

# Culture Change in Long Term Care Facilities

## National Trends in Delivery of Health and Long Term Care Summit

### *Implications for Safety Codes and Standards*

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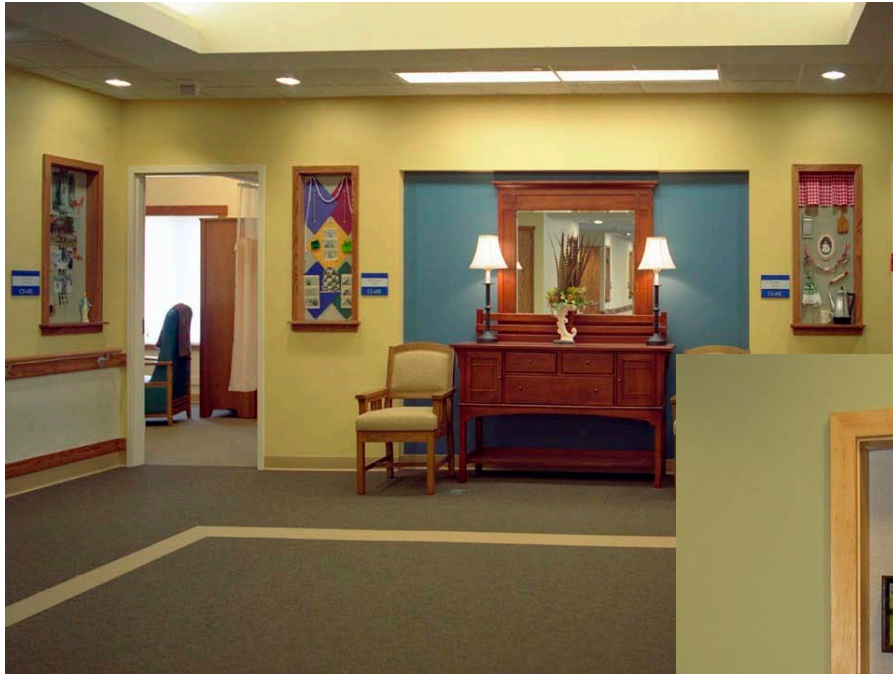
President  
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ARCHITECTURE AND DESIGN FOR AGING

Minneapolis, Minnesota, USA

# Improving Quality of Life

Involves More Than Safety

- Person-Centered Care
- Dignity
- Privacy
- Security
- Choice
- Control



*Identity Cases*



Personalize one's Environment

Culture Change involves a deep knowledge and understanding of residents and staff

# Form Follows Regulation

## The Creation of Unintended Consequences

- Locks in existing models
- Creates repetitive and predictable environments
- Eliminates potential innovation
- Based upon regulatory expedience
- Minimum standards become maximum allowances



# Form Follows Regulation

## The Institutional Nursing Home Model

### Requirement:

- Bedrooms must exit through a corridor
- Minimum 8'-0" clear corridor width
- Visual control from a nurse station
- Cooking facilities considered as hazardous

### *Result:*

- *Double-loaded corridors lined by bedrooms*
- *Straight undifferentiated 8'-0" wide corridors*
- *Dominant nurse station at corridor intersections*
- *Hide the residential center of "home" from daily experience*

# Creating Home in the Nursing Home

## Relationship Enabling Environments

- Reduce the scale
- Use understandable and identifiable spaces
- Provide the appropriate *Hierarchy of Space*
- Enable movement
- Provide access to nature
- Create places you would want for your loved ones



# Living in a Home

## Household Model

- Small scale environment
- Ease of access
- All activities of daily living in one setting



