

NEIL ABERCROMBIE  
GOVERNOR



DWIGHT TAKAMINE  
DIRECTOR

AUDREY HIDANO  
DEPUTY DIRECTOR

**STATE OF HAWAII**  
**DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS**

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March 19, 2012

The Honorable Henry Aquino, Chair  
Committee on Public Safety and Military Affairs  
House of Representatives  
State Capitol, Room 419  
Honolulu, Hawaii 96813

Dear Chair Aquino:

Subject: S.B. 2397, S.D. 1, H.D. 1 Relating to Fire Sprinklers

I am Kenneth G. Silva, Chair of the State Fire Council (SFC) and Fire Chief of the Honolulu Fire Department (HFD). The SFC and the HFD strongly oppose S.B. 2397, S.D. 1, H.D. 1.

During its Regular Session of 2011, the Twenty-Sixth Legislature enacted House Resolution No. 47, H.D. 1, which requested that the State Building Code Council (SBCC) submit a report no later than 20 days before the Regular Session of 2015 convenes of its findings, recommendations, and actions taken to adopt the requirement that automatic fire sprinklers be installed in new one- and two-family dwellings.

The SBCC is reviewing the 2009 editions of the International Building and Residential Codes, which require residential fire sprinklers in new one- and two-family dwellings as minimum requirements. The SBCC formed a fire sprinkler investigative committee of stakeholders from public/private sectors, industry, and code regulators to explore issues relating to automatic fire sprinkler installations. The investigative committee's work is ongoing, and most infrastructure issues are complete.

However, issues relating to in-house systems must still be addressed. It would be a disservice to the community to enact an antisprinkler law based on one viewpoint without considering the research done by this committee, which represents all interests. The investigative committee's final report will be forwarded to the SBCC, who will decide what to adopt for the entire state.

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The building codes are a comprehensive compilation of codes that address all aspects of the built environment. The resulting national codes reflect a consensus that balances safety, cost/benefit, and the most technologically advanced products, materials, and processes. Code revisions are enacted slowly, and many are a result of fatalities, serious injuries, or large property losses. When building codes are adopted at the county and state levels, they must undergo the administrative rules process, including being discussed at public hearings to allow the public an opportunity to participate and provide input. This process should not be circumvented.

There is no requirement in the current county or state building codes that mandates the installation of fire sprinklers in new one- and two-family residential dwellings. When homes undergo the county building permit process and do not meet fire department access road or fire fighting water supply requirements (hydrants), the fire code allows fire sprinklers to be installed as an alternative to meet the intent of the fire code. This bill may eliminate that alternative and would require the homeowner to meet road and water supply requirements, which is usually at a much greater cost than fire sprinklers, before a permit is issued.

By not allowing counties to mandate fire sprinklers in residential homes, adult residential care homes may not be allowed to be permitted or built, as fire sprinklers are required in this type of occupancy due to its incapacitated residents. If this bill passes, it would eliminate the counties' home rule to permit residential homes to be built when they do not meet other building or fire code requirements.

Home fire sprinklers are a proven way to protect lives and property against fires. These life saving systems respond quickly and effectively to the presence of a nearby fire. Approximately 90% of the time, fires are contained by the operation of just one sprinkler head. Hundreds of gallons of water are saved, and toxic air pollutants and ground water runoff are also significantly reduced.

Smoke alarms and other building safety requirements have progressively reduced fire losses and deaths. Working smoke alarms reduce the risk of fire fatalities by 50 percent. However, they are only effective if occupants are cognitively and physically capable of responding during a limited timeframe of rapid fire growth. National statistics have shown disproportionate fire deaths for the young and elderly for decades, which is an example of the types of individuals unable or incapable of exiting a home fire in a timely manner. The risk of dying in a home fire decreases by approximately 80 percent when fire sprinklers are present. Home sprinkler systems respond quickly to reduce heat, flames, and smoke from a fire, thus allowing families valuable time to safely exit.

The Honorable Henry Aquino, Chair  
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Opponents of residential fire sprinkler systems like to boast that newer homes are safer and the fire and death problem is limited to older homes. The age of a home is a poor predictor of fire death rates. When an older home is associated with a higher death rate, it is usually a result of a disproportionate share of poorer, less educated households. Statistically, the only fire safety issue that is relevant to the home's age is outdated electrical wiring. Beyond that, it has little or nothing to do with fire safety.

