

WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #3

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JUL 24 10 41 AM '97

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: STATE FIRE COMMISSION TITLE NUMBER: 87

CITE AUTHORITY 29-3-5

AMENDMENT TO AN EXISTING RULE: YES XX NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: I

TITLE OF RULE BEING AMENDED: State Fire Code

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED:

TITLE OF RULE BEING PROPOSED:

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

Bill Spencer, Chairman
Walter Smith III
STATE FIRE MARSHAL

\$9.00 (w/out comments)
\$17.30 (w/comments)

**LEGISLATIVE
RULE-MAKING
REVIEW COMMITTEE**

DATE:

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: State Fire Commission

LEGISLATIVE RULE TITLE: State Fire Code

1. Authorizing statute(s) citation 29-3-5

2. a. Date filed in State Register with Notice of Hearing

June 10, 1997

b. What other notice, including advertising, did you give of the hearing?

Press Release mailed to all news media resources (copy attached)

c. Date of Hearing(s) July 14, 1997

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached XXX No comments received

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

July 25, 1997

f. Name and phone number(s) of agency person(s) to contact for additional information:

Walter Smittle III, State Fire Marshal 558-2191

L. Darl Cross, Chief Deputy Fire Marshal 558-2191

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

Non-applicable

b. Date of hearing: Non-applicable

c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

Non-applicable

d. Attach findings and determinations and reasons:

Attached Non-applicable

NEWS RELEASE



The Department of Military Affairs and Public Safety

BILL L. SPENCER
Chairman
JAMES W. FIFE
Vice-Chairman
DANIEL I. W. HESS
Secretary

CECIL H. UNDERWOOD, GOVERNOR
OTIS G. COX, JR.
Secretary
STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301

WALTER SMITTLE III
State Fire Marshal
Phone (304) 558-2191
FAX (304) 558-2537

NEWS RELEASE

The West Virginia State Fire Commission will conduct a public hearing on the proposed adoption of the 1997 National Fire Codes as part of the State Fire Code.

The public hearing will take place at the State Capitol, East Wing, Room E-215, at 10:00 AM, July 14, 1997. All interested individuals or organizations are encouraged to attend the public hearing or submit written comments to: State Fire Commission, c/o Mr. Bill L. Spencer, Chairman, 1207 Quarrier Street, Room 202, Charleston, WV 25301. For additional information, please contact the State Fire Commission at (304) 558-2191 during regular business hours.

MAILING LIST

NAME	ADDRESS	CITY	STATE	ZIP	REMARKS
BARBOUR DEMOCRAT	PO BOX 459	PHILIPPI	WV	26416	WEEKLY-WEDNESDAY
BECKLEY REGISTER/HERALD	801 NORTH KANAWHA ST.	BECKLEY	WV	25801	DAILY-SUNDAY
BLUEFIELD DAILY TELEGRAPH	P. O. BOX 1599	BLUEFIELD	WV	24701	DAILY-SUNDAY
BRAXTON CITIZEN'S NEWS	501 MAIN	SUTTON	WV	26601	WEEKLY-MONDAY
BRAXTON DEMOCRAT/CENTRAL	P. O. BOX 427	SUTTON	WV	26601	WEEKLY-FRIDAY
BUCKHANNON RECORD-DELTA	7 NORTH LOCUST ST.	BUCKHANNON	WV	26201	WEEKLY-MON & WED.
CABELL RECORD	1035 THIRD AVE.SUITE 201	HUNTINGTON	WV	25701	WEEKLY-WEDNESDAY
CHARLESTON DAILY MAIL	1001 VIRGINIA ST. E.	CHARLESTON	WV	25301	DAILY-SUNDAY
CHARLESTON GAZETTE	1001 VIRGINIA ST. E.	CHARLESTON	WV	25301	DAILY-SUNDAY
CLARKSBURG EXPONENT/TELEGRAM	324-326 HEWES AVE.	CLARKSBURG	WV	26301	DAILY-SUNDAY
CLAY COUNTY FREE PRESS	BOX 180, CHURCH ST.	CLAY	WV	25043	WEEKLY-TUESDAY
COAL VALLEY NEWS	P. O. BOX 508	MADISON	WV	25130	WEEKLY-WEDNESDAY
DOMINION POST	GREER BLDG. RT. 7	MORGANTOWN	WV	26505	DAILY, SUNDAY
FAYETTE TRIBUNE	417 MAIN STREET	OAK HILL	WV	25901	WEEKLY-MONDAY & THURSDAY
GRANT COUNTY PRESS	47 SOUTH MAIN ST.	PETERSBURG	WV	26847	WEEKLY-WEDNESDAY
GRANTSVILLE NEWS	P. O. BOX 400	GRANTSVILLE	WV	26147	WEEKLY-THURSDAY
GUYANDOTTE VOICE	P. O. BOX 4508	CHAPMANVILLE	WV	25508	WEEKLY-WEDNESDAY
HAMPSHIRE REVIEW	P.O. DRAWER 1036	ROMNEY	WV	26757	WEEKLY-WEDNESDAY
HANCOCK COUNTY COURIER	BOX 547	NEW CUMBERLAND	WV	26047	WEEKLY-THURSDAY
HERALD RECORD	202 EAST MAIN	WEST UNION	WV	26456	WEEKLY-TUESDAY
HINTON DAILY NEWS	BOX 1000, 210 SECOND AVE	HINTON	WV	25951	WEEKLY-TUESDAY
HOMETOWN NEWS	P.O. BOX 597	MADISON	WV	25130	WEEKLY
HURRICANE BREEZE	P. O. BOX 336	HURRICANE	WV	25526	WEEKLY-WEDNESDAY
INDEPENDENT HERALD	P. O. BOX 100, RT. 10E	PINEVILLE	WV	24874	WEEKLY-WEDNESDAY
INDUSTRIAL NEWS	P. O. BOX 180	IAEGER	WV	24844	WEEKLY-WEDNESDAY
MEADOW RIVER POST	BOX 747	RAINELLE	WV	25962	WEEKLY-THURSDAY
MINERAL DAILY NEWS-TRIBUNE	24 ARMSTRONG ST.	KEYSER	WV	26726	DAILY
MOUNDSVILLE DAILY ECHO	P. O. BOX 369	MOUNDSVILLE	WV	26041	DAILY
MOUNTAIN ECHO	24 ARMSTRONG ST.	KEYSER	WV	26726	WEEKLY-SATURDAY
MOUNTAIN STATESMAN	914 WEST MAIN ST.	GRAFTON	WV	26354	WEEKLY-TUES. THURS. & SAT.
PARKERSBURG NEWS	519 JULIANA STREET	PARKERSBURG	WV	26101	DAILY-SUNDAY
PARKERSBURG SENTINEL	519 JULIANA STREET	PARKERSBURG	WV	26101	DAILY
PARSONS ADVOCATE	212 MAIN ST.	PARSONS	WV	26287	WEEKLY-WEDNESDAY
PENNSBORO NEWS	407 MAIN STREET	PENNSBORO	WV	26415	WEEKLY-WEDNESDAY
PLEASANTS COUNTY LEADER	P. O. BOX 27	ST. MARYS	WV	26170	WEEKLY-SATURDAY
POINT PLEASANT REGISTER	200 MAIN STREET	POINT PLEASANT	WV	25550	DAILY
PRESTON COUNTY JOURNAL	P. O. BOX 587	KINGWOOD	WV	26537	WEEKLY-MONDAY & THURSDAY
PRESTON COUNTY NEWS	BOX 225, 226 WASHINGTON AVE	TERRA ALTA	WV	26764	WEEKLY-THURSDAY
PRINCETON TIMES	P.O. BOX 1199	PRINCETON	WV	24740	WEEKLY-THURSDAY
REGISTER HERALD/POST REPORT	107 NORTH LAFAYETTE STREET	LEWISBURG	WV	24901	WEEKLY-WEDNESDAY
RICHWOOD NEWS-LEADER	P. O. BOX 591	RICHWOOD	WV	26261	WEEKLY-WEDNESDAY
ROANE COUNTY REPORTER	P. O. BOX 647	SPENCER	WV	25276	WEEKLY-THURSDAY
SPIRIT OF JEFFERSON ADVOCATE	P. O. BOX 966	CHARLES TOWN	WV	25414	WEEKLY-THURSDAY
ST. MARYS ORACLE	P. O. BOX 27	ST. MARYS	WV	26170	WEEKLY-WEDNESDAY
THE BROOKE NEWS	P. O. BOX 591	WELLSBURG	WV	26070	WEEKLY-THURSDAY

