

9. FIRE PROTECTION DESIGN

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FIRE PROTECTION SUMMARY

The Emergency Service Provider has adopted Appendix B, C, and D of the 2018 International Fire Code (IFC). Appendix B Table B105.1(2) of the 2018 IFC governs the fire flow requirements for buildings. Table B105.2 of the appendix allows for a reduction of fire-flow equivalent to 25% of the value in Table B105.1(2) if the building is supplied with an automatic sprinkler system in accordance with Section 903.3.1.1 of the IFC. Table B105.2 clarifies that the reduced fire flow shall not be less than 1,500 gallons per minute. Below are the calculation fire flow (gpm) and duration (hrs) requirements base on type of construction, assuming each building is supplied with an automatic sprinkler system in accordance with IFC Section 903.3.1.1. The final design building heights and areas need to be determined for each parcel to confirm which types of construction are permitted.

	PARCEL B		PARCEL C		PARCEL D		PARCEL E	
Calculation Area	558,452 SF		315,410 SF		129,855 SF		335,187 SF	
	Fire Flow (gpm)	Duration (hrs)						
Type IB	1,500	2	1,500	2	1,500	2	1,500	2
Type IIIA above IA	1,500	2	1,500	2	1,500	2	1,500	2
Type VA above IA	1,875	2	1,500	2	1,500	2	1,500	2

AERIAL FIRE APPARATUS ACCESS ROADS

Appendix D of the IFC governs Fire Apparatus Access Roads. Due to various site constraints and existing conditions, some of the parcels will not be able to meet the requirements of aerial fire apparatus access roads. Additionally, some areas of the building exceed the 150’ travel distance from fire department access to the exterior walls on the first story. To mitigate these issues, the following additional fire protection features will be added to buildings on parcels C, D, and E:

Exterior standpipe outlets will be provided along the perimeter of the building where compliant fire department access is not provided. These will be nominally spaced on approximate 200-ft centers. Specific locations and means of freeze protection will be developed as the design of the buildings proceed.

The minimum sprinkler system design densities will be increased one hazard classification. For example, if Ordinary Hazard Group 1 design densities are required, they will be increased to Ordinary Hazard Group 2

FIRE RESPONSE PLAN

The following information was received from Park City Fire District upon inquiry:

Which fire station(s) would respond to this site?

- Station 31 on Holiday Ranch Loop Road and Station 38 on Deer Valley Drive North would be the main responding stations with backup coming from Station 34 on Royal Street and Station 36 on Canyons Resort Drive

Which routes would be taken?

- Station 38 would take Deer Valley Drive to Empire Avenue
- Station 31 would take Hwy 224/Park Avenue to Empire Avenue

Would response vary depending upon the time of day and/or season?

- Yes. Traffic and weather both effect response times.