A fire at 2 a.m. is just as deadly in a new home as it is in an older one. In fact, new methods of construction negatively impact occupant and fire fighter life safety under fire conditions. The National Research Council of Canada tested the performance of unprotected floor assemblies exposed to fire and found that these structures are prone to catastrophic collapse as early as six minutes from the onset of fire. Underwriters Laboratories conducted a study to identify the danger to fire fighters created by the use of lightweight wood trusses and engineered lumber in residential roof and floor designs. The findings point to the failure of lightweight engineered wood systems when exposed to fire. The same study found that the synthetic construction of today's home furnishings increased the risk by providing a greater fuel load. Fire sprinklers can offset increased dangers posed by lightweight construction and create a safer fire environment for fire fighters to operate in.

The contention that new home prices will dramatically rise is inaccurate. Hawaii's higher home prices are more directly impacted by high land prices, shipping costs for building materials, and contractor costs. On a national average, home fire sprinkler systems add 1% to 1.5% of the total building cost to new construction. In Hawaii, estimates obtained by the SBCC's fire sprinkler investigative committee were approximately \$1.50 per square foot. For example, a system, including permitting, installation, and materials, for a 2,500-square foot home, would cost \$6,000 to \$7,000. At \$200 per square foot, the home would cost \$500,000. The residential sprinkler system would be 1.3% of the total price. The most economical time to install sprinklers is during new construction.

Saving lives means more than just preventing deaths. Fire sprinklers not only reduce the risk of death, they also reduce property loss. In the City and County of Honolulu from 2006 to 2010, single-family home fires accounted for 40.7% (499) of the total fires; 52.6% (\$40,517,668) of all fire dollar losses; 53.3% (56) of the fire injuries; and 66.7% (10) of the fire fatalities. In contrast, buildings that were sprinklered accounted for 4.2% (52) of the total fires; 0.6% (\$428,320) of all fire dollar losses; 5.7% (6) of the fire injuries; and 6.7% (1) of the fire fatalities. The statistical report for this period is attached.

The Honorable Henry Aquino, Chair  
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March 19, 2012

Prohibition laws are normally enacted to control or ban potentially dangerous or harmful products or behaviors. Automatic fire sprinklers are a proven fire, life safety, and property protection measure with an outstanding performance record in reducing fire fatalities, injuries, and property losses.

The SFC and the HFD urge your committee's deferral of S.B. 2397, S.D. 1, H.D. 1.

Should you have any questions, please contact SFC Administrator Socrates Bratakos at 723-7151 or [sbratakos@honolulu.gov](mailto:sbratakos@honolulu.gov).

Sincerely,



KENNETH G. SILVA  
Chair

KGS/LR:cn

Attachment

National Fire Incident Reporting System  
City and County of Honolulu  
Structure Fire Report  
2006-2010

FIRES	TOTAL	% OF TOTAL LOSS	ESTIMATED DOLLAR LOSS	% OF TOTAL LOSS	INJURIES	% OF TOTAL INJURIES	FATALITIES	% OF TOTAL FATALITIES
All Structures	1,227	N/A	\$77,083,268	N/A	105	N/A	15	N/A
Single-Family	499	40.7	40,517,668	52.6	56	53.3	10	66.7
Multifamily	214	17.4	9,494,685	12.3	28	26.7	5	33.3
High-Rise	71	5.8	2,450,800	3.2	7	6.7	0	0.0
High-Rise With Sprinklers	24	2.0	235,950	0.3	1	1.0	1	6.7
High-Rise Without Sprinklers	47	3.8	2,214,850	2.9	6	5.7	0	0.0
Sprinklers	52	4.2	428,320	0.6	6	5.7	1	6.7
Without Sprinklers	1,175	95.8	76,654,948	99.4	99	94.3	14	93.3

**William P. Kenoi**  
*Mayor*



**Darren J. Rosario**  
*Fire Chief*

**Renwick J. Victorino**  
*Deputy Fire Chief*

**County of Hawai'i**  
**HAWAII FIRE DEPARTMENT**  
25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720  
(808) 932-2900 • Fax (808) 932-2928

March 19, 2012

The Honorable Henry Aquino, Chair  
Committee on Public Safety and Military Affairs  
House of Representatives  
State Capitol, Room 419  
Honolulu, Hawaii 96813

Dear Chair Aquino:

Subject: S.B. 2397, S.D. 1, H.D. 1 Relating to Fire Sprinklers

I am Darren J. Rosario, Member of the State Fire Council (SFC) and Fire Chief of the Hawaii Fire Department of the County of Hawaii (HCFD). The SFC and the HCFD strongly oppose S.B. 2397, S.D. 1, H.D. 1.