MAILING LIST

NAME	ADDRESS	CITY	STATE	ZIP CODE	REMARKS
THE CALHOUN CHRONICLE	P. O. BOX 400	GRANTSVILLE	WV	26147	WEEKLY-THURSDAY
THE CARBIDER	BOX 8361	SOUTH CHARLESTON	WV	25303	
THE CATHOLIC SPIRIT	P. O. BOX 951	WHEELING	WV	26003	WEEKLY-FRIDAY
THE CLAY HERALD	RT. 4, BOX 5	CLAY	WV	25043	WEEKLY-MONDAY
THE FOLLEANSBEE REVIEW	P. O. BOX 591	WELLSBURG	WV	26070	WEEKLY-THURSDAY
THE GLENVILLE DEMOCRAT	P. O. BOX 430	GLENVILLE	WV	26351	WEEKLY-THURSDAY
THE GLENVILLE PATHFINDER	206 EAST MAIN STREET	GLENVILLE	WV	26351	WEEKLY-THURSDAY
THE HERALD DISPATCH	946 5TH AVENUE	HUNTINGTON	WV	25720	DAILY, SUNDAY
THE INTELLIGENCER	15TH/MAIN STREETS	WHEELING	WV	26003	DAILY
THE INTER-MOUNTAIN	P. O. BOX 1339	ELKINS	WV	26241	DAILY
THE JACKSON HERALD	P.O. BOX 31/117 COURT ST.	RIPLEY	WV	25271	WEEKLY-WEDNESDAY
THE JACKSON STAR NEWS	P. O. BOX 10	RAVENSWOOD	WV	26241	WEEKLY-WED & SAT
THE JACKSON STAR NEWS	BOX 10, RACE STREET	RAVENSWOOD	WV	26164	WEEKLY-WED. & SATURDAY
THE LINCOLN JOURNAL	BOX 308, 337 WALNUT ST.	HAMLIN	WV	25523	WEEKLY-WEDNESDAY
THE LOGAN BANNER	BOX 720, 435 STRATTON ST.	LOGAN	WV	25601	DAILY, SUNDAY
THE MONROE WATCHMAN	P. O. BOX 179	UNION	WV	24983	WEEKLY-THURSDAY
THE MONTGOMERY HERALD	406 LEE STREET	MONTGOMERY	WV	25136	WEEKLY-WEDNESDAY
THE MOOREFIELD EXAMINER	132 SOUTH MAIN ST.	MOOREFIELD	WV	26836	WEEKLY-WEDNESDAY
THE MORGAN MESSENGER	P. O. BOX 567	BERKELEY SPRINGS	WV	25411	W-WED.
THE MORNING/SUNDAY JOURNAL	207 WEST KING STREET	MARTINSBURG	WV	25401	DAILY
THE MULLEN ADVOCATE	BOX 907	MULLENS	WV	25882	WEEKLY-THURSDAY
THE NEWS LEADER	BOX 591	RICHWOOD	WV	26261	WEEKLY-WEDNESDAY
THE NICHOLAS CHRONICLE	BOX 503, WEBSTER ROAD	SUMMERSVILLE	WV	26651	WEEKLY-THURSDAY
THE PENDLETON TIMES	P. O. BOX 906	FRANKLIN	WV	26807	WEEKLY-THURSDAY
THE PIEDMONT HERALD	33 EAST FAIRVIEW ST.	PIEDMONT	WV	26750	WEEKLY-TUESDAY
THE POCAHONTAS TIMES	P. O. BOX 117, 810 SECOND AVE	MARLINTON	WV	24954	WEEKLY-THURSDAY
THE PUTNAM DEMOCRAT	P. O. BOX 179	WINFIELD	WV	25213	WEEKLY-THURSDAY
THE RITCHIE GAZETTE	BOX 215, 112-116 E. MAIN ST.	HARRISVILLE	WV	26362	WEEKLY-THURSDAY
THE SHINNSTON NEWS	P. O. BOX 7	SHINNSTON	WV	26431	WEEKLY-WEDNESDAY
THE WEBSTER ECHO	P. O. BOX 749	WEBSTER SPRINGS	WV	26288	WEEKLY-WEDNESDAY
THE WEBSTER REPUBLICAN	BACK FORK STREET	WEBSTER SPRINGS	WV	26288	WEEKLY-WEDNESDAY
THE WEEKLY NEWS SENTINEL	BOX 308, 337 WALNUT ST.	HAMLIN	WV	25523	WEEKLY-WEDNESDAY
TIMES-RECORD	P. O. BOX 674	SPENCER	WV	25276	WEEKLY-THURSDAY
TIMES-WEST VIRGINIAN	P. O. BOX 2530	FAIRMONT	WV	26554	DAILY-SUNDAY
TYLER STAR NEWS/CITY JOURNAL	BOX 191, DIAMOND STREET	SISTERSVILLE	WV	26175	WEEKLY-WEDNESDAY
WADC-AM/WMGP-FM	703 MARKET STREET	PARKERSBURG	WV	26101	
WAEY-AM/FM	BOX 5588	PRINCETON	WV	24740	
WAEZ-FM	P. O. BOX 2324	HUNTINGTON	WV	25725	
WAJR-AM/WVAZ-FM	GREER BLDG. RT. 7	MORGANTOWN	WV	26505	
WAMX-FM	P. O. BOX 1150	HUNTINGTON	WV	25713	
WAYNE COUNTY NEWS	310 CENTRAL AVENUE	WAYNE	WV	25570	WEEKLY-THURSDAY
WBOY-TV	912 W. PIKE ST.	CLARKSBURG	WV	26302	
WBTH-AM/WXCC-FM	5 1/2 E. SECOND AVE.	WILLIAMSON	WV	25661	
WBUC-AM/WBTQ-FM	P. O. DRAWER C	BUCKHANNON	WV	26201	
WCAW-AM/V100-FM	P.O. BOX 4318	CHARLESTON	WV	25364	

MAILING LIST

NAME	ADDRESS	CITY	STATE	ZIP	REMARKS
WCEF-FM	BOX 798	RIPLEY	WV	25271	
WCBS-AM/WBES-FM	1111 VIRGINIA ST. E.	CHARLESTON	WV	25301	
WCBS-TV	1301 PIEDMONT	CHARLESTON	WV	25301	
WCLG-AM/FM	BOX 885	MORGANTOWN	WV	26505	
WCST-AM/FM	P. O. BOX 10	BERKELEY SPRINGS	WV	25411	
WCWV-FM	713 MAIN ST.	SUMMERSVILLE	WV	26651	
WDNE-AM/WVET-FM	WASHINGTON & DAVIS STS.	ELKINS	WV	26241	
WDTV	PO BOX 480 FIVE TV DRIVE	BRIDGEPORT	WV	26330	
WEIR-AM	3578 PENNSYLVANIA AVENUE	WEIRTON	WV	26062	
WEIRTON DAILY TIMES	114 LEE AVENUE	WEIRTON	WV	26062	DAILY
WELC-AM	BOX 949	WELCH	WV	24801	
WELCH DAILY NEWS	125 WYOMING ST.	WELCH	WV	24801	DAILY
WELD-AM/FM	KESSEL ROAD	FISHER	WV	26818	
WELK-FM	228 RANDOLPH AVENUE	ELKINS	WV	26241	
WEMM-FM	703 THIRD AVENUE	HUNTINGTON	WV	25701	
WEPM-AM/WKMZ-FM	P.O. BOX 767	MARTINSBURG	WV	25401	
WEST VIRGINIA BEACON DIGEST	P. O. BOX 901	SOUTH CHARLESTON	WV	25324	WEEKLY-FRIDAY
WEST VIRGINIA DAILY NEWS	P. O. BOX 471, 200 S. COURT ST	LEWISBURG	WV	24901	DAILY
WEST VIRGINIA HILLBILLY	P. O. BOX 591	RICHWOOD	WV	26261	WEEKLY-THURSDAY
WESTON DEMOCRAT	P.O. BOX 968	WESTON	WV	26452	WEEKLY-WEDNESDAY
WET2-AM	P. O. BOX 249	NEW MARTINSVILLE	WV	26155	
WETZEL CHRONICLE	P.O. BOX 289, 1100 3RD ST.	NEW MARTINSVILLE	WV	26155	WEEKLY-WEDNESDAY
WEYS-FM	#1 BRUCE STREET	INSTITUTE	WV	25112	
WFGH-FM	BROADCAST BLDG. COURT ST.	FORT GAY	WV	25514	
WFGM-FM	1101 FAIRMONT AVENUE	FAIRMONT	WV	26554	
WFSP-AM	P. O. BOX 567	KINGWOOD	WV	26537	
WGNT-AM	P. O. BOX 1150	HUNTINGTON	WV	25713	
WEAR-AM/WVHF-FM	350 W. MAIN STREET	CLARKSBURG	WV	26301	
WEAW-AM/WSSN-FM	P. O. BOX 980	WESTON	WV	26452	
WHEELING NEWS-REGISTER	15TH/MAIN STREETS	WHEELING	WV	26003	DAILY, SUNDAY
WHIS-AM/WHAJ-FM	RADIO CTR/900 BLUEFIELD	BLUEFIELD	WV	24701	
WHJC-AM	BOX 68	MATEWAN	WV	25678	
WHLX-FM	P.O.BOX 6462	WHEELING	WV	26003	
WILLIAMSON DAILY NEWS	100 EAST 3RD AVENUE	WILLIAMSON	WV	25661	DAILY
WIRT COUNTY JOURNAL	BOX 309	ELIZABETH	WV	26143	WEEKLY-WEDNESDAY
WJLS-AM/WBKW-FM	P. O. BOX 1452	BECKLEY	WV	25802	
WKAZ-AM/WKLC-FM	100 KANAWHA TERRACE	ST. ALBANS	WV	25177	
WKCJ-FM	P. O. BOX 306	LEWISBURG	WV	24901	
WKEE-AM/FM	P.O. BOX 2288	HUNTINGTON	WV	25701	
WKGI-FM	P. O. BOX 267	NEW MARTINSVILLE	WV	26155	
WKKM-FM	P. O. BOX 1546	CLARKSBURG	WV	26301	
WKLP-AM/WQZK-FM	DRAWER F	KEYSER	WV	26726	
WKMM-FM	P. O. BOX 967	KINGWOOD	WV	26537	
WKOY-AM	623 COMMERCE	BLUEFIELD	WV	24701	
WKWK-AM/WEEL-FM	P. O. BOX 2258	WHEELING	WV	26003	

