

## Research Plan: House Bill 1649, Sprinklers in Rural Churches

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Deputy Executive Director Approval: Initial: Date:

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### Purpose:

The Local Government Subcommittee of the House sent House Bill 1649 to the Commission for study. **House Bill 1649** by T. Hill (**Senate Bill 1749** by Niceley) would exempt single-story places of worship located in unincorporated areas from state laws and regulations requiring places of assembly to have fire protection sprinkler systems as long as they

- have a capacity of no more than 400 persons;
- do not have a water supply located on the property;
- have a minimum of two exits, plus one additional exit for every 2,500 square feet or portion thereof over 4,500 square feet;
- have a fire alarm system;
- have fixed seating for at least 250 persons; and
- were built on or after July 1, 2012.

### Background

The Dyson Grove Baptist Church congregation in Johnson County, Tennessee, built a new, larger building for its growing membership on a rural site without access to a public water supply. A Tennessee-licensed architect volunteered his services to design the building but failed to submit the building plans for approval to the state Fire Prevention Division as required by Chapter 0780-02-03 of the Rules of Department of Commerce and Insurance Division of Fire Prevention. The Division must approve plans before construction of any place of assembly, including churches, having a capacity of 300 or more persons can begin. Later, a state electrical inspector noticed during his inspection of the completed building that it did not have a fire sprinkler system as required by state building and fire codes, and reported the violation to the state Fire Prevention Division. Upon review, the state fire marshal granted the church temporary occupancy so that it could keep its doors open while the architect and church members find a solution to comply with code. The Codes Enforcement Section of the Fire Prevention Division filed a complaint against the architect with the Board of Architectural and

Engineering Examiners, who reviewed the project and imposed a civil penalty against the architect for not following state law; the case is pending.

### **Step 1. Define the Problem**

How to ensure the safety of church congregations where there is no public water supply or the supply is insufficient to support adequate fire suppression. The sponsors of the legislation and some churches claim that compliance with current building and fire codes is burdensome, expensive, and unnecessary for rural churches. But fire officials and building and design professionals say that the codes are the minimum standard for public safety, and alternatives exist for churches to be able to comply.

### **Step 2. Assemble Some Evidence**

- Review referred legislation
  - Review committee hearings on the bill and summarize comments and concerns of committee members, the bill sponsor, and others speaking for or against the bill.
  - Review House Bill 1649 and related statutes and regulations to determine what the bill does, including any dealing with
    - fire suppression requirements,
    - any exceptions or exemptions,
    - location specific requirements, and
    - other fire safety requirements.
  - Interview the sponsor, bill proponents, and other stakeholders to determine what is driving this issue. These include, but are not limited to representatives of
    - church organizations,
    - the Department of Commerce and Insurance--Divisions of Fire Prevention and Insurance,
    - Tennessee Society of Professional Engineers,
    - American Council of Engineering Companies of Tennessee,
    - Board of Architectural and Engineering Examiners,
    - the American Institute of Architects/Tennessee Society,
    - Tennessee Building Officials Association,
    - Building Owners and Managers Association,
    - Associated General Contractors of Tennessee,

- Tennessee Fire Sprinkler Contractors Association,
  - National Fire Protection Association, United States Fire Administration, Tennessee Fire Chiefs Association, and
  - International Code Council.
- Review the fiscal note. Consult with Fiscal Review Committee staff and follow up with agencies submitting support forms to determine the estimated cost and the method and rationale for the estimates.
- Review fire suppression requirements and options in other states and/or exemptions for churches.
  - Where exceptions or exemptions are allowed, if any?
  - What alternatives to sprinklers are there for fire suppression built in rural, unincorporated areas, if any?
  - Contact the state fire marshal's office in Virginia and other states with exemptions from building and fire codes for churches.
- Collect information about fires in churches and similar places of assembly in Tennessee and the United States.
  - How many church fires are there annually? Collect most recent data available.
  - What is the average loss to property from a church fire?
  - What is the average loss of life resulting from a church fire?
  - What fire safety and prevention methods have been found adequate and effective for churches and similar places of assembly? What are their costs?
  - How effective is fire suppression where there is no water and no sprinkler systems?
  - How effective are chemical sprinkler systems and other fire suppression methods such as installing a water tank, constructing a wall to reduce the occupancy, and building with non-combustible materials
- Review literature on rural construction and fire safety, including but not limited to
  - Tennessee Department of Commerce and Insurance report, *Cost Effectiveness of Fire Sprinkler Equipment*
  - Reports from the National Fire Protection Association:
    - *101, Life Safety Code*
    - *U.S. Structure Fires in Religious and Funeral Properties*
    - *U.S. Experience with Sprinklers*
  - U.S. Fire Administration, *Mitigation of the Rural Fire Problem*

### **Step 3. Construct Alternatives**

Alternatives will be based on

- current law
- proposed changes to the current law, and
- any additional alternatives drawn from the research and analysis in Step 2.

Each alternative will be described specifically enough to project outcomes in Step 5.

### **Step 4. Select Criteria**

- Cost
  - To congregations
  - To communities
- Effectiveness
  - Fire safety
  - Risks to other structures and persons
- Estimate receptiveness of
  - congregations
  - communities
  - fire safety officials

### **Step 5. Project Outcomes**

- Estimate cost
- Estimate the risks to property and life
- Estimate the acceptability to congregations, officials, and local communities

### **Step 6. Confront Trade-offs**

- How will the differences between the current law and the other alternatives affect the public?
- What are the pros and cons of the potential solutions?

### **Step 7. Decide which alternatives to present to the Commission**

Based on the results of Step 6, choose the alternatives that most practically and realistically resolve the problem

## **Step 8. Produce the Draft Report**

Develop and present a draft for review and comment to the Commission

### **Revisit Steps 5-8.**

- Respond to feedback from Commission regarding outcome projections, trade-offs, and selection of alternatives
- Revise and edit the draft to reflect comments of the Commission
- Submit final report to the Commission for approval