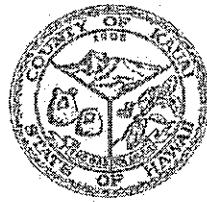
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However, issues relating to in-house systems must still be addressed. It would be a disservice to the community to enact an antisprinkler law based on one viewpoint without considering the research done by this committee, which represents all interests. The investigative committee's final report will be forwarded to the SBCC, who will decide what to adopt for the entire state.



**Bernard P. Carvalho, Jr.**  
Mayor



**Robert F. Westerman**  
Fire Chief

**Gary K. Heu**  
Managing Director

**John T. Blalock**  
Deputy Fire Chief

**KAUA'I FIRE DEPARTMENT**  
**County of Kaua'i, State of Hawai'i**

3083 Akahi Street, Suite 101, Lihu'e, Hawai'i 96766  
TEL (808) 241-4980 FAX (808) 241-6508

March 20, 2012

The Honorable Henry Aquino, Chair  
Committee on Public Safety and Military Affairs  
House of Representatives  
State Capitol, Room 419  
Honolulu, Hawaii 96813

Dear Chair Aquino:

**Subject: S.B. 2397, S.D. 1, H.D. 1 Relating to Fire Sprinklers**

I am Robert F. Westerman, Fire Chief of the Kauai Fire Department (KFD) and a member of the State Fire Council (SFC). The KFD and the SFC strongly oppose S.B. 2397, S.D. 1, H.D. 1.

During its Regular Session of 2011, the Twenty-Sixth Legislature enacted House Resolution No. 47, H.D. 1, which requested that the State Building Code Council (SBCC) submit a report no later than 20 days before the Regular Session of 2015 convenes of its findings, recommendations, and actions taken to adopt the requirement that automatic fire sprinklers be installed in new one- and two-family dwellings.

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*An Equal Opportunity Employer*

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Opponents of residential fire sprinkler systems like to boast that newer homes are safer and the fire and death problem is limited to older homes. The age of a home is a poor predictor of fire death rates. When an older home is associated with a higher death rate, it is usually a result of a disproportionate share of poorer, less educated households. Statistically, the only fire safety issue that is relevant to the home's age is outdated electrical wiring. Beyond that, it has little or nothing to do with fire safety.

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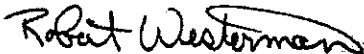
The contention that new home prices will dramatically rise is inaccurate. Hawaii's higher home prices are more directly impacted by high land prices, shipping costs for building materials, and contractor costs. On a national average, home fire sprinkler systems add 1% to 1.5% of the total building cost to new construction. In Hawaii, estimates obtained by the SBCC's fire sprinkler investigative committee were approximately \$1.50 per square foot. For example, a system, including permitting, installation, and materials, for a 2,500-square foot home, would cost \$6,000 to \$7,000. At \$200 per square foot, the home would cost \$500,000. The residential sprinkler system would be 1.3% of the total price. The most economical time to install sprinklers is during new construction.

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The KFD and the SFC urge your committee's deferral of S.B. 2397, S.D. 1, H.D. 1.

Please call me at (808) 241-4980 should you have any questions regarding this matter.

Sincerely,



Robert Westerman  
Fire Chief, County of Kaua'i

RFW/eld

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# **BIA-HAWAII**

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**BUILDING INDUSTRY ASSOCIATION**

## **Testimony to House Committee on Public Safety and Military Affairs**

Wednesday, March 21, 2012

11:00 a.m.

Capitol Room 309

### **RE: S.B. 2397 SD1 HD1, Relating to Fire Sprinklers**

Dear Chair Aquino, Vice-Chair Cullen, and members of the Committee:

My name is Gladys Marrone, Government Relations Director for the Building Industry Association of Hawaii (BIA-Hawaii). Chartered in 1955, BIA-Hawaii is a professional trade organization affiliated with the National Association of Home Builders, representing the building industry and its associates. BIA-Hawaii takes a leadership role in unifying and promoting the interests of the industry to enhance the quality of life for the people of Hawaii.