MAILING LIST

NAME	ADDRESS	CITY	ZIP		REMARKS
			STATE	CODE	
WKYG-AM/WKXX-FM	1715/1717 ST.MARYS AVE.	PARKERSBURG	WV	26102	
WLOG-AM	BOX 1800	LOGAN	WV	25601	
WLTP-AM/WNUS-FM	BOX 428	BELPRE	OH	45714	
WLYJ-TV	PO BOX 2544/775 W. PIKE	CLARKSBURG	WV	26302	
WMMN-AM	P. O. BOX 1746	CHARLESTON,	WV	25326	
WMON-AM	BOX 750	MONTGOMERY	WV	25136	
WMOV-AM	GIBBS STREET	RAVENSWOOD	WV	26164	
WMTD-AM/FM	P.O. BOX 850	HINTON	WV	25951	
WMUL-FM	COMM. BLDG.MARSHALL UNIV.	HUNTINGTON	WV	25701	
WNST-AM	P. O. BOX 266	MILTON	WV	25541	
WOAY-AM/FM	P. O. BOX 251	OAK HILL	WV	25901	
WOAY-TV	P. O. BOX 251	OAK HILL	WV	25901	
WOWK-TV	P. O. BOX 13	HUNTINGTON	WV	25706	
WPDK-AM/FM	BOX 1920	CLARKSBURG	WV	26301	
WPMW-FM	14 MORAN AVENUE	MULLENS	WV	25882	
WPQZ-AM	130 S. 2ND STREET	CLARKSBURG	WV	26301	
WQBE-AM/FM	4250 WASHINGTON ST. W.	CHARLESTON	WV	25313	
WRNR-AM	P. O. BOX 709	MARTINSBURG	WV	25401	
WRON-AM/FM	276 SENECA TRAIL NORTH	RONCEVERTE	WV	24970	
WRRR-FM	BOX 374, GREENS RUN ROAD	ST. MARYS	WV	26170	
WSAZ-TV	645 FIFTH AVENUE	HUNTINGTON	WV	25701	
WSCW-AM/WJYP-FM	605 D ST./PO BOX 8718	SO. CHARLESTON	WV	25303	
WSGB-AM/WCKA-FM	189A MAIN ST.	SUTTON	WV	26601	
WSLW-AM	P. O. BOX 610	WHITE SULPHUR SPRINGS	WV	24986	
WSWP-TV	1900 WASHINGTON ST.E.	CHARLESTON	WV	25305	
WSWP-TV	P. O. BOX AH	BECKLEY	WV	25801	
WTAP-TV	121 W. SEVENTH	PARKERSBURG	WV	26101	
WTBZ-AM/FM	P. O. BOX 2	GRAFTON	WV	26354	
WTCR-AM	RADIO PARK ROAD	CATLETTSBURG	KY	41129	
WTCR-FM	P. O. BOX 2186	HUNTINGTON	WV	25722	
WTCS-AM STEREO	RADIO PARK, LEONARD AVE.	FAIRMONT	WV	26554	
WTIP-AM/WVSR-FM	817 SUNCREST PLACE	SO. CHARLESTON	WV	25303	
WTNJ-FM	609 MAIN STREET	MOUNT HOPE	WV	25880	
WTRF-TV	96 16TH STREET	WHEELING	WV	26003	
WVAH-TV	23 BROADCAST PLAZA	HURRICANE	WV	25526	
WVAR-AM	BOX 349	RICHWOOD	WV	26261	
WVBC-FM	BETHANY COLLEGE	BETHANY	WV	26032	
WVKV-AM	BOX 1080	HURRICANE	WV	25526	
WVMR-AM		DUNMORE	WV	24934	
WVOM-AM/FM	SEARS BLDG.	LOGAN	WV	25601	
WVPB-FM	1900 WASHINGTON ST. E.	CHARLESTON	WV	25305	
WVPN-FM	1900 WASH.ST.E.	CHARLESTON	WV	25305	
WVRC-AM	106 RADIO ST.	SPENCER	WV	25276	
WVVA-TV	PO.BOX 1930/RT.460 BYPASS	BLUEFIELD	WV	24701	
WVWC-FM	WEST VIRGINIA WESLEYAN	BUCKHANNON	WV	26201	

MAILING LIST

NAME	ADDRESS	CITY	STATE	ZIP	REMARKS
WWBB-AM	ONE BROADCAST PLACE	MADISON	WV	25130	
WWNR-AM	P. O. BOX AE	BECKLEY	WV	25802	
WWVA-AM/WOVK-FM	CAPITOL MUSIC HALL	WHEELING	WV	26003	
WWVU-FM	MOUNTAINLAIR, WVU	MORGANTOWN	WV	26505	
WXEE-AM	P. O. BOX 1340	WELCH	WV	24801	
WXIL-FM	P.O. BOX 1228	PARKERSBURG	WV	26102	
WXIT-AM	136 HIGH STREET	CHARLESTON	WV	25311	
WXVA-AM/FM	P. O. BOX 700	CHARLES TOWN	WV	25414	
WYKM-AM	BOX 627, RT. 60	RUPERT	WV	25984	
WZMM-AM/FM	98 16TH STREET	WHEELING	WV	26003	

Jack Harden, President
WV Professional Firefighters Association
Beckley Fire Dept.
P. O. Drawer AJ
Beckley, WV 25801

WV Society of Architects
405 Capitol Street
Charleston, WV 25301

WV Society of Professional Engineers
179 Summers Street
Charleston, WV 25301

Dale L. Clayton, President
WV State Fire Chiefs Association
Rt. 3, Box 431
Fairmont, WV 26554

John Beaty, President
WV Firemen's Association
120 E. Robinson Street
Paden City, WV 26159

Paul Bragg, President
WV Professional Fire Chief's Assoc.
105 Julianna Street
Beckley, WV 25801

Charles R. Sargent, President
WV Code Officials Association
454 Blake Road
Nitro, WV 25143

SUMMARY

The West Virginia State Fire Commission promulgates the State Fire Code in accordance with West Virginia Code, Chapter 29, Article 3, Section 5. The purpose of this code is to establish the minimum requirements for the safeguarding of life and property from the hazards of fire and explosion. Amendments to the State Fire Code include the adoption of the 1997 National Fire Codes as promulgated and miscellaneous requirements for fire safety.

**STATEMENT
OF
CIRCUMSTANCES**

STATE FIRE CODE

STATEMENT OF CIRCUMSTANCES

The State Fire Code provides the latest technology in fire safety designs and installations. This proposed rule adopts the 1997 edition of the National Fire Codes which are referenced by federal and state governments for reducing property loss and loss of life from the hazards of fire and explosion.

The purpose of updating the State Fire Code will provide the design professionals with different options to achieve a level of fire safety within different occupancies. The proposed rule also provides for miscellaneous fire requirements not specifically addressed by the National Codes. The State Fire Commission is authorized by Chapter 29, Article 3, Section 5 of the West Virginia Code to establish safe practices embodied in widely recognized standards of good practice for fire safety.

FISCAL NOTE

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: State Fire Code

Type of Rule: **Legislative** **Interpretive** **Procedural**

Agency State Fire Commission

Address 1207 Quarrier Street, 2nd Floor
Charleston, WV 25301
Telephone: (304) 558-2191

1. Effect of Proposed Rule

	ANNUAL FISCAL YEAR				
	INCREASE	DECREASE	CURRENT	NEXT	THEREAFTER
<u>ESTIMATED TOTAL COST</u>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
PERSONAL SERVICES	0	0	0	0	0
CURRENT EXPENSE	0	0	0	0	0
REPAIRS & ALTERNATIONS	0	0	0	0	0
EQUIPMENT	0	0	0	0	0
OTHER	0	0	0	0	0

2. Explanation of above estimates:

Non-applicable

3. Objectives of these rules:

The objective of this rule provides for up-to-date technology in fire safety to reduce the loss of life and property from fires or explosions. This rule will adopt the National Fire Codes which are used by the Federal and State government, as well as international recognition, and provides the best viable fire safety resources with today's knowledge which provides for a reasonable level of safety for all occupancies.

