What Is Claimed Is:

1. A ceiling-only storage occupancy fire protection system comprising:

a grid of pendent fire protection sprinklers defining a sprinkler-to-sprinkler spacing ranging from eight feet to twelve feet (8 ft.-12 ft.), each sprinkler including:

a sprinkler body having an inlet and an outlet with a passageway disposed therebetween along a sprinkler axis and a nominal K-factor of 14 [GPM/(psi)^{½}] to 36.4 [GPM/(psi)^{½}];

a closure assembly including a plug;

a thermally responsive trigger assembly to support the closure assembly adjacent the outlet of the sprinkler body and seal the outlet in an unactuated state of the sprinkler, the trigger assembly having a temperature rating in a range from 155° F to 210° F; and

a deflector coupled to the body and spaced from the outlet; and

a network of pipes including at least one main pipe and a plurality of spaced apart branch lines interconnecting and locating the grid of pendent sprinklers beneath a ceiling having a ceiling height of up to a maximum fifty-five feet (55 ft.), the network of pipes locating the grid of sprinklers relative to a source of firefighting fluid to define a hydraulic design area of the system with a total number of design sprinklers ranging from five to no more than twelve (5-12) design sprinklers, the network of pipes being filled with the firefighting fluid to provide the design sprinklers with a prescribed hydraulic minimum design pressure in an unactuated state of the system for storage protection of high-piled storage including at least one commodity including of any one of Class 1, Class 2, Class 3, Class 4 and/or cartoned unexpanded plastic commodities and combinations thereof, stored beneath the ceiling, the at least one commodity having a maximum storage height of up to

fifty feet (50 ft.), the storage having a configuration of rack storage, the rack storage being any one of single-row, double-row, and multi-row rack storage,

wherein the prescribed hydraulic minimum design pressure includes a hybrid minimum design pressure, ~~,~~ and

~~2. The system of claim 1~~, wherein the hybrid minimum design pressure includes a first hydraulic minimum design pressure and a second hydraulic minimum design pressure being different than the first hydraulic minimum design pressure; and wherein the total number of design sprinklers define a first set of design sprinklers prescribed with the first hydraulic minimum design pressure and a second set of design sprinklers prescribed with the second hydraulic minimum design pressure.

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~~3.~~2. The system of claim ~~2~~1, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-50%.

~~4.~~3. The system of claim ~~3~~2, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 15%-20%.

~~5.~~4. The system of claim ~~3~~2, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-15%.

~~6.~~5. The system of claim ~~2~~1, wherein the first set of design sprinklers has no more than five design sprinklers and the first hydraulic minimum design pressure is eighty pounds per square inch (80 psi.); and wherein the second set of design sprinklers has no more than five

design sprinklers and the second hydraulic minimum design pressure is forty pounds per square inch (40 psi.).

~~7. The system of claim 1, wherein the total number of design sprinklers defining the design area is ten to no more than twelve (10-12).~~

~~8. The system of claim 7, wherein the design sprinklers are disposed on a first branch line, a second branch line, a third branch line, and a fourth branch line, the first, second, third, and fourth branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~9. The system of claim 8, wherein the total number of design sprinklers is twelve (12); and wherein three sprinklers are disposed on the first branch line comprises three sprinklers, three sprinklers are disposed on the second branch line, three sprinklers are disposed on the third branch line, and three sprinklers are disposed on the fourth branch line.~~

~~10. The system of claim 1, wherein the total number of design sprinklers defining the hydraulic design area is five to no more than nine (5-9) design sprinklers~~

~~11. The system of claim 10, wherein the total number of design sprinklers defining the hydraulic design area is nine (9).~~

~~12. The system of claim 11, wherein the design sprinklers comprise three sprinklers on a first branch line, three sprinklers on a second branch line, and three sprinklers on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~13. The system of claim 10, wherein the design sprinklers defining the hydraulic design area comprise sprinklers disposed on a first branch line, sprinklers disposed on a second~~

~~branch line, and sprinklers disposed on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~14. The system of claim 10, wherein the design sprinklers defining the hydraulic design area include sprinklers disposed on a fourth branch line.~~