**BIA-Hawaii strongly supports SB 2397 SD1 HD1** which, as written, prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes, provided that this does not apply to: (1) new homes that require a variance from access road or fire fighting water supply requirements; and (2) non-residential agricultural and aquacultural buildings and structures located outside the urban area.

The home building industry is committed to the safety of the communities in which they build, but BIA-Hawaii opposes mandating fire sprinklers in new one- and two-family homes because: 1) new homes are built with better fire safety measures and other fire safety measures are required that are proven to save lives; 2) fire sprinklers are not cost-effective; 3) targeted fire safety education programs work; 4) fire sprinklers have not been proven to enhance the safety of occupants; and 5) if a homeowner wants to install a fire sprinkler, that option should be theirs.

#### **New homes are built better and safer.**

There have been significant improvements to the fire safety of homes over the past few decades leading to a dramatic and continued decrease in fire incidents, injury, death, and property loss. There is no data to suggest that sprinklers will significantly improve this decline.

Several examples of inexpensive fire safety improvements to residential construction that have led to these reductions in fire incident, injury and death include:

- Interconnected, hardwired smoke alarm systems
- Carbon monoxide detectors
- Improved electrical systems
- Improved framing and fire blocking techniques, and
- Improved fire ratings on interior furnishings and building material

Furthermore, the majority of residential fires that occur today are in older homes that generally do not have many of the improved fire safety features required in today's construction. Based on our own research (see attached), since 2005, of available data, residential fires on Oahu involved older homes. Most were built prior to 1970, and as far back as 1912. Sprinkler proponents argue that "new homes become old." However, that argument lacks substance because it does not acknowledge that the fire safety features required in today's construction are permanent, as is the protection they provide. Fire sprinklers in new homes will not make them safe. Fire sprinklers in old homes will make them safe.

**Fire sprinklers are not cost-effective.**

Costs for residential fire sprinklers can vary. One of our developers received an estimate of **\$6,500** from a reputable sprinkler company using union labor for a new 1,400 square foot, two-story home, or \$4.64 per square foot. Additionally, another developer got an estimate in 2008 for **\$34,000** to sprinker a 6-plex consisting of 3-bedroom units at 1,100 square feet each, or \$5.15 per square foot. The latter cost did not include the cost of infrastructure to bring the water to the building as it was on a separate water supply to ensure adequate pressure.

Proponents have presented estimates of \$4,000 and up, but those are based on mainland figures and do not include the cost of shipping and labor. As we have seen recently in Kailua, homeowners were quoted upwards of \$16,000 for a sprinkler system, and it was unclear whether that cost included connecting the system to the City's water source. Depending on where the new home will be built, issues such as water pressure, or whether trenching is required, all add to the cost of the system.

We are committed to the safety of the communities we build and the residents who live there, but this additional cost can disqualify someone for a mortgage.

**Fire education programs work.**

BIA-Hawaii supports fire safety education programs for consumers as one of the most effective and reasonable means to preventing residential fires and reducing death, injury, and property loss well as cost-effective residential fire protection technologies that are required by current codes. Education is key in deterring human behavior that may start residential fires, such as leaving a stove unattended or smoking in bed.

Other fire prevention efforts, such as targeted fire safety/prevention education programs, have also been successful. Programs of this nature should be considered first since they will ultimately prevent more fires and property loss and, more importantly, injury and death. For example: The State of South Carolina successfully implemented a fire safety program entitled "Get Alarmed South Carolina." As a result their fire death rate dropped 41% from 1996 to 1998. The program included a smoke alarm distribution component. Fire prevention education programs work, especially for those homes and home environments at greatest risk.

**Fire sprinklers have not been proven to enhance the safety of occupants**

Sprinkler mandates apply only to those homes at least risk. Furthermore, based on National Fire Protection Data, the risk of death in a home with sprinklers is still close to 30% and property loss is still substantial and would still be far less overall than the overall cost of sprinklers under mandatory requirements.

Representative Henry Aquino, Chair  
Committee on Public Safety and Military Affairs  
March 21, 2012  
SB 2397 SD1 HD1  
BIA-Hawaii testimony

**Homeowners should decide.**

Since the homeowner will be burdened with the tremendous cost of a fire sprinkler system, they should be able to decide whether a sprinkler system suits their needs. Homeowners should decide whether a 5-10% savings in homeowner's fire insurance, which equates to about \$65/year for one of our members, works for them. Proponents also discuss a possible tax credit as an incentive to install fire sprinklers. However, if sprinklers are mandated, tax credits as incentives don't work.

