and light rail 104. The electrical power can be supplied to the conductors on the ceiling panel grid and light rails 104 to permit a light fixture to be placed anywhere along the ceiling grid rail and receive power from the electrical power conductors. Because electrical power conductors may be exposed or partially exposed on the ceiling panel grid and light rails 104, a low voltage electrical system may be used for safety.

[0072] FIG. 6 is a diagram of an example manufactured ceiling finish system in accordance with some implementations. Specifically, FIG. 6 shows an example arrangement of the ceiling channels 102, ceiling panel grid and light rails 104, acoustical ceiling panels 106, and ceiling panel grid and light rail clips 202.

[0073] Manufactured Bathroom Wall Finish System

[0074] FIGS. 7-12 show diagrams of an example implementation of a manufactured bathroom wall finish system in accordance with some implementations.

[0075] FIG. 7 is a diagram of an example bathroom 700 having a bathroom interior wall finish system in accordance with some implementations. The bathroom 700 includes a solid surface top member 702 (e.g., an aluminum composite material or other suitable material), lights 704, a fan 706, a shower head 708, a shower control 710, a plurality of second extrusion members 712, and a plurality of solid surface wall panels 714 (e.g., quartzite panels).

[0076] FIG. 8 is a diagram of a cross section of a wall having the bathroom interior wall finish system in accordance with some implementations. FIG. 8 shows an acoustical ceiling

panel 802 (e.g., similar to acoustical ceiling panel 106 or a different type of ceiling panel for a shower or bathroom environment), a solid surface top panel 702, a plurality of metal hat channels 804, a plurality of solid surface wall panels 714, a demising wall system 810, a

CLAIMS

What is claimed is:

1. A manufactured ceiling finish system, comprising:

at least one ceiling channel fastened to a ceiling side of a ceiling/floor panel;

at least one ceiling panel grid and light rail clip configured to engage the at least one ceiling channel;

at least one ceiling panel grid and light rail configured to engage the at least one ceiling panel grid and light rail clip, wherein the at least one ceiling panel grid and light rail clip includes a round ceiling panel grid and light rail clip aperture configured to receive a round ceiling panel grid and light rail protrusion of the at least one ceiling panel grid and light rail;

a first acoustical ceiling panel configured to engage the at least one ceiling panel grid and light rail at a first side of the at least one ceiling panel grid and light rail; and

a second acoustical ceiling panel configured to engage the at least one ceiling panel grid and light rail at a second side of the at least one ceiling panel grid and light rail,

wherein the round ceiling panel grid and light rail protrusion, received in the round ceiling panel grid and light rail clip aperture, enables rotation of the at least one ceiling panel grid and light rail for engagement of the second acoustical ceiling panel at the second side of the at least one ceiling panel grid and light rail, after engagement of the first acoustical ceiling panel at the first side of the at least one ceiling panel grid and light rail, and

wherein the at least one ceiling panel grid and light rail includes a ceiling track having a section that extends from a distal end of the at least one ceiling panel grid and light rail beyond a first acoustical ceiling tile retention section and a second acoustical ceiling tile retention section.

2. The manufactured ceiling finish system of claim 1, wherein the at least one ceiling channel includes a lengthwise planar aperture configured to slidably receive the at least one ceiling panel grid and light rail clip, and wherein the at least one ceiling panel grid and light rail clip includes a planar portion configured to be inserted into the lengthwise planar aperture of the at least one ceiling channel.

3. The manufactured ceiling finish system of claim 2, wherein the at least one ceiling panel grid and light rail clip is configured to be secured in place within the lengthwise planar aperture of the at least one ceiling channel via a fastener inserted through the at least one ceiling panel grid and light rail clip and into the at least one ceiling channel.

4. The manufactured ceiling finish system of claim 1, wherein portions of the at least one ceiling panel grid and light rail clip on respective sides of the round ceiling panel grid and light rail clip aperture are sloped to enable the rotation of the round ceiling panel grid and light rail protrusion of the at least one ceiling panel grid and light rail within the round ceiling panel grid and light rail clip aperture.

5. The manufactured ceiling finish system of claim 1, wherein the section of the ceiling track of the at least one ceiling panel grid and light rail, which extends beyond the first and second acoustical ceiling tile retention features, enables at least one electrical power conductor to be attached to at least one side of the section.

6. A manufactured interior finish system, comprising:

the manufactured ceiling finish system of claim 1; and

a manufactured interior bathroom wall finish system, comprising:

a solid surface base member attached to a bottommost metal hat channel;

a plurality of first extrusions each having a first opening configured to engage a corresponding metal hat channel and a second opening configured to receive a second extrusion;

a plurality of second extrusions each configured to be inserted into a respective second opening of a corresponding one of the plurality of first extrusions and configured to be fastened to the respective one of the plurality of the first extrusions via a fastener;

a plurality of solid surface wall panels each having a bottom edge configured to be inserted into a first aperture of a lower one of the plurality of second extrusions and having a top edge configured to be inserted into a second aperture of an upper one of the plurality of second extrusions, wherein the plurality of solid surface wall panels are assembled in a bottom to top order such that the upper one of the plurality of second extrusions secures a lower adjacent solid surface panel as the manufactured interior bathroom wall finish system is installed; and

a solid surface top member attached to a topmost metal hat channel.