~~15. The system of claim 10, wherein the design sprinklers defining the hydraulic design area consists of sprinklers on a first branch line and a second branch line, the first and second branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~16. The system of claim 1, wherein the sprinkler body has a nominal K-factor of any one of 22.4; 25.2; 28.0; 30.8; 33.6 or 36.4 [GPM/(psi)$^{1/2}$].~~

~~17. The system of claim 1, wherein the sprinkler-to-sprinkler spacing ranging from eight feet to twelve feet (8 ft. 12 ft.) comprises sprinkler-to-sprinkler spacing of eight feet (8 ft.).~~

~~18. The system of claim 1, wherein the deflector of each sprinkler in the grid of pendent sprinklers is located up to fourteen inches (14 in.) below the ceiling.~~

~~19. The system of claim 18, wherein the deflector of each sprinkler in the grid of pendent sprinklers is located up to eighteen inches (18 in.) below the ceiling.~~

~~20. The system of claim 1, wherein the rack storage has an aisle width of no more than eight feet (8 ft.)~~

~~21. The system of claim 20, wherein the aisle width ranges from 4-8 ft.~~

~~22. The system of claim 21, wherein the aisle width is 6 ft.~~

~~23. The system of claim 21, wherein the aisle width is 4 ft.~~

~~24. The system of claim 1, where the thermally responsive trigger assembly is configured as a frangible glass bulb.~~

~~25. The system of claim 1, wherein the thermally responsive trigger assembly of each sprinkler includes a strut lever arrangement with a fusible link.~~

~~26. The system of claim 1, wherein the t thermally responsive trigger assembly of each sprinkler has an RTI ranging from 19 to 36 $(m*s)^{1/2}$ [35-65 $(ft.*s)^{1/2}$].~~

~~27.~~6. A method of supplying a ceiling-only storage occupancy fire protection system, the method comprising:

obtaining a plurality of storage sprinklers; and

providing the plurality of sprinklers for ceiling-only installation relative to a source of firefighting fluid to define a hydraulic design area defined by a total number of design sprinklers with a prescribed hydraulic minimum design pressure in an unactuated state of the system, the prescribed hydraulic minimum design pressure including a hybrid minimum design pressure~~.~~

~~28. The method of claim 27~~, wherein the providing the plurality of sprinklers includes prescribing the hybrid minimum design pressure including a first hydraulic minimum design pressure and a second hydraulic minimum design pressure that is different than the first hydraulic minimum design pressure; and providing the plurality of sprinklers includes prescribing the total number of design sprinklers defining a first set of design sprinklers prescribed with the first hydraulic minimum design pressure and a second set of design sprinklers prescribed with the second hydraulic minimum design pressure.

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~~29.~~7. The method of claim ~~28~~6, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-50%.

~~30.~~8. The method of claim ~~29~~7, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 15%-20%.

~~31.~~9. The method of claim ~~29~~7, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-15%.

~~32.~~10. The method of claim ~~28~~6, wherein the first set of design sprinklers has no more than five design sprinklers and the first hydraulic minimum design pressure is eighty pounds per square inch (80 psi.); and wherein the second set of design sprinklers has no more than five design sprinklers and the second hydraulic minimum design pressure is forty pounds per square inch (40 psi.).

~~33. The method of claim 27, wherein the total number of design sprinklers defining the hydraulic design area is ten to no more than twelve (10-12).~~

~~34. The method of claim 33, wherein the design sprinklers are disposed on a first branch line, a second branch line, a third branch line, and a fourth branch line, the first, second, third, and fourth branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~35. The method of claim 34, wherein the total number of design sprinklers is twelve (12); and wherein three sprinklers are disposed on the first branch line comprises three sprinklers,~~

three sprinklers are disposed on the second branch line, three sprinklers are disposed on the third branch line, and three sprinklers are disposed on the fourth branch line.

36. The method of claim 27, wherein the total number of design sprinklers defining the hydraulic design area is five to no more than nine (5-9) design sprinklers

37. The method of claim 36, wherein the total number of design sprinklers defining the hydraulic design area is nine (9).