**Household Plan**



# Living in a Home

## Household Model

- Understandable spaces
- Recognizable from past experience
- Variety of choices

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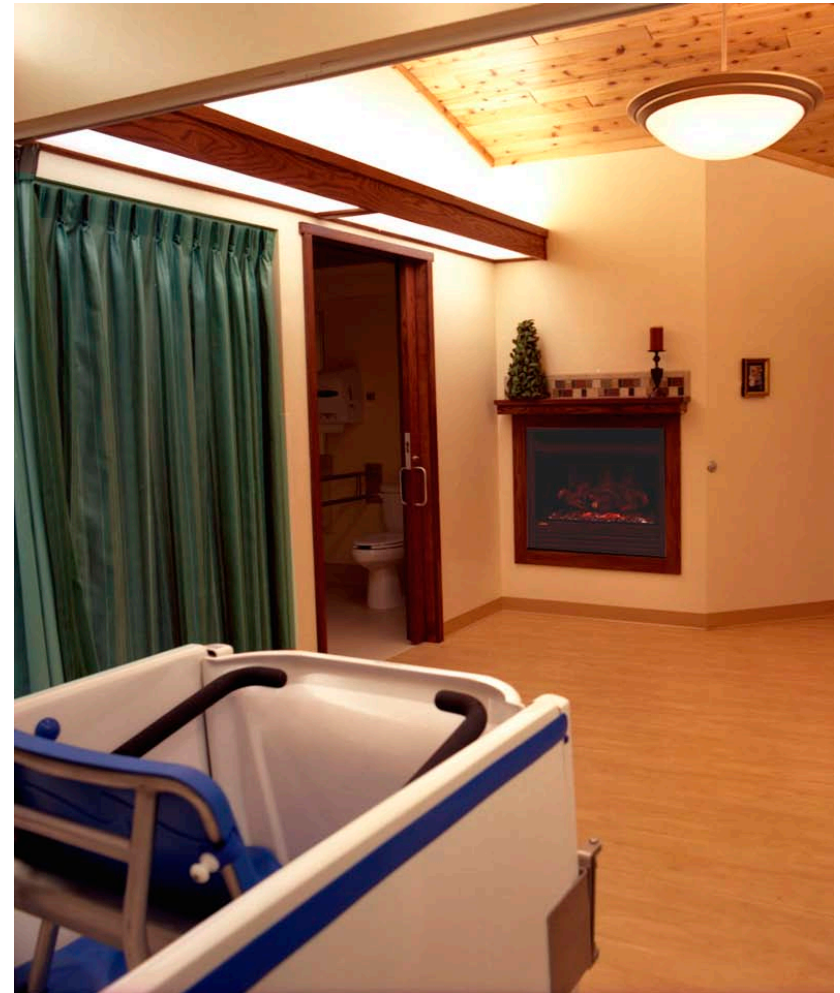


# Living in a Home

## Household Model

- De-institutionalized clinical resources
- Comfortable, non-threatening environment

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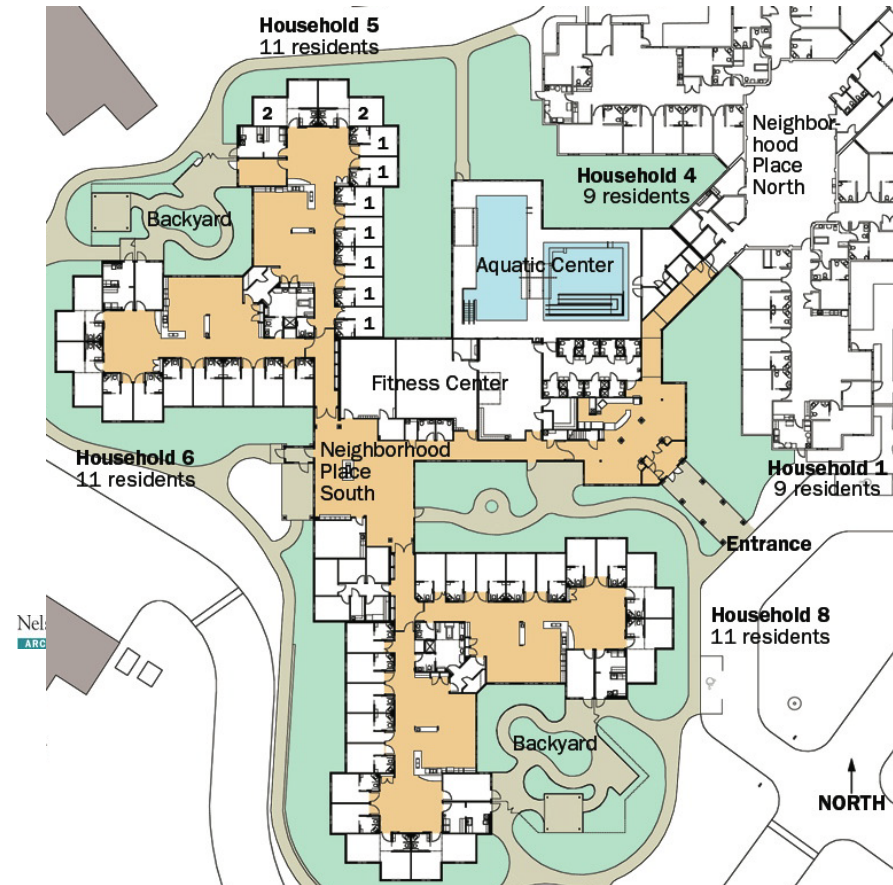