7. The manufactured interior finish system of claim 6, wherein the solid surface base member and the solid surface top member are formed from an aluminum composite material.

8. The manufactured interior finish system of claim 6, wherein the solid surface wall panels are

formed from quartzite.

9. The manufactured interior finish system of claim 6, wherein each of the plurality of first extrusions include a plurality of continuous seals attached to a respective one of the plurality of first extrusions, and wherein the plurality of continuous seals are arranged so as to form a seal when solid surface wall panels are installed adjacent to the respective one of the plurality of first extrusions.

10. The manufactured interior finish system of claim 9, wherein the plurality of continuous seals include a first seal disposed adjacent to a top edge of a respective one of the plurality of first extrusions, a second seal disposed adjacent a midpoint of the respective one of the plurality of first extrusions, and a third seal disposed adjacent a bottom edge of the respective one of the plurality of first extrusions, and

wherein when the manufactured interior bathroom wall finish system is installed, the first seal is arranged to contact an upper solid surface panel and the second and third seals are arranged to contact a lower solid surface panel relative to the respective one of the plurality of first extrusions.

11. A manufactured interior finish system, comprising:

the manufactured ceiling finish system of claim 1; and

a manufactured interior bathroom wall finish system, comprising:

a solid surface base member attached to a bottommost metal hat channel;

a plurality of first extrusions each having a first opening configured to engage a

corresponding metal hat channel and a second opening configured to receive a second extrusion;

a plurality of second extrusions each configured to be inserted into a respective second opening of a corresponding one of the plurality of first extrusions and configured to be fastened to the respective one of the plurality of the first extrusions via a fastener, wherein each second extrusion has a downward facing aperture;

a plurality of third extrusions each configured to engage a respective first extrusion and a respective second extrusion, wherein each third extrusion has an upward facing aperture;

a plurality of solid surface wall panels each having a bottom edge configured to be inserted into an upward facing aperture of a lower one of the plurality of third extrusions and having a top edge configured to be inserted into a downward facing aperture of an upper one of the plurality of second extrusions, wherein the plurality of solid surface wall panels are assembled in a bottom to top order such that the upper one of the plurality of second extrusions secures a lower adjacent solid surface panel as the manufactured interior bathroom wall finish system is installed; and

a solid surface top member attached to a topmost metal hat channel.

12. The manufactured interior finish system of claim 11, wherein the solid surface base member and the solid surface top member are formed from an aluminum composite material.

13. The manufactured interior finish system of claim 11, wherein the solid surface wall panels are formed from quartzite.

14. The interior finish system of claim 11, wherein each of the plurality of first extrusions include a plurality of continuous seals attached to a respective one of the plurality of first extrusions, and wherein the plurality of continuous seals are arranged so as to form a seal when solid surface wall panels are installed adjacent to the respective one of the plurality of first extrusions.

15. The manufactured interior finish system of claim 14, wherein the plurality of continuous seals include a first seal disposed adjacent to a top edge of a respective one of the plurality of first extrusions, and a second seal disposed adjacent a bottom edge of the respective one of the plurality of first extrusions, and

wherein when the manufactured interior bathroom wall finish system is installed, the first seal is arranged to contact an upper solid surface panel and the second seal is arranged to contact a lower solid surface panel relative to the respective one of the plurality of first extrusions.

16. A manufactured interior finish system, comprising:

the manufactured ceiling finish system of claim 1; and

a manufactured interior wall finish system, comprising:

a solid surface base member attached to a bottommost metal hat channel;

a plurality of first longitudinal members each having a first opening configured to engage a corresponding metal hat channel, and having a second opening configured to receive a second extrusion;

a plurality of second longitudinal members each configured to be inserted into a

respective second opening of a corresponding one of the plurality of first longitudinal members;

a plurality of wall panels each having a bottom edge configured to be inserted into an upward facing aperture formed by an upper horizontal surface of a portion of an adjacent lower first longitudinal member and an upper vertical portion of an adjacent lower second longitudinal member, and having a top edge configured to be inserted into a downward facing aperture formed by a lower horizontal surface of a portion of an adjacent upper first longitudinal member and a lower vertical portion of an adjacent upper second longitudinal member; and

a solid surface top member attached to a topmost metal hat channel.

17. The manufactured interior finish system of claim 16, wherein the plurality of first longitudinal members have a plurality of third openings formed therein, wherein the third openings are each configured to receive a vertical member and are spaced along the plurality of first longitudinal members at a given interval, and wherein the second longitudinal members are formed to have a length that permits the second longitudinal members to fit within the given interval between adjacent third openings.

18. The manufactured interior finish system of claim 16, wherein the plurality of first longitudinal members include an extrusion.

19. The manufactured interior finish system of claim 16, wherein the plurality of first longitudinal members include a pultrusion.

20. The manufactured interior finish system of claim 16, wherein the plurality of second longitudinal members include an extrusion.

21. The manufactured interior finish system of claim 16, wherein the plurality of second longitudinal members include a pultrusion.

22. The manufactured interior finish system of claim 16, wherein the solid surface base member and the solid surface top member are formed from an aluminum composite material.

23. The manufactured interior finish system of claim 16, wherein the wall panels are formed from a wood composite material.