38. The method of claim 37, wherein the design sprinklers comprise three sprinklers on a first branch line, three sprinklers on a second branch line, and three sprinklers on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.

39. The method of claim 36, wherein the design sprinklers defining the hydraulic design area comprise sprinklers disposed on a first branch line, sprinklers disposed on a second branch line, and sprinklers disposed on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.

40. The method of claim 39, wherein the design sprinklers defining the hydraulic design area include sprinklers disposed on a fourth branch line.

41. The system of claims 36, wherein the design sprinklers defining the hydraulic design area consists of sprinklers on a first branch line and a second branch line, the first and second branch lines being separate branch lines of the plurality of spaced apart branch lines.

42. The method of claim 27, wherein obtaining the plurality of sprinklers includes obtaining sprinklers with a sprinkler body has a nominal K-factor of any one of 22.4; 25.2; 28.0; 30.8; 33.6 or 36.4 [GPM/(psi)$^{1/2}$].

~~43. The method of claim 27, wherein obtaining the plurality of sprinklers includes obtaining sprinklers having a thermally responsive trigger assembly configured as a frangible glass bulb.~~

~~44. The method of claim 27, wherein obtaining the plurality of sprinklers includes obtaining sprinklers having a thermally responsive trigger assembly includes a strut lever arrangement with a fusible link.~~

~~45. The system of claim 44, wherein the fusible link of each sprinkler has an RTI ranging from 19 to 36 $(m*s)^{1/2}$ [35-65 $(ft.*s)^{1/2}$].~~

~~46.~~11. The method of claim ~~27~~6, wherein providing the plurality of sprinklers to define the design area with a demand in gallons per minute (GPM) of less than 1700 GPM including a first total flow defined by a first set of design sprinklers and a second total minimum flow defined by a second set of design sprinklers inclusive of the first set of design sprinklers.~~.~~

~~47.~~12. A method of providing ceiling-only storage occupancy fire protection, the method comprising:

installing a grid of pendent sprinklers in a network of pipes, the sprinklers defining a sprinkler-to-sprinkler spacing ranging from eight feet to twelve feet (8 ft.-12 ft.) within two feet of a ceiling having a ceiling height of up to a maximum fifty-five feet (55 ft.), each sprinkler including: a sprinkler body having an orifice with an inlet and an outlet with a passageway disposed therebetween along a sprinkler axis, the orifice defining a nominal K-factor of in a range of 14.0 [GPM/$(psi)^{1/2}$] to 36.4 [GPM/$(psi)^{1/2}$], a closure assembly including a plug; a thermally rated trigger assembly to support the closure assembly adjacent the outlet of the sprinkler body, to support the closure assembly adjacent the outlet of the sprinkler body and seal the outlet in an unactuated state of the sprinkler, the trigger assembly having a

temperature rating in a range from 155° F to 210° F; and, a deflector coupled to the body and spaced from the outlet; and

connecting the network of pipes to a source of firefighting fluid in which a total number of most hydraulically remote sprinklers in the grid of sprinklers define a group of design sprinklers and a hydraulic design area of the system, the total number of design sprinklers ranging from five to no more than twelve (5-12) design sprinklers, the design sprinklers having a prescribed hydraulic minimum design pressure in an unactuated state of the system, the network of pipes configured to supply firefighting fluid for suppression protection of high-piled storage including at least one commodity including of any one of Class 1, Class 2, Class 3, Class 4 and/or cartoned unexpanded plastic commodities and combinations thereof, the commodity having a maximum storage height of up to fifty feet (50 ft.), the storage having a configuration of at least rack storage, the rack storage being any one of single-row, double-row, and multi-row rack storage, wherein the prescribed hydraulic minimum design pressure includes a hybrid minimum design pressure.

~~48. The method of claim 47~~, wherein the connecting defines a hydraulic demand that includes a first total minimum flow defined by a first set of design sprinklers and a second total minimum flow defined by a second set of design sprinklers inclusive of the first set of design sprinklers.

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~~49.~~13. The method of claim ~~48~~12, wherein the installing is beneath the ceiling, the connecting defines a second total minimum flow being approximately 1600 gallons per minute (GPM).