# Belonging to a Community

## Neighborhood Place

- Places to meet others
- Participation in larger group activities
- Variety of activity settings



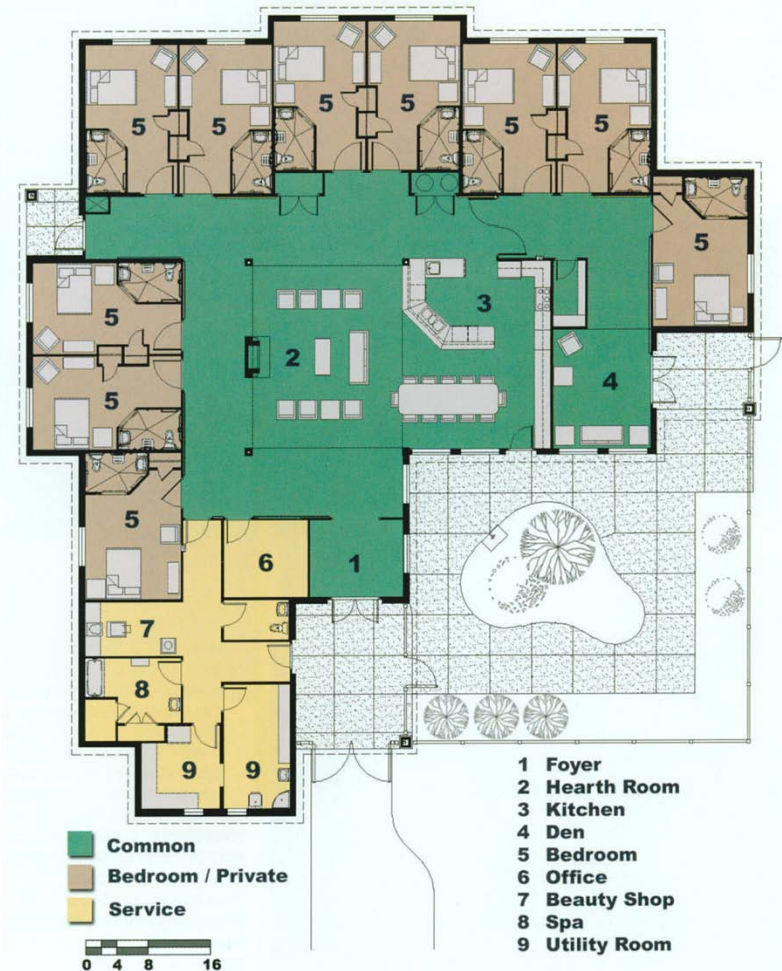
# Living in a Home

## The Green House<sup>®</sup> Model at Traceway

- Independent houses
- 10 private resident rooms
- Specially trained staff provide all care and household duties



