



# San Diego Fire-Rescue Department Training & Education Division **TRAINING DRILL**

**Training and Education Division**

**Date: June 2022**

**Subject: Basement/Hillside Structure Fires**

## **Background:**

The hilly topography and the need to maximize the square footage of residential structures within San Diego County have led to an abundance of hillside residential structures throughout nearly every neighborhood. The San Diego Fire-Rescue Department has responded to several fire incidents in these types of structures that have resulted in close calls for our members. These low frequency/high hazard responses pose extreme challenges for firefighters.

Nationwide, firefighters have died or been injured while trying to extinguish a basement fire or a fire on a level lower than their entry point of the structure. Between 1998 and 2017, [NIOSH](#) documented 24 below-grade fires that resulted in 32 firefighter LODDs and 19 firefighter LODIs. Typically, these cases involved firefighters falling through a wood floor assembly into a burning basement or a high-velocity hot gas event which resulted in superheated gases flowing out of a basement which burned or trapped firefighters.

## **Discussion Points:**

To effectively perform a risk analysis and safely engage fires within a hillside structure, please review the below discussion points as a crew:

- Building Size Up**      Type of hillside home (Ascending, Descending, or Cantilever)
- Describe different tactical considerations for each type of hillside home.
- 360 Survey**            Total number of floors above/below grade
- Discuss the challenges this will present as an incident commander.
- Fire Location**        Floor with the lowest elevation of involvement
- Why is fire location critical in your development of tactics and strategy?
- Flow Path**            Current and anticipated flow path during fire attack operations ([SFFD LODD](#))
- Review [SLICERS](#) and how it applies to hillside structures.
- Risk Assessment**    How to implement risk assessment on fire attack [Tactics/Strategies](#)
- Describe your [risk management](#) process and how you would implement it on a hillside structure.

## **Action Items/Drills:**

1. [Review Hillside Structure Terminology \(FIRESCOPE ICS 501 – Hillside Structures\)](#)
2. Discuss challenges of firefighting operations related to hillside structures
3. Discuss flow path and unique hazards of hillside structures
4. Review [Water Application for Basement and Hillside Structure Fires](#) Training Video
5. Review ventilation considerations at hillside structures
6. Review responsibilities of the incident commanders at hillside structure incidents
7. Review Fire Safety Research Institute online training: [Understanding and Fighting Basement Fires](#)