**Additional important information.**

*I-Codes:* Residential fire sprinklers are required in the 2009 International Building Code (IBC) and International Residential Code (IRC), which the SBCC will discuss this year. However, these I-Codes are only *model* codes, and not the minimum standard requirements. It becomes the minimum standard when the State adopts their code. Fire sprinklers goes far beyond the minimum requirement for public health and safety, particularly since fire safety measures are already required in the codes. These existing and new fire safety requirements cost far less than fire sprinklers and are proven to save more lives.

*Legislation:* Hawaii would not be the first state to do what SB 2397 SD1 proposes to do. To date, at least **35 states** across the nation have either amended the mandate out at the state level, or have passed legislation requiring that no model code be adopted by a municipality mandating residential sprinklers.

*Decreased fire deaths:* According to the Centers for Disease Control and Prevention (CDC), there were 377,000 home fires in the United States in 2009 which killed 2,565 people and injured another 13,050, not including firefighters. In 2009, there were 305,000,000 people living in the United States. The CDC goes on to say that the number of fatalities and injuries caused by residential fires has declined gradually over the past several decades, and many residential fire-related deaths remain preventable through education.

*Fire Sprinkler Investigative Committee:* Finally, fire sprinkler proponents argue that this requirement is not yet required in any code, so this bill is premature. However, the State Building Code Council (SBCC) has formed an investigative committee that is preparing a report pursuant to H.R. 47 HD1 (2011), which requested that the SBCC adopt the requirement that automatic fire sprinklers be installed in new one- and two-family residences. That report is due to the Legislature in 2015, but it will be biased in favor of residential fire sprinklers because that is what the committee is tasked to do.

SB 2397 SD1 is required because discussions at the SBCC on the upcoming 2009 IRC, which includes the sprinkler requirement, will likely begin in mid-2012 and the requirement can be adopted before the committee report is due. If it is adopted, then State DHHL housing projects, the Administration's plan for affordable housing, and Hawaii's economic recovery will be negatively impacted.

**BIA-Hawaii strongly supports SB 2397 SD1 HD1.**

THE GENTRY COMPANIES



March 21, 2012

The Honorable Henry J. C. Aquino, Chair  
House Committee on Public Safety and Military Affairs  
State Capitol, Room 419  
Honolulu, HI 96813

RE: S.B. 2397, S.D. 1, H.D. 1 Relating to Fire Sprinklers

Dear Chair Aquino and Members of the Committee:

My name is Debbie Luning, Director of Government Affairs for Gentry Homes, Ltd., testifying in **strong support** of S.B. 2397, S.D. 1, H.D. 1 Relating to Fire Sprinklers. The purpose of this bill is to prohibit the counties from requiring the installation or retrofitting of automatic fire sprinklers or an automatic fire sprinkler system in any new or existing detached one- or two-family dwelling unit in a structure used only for residential purposes. We believe that mandatory installation of fire sprinklers in single family and duplex homes, while well-intentioned, will not necessarily achieve the desired results of saving lives due to home fires. We are also concerned about the added cost to new homebuyers if it becomes a mandate. Our concerns about mandating fire sprinklers are summarized below.

1) **The requirement to install fire sprinklers would apply only to newly constructed homes, not to older homes which are basically the source of the problem.** Homes built nowadays are much safer in terms of fire prevention because of the types of materials, construction design and methods that are used. Examples include safer electrical wiring, double wall drywall construction, fire-rated garages, draft stops, cement siding and integrated smoke detector alarm systems that are very sensitive. These features were not necessarily included in homes built over 15 years ago; yet, the mandates in these resolutions would not apply to older homes -- they would only apply to newly constructed homes.

2) **Fire sprinklers will be ineffective unless there is a direct source of heat that triggers the sprinklers.** Smoke and noxious gases are the biggest threats in a home fire, and asphyxiation by poisonous fumes in the air outweighs burning as cause of death by a 3:1 ratio. A fire sprinkler, unless triggered by heat, will be ineffective under these circumstances.