DESIGN 2004





# Living in a Home

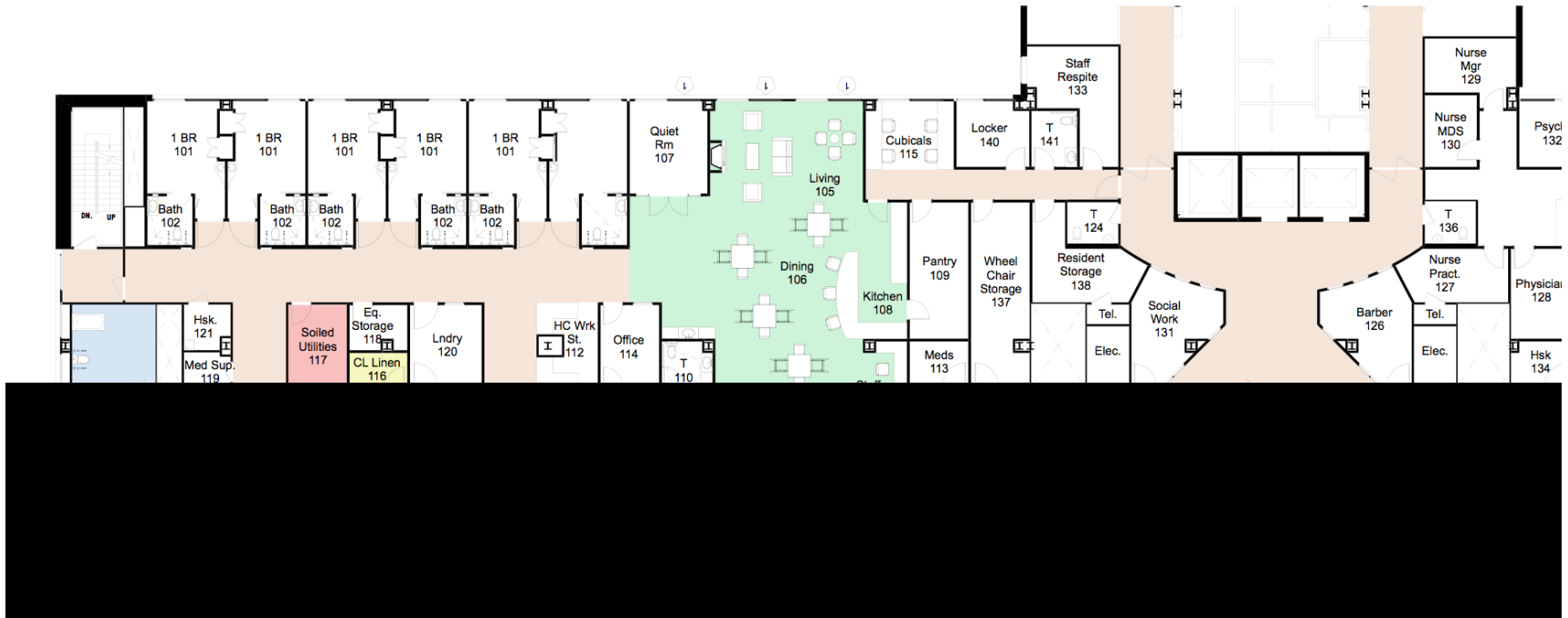
## The Green House<sup>®</sup> Model at Traceway

- Hearth Room
- Open Kitchen & Dining



# Remodeling to Create Home

## Community Living Center Concept

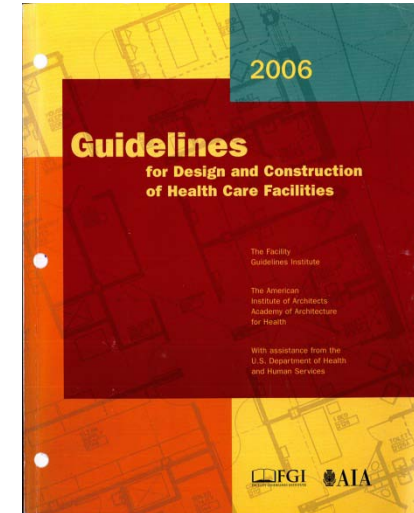
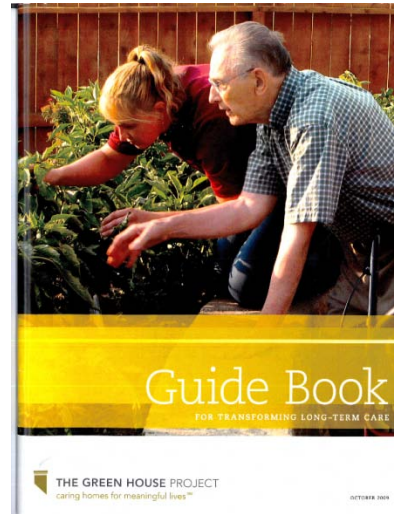