~~50. The method of claim 47, wherein the installing is beneath the ceiling includes one of: the ceiling height being fifty-five feet (55 ft.) for protection of the rack storage having a~~

~~storage height of fifty feet (50 ft.); or the ceiling height being fifty feet (50 ft.) for protection of the rack storage having a storage height of forty-five feet (45 ft.).~~

~~51.~~14. The method of claim ~~47~~12, wherein the connecting the network of pipes to the source of firefighting fluid includes prescribing the hybrid minimum design pressure including a first hydraulic minimum design pressure and a second hydraulic minimum design pressure that is different than the first hydraulic minimum design pressure with the total number of design sprinklers defining a first set of design sprinklers prescribed with the first hydraulic minimum design pressure and a second set of design sprinklers prescribed with the second hydraulic minimum design pressure.

~~52.~~15. The method of claim ~~51~~14, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-50%.

~~53.~~16. The method of claim ~~51~~14, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 15%-20%.

~~54.~~17. The method of claim ~~51~~14, wherein the first hydraulic minimum design pressure and the second hydraulic minimum design pressure define a differential therebetween that ranges from 10%-15%.

~~55.~~18. The method of claim ~~51~~14, wherein the first set of design sprinklers has no more than five design sprinklers and the first hydraulic minimum design pressure is eighty pounds per square inch (80 psi.); and wherein the second set of design sprinklers has no more than five design sprinklers and the second hydraulic minimum design pressure is forty pounds per square inch (40 psi.).

~~56. The method of claim 47, wherein the total number of design sprinklers defining the hydraulic design area is ten to no more than twelve (10-12).~~

~~57. The method of claim 56, wherein the design sprinklers are disposed on a first branch line, a second branch line, a third branch line, and a fourth branch line, the first, second, third, and fourth branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~58. The method of claim 57, wherein the total number of design sprinklers is twelve (12); and wherein three sprinklers are disposed on the first branch line, three sprinklers are disposed on the second branch line, three sprinklers are disposed on the third branch line, and three sprinklers on the fourth branch line.~~

~~59. The method of claim 47, wherein the total number of design sprinklers defining the hydraulic design area is five to no more than nine (5-9) design sprinklers~~

~~60. The method of claim 59, wherein the total number of design sprinklers defining the hydraulic design area is nine (9).~~

~~61. The method of claim 60, wherein the design sprinklers comprise three sprinklers on a first branch line, three sprinklers on a second branch line, and three sprinklers on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

~~62. The method of claim 59, wherein the design sprinklers defining the hydraulic design area comprise sprinklers disposed on a first branch line, sprinklers disposed on a second branch line, and sprinklers disposed on a third branch line, the first, second, and third branch lines being separate branch lines of the plurality of spaced apart branch lines.~~

63. The method of claim 62, wherein the design sprinklers defining the hydraulic design area include sprinklers disposed on a fourth branch line.

64. The system of claim 47, wherein the design sprinklers defining the hydraulic design area consists of sprinklers on a first branch line and a second branch line, the first and second branch lines being separate branch lines of the plurality of spaced apart branch lines.

65. The method of claim 47, wherein obtaining the plurality of sprinklers includes obtaining sprinklers with a sprinkler body has a nominal K-factor of any one of 22.4; 25.2; 28.0; 30.8 33.6 or 36.4 [GPM/(psi)$^{1/2}$].

66. The method of claim 47, wherein obtaining the plurality of sprinklers includes obtaining sprinklers having a thermally responsive trigger assembly configured as a frangible glass bulb.

67. The method of claim 47, wherein obtaining the plurality of sprinklers includes obtaining sprinklers having a thermally responsive trigger assembly that includes a strut lever arrangement with a fusible link.

68. The method of claim 47, wherein obtaining the plurality of sprinklers includes obtaining sprinklers having a thermally responsive trigger assembly with an RTI ranging from 19 to 36 (m*s)$^{1/2}$ [35-65 (ft.*s)$^{1/2}$].

69. The method of claim 47, wherein providing the plurality of sprinklers define the design area with a demand in gallons per minute (GPM) of less than 1700 GPM.