Rule Title: State Fire Code

4. **Explanation of Overall Economic Impact of Proposed Rule.**

A. Economic Impact on State Government. This proposed rule will provide the State Fire Commission with updated technology on fire safety procedures and requirements to reduce fire loss. The initial cost for filing the National Fire Codes has been waived by the National Fire Protection Association, therefore, there is no cost to the State for filing this rule.

B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups of Citizens.

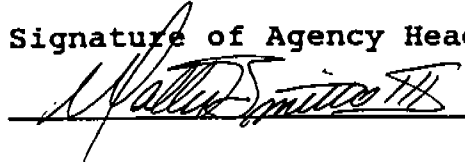
The utilization of the 1997 National Fire Codes will permit all individuals to use the latest technology available. The use of this technology will provide the necessary fire safety features for the reduction of fire loss. Requests for updating the code have been made by architects, business & industry.

C. Economic Impact on Citizens/Public at Large.

The current State Fire Code uses the 1994 National Fire Codes. With the adoption of the 1997 National Fire Codes, a more viable program for enhancing fire safety can be achieved through inspection and public information programs.

Date: June 10, 1997

Signature of Agency Head or Authorized Representative

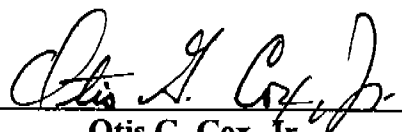


STATE FIRE CODE

**WEST VIRGINIA
STATE FIRE CODE**

**Rules
of the West Virginia
State Fire Commission**

Approved by Secretary, Department of Military Affairs and Public Safety



Otis G. Cox, Jr.

June 10, 1997

Date

Approved by State Fire Commission



Bill L. Spencer, Chairman

June 10, 1997

Date

**STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301**

WEST VIRGINIA STATE FIRE CODE

Rules of the West Virginia State Fire Commission

SERIES I

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FILED

TITLE 87
LEGISLATIVE RULE
FIRE COMMISSION

Jul 24 10 42 AM '97

SERIES 1
FIRE CODE

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

§87-1-1. General.

1.1. Scope. -- This rule establishes the State Fire Code for the safeguarding of life and property from the hazards of fire and explosion.

1.2. Authority. -- This legislative rule is issued under authority of W. Va. Code §29-3-5 (1931, as amended), and pursuant to the provisions of W. Va. Code, Chapter 29A.

1.3. Filing Date. -- ~~March 29, 1995~~

1.4. Effective Date. -- ~~April 1, 1995~~

1.5. Exemption. -- This State Fire Code has no application to personal care homes caring for three or less patients or buildings used wholly as dwelling houses for no more than two families and has no application to farm structures. Provided; however, that farm structures (1) used for group sleeping accommodations for farm workers or (2) used for educational, health care, assembly or penal detention/correctional occupancy are not exempt from the requirements of this State Fire Code.

1.6. Incorporation of Other Documents. -- This State Fire Code does not include a reprinting of all the requirements imposed by statute or by the incorporation of various National Standards and Codes cited in Section 4 of this rule. For ascertaining these additional standards and requirements it is necessary to make reference to these other documents.

§87-1-2. Reporting of Fire Incidences by Fire Departments Brigades, and Companies.

Any organized public fire brigade, department or company shall report every fire and non-fire incident(s) to the State Fire Marshal on the forms provided by the State Fire Marshal. Every fire and non-fire incident response shall be reported within thirty (30) days after the date of the incident. EXCEPTION: Any fire or explosion involving human fatality, property damage in excess of \$250,000, or arson or suspected arson, shall be reported immediately.

§87-1-3. Unvented Heaters.

All unvented fuel fired heaters are prohibited for all occupancies except one (1) and two (2) family dwellings.

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Series I**

Section 4.1

§87-1-4. National Standards and Codes.

4.1. Incorporated of National Standards and Codes - The standards and requirements as set out and established by the 1994 7 edition of "The National Fire Codes" published by the National Fire Protection Association, [The National Fire Protection Association (NFPA) organized in 1896 is an independent, voluntary membership, nonprofit (tax-exempt) organization and has as its mission the safeguarding of people, their property, and the environment from destructive fire, using scientific and engineering techniques and education] and the State Building Code, ~~but not including standards and requirements directed to the operation of local fire departments, and NFPA 101M A and Chapters 22 and 23 of NFPA 101~~ and have the same force and effect as if set out verbatim in this rule and are hereby adopted and promulgated by the State Fire Commission as a part of the State Fire Code. The State Fire Marshal shall make use of the standards and requirements within the publications in all matters coming under his or her jurisdiction. A copy of The National Fire Codes has been filed with the Secretary of State and a copy of the Table of Contents of said publication is included in Section 4.5 of this rule. Information regarding the purchase of The National Fire Codes (or separate volumes thereof) may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

4.2. National Standards and Codes - Modification of Fireworks Display Regulations. The "Regulations of the State Fire Marshal For The Display of Fireworks" as contained in N.F.P.A. 1123 and 1126 of the 19947 edition of The National Fire Codes have the same force and effect and shall control the same as if set out verbatim in this rule and are hereby adopted and promulgated by the State Fire Commission as a part of the State Fire Code, but with numbered paragraphs A and B changed to read as follows:

A. Upon receipt of such application at least 15 days in advance of the date set for this display, the Chief of the Fire Department shall make, or cause to be made an investigation of the site of the proposed display for the purpose of determining whether the provisions of this rule are complied with in the case of the particular display. He or she shall confer with the Chief of the Police Department, or the County Sheriff if the site for the proposed display is to be outside the limits of a municipality, about the application and whether issuance of a permit would be consistent with public safety. If a display is properly lawful, the Chief of Police (or the County Sheriff, if the site of the proposed display is outside the limits of a municipality) and the Chief of Fire Department shall together endorse the application, stating that they approve the display as being in conformance with all parts of the law and with this rule. Failure to approve the application by either the Fire Chief or Police Chief (or County Sheriff, as the case might be) is sufficient cause for the State Fire Marshal to deny a permit.

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Section 4.2

B. The application, following endorsement by the Chiefs of the Fire and Police Departments (or County Sheriff, as the case might be), shall be sent to the State Fire Marshal who shall then, upon receipt of evidence of financial responsibility as required by law in such cases, issue a nontransferable permit authorizing the display.

These changes to the N.F.P.A. 1123 and 1126 are made to make certain it is understood that the County Sheriff (rather than City Police Chief) is the local police authority referred to in W. Va. Code §29-3-24 in those situations where the proposed site of a fireworks display is outside the limits of a municipality.

4.3. National Standards and Codes, Table of Contents

(1) National Fire Codes - Published by National Fire Protection Association, pages 4-5:

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61	Agricultural and Food Products Facilities—1995	Vol 3	91	Exhaust Systems for Air Conveying of Materials—1995	Vol 4
90A	Air Conditioning and Ventilating Systems—1996	Vol 4	69	Explosion Prevention Systems—1997	Vol 3
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408	Aircraft Hand Portable Fire Extinguishers—1994	Vol 5	705	Field Flame Test for Textiles and Films—1993	Vol 11
409	Aircraft Hangars—1995	Vol 5	921	Fire and Explosion Investigations—1995	Vol 12
410	Aircraft Maintenance—1994	Vol 5	262	Fire and Smoke Characteristics of Wire and Cables, Method of Test for—1994	Vol 6
403	Aircraft Rescue, Fire Fighting at Airports—1993	Vol 5	72	Fire Alarm Code, National—1996	Vol 4
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402	Aircraft Rescue and Fire Fighting Operations—1996	Vol 11	1914	Fire Department Aerial Devices, Testing—1991	Vol 8
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8504	Atmospheric Fluidized-Bed Boiler Operation—1996	Vol 9	1404	Fire Department Self-Contained Breathing Apparatus Program—1996	Vol 8
30A	Automotive and Marine Service Station Code—1996	Vol 2	1002	Fire Department Vehicle Driver/Operator Qualifications—1993	Vol 7
1901	Automotive Fire Apparatus—1996	Vol 8	80	Fire Doors and Fire Windows—1995	Vol 4
231E	Baked Cotton Storage—1996	Vol 10	10	Fire Extinguishers, Portable—1994	Vol 1
8501	Boiler Operation, Single Burner—1992	Vol 9	10R	Fire Extinguishers, Portable, in Family Dwellings—1992	Vol 10
251	Building Construction and Materials, Fire Tests of—1995	Vol 6	2001	Fire Extinguishing Systems, Clean Agent—1996	Vol 9
220	Building Construction, Standard Types of—1995	Vol 5	1001	Fire Fighting Professional Qualifications—1992	Vol 7
1402	Building Fire Service Training Centers—1997	Vol 12	1961	Fire Hose—1997	Vol 9
703	Building Materials, Fire Retardant Coatings—1995	Vol 7	1962	Fire Hose, Care, Use and Service Testing—1993	Vol 9
259	Building Materials, Test Method for Potential Heat—1993	Vol 6	1963	Fire Hose Connections—1993	Vol 9
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49	Chemicals Data, Hazardous—1994	Vol 10	1	Fire Prevention Code—1997	Vol 1
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261	Cigarette Ignition Resistance, Upholstered Furniture Material Assemblies—1994	Vol 6	170	Fire Safety Symbols—1996	Vol 5
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**Fire Commission
Legislative Rules
Series I**

Section 5.1

§87-1-5. Sprinkler Protection and Area Limitations.