- Veterans Administration Initiative
  - Maximum 17 residents per *Household*
  - Shared *Neighborhood* service areas



# Creating Home

## Available Industry Resources



- FGI Guidelines for the Design and Construction of Health Care Facilities
- AIA/AAHSA Design for Aging Review
- The Greenhouse Project
- DESIGN - SAGE & Long Term Living Magazine
- Pioneer Network

# Focus Areas of LSC Work Groups

## Issues Hindering the Creation of Home

- Work Group Subjects
  - Décor
  - Corridors
  - Kitchens
  - Fireplaces
- Areas of focus voted on by National Task Force requiring 2/3 majority approval

# Combustible Decorations

## Proposal to Increase Allowable Quantity of Decorations



- Personalization and Identity

# Combustible Decorations 18.7.5.6

## Proposal Comments 101-305

- **Current Requirements:**
  - Flame Retardant
  - In such limited quantities that the hazard of fire...is not present
- **Proposed Requirements:**
  - Flame Retardant or treated with approved fire retardant coating
  - Permitted to be attached to walls or non-rated doors provided:
    - Not exceed 20% of wall & door inside non-sprinklered spaces
    - Not exceed 50% of walls & doors in sprinklered sleeping rooms
    - Not exceed in all other fire sprinklered spaces
    - Permitted on non-rated doors provided no operational interference

The same language shall apply to existing health care facilities under 19.7.5.6



# Combustible Decorations 18.7.5.6

## Justification for 101-305

- **Proposed language mirrors Daycare requirements:**
  - Use with occupants not capable of self-preservation
  - Occupancy with defined staffing
  - Use where occupants sleep
- **Combustible Decorations are no more hazardous than other elements allowed within sprinklered health care occupancies:**
  - Combustible Window draperies
  - Combustible Shower curtains
  - Combustible Furniture & mattresses

Creating Meaningful Environments in which to Live

# Means of Egress Requirements

## Proposal to Permit Seating within Corridors



- Supporting Mobility and Socialization



# Means of Egress Requirements

## Current Code Requirements

- **18.2.3.4 - not less than 8'-0" clear unobstructed except:**
  - In adjunct areas not intended for patients may be 44" wide
  - Projections on both sides of corridors complying with;
    - Maximum 6" projection
    - 40" or more above floor
    - Maximum 36" width
    - Minimum 48" apart
- **7.3.2.2 - within all Means of Egress**
  - 4 1/2" projection allowed below 38" on both sides (Handrails)

# Means of Egress Requirements

## Occupant Load & Capacity Calculation for an 8'-0" Corridor

- **Table 7.3.3.1 - Capacity Factor (width per person)**
  - Health Care - Sprinklered
  - 0.2 inch (5 mm)
  - $96'' / 0.2'' = 480 \text{ people} \times 2 \text{ exits} = 960 \text{ people}$
- **Table 7.3.1.2 - Occupant Load Factor**
  - Health Care Use - Sleeping Department
  - 120 sq ft (11.1 sq m) per Occupant
  - $960 \text{ people} \times 120 \text{ sq ft} = 115,200 \text{ sq ft}$



# What About Handrail Access?

## Measurement of Means of Egress - Projections

- Handrails are NOT a required part of the egress
  - Only considered in LSC as a projection
- Handrails are typically interrupted throughout facilities
  - Bedroom doorways
  - Closets and other doorways
  - Cross corridors
  - Spaces open to corridors

Handrails have limited potential users

- Not used by person with walker
- Not used with electric wheelchair
- Seldom used with manual wheelchair
- Sometimes used by capable walkers or those with cane

Seating is arguably a more helpful intervention

# Capacity of Means of Egress 18.2.3.4

## Proposal Comments 101-265a Log #CP666

- **Within corridors at least 8'-0" wide allow fixed furniture and wheeled equipment that meets all of the following:**
  - Shall not reduce unobstructed width to less than 6'-0"
  - Items located on one side of corridor only
  - Items shall be grouped into areas of less than 50 sq ft
  - Groupings shall be separated by at least 10'-0"
  - Corridors with such groupings are protected by electrically supervised, automatic smoke detection system