3) **Fire sprinklers will be ineffective unless they are regularly maintained.** One cannot merely install a fire sprinkler system; it has to be regularly maintained in order for the system to work effectively. It is our contention that many homeowners will be negligent in regularly maintaining their fire sprinkler systems, thereby rendering them ineffective.

4) **Insurance companies will not cover the cost of damage caused by false alarms.** This is a very real and very practical concern. Insurance companies will not cover the cost of water damage should the fire sprinkler go off accidentally or unexpectedly – there has to be an actual fire in order for them to do so. This could mean tens of thousands of dollars of damage that the homeowner will have to pay for out of his/her own pocket.

5) **Mandating the installation of fire sprinklers in new homes would affect affordability.** Whenever additional requirements are placed on the development of newly constructed homes, the cost of homes increase and more people get priced out of the housing market. If one of the goals of the Legislature and government is to provide more affordable homes for Hawaii's people, it doesn't make sense to place additional requirements that add to the cost of a home, especially when the requirement has not been proven to be necessary. We are by no means advocating placing people's lives at risk, but we do have concerns about mandating fire sprinklers which may not be needed in newly constructed homes.

For the reasons stated above, we are strong support of this bill and urge its passage. Thank you for the opportunity to provide comments.

Sincerely,

GENTRY HOMES, LTD.



Debra M. A. Luning  
Director of Governmental Affairs and  
Community Relations



THE HOUSE OF REPRESENTATIVES  
THE TWENTY-SIXTH LEGISLATURE  
REGULAR SESSION OF 2012

COMMITTEE ON PUBLIC SAFETY AND MILITARY AFFAIRS

Rep. Henry J.C. Aquino, Chair  
Rep. Ty Cullen, Vice Chair

DATE: Wednesday, March 21, 2012  
TIME: 11:00 AM  
PLACE: Conference Room 309  
State Capitol  
415 South Beretania Street

**RE: Testimony in support of SB 2397 SD1 HD1 RELATING TO FIRE SPRINKLERS, with one requested amendment to correct an apparent HD1 drafting error**

Aloha Chair Aquino, Vice Chair Cullen, and Committee Members:

The Hawaii Aquaculture and Aquaponics Association (HAAA), representing Hawaii's aquaculture and aquaponics industry statewide testifies in support of the intent of SB 2397 SD1 HD1 "Relating to Fire Sprinklers", but with onr critical requested amendment.

SB 2397 as originally written removed the requirement for installation or retrofitting of fire sprinklers for new or existing detached one- and two-family dwelling unit in a structure used only for residential purposes. The HAAA requested that this bill be amended to expand this exclusion to include all nonresidential agricultural and aquacultural buildings and structures located outside the urban zone, as such buildings and structures are often located far from existing public water systems and fire hydrants of sufficient volume and pressure to meet requirements for the installation or retrofitting and operation of such fire sprinkler systems without adding unnecessary hardship to Hawaii's farming and ranching community.

Due to an apparent drafting effort, the HD1 draft of this bill reads just the opposite, as it: "Prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes, provided that this does not apply to: (1) new homes that require a variance from access road or fire fighting water supply requirements; and (2) non-residential agricultural and aquacultural buildings and structures located outside the urban area."

The HAAA therefore requests that this bill be amended to correct this HD 1 drafting error such that the bill prohibition on requiring sprinklers includes all nonresidential agricultural and aquacultural buildings and structures located outside the urban zone, as previously requested

The HAAA is currently supporting SB2646 SD1 HD1 that would reduce the cost and construction time of

low-risk farm structures by exempting such structures from county building permit requirements. SB 2397 with the requested correction would further support the permitting relief that such an exemption would provide for Hawaii's farmers and ranchers. We therefore urge you to support the amendment of SB 2397 SD1 HD1 as requested, and that it be passed out of committee.

Thank you for the opportunity to comment.