Approved automatic sprinkler systems in accordance with the applicable NFPA Standard for Sprinkler Systems, will be installed in all new buildings, used for any occupancies, exceeding the areas in the table at the end of this rule.

EXCEPTION: Sprinkler protection for occupancies covered by Section 6 of this rule are required to provide sprinkler protection.

Type of Construction	BUILDING HEIGHT				
	1 Story	2 Story	More than 2 stories and up to 40 ft.	More than 40 feet	More than 75 feet
Type I					
443 Fire Resistive	40,000	40,000	10,000	Sec.10-High Rise	Sec.10-High Rise
332 Fire Resistive	40,000	30,000	10,000	Sec.10-High Rise	Sec.10-High Rise
Type II					
222 Protected Non-Com.	30,000	20,000	8,000	Sec.10-High Rise	Sec.10-High Rise
111 Protected Limited Combustible	30,000	15,000	5,000	Sec.10-High Rise	Sec.10-High Rise
000 Unprotected Limited Unprotected Non-Com.	10,000	<u>6</u> -6,000	All Areas Require Sprinklers	NOT PERMITTED	NOT PERMITTED
Type III					
211 Protected Ordinary	9,000	6,000	All Areas Require Sprinklers	NOT PERMITTED	NOT PERMITTED
200 Non-Protected Ordinary	7,000	4,000	All Areas Require Sprinklers	NOT PERMITTED	NOT PERMITTED
Type IV					
2HH Heavy Timber	9,000	6,000	All areas Require Sprinklers	NOT PERMITTED	NOT PERMITTED
Type V					
111 Protected Wood Frame	7,000	4,000	All Areas Require Sprinklers	NOT PERMITTED	NOT PERMITTED
000 Non-Protected Wood Frame	5,000	3,000	NOT PERMITTED	NOT PERMITTED	NOT PERMITTED

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Notes to Table:

(1) The word "area" means that area enclosed by exterior or foundation walls, fire barrier walls, or a combination of exterior or foundation walls. A fire barrier wall is a continuous vertical membrane designed and constructed with a fire resistance rating of two (2) hours to limit the spread of fire and smoke. Fire barriers shall have protected openings shall be constructed in accordance with NFPA 221, Standard for Fire Walls and Fire Barrier Walls, with a minimum of a 2 hour fire rating. Buildings shall only be separated by one (1) two hour fire barrier wall and areas shall be divided as equally as possible.

(2) The phrase "not permitted" means that buildings of these heights are not permitted for the type of construction indicated.

(3) The phrase "Section 10-High Rise" means that the building shall also comply with Section 10 of these Rules and Regulations.

(4) Types of building construction indicated in the chart are located in NFPA 220, Standard on Types of Building Construction.

(5) Protection of Structural members in Type I and Type II construction: Columns, girders, trusses, beams, lintels, or other structural members that are required to have a fire resistance rating and that support more than two floors or one floor and roof, or support a bearing wall or a nonbearing wall more than two stories high, shall be individually protected on all sides for their length or height with materials having the required fire resistance rating. All other structural members required to have a fire resistance rating may be protected by individual encasement, by a membrane or ceiling protection which is part of an approved assembly which meets the required fire resistance rating, or by a combination of both.

§87-1-6. Sprinkler Protection (Certain Occupancies).

All nursing, convalescent, old age, custodial care, and long term or extended care homes or institutions, existing and new, regardless of the type of construction, shall be provided with a complete automatic sprinkler protection in accordance with Standard 13 contained within the National Fire Codes and incorporated by reference in Section 4.1 of this rule.

EXCEPTION: Homes caring for not more than three patients.

§87-1-7. Carpet Used as Floor Covering.

7.1. Flammability Requirements for Carpet Used As Floor Covering

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In institutional, health care, educational and penal occupancies, carpet shall meet a minimum value of 0.45 watts per square centimeter in all corridors and exits. Carpet in all other areas of the above shall meet a minimum value of 0.22 watts per square centimeter.

Flammability requirements for carpet used as floor covering in all other occupancies shall meet a minimum value of 0.22 watts per square centimeter in all corridors and exits.

Any pad used under the carpet shall meet the minimum class of the carpet installed.

The values shall be determined by NFPA 253, Critical Radiant Flux of Floor Covering Systems.

7.2. Smoke Generation Properties of Carpet Used as Floor Covering.

In all occupancies smoke shall not exceed a maximum value of $D_m=450$ (flaming mode).

The value shall be determined by ASTM E-662, Specific Optical Density of Smoke Generation by Solid Materials.

All test data for determining the flammability and smoke properties of carpets shall be conducted by a nationally recognized laboratory as certified by the National Voluntary Laboratory Accreditation Program.

EXCEPTION: Where an approved, automatic sprinkler system is installed and the all floors is are non-combustible. Class II carpet shall be permitted in any location where Class I is required. Where an approved automatic sprinkler system is installed and the all floors are is noncombustible and Class II carpet is permitted, no rating is required.

§87-1-8. Maintenance of Fire Hazard; Order for Correcting Condition, Removal of Material, Repair, Demolition, etc.; Order to Contain Notice to Comply and Right to Appeal.

Whenever the State Fire Marshal, by and through persons working under his or her direction, determines (based upon the State Fire Code and/or on the experience and knowledge applied in the operation of his or her office) (1) that any building or structure has been constructed, altered, or repaired in a manner violating the State Fire Code as promulgated prior to the commencement of such construction, alterations, or repairs, or (2) that any building or structure is being maintained or used in such a way as to endanger life or property from the hazards of fire or explosion, or (3) that any building or other structure or property of any kind, which, for want of repairs, or by reason of its age, dilapidated, or abandoned condition or for any other reason constitutes a fire hazards and is located or constructed so as to constitute a danger to other buildings, property, persons, life, or limb, or (4) that in any building or upon any premises there is located any combustible, flammable, or explosive

substance or material or other condition dangerous to the safety of persons occupying the building or premises and adjacent premises and property, then the State Fire Marshal shall order such condition or thing to be corrected, or combustible, flammable or explosive, items to be removed, or such building or buildings to be repaired, closed to occupants, or removed, as required by the circumstances. Such order shall be promptly complied with by the owner, agent, occupant, and lessee of such premises, place, property, or thing. Any order may be expressed in the alternative, e.g. allowing repair but on the failure to repair requiring demolition. Any such order by the State Fire Marshal which concludes that a fire hazard exists, stating what repairs, and/or demolition, must be accomplished, and that compliance must be completed within thirty (30) days of issuance, and in the event of noncompliance, the State Fire Marshal is authorized by statute to enter into and upon the premises affected by the order and cause the building, structure, premises, or thing to be repaired, torn down, materials removed, and all dangerous conditions to be remedied (as the case may be) at the expense of the owner, and shall advise that the order can be contested by entering an appeal to the State Fire Commission as outlined in Section 13 of this Rule.

§87-1-9. Interference with Fire Protection Equipment.

No person shall render any portable or fixed fire extinguishing system or device or any fire warning system inoperative or inaccessible except as may be necessary during emergencies, maintenance, drills or prescribed testing.

§87-1-10. High Rise Buildings - Fire Safety Standards and Requirements.

10.1. General - All new buildings or structures more than forty (40) feet in height, measured from the lowest grade level of fire department vehicle access to the floor of the highest normally occupied space used for human occupancy of the structure, are subject to this rule for high rise buildings. This rule shall not nullify or interfere with existing city high rise ordinances or local laws previously adopted prior to September 8, 1975 relative to this subject. **EXCEPTION:** Industrial occupancies not occupied as business offices are exempted from this section.

10.2. Addition of Floors to Existing Buildings

Whenever floors are added to an existing building, which previously was not a high rise, causing building to become a high rise, the building shall comply with this rule.

10.3. Automatic Fire Extinguishing Systems & Standpipe Systems - Any building or structure as defined in Subsections 10.1 or 10.2 and used for human occupancy shall have an approved automatic fire extinguishing system throughout the entire building and standpipe systems installed in accordance with The National Fire Codes, imposed by Section 4 of this Rule. **NOTE: Class I Manual Standpipe Systems may be used up to 75 feet as per NFPA 14, Standard for Standpipe Systems.**

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10.4. Fire Alarm System - The fire alarm system shall conform to the rules imposed by Section 4 and Section 11 of this Rule.