The same language shall apply to existing health care facilities under 19.3.6.1

# Capacity of Means of Egress 18.2.3.4

## Justification for 101-265a Log #CP666

- Currently many types of projections are allowed within corridors
- Projections shall not reduce unobstructed width to less than 6'-0"
- Limited to one side of corridor offers consistency
- Small 50 sq ft groupings match Table 18.3.2.1 Hazardous Area Protection (or lack thereof) requirements
- Only allowed in corridors protected by an electrically supervised, automatic smoke detection system
- Currently furnishing may be unlimited in sprinklered facilities

Improving mobility and access for residents by encouraging ambulation and socialization

# Cooking Facilities

## Allowing Cooking Equipment Open to Corridors



- Experiencing Activities of Home

# Cooking Facilities 18.3.2.5

## Proposal Comments 101-277 Log #179

- **Current Requirements:**
  - Domestic cooking equipment used for warming or limited cooking need not be separated for corridors
  - Cooking equipment shall to protected as per NFPA 96
- **Common Interpretations:**
  - All cooking appliances are hazardous areas and require separation from the corridor even when protected according to NFPA 96
  - Only small appliances such as microwaves, hot plates, toasters and nourishment centers are exempt from commercial cooking requirements
  - The only unprotected residential stove allowed in health care is one used exclusively for occupational therapy (NFPA 96 A.1.1.4 (2))



# Cooking Facilities 18.3.2.5

## Proposal Comments 101-277 Log #179

- **Proposed Requirements:**
  - *Residential* cooking equipment used for warming or limited cooking need not be separated for corridors
  - Residential or commercial equipment used to prepare food for fewer than 24 residents or patients shall meet the following:
    - Cooktop or range equipped with grease collect hood and meets airflow requirements of NFPA 96 sections 8.2.1 & 8.2.2
    - Cooktop or range protected by UL 300A fire suppression system
    - Use of solid fuel shall be prohibited
    - Deep fat frying shall be prohibited
    - Portable fire extinguishers shall be located in kitchen
    - A locked & timed key switch shall be provided for the cooktop
    - An interlock shall be required between range hood and cooktop
    - The portion of the facility served by the cooking facility shall be separated from other areas by a smoke barrier per 18.3.7.3

# Cooking Facilities 18.3.2.5

## Justification 101-277 Log #179

- There is a current lack of clarity & uniform interpretation across jurisdictions and AHJ's
- Participation in cooking is an integral component of home life
- Open kitchens provide ease of supervision and control by staff
- Risk involves few residents, separated from remainder of the facility
- Equipment is protected by UL300A fire suppression system
  - NIST Special Pub. 1066, 2007 indicated that a single sprinkler head in a residential scale kitchen may adequately protect against fire
- Equipment is protected from operation without staff supervision
- The type of equipment (residential or commercial) does little to impact the nature of hazard - the cooking methods do
- Fires are caused by grease build-up - control of grease is important
  - No deep fat frying is allowed
  - Grease baffles & collection are required

# Fireplaces

## Proposal to Allow Within Sleeping Compartments



- Socialization Around the Hearth

# Fireplaces 18.5.2

## Proposal Comments 101-293 Log #183 SAF-HEA

- **Current Requirements:**
  - Fireplaces not allowed within sleeping compartments
  - Fuel-fired heating devices allowed with specific requirements
- **Proposed Requirements:**
  - Permit vented gas fireplaces in sleeping compartments as follows:
    - Installed according to 9.2.2
    - Not permitted within sleeping rooms
    - Smoke compartment protected by supervised automatic sprinklers
    - Controls shall be restricted by locking or located in locked area
    - Carbon monoxide detector provided in or directly outside area

The same language shall apply to existing health care facilities under 19.5.2



# Fireplaces 18.5.2

## Justification for 101-293 Log #183 SAF-HEA

- Allows an element that is associated with home into social areas of sleeping compartments
- Clarifies that gas log heating devices that appear to be a fireplace are considered to be a heating device
- Provides protections and security for gas fireplace controls beyond those currently required
- Clearly limits solid fuel fireplaces to non-sleeping compartments
- Prohibits fireplace heating devices from sleeping rooms

The hearth provides warmth and a focus for social interaction

# Creating Safe Environments for Living

Working Together Towards Meaningful Change

