

Building Fires

Structural Damage Assessment



Presented by



Rick Abbott, PE, SE



Abbott Consulting Forensics
and Design LLC



Presenter Bio: Rick Abbott

- Born in Minnesota in 1966 (Snow, Ice, Lakes)
- BS Civil Engineering – University of MN 1989
- Masters of Engineering (Civil) – Cornell 1990
- Professional Engineer (PE) in 1993
- Structural Engineer (SE) in 2003
 - 1 construction material testing
 - 19 years structural design
 - Licensed PE in 7 states
 - Licensed SE California
- Forensic Engineering in 2011
 - 10 years of inspecting distressed buildings
 - Report writing
 - A lot of time with eye on crazy stuff.

What is PE vs SE

<https://abbottforensic.com/what-is-a-structural-engineer/>

Frequent Asked Questions

<https://abbottforensic.com/faq/>

White Papers

<https://abbottforensic.com/white-papers/>

Forensic Engineer

<https://abbottforensic.com/what-is-a-forensic-structural-engineer/>

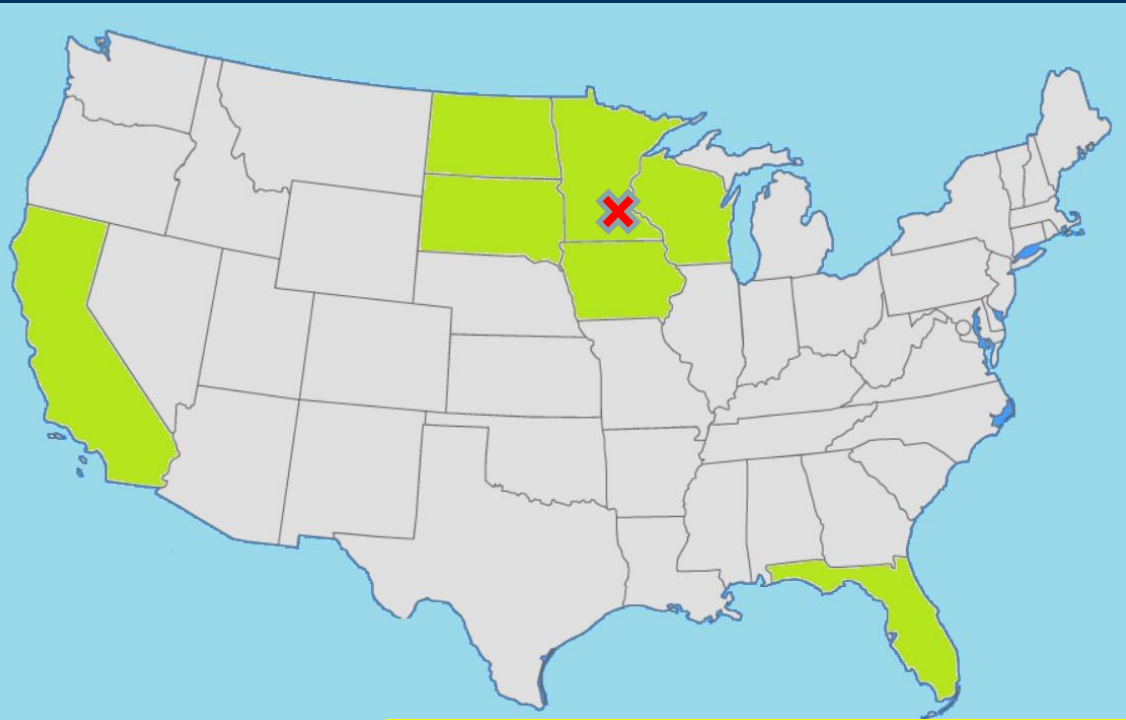
Seminars

<https://abbottforensic.com/seminars/>



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The home office is in Minneapolis / St. Paul Area



Scope of Work:

What went wrong?

What is the Extent of Damage?