10.5. Fire Department Voice Communication System - Any high rise building or structure used for human occupancy that is seventy-five (75) feet in height or greater as measured ~~from the lowest grade level to the floor of the highest normally occupied space used for human occupancy~~ in accordance with Section 10.01 shall have an approved electrically supervised fire department voice communication system. The Fire Department Voice Communication System shall be located at each floor level of stair enclosures, elevator lobbies, penthouse and in any elevator designated for fire department use. This system shall be a telephone jack system unless specifically approved otherwise by the designated fire authority having jurisdiction.

10.6. High Rise Central Control Station - In every High Rise as defined in Subsections 10.1 and 10.2, a central control station for Fire Department operations shall be provided in a location approved by the State Fire Marshal or the designated local fire authority. The Central Control Station shall contain: (1) the fire department voice communication system panel when required, (2) fire detection and alarm system panels, (3) status indicators for the HVAC, Smoke Control System, fire pumps and emergency generator and a (4) telephone approved by designated fire authority having jurisdiction. Emergency lighting shall be provided at the Central Control Station.

10.7. Emergency Power - A permanently installed emergency power generation system conforming to The National Fire Codes imposed by Section 4 of Rule shall be provided in every high rise building 75 feet in height or greater, as measured ~~from the lowest grade level to the floor of the floor of the highest normally occupied space used for human occupancy~~ in accordance with Section 10.01.

All power, lighting, signal, and communication facilities, required by this rule or otherwise, shall be transferable automatically to the emergency power system.

The emergency system shall be of sufficient capacity to provide service for, but not limited to, the following:

- (a) The Fire Alarm System
- (b) Exit & Other Emergency Lighting
- (c) Fire Protection Equipment
- (d) The Smoke Management System
- (e) The Fire Department Elevator
- (f) The Fire Department Voice Communication System
- (g) The Fire Pumps

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10.8. Smoke Management - In all high rise buildings as defined in Subsections 10.1 and 10.2 smoke management system designed in accordance with NFPA 92A, Smoke-Control Systems, and 92B, Smoke Management Systems in Malls, Atria and Large Areas, shall be provided and acceptable to the authority having jurisdiction.

10.9. Floor Designation - All stairway doors (both on the stairway and entrance side) shall indicate the floors by number. The number shall be at least 6" block letters in a contrasting color.

§87-1-11. Fire Alarm System.

11.1. General Requirements for All Occupancies

(1) The requirements of NFPA 101, Life Safety Code, Chapter 7, Section 6 as adopted by this Rule shall apply in addition to the following requirements.

(12) All fire alarm systems including all components shall be electrically supervised. Components include pull stations, automatic detection, sounding devices, flow switches, tamper switches and main panel.

(23) All fire alarm systems shall be tied in ahead of the main power disconnect, unless a secondary power source is provided.

(34) All fire alarm systems shall be in accordance with The National Fire Codes, imposed by Section 4 of this rule. (NOTE: NFPA 70, National Electrical Code, and NFPA 72, National Fire Alarm Code)

(45) Sprinkler System(s) installed - The OS & Y, P.I.V. and other Control Valves shall be electrically supervised and tied into the trouble/supervisory side of the fire alarm control panel.

(56) Sprinkler System(s) shall be tied in so water flow will activate the general fire alarm sounding device(s).

(67) Flow and/or pressure switches shall be annunciated separately on the main fire alarm control panel.

(78) All Health Care, and Detention and Correctional Occupancies shall be tied into a fire department or a communication center responsible for receiving emergency calls with 24-hour supervision.

(89) Heating, Ventilation, Air Conditioning Systems (HVAC)

(a) All heating, ventilation, and air conditioning systems greater than 2000 CFM and less than 15,000 CFM shall have a duct type smoke detector in the return air duct or plenum for automatic shut down, to close main fan dampers and to sound general fire alarm when activated.

(b) All heating, ventilation, air conditioning systems greater than 15,000 CFM shall have duct type smoke detectors installed in both supply and return air duct to automatically shut down, close main fan dampers and to sound a general fire alarm when activated.

(c) Health Care, Detention/Correctional occupancies and high rise buildings duct detectors shall be zoned to indicate the specific air handling unit at the main fire alarm panel.

(d) 100% utilization of outside air will not require duct detector(s).

(e) HVAC Systems used as part of the smoke management systems are exempt from this subsection.

(910) Audible alarm indicating devices shall be of such character and so distributed as to be effectively heard above the ambient noise level obtained under normal conditions of occupancy. Audible alarm indicating devices shall produce signals that are distinctive from audible signals used for other purposes in the same building.

Visual signal devices shall be provided in all new fire alarm systems.

Pre-recorded or live voice evacuation instructions to occupants are permitted. Pre-recorded instructions shall be preceded by not less than 5 seconds or more than 10 seconds of a continuous alerting signal. Upon completion or failure of pre-recorded instructions, the fire alarm evacuation signal shall sound. Pre-recorded instructions shall be repeated two or more times. Live voice instructions shall be permitted to interrupt the pre-recorded message or the fire alarm evacuation signal. Audible and visual fire alarm devices shall be used only for fire alarm system.

(1011) Manual pull stations shall be located no greater than 200 feet from each other and at all exits. Manual pull stations shall be of the same general operational type. (See specific subsections of this section for additional occupancy requirements.

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Section 11.01

(~~11~~12) Thermal detectors are required in the following areas in all occupancies requiring a fire alarm system and as listed or identified in NFPA 101, The Life Safety Code

AREAS	TYPE OF DETECTORS
(a) Elevator Shafts	Fixed Temperature
(b) Attic & Cockloft Spaces	Fixed Temperature
(c) Storage Rooms	Rate of Rise
(d) Furnace or boiler rooms	Fixed Temperature
(e) Janitor Closets	Rate of Rise
(f) Kitchens	Fixed Temperature
(g) Laboratories, Home Economics, Woodworking Shops, Auto Shops, Utility Rooms, & Locker Rooms	Rate of Rise

EXCEPTION: Thermal detectors are not required in areas provided with sprinkler protection or dwelling units of apartments.

(~~12~~13) Smoke detectors are required in the following areas in all occupancies requiring fire alarm systems:

(A) Rooms and/or areas dedicated for the location of electrical distribution panels or transformers.

(B) Stages/Platforms

(C) On each side of required smoke partition doors.

Smoke detectors where required by the occupancy shall be placed a maximum of 15 feet from ends of corridors or walls and 30 feet on center and in rooms open to the corridors. Variance with these requirements must have submission of technical data to justify exceeding these distance requirements.

(~~13~~14) A building or structure being used for more than one occupancy must comply with the fire alarm system requirements of the most stringent occupancy for that building or structure.

(~~14~~15) Hood suppression systems shall be connected to the Fire Alarm System.

(16) A pre-signal system is not permitted.

11.2. Requirements for Educational/Day Care Occupancy

(1) A fire alarm system is required in every educational occupancy, and must meet the requirements and standards as provided in this section. Educational occupancies are defined in NFPA 101, The Life Safety Code. ~~EXCEPTION: One or two~~ A classroom buildings of less than 2500 sq. ft. gross floor area with direct exiting to the outside from each classroom.

(2) The general requirements shall be complied with in all educational occupancies as if herein restated verbatim.

(3) Open Plan Classroom Concepts require a complete smoke detection system throughout the facility.

(4) Day Care Centers located in buildings other than educational facilities shall have smoke detectors installed on the ceilings of each story in front of the doors to the stairways and at no greater than 30 feet spacing in the corridors of all floors occupied by the center.

(4a) Group Day Cares require hardwired smoke detectors in sleeping rooms and corridors. Audio visual warning devices are required if hearing impaired individuals are in the facility. In mixed occupancies when exiting requires the use of a common corridor, an electrically supervised fire alarm system shall be installed.

(5) An annunciator panel or fire alarm control panel is to be readily accessible to local fire department personnel.

(6) Rate of rise thermal detectors are required in all Rest Rooms ~~having three (3) or more fixtures.~~ Exception: Existing Buildings.

(7) Smoke detectors shall be installed in all corridors, except in a single story building with direct exiting to the exterior from every normally student occupied room via a door.

11.3. Requirements for Assembly Occupancy

- (1) A fire alarm system is required in every place of assembly where:
- (a) Occupancy is subject to 300 or more occupants, or
 - (b) Occupancy is subject to 100 or more occupants above or below level of exit discharge,
or
 - (c) The building is two (2) or more stories in height above level of exit discharge, or two (2) or more stories below level of exit discharge.

(d) Theaters with more than one audience-viewing room.

Assembly occupancies are as defined in the Life Safety Code.

(2) The General Requirements shall be complied with in all places of assembly as if herein restated verbatim.

(3) Annunciator panel and/or fire alarm control panel shall be readily accessible to fire department personnel.

(4) Theater(s) and auditorium(s) are required to provide sounding audible device(s). House lights in auditoriums and theaters shall be activated by the fire alarm system.

11.4. Requirements for Health Care Occupancy

(1) A fire alarm system is required in every Health Care occupancy, and such a system must meet the requirements and standards of this rule. Health Care occupancies are defined in NFPA 101, The Life Safety Code.

(2) The general requirements of this rule shall be complied with in all health care occupancies as if herein restated verbatim.