Respectfully submitted,

Ronald P. Weidenbach  
HAAA President





March 20, 2012

Representative Henry Aquino  
House Committee on Public Safety & Military Affairs  
Hawaii State Capitol, Room 419  
415 So. Beretania St.  
Honolulu, HI 96813

RE: SB 2397 SD1 HD1

Dear Chairman Aquino:

I appreciate the opportunity to provide testimony to you and Members of the House Committee on Public Safety & Military Affairs regarding SB 2397 SD1 HD1. My name is Kraig Stevenson; I am the Senior Regional Manager and your liaison to the International Code Council (ICC). The ICC is a private, not-for-profit membership association dedicated to building, plumbing, energy efficiency, fire prevention and sustainable construction, and develops the codes used to construct residential and commercial buildings, including homes and schools. ICC provides the highest quality codes, standards, products and services for all concerned with the safety and performance of the built environment. The ICC model codes are used in all 50 states and by the federal government. The Federal Office of Management and Budget (OMB) recognizes the ICC model codes as "consensus standards" compliant with the requirements of OMB Circular A-119 requiring openness, a balance of interests, due process, a formal appeals process, and consensus. The State of Hawaii and its four counties have historically adopted the International Codes and its legacy national model codes, (Uniform Codes, published by the International Conference of Building Officials).

The International Code Council is not able to support SB 2397 SD1 HD1 and offers comments.

The legislation prohibits counties from requiring automatic fire sprinkler systems to be installed in any new or existing detached one- or two-family dwelling unit except when a new home requires a variance from access road or fire fighting water supply requirements. The counties are currently adopting the 2006 edition of the International Residential Code and this code edition does not mandate automatic fire sprinkler systems to be installed. The legislation will therefore, remove options available to builders to propose the use of fire sprinklers to mitigate other fire and life safety or public safety concerns in addition to any deficiencies in access roads or fire fighting water supply. All ICC codes allow for alternate methods of construction and design to be proposed as alternates to code requirements. The legislation would unnecessarily limit options that should be available to developers, builders and home owners. The current list of exemptions does not foresee all other equally valid reasons to allow or require automatic fire sprinklers as exemptions or options that are worthy of consideration by the enforcing jurisdiction.



The 2009 and 2012 editions of the International Residential Code have significant relaxations in code requirements that reduce the cost of developing land and the cost of constructing homes. Some of the 2009 and 2012 code relaxations are based upon the installation of automatic fire sprinkler systems. The Hawaii State Building Code Council's code review process is the appropriate forum to examine new code requirements and any updating, changes or options that can be offered as necessary to meet the fire and life safety needs and expectations of the enforcing jurisdiction and the construction community.

Please do not hesitate to contact me if I can provide you with any additional information. I can be reached at 888-422-7233 x 7603 or by email at [kstevenson@iccsafe.org](mailto:kstevenson@iccsafe.org).

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Kraig Stevenson", with a long horizontal flourish extending to the right.

Kraig Stevenson, CBO  
Senior Regional Manager  
International Code Council



Testimony of C. Mike Kido  
External Affairs  
The Pacific Resource Partnership

House Committee on Public Safety & Military Affairs  
Representative Henry J.C. Aquino, Chair  
Representative Ty Cullen, Vice Chair

SB 2397, SD1, HD1 – Relating to Fire Sprinklers  
Wednesday, March 21, 2012  
11:00 am  
Conference Room 309

Aloha Chair Aquino, Vice Chair Cullen, and Members of the Committee:

My name is C. Mike Kido, External Affairs of the Pacific Resource Partnership (PRP), a labor-management consortium representing over 240 signatory contractors and the Hawaii Regional Council of Carpenters, formerly the Hawaii Carpenters Union.

PRP **supports** SB 2397, SD1, HD1 Relating to Fire Sprinklers which prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one- or two-family dwelling units used only for residential purposes.

PRP opposes mandating fire sprinklers in new one- and two-family homes for the following reasons:

First, Hawaii had the nation's lowest fire death rate in 2008, 1.6 per million residents, according to data compiled by the U.S. Fire Administration (a branch of FEMA). The national rate was 12.0 deaths per million. (The District of Columbia topped the list at 32.2 million.)

Nationally, residential building electric malfunction fires are trending downward, going from 30,000 in 2006 to 26,100 in 2010, a decline of 13%. Heating-related malfunctions are the second leading cause of residential fires in the US. Because few Hawaiian homes have heating systems, the incidence of residential fires is lower than the elsewhere.

According to the National Fire Protection Association, up to 90% of residential fires are contained by the operation of just one sprinkler, and that fatality risk is reduced by about 80% with automatic fire sprinkler systems.

Next, FEMA estimates the cost of a home sprinkler system in new construction at \$1.61 per square foot. The Building Industry Association of Hawaii calculates that the average size of a new single-family

home is 2,377 square feet. Using the FEMA estimate, the additional cost of system installation comes to \$3827 for an average home.