Offer Repair Recommendations



Structural Fire : Agenda

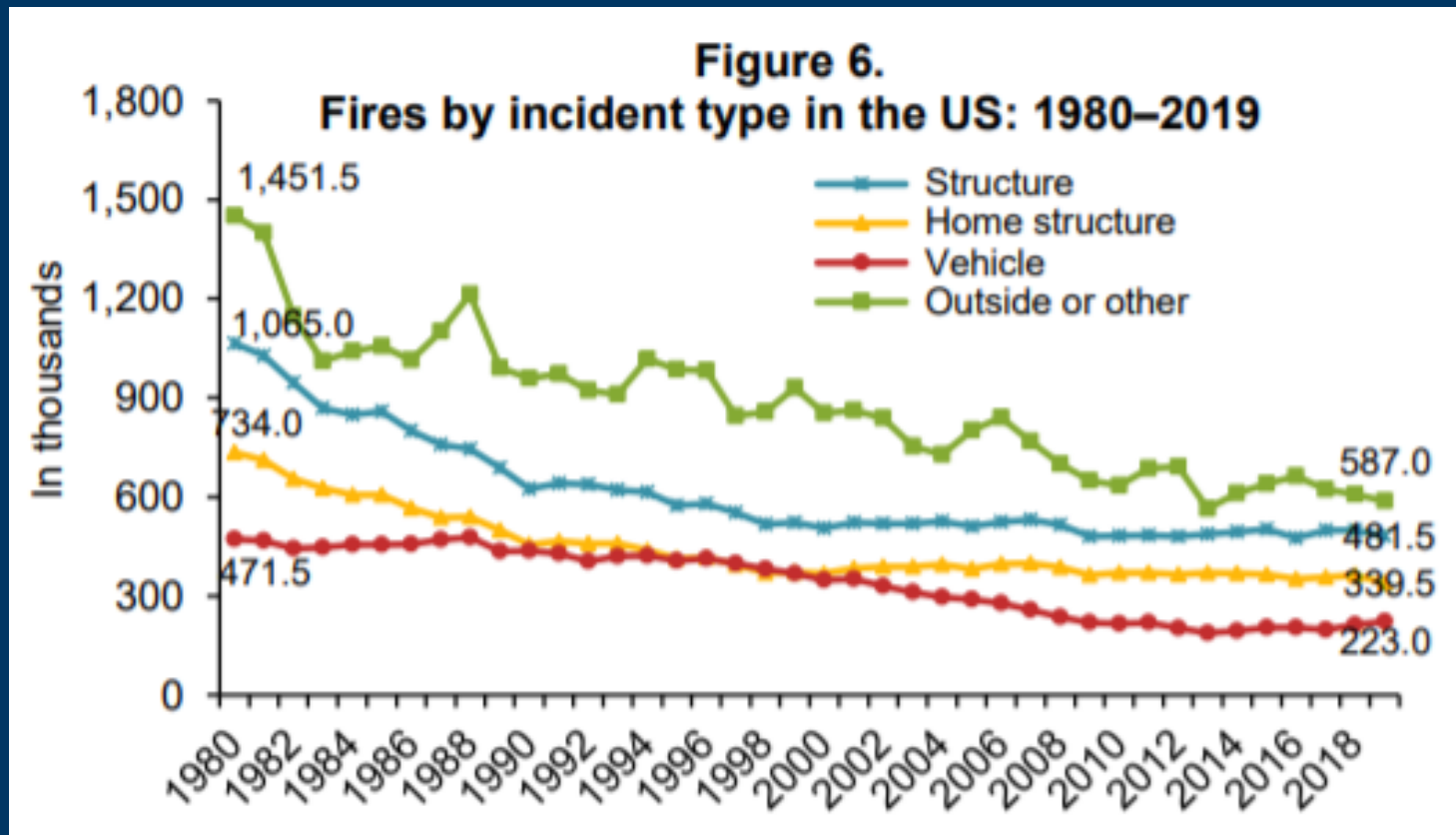
1. The Problem
2. Pre-Inspection Protocol
Engineer's Scope of Work
3. Temperature, Fire, Heat
4. Affects of Heat and Fire
 - a. Wood
 - b. Masonry
 - c. Steel
 - d. Concrete



How Big is this Problem?

Every 23 seconds, a fire department in the United States responds to a fire somewhere in the nation

In 2019 structure fires caused 12.3 Billion in property damage.



Source: National Fire Protection Association (NFPA)