(3) An approved automatic smoke detection system shall be installed in all corridors.

(4) Manual pull stations shall be installed every 50 feet throughout the facility in patient room areas starting at the end of all corridors. All other manual pull stations shall be placed in accordance with general requirements of this rule.

(5) Fire alarm systems shall have annunciators located at all 24 hour nurse's stations, the telephone switchboard, and at the main location of the fire department's entry.

11.5. Requirements for Detention and Correctional Occupancies

(1) A fire alarm system is required in every Detention and Correctional occupancy and such a system must meet the requirements and standards as provided in this rule. Detention and Correction occupancies are defined in NFPA 101, The Life Safety Code.

(2) The general requirements shall be complied with in all Detention and Correctional occupancies as if herein restated verbatim.

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(3) The annunciator panel or fire alarm control panel is to be readily accessible to fire department personnel and shall also be provided in the jail control center.

(4) Manual pull stations shall be provided as set forth in general requirements of this rule. EXCEPTION: Manual pull stations may be of security type in detention sections.

(5) Smoke detectors shall be installed in all corridors. If no corridor exists, installation shall be at the highest point of the cell area(s).

(6) Dormitory style facilities shall comply with Residential requirements.

11.6. Requirements for Residential Occupancy

(1) A fire alarm system is required for each of the herein enumerated groups of residential buildings, and such system must meet the requirements and standards provided. A residential building is as defined in NFPA 101, The Life Safety Code.

EXCEPTION: Lodging and Rooming Houses protected throughout with a sprinkler system shall be provided with interconnected hardwired smoke detectors per NFPA 72, The National Fire Alarm Code, Chapter 2.

(2) These general requirements shall be complied with in all residential occupancies as if herein restated verbatim.

(3) Residential occupancies are designated in two Groups, A and B. These designations or groups must comply with the stated requirements, as follows:

GROUPS

- A. Hotel/Motels, Dormitories, Lodging and Rooming Houses
- B. Apartments

REQUIREMENTS

- A. Hotels/Motels/Lodging or Rooming and/or Boarding Houses, Dormitories

(1) Smoke detectors shall be placed a maximum of 15 feet from ends of corridors or walls and located 30 feet on center throughout all inside corridors. Smoke detectors shall be placed a maximum of 15 feet from ends of walls and 30 feet on center in open bay sleeping areas.

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(2) The annunciator panel or fire alarm control panel shall be readily accessible to fire department personnel and also shall be located at the registration desk.

(3) All sleeping rooms and living areas in suites shall have an approved self-contained smoke detector(s) hard wired in accordance with NFPA 742, Household Fire Warning Equipment, National Fire Alarm Code.

(4) Motel(s)/Hotel(s) having direct exterior exiting shall have manual pull station(s) every 75 feet located on exterior walls. (Minimum requirement shall be one): Exception: One story motels with 16 or less sleeping rooms having direct exiting to the exterior are not required to be provided with a fire alarm system.

B. Apartments

(1) Apartment buildings having 12 or more units or 4 or more stories in height shall have a fire alarm system. Smoke detectors shall be placed a maximum of 15 feet from the ends of corridors and walls and 30 feet on centers.

(2) All existing apartments shall have approved self-contained smoke detector(s) located at entrance(s) to bedrooms.

(3) All new apartments shall have an approved self-contained smoke detector(s) hard wired in accordance with NFPA 742, Household Fire Warning Equipment, National Fire Alarm Code.

(4) All new apartment building having 12 or more units or 4 or more stories in height with direct exiting to the exterior shall have manual pull stations every 75 feet on the exterior wall. Minimum requirement shall be one.

11.7. Requirements for Mercantile Occupancy

(1) A fire alarm system is required in every mercantile occupancy over 3,000 square feet, and such system must meet the requirements and standards as provided herein. Mercantile occupancies are as defined in NFPA 101, the Life Safety Code.

(2) The general requirements will be complied with in all mercantile occupancies as if herein restated verbatim.

(3) If an existing Class B mercantile occupancy has a complete and approved sprinkler protection system, a fire alarm system will not be required.

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11.8. Requirements for Business Occupancy

(1) A fire alarm system is required in every business occupancy where:

(a) Occupancy is subject to 300 or more total occupants, or

(b) Occupancy is subject to 100 or more occupants above or below level of exit discharge,
or

(c) Building two (2) or more stories in height above level of exit discharge or two (2) or more stories below the level of exit discharge. Business occupancy is defined in NFPA 101, The Life Safety Code.

(2) The general requirements shall be complied with in all business occupancies as if herein restated verbatim.

11.9. Requirements for Industrial Occupancy

A fire alarm system is required in all Industrial Occupancies as required in The National Fire Codes (NFPA 101, Life Safety Code) referred to in Section 4 of this rule.

11.10. Requirements for Storage Occupancy

A fire alarm system is required in all Storage Occupancies as required in The National Fire Codes (NFPA 101, Life Safety Code) referred to in Section 4 of this rule.

§87-1-12. Exit Inspections and Public Life Safety Announcements.

12.1. Inspection of Exits. Not more than ninety (90) minutes prior to the scheduled commencement of any noncontinuous activity, event, performance, show, meeting, function, or other occasion for which persons will gather at a Class A or B place of assembly (as defined in NFPA 101, The Life Safety Code) the owner (or his or her designee pursuant to written authority, instructions, or procedures) shall inspect every required exit, way of approach thereto, and way of departure therefrom. If such inspection reveals that any required means of egress is obstructed, inaccessible, locked, fastened, or otherwise unsuited for immediate use, the scheduled program shall not begin, nor shall admittance to the place of assembly be permitted, until necessary corrective action has been completed.

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12.2. Announcements. Immediately prior to the start of a program, the owner or his or her authorized agent shall orally notify all attendees concerning the location of the exit(s) to be used in case of fire or other emergency.

12.3. Records. Accurate record of all inspections, corrections, and notifications made pursuant to this chapter shall be kept and retained for at least two (2) years in the offices of the respective building owners. The records shall contain:

(a) A brief description of each activity, event, performance, etc., including date, time, and location;

(b) the name and signature of the person who performed each requirement of this chapter; and

(c) the date and time when each requirement was performed.

12.4. Alternatives. In cases of practical difficulty or undue hardship, or in which compliance would not significantly increase life safety, the State Fire Marshal may approve or accept alternative means of accomplishing the objectives of this section.

§87-1-13. Orders and Decisions of the State Fire Marshal; and Appeals and Procedure for Appeals from such Orders or Decisions.

Any person aggrieved by an order or final written decision of the State Fire Marshal based upon or made in the course of the administration or enforcement of the provisions of W. Va. Code Chapter 29, Article 3 or made pursuant to these rule, and desiring to contest such order or written decision may file an appeal from such order or written decision with the State Fire Commission. Preservation of the right to an appeal and the procedure for the contested case is governed by this section and by W. Va. Code §Chapter 29, Article 3, and Chapter 29A.

13.1. State Fire Marshal's Order and Decisions are Final and Conclusive - Any order or final written decision of the State Fire Marshal based upon or made in the course of the administration or enforcement of the provisions of W.V. Code, Chapter 29, Article 3 based upon or made pursuant to this rule is final, unless vacated or modified upon review pursuant to the appeal rights and procedures provided by Chapter 29A of the W.V. Code and this rule.

13.2. W. Va. Code §29-3-12(g) and (i) Inquiry and Investigation - The testimony which may be obtained by the State Fire Marshal pursuant to the authority in W. Va. Code §29-3-12(g) and (i) shall be obtained without compliance with the provisions in these rules governing "Procedure in Contested Cases." Where appropriate, a subsequent order by the State Fire Marshal relating to the testimony

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so obtained shall, the same as any other order by the State Fire Marshal, be subject to the appeal rights provided in W. Va. Code §Chapter 29, Article 3.

13.3. Appeal Petition - The appeal petition is to be typewritten, styled "Appeal Petition", and submitted with an original and one (1) copy. It shall be complete in itself so as to fully state the matters contested. No telegram, telephone call, or similar communication will be regarded as an appeal petition. The petition shall contain and include the following:

- (A) a copy of the order or decision of the State Fire Marshal being contested;
- (B) a clear and concise assignment of each error which the petitioner alleges to have been committed by the State Fire Marshal in issuing said order or decision with each assignment of error being shown in separately numbered paragraphs;
- (C) a clear and concise statement of fact upon which the petitioner relies as sustaining his assignment of errors;
- (D) the address petitioner desires to have all notices, documents, and the final order of the State Fire Commission mailed to;
- (E) the telephone number or numbers where petitioner can be contacted;
- (F) the names and addresses of all persons having any ownership interest in the property which is the subject of the State Fire Marshal's order being contested;
- (G) a prayer setting forth the relief sought; and
- (H) the signature of the petitioner or its duly authorized officer.