Hawaii's distance and other factors together make the FEMA estimates low. A 20% Hawaii premium would mean installation costs of \$1.92 per square foot. Using three estimates for new residential construction costs (\$100, \$150, and \$200 per square foot) suggest the additional cost of a sprinkler system would be 1.92%, 1.28%, and 0.96%, respectively. These figures are in line with national estimates, which assume that home fire sprinkler installation adds 1-1.5% to the total building cost in new construction. Based on new SFH area of 2,377 square feet, the incremental increases would thus be partly mitigated by Hawaii's overall construction costs, with the biggest percentage burden falling on builders/owners of cheaper units.

According to the National Fire Protection Association, almost two-thirds of home fire deaths resulted from fires in homes without smoke alarms (38%) or with non-functioning fire alarms (24%). The 1994 Uniform Building Code Section 310.9.1 adopted by Hawaii requires residents to install smoke detectors in all new and renovated dwelling units.

The death rate per 100 reported home fires, NFPA data shows, is twice as high in homes without a working smoke alarm as it is in those protected by functioning alarm systems. NFPA has also cited a survey showing that in one-fifth of US homes with smoke alarms the alarms were not working.

Statewide fire policy is coordinated by the State Fire Council (SFC), on which the chiefs of the four county fire departments and other administrators serve. The SFC's aim is to "develop a comprehensive fire service emergency management network of the protection of life, property, and the environment through the state." The current state fire code was approved by the sitting governor in 2001; Maui was the final county to adopt the code, in 2006, while Hawaii County continues to utilize a 1988 code due to legal issues. According to the Honolulu Fire Department's website, Hawaii and Colorado remained the only two states not having a state fire marshal as of June 1, 2009.

Thank you for the opportunity to share our views with you and we respectfully ask for your support on SB 2397, SD1, HD1.

Testimony of Glenn Ida  
Representing,  
The Plumbers and Fitters Union, Local 675  
1109 Bethel St., Lower Level  
Honolulu, Hi. 96813

**In Opposition of SB 2397, SD1, HD1**

Before the House:  
Committee on Committee on Public Safety and Military Affairs  
Wednesday, Mar. 21, 2012  
11 AM, Conference Room 309

Aloha Chair Rep. Henry Aquino, Vice-Chair Rep. Ty Cullen and Members of the Committee,

My name is Glenn Ida; I represent the 1300 plus active members and about 600 retirees of the Plumbers and Fitters Union, Local 675.

Local 675, is in Opposition of SB 2397, SD1 which Prohibits counties from requiring installation or retrofitting of automatic fire sprinklers in new or existing one or two family dwelling units used only for residential purposes.

The requirement of fire sprinklers in multifamily occupancies started in the 1980's. An optional International Residential Code (IRC) Appendix extended those requirements to single-family homes in 2006, and in 2008 the members of the International Code Council approved fire sprinklers as a standard feature to be included in all new homes. The action was upheld on appeal and later reaffirmed at a 2009 public hearing before the ICC Residential Building Code Committee, which oversees the IRC. As a result the fire sprinkler requirement will be included in the 2012 edition of the International Residential Code (IRC).

Currently, there is no requirement in the county or state building codes that mandates the installation of fire sprinklers in new one- and two-family residential dwellings.

Local 675 Training Coordinator, Mr. Harold McDermott, is a member on a sub-committee of the State's Building Codes Council which meets regularly and is discussing the issue of residential fire sprinklers along with other stakeholders which will provide a report before the requirement goes into effect. He has on record an estimated the cost for a system of around \$4000.00 for a 1500 sq ft., for a brand new two-story home, and added that the homeowner may receive some savings on homeowner's insurance.

Home fire sprinklers are a proven way to protect lives and property against fires. Modern fire sprinkler heads respond quickly, effectively and individually to the presence of a nearby fire. Most of the time, fires are contained by the operation of just one sprinkler head. Thus, saving hundreds of gallons of water and significantly reducing toxic air pollutants and water damage.

Local 675 believes that this Bill is premature and the work of the sub-committee be allowed to finish and give its recommendations to the State Building Code Council.

Therefore, Local 675 Opposes SB 2397, SD1.

Thank you for this opportunity to testify.

Glenn Ida, 808-295-1280