13.4. Time Requirement and Manner of Filing Appeal Petition - An appeal petition must be personally delivered or mailed to the State Fire Commission within thirty (30) days following service upon the petitioner, or within thirty (30) days following actual receipt if service is not required or for some reason is not made of the order or decision being contested. Any appeal petition shall be sent by certified mail, return receipt requested, and timely if postmarked within the thirty (30) day period. Any appeal petition not delivered or mailed within the thirty (30) day period is not timely filed and the order or decision of the State Fire Marshal being contested is final.

13.5. Copy of Appeal Petition to State Fire Commission - Upon receipt of an appeal petition, the State Fire Commission shall supply a copy of the petition to the State Fire Commission together with an opinion by the State Fire Marshal regarding the urgency of the matter being contested. If The State

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Fire Marshal elects to file a response to the appeal petition, he or she shall deliver a copy of the response to the State Fire Commission and a copy to the petitioner.

13.6. Scheduling Appeal Petition for and Notice of Hearing - The State Fire Commission through the State Fire Marshal shall schedule a hearing on the appeal petition giving the petitioner and the State Fire Marshal at least ten (10) days written notice of the date, time, and place of the hearing. The notice to the petitioner shall be by personal delivery or by certified mail, return receipt requested, shall contain a short and plain statement of the matters to be considered at the hearing, a copy of the State Fire Marshal's response, if any, to the appeal petition, and be mailed or personally delivered by the State Fire Marshal no later than thirty (30) days after receipt of the appeal petition. A copy of the notice to the petitioner shall be supplied to the State Fire Marshal. The hearing is to be conducted at a designated location ~~at the State Capitol~~ in Charleston, West Virginia, or in the discretion of the State Fire Commission at a location within the county where the premises in question are located.

13.7. Authorized Representative - The petitioner may appear individually, or by counsel.

13.8. Continuances - A motion for continuance shall not be granted unless made in writing three days before the hearing or during the hearing, in either case for good and sufficient cause. Upon consideration of a motion for continuance, the urgency of the situation shall be determined and taken into consideration. Conflicting engagements of counsel or the employment of new counsel are not good grounds for a continuance, unless set forth in a motion filed promptly after the notice of hearing has been mailed, or unless extenuating circumstances are shown, which the State Fire Commission or hearing examiner considers adequate.

13.9. Absence of Petitioner or Counsel at the Scheduled Hearing - A hearing shall not be delayed or continued due to the absence of the petitioner or his legal counsel at a hearing, after service of notice of time, date, and place. The hearing shall proceed and the case shall be submitted for decision on the part of the absent petitioner or petitioners.

13.10. Hearing Examiner - Any member of the State Fire Commission may conduct a hearing on an appeal petition, and shall have full authority to conduct the proceedings on an appeal petition, and when acting in such capacity shall be referred to as the hearing examiner. Alternatively, the State Fire Commission may authorize and empower an impartial attorney as a hearing examiner with the specific powers listed in W. Va. Code §29A-5-1(d).

13.11. Subpoenas and Subpoenas Duces Tecum - At any hearing held hereunder, the testimony of witnesses and the production of documentary evidence may be required through the use of subpoenas and subpoenas duces tecum. The State Fire Marshal may issue subpoenas and subpoenas duces tecum at the request of the petitioner, the hearings examiner, or the State Fire Commission.

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Every such subpoena and/or subpoena duces tecum is required to prove service at least five (5) days before the return date thereof, either by personal service made by any person eighteen (18) years of age, or older, or by registered or certified mail, but a return acknowledgement signed by the person to whom the subpoena or subpoena duces tecum is directed shall be required to prove service by registered or certified mail.

Any party requesting a subpoena or subpoena duces tecum must see that it is properly served. Service of a subpoena or subpoena duces tecum issued at the insistence of the State Fire Commission is the responsibility of such Commission.

Any public official who serves any such subpoena or subpoena duces tecum shall be entitled to the same fee as a Sheriff who serves a witness subpoena for a circuit court of this state; and fees for the attendance and travel of witnesses shall be the same as for witnesses before the circuit courts of this state. All fees shall be paid by the State Fire Commission if the subpoena or subpoena duces tecum is issued at the instance of the Commission. All such fees related to any subpoena or subpoena duces tecum issued at the instance of the petitioner or the State Fire Marshal shall be paid by the party requesting such subpoena or subpoena duces tecum.

A request for a subpoena or subpoena duces tecum shall be in writing and shall contain a statement acknowledging that the requesting party agrees to pay the required fee.

Any person receiving a subpoena or subpoena duces tecum issued hereunder shall honor the same as though it were issued by a circuit court of the state, and shall appear as a witness and/or produce such books, records, or papers in response to such subpoena or subpoena duces tecum. In case of disobedience or neglect of any subpoena or subpoena duces tecum served on any person or the refusal of any witness to testify to any matter regarding which he or she may be lawfully interrogated, the circuit court of the county in which the hearing is being held, upon application by the State Fire Commission, shall compel obedience by attachment proceedings for contempt as in the case of disobedience of the requirements of a subpoena or subpoena duces tecum issued from such circuit court or a refusal to testify therein.

13.12. Evidence

(A) All witnesses appearing at such hearing shall testify under oath or affirmation. Every adverse party shall have the right of cross-examination of witnesses who testify, and shall have the right to submit rebuttal evidence.

(B) All relevant and material evidence, including papers, records, agency staff memoranda and documents in the possession of the State Fire Commission or the State Fire Marshal of which either party desires to avail himself, may be offered and made a part of the record in the case.

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(C) Irrelevant, immaterial, or unduly repetitious evidence shall be excluded. Except as otherwise herein stated, the rules of evidence as applied in civil cases in the circuit courts of this state shall be followed in considering the admissibility of evidence. However, when necessary to ascertain facts not reasonably susceptible of proof under those rules, reasonably authenticated evidence not admissible thereunder may be admitted, except where precluded by the official code of W.V. or privilege, if it is of a type commonly relied upon by reasonably prudent persons in the conduct of their affairs.

13.13. Record of Proceedings - All of the testimony, evidence and rulings on admissibility of evidence at any such hearing shall be recorded by a certified court reporter. An official record of the hearing will be prepared by the State Fire Commission, but a transcript, shall only be prepared if this Commission's final decision is appealed. The cost of the transcript shall be paid by the party requesting it.

13.14. Informal Disposition - At any stage of the proceedings, informal disposition may be made of any contested case by stipulation, agreed settlement, consent order, or default.

13.15. Decision by the State Fire Commission - Upon the conclusion of the hearing, the person designated by the State Fire Commission as hearing examiner shall prepare a decision supported by findings of fact and conclusions of law affirming, modifying, or vacating the earlier order of decision of the State Fire Marshal. The State Fire Commission may either accept, modify, or reject the hearing examiner's decision. If the Commission accepts the hearing examiner's decision it shall sign the decision. If the Commission rejects or modifies the hearing examiner's decision, it shall prepare a written decision setting forth findings of facts and conclusions of law. In either event, the order signed by the State Fire Commission shall be final unless vacated or modified upon judicial review thereof. A copy of the order shall be served on all parties to the hearing and all attorneys of record, if any, in person or by certified mail, return receipt requested.

13.16. Judicial Review - The petitioner or by the State Fire Marshal may appeal the Commission's decision to the circuit court of the county where the premises are located, if the appeal is filed within thirty (30) days after the date upon which party was served with a copy of the final order or decision of the State Fire Commission. The final order signed by the State Fire Commission is final if the proceedings for judicial review are not instituted within the said thirty (30) day period.

§87-1-14. Miscellaneous Provisions.

14.1. FOREST FIRE SEASON:

The periods of each year between March first and May thirty-first, inclusive, and October first and December thirty-first, inclusive, are hereby designated as forest fire seasons. No person shall during

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any such fire season, except between the hours of four o'clock p.m. and seven o'clock a.m. prevailing time, set fire to, or procure another to set fire to, any brush, leaves, grass, debris or field containing dry grass or other inflammable material capable of spreading fire, located in or within 300 feet of any woodland, brushland, or field containing dry grass or other inflammable material. Any fire set during this time shall be extinguished prior to seven o'clock a.m. prevailing time. Such prohibition of fires between seven o'clock a.m. and four o'clock p.m. prevailing time does not include (1) small fires set for the purpose of food preparation, or providing light or warmth around which all grass, brush, stubble, or other debris has been removed for a distance of ten feet from the fire, and (2) burning which may be conducted at any time when the ground surrounding the burning site is covered by one inch or more of snow. Any person who sets or causes to be set any fire permitted by this section shall not leave such fire unattended for any period of time.

Any person or his agent or employee who sets or causes to be set any fire at any time in the use and occupation of any kind on which the burning was being done is in violation of this section if fire escapes beyond the safety strip. Any person who, by himself, or by his employees, agents or guides or as an employee, agent or guide of any other person, shall at any time build or use any fire in any field, on any public or private road, or in any area adjacent to or on any forest land in this state, shall, before leaving such fire for any period of time, totally extinguish the same. A person shall not at any time, totally extinguish the same. A person shall not at any time throw or place any lighted match, cigar, cigarette, firecracker or lighted material on any forest land, private road, public highway or railroad right-of-way within this state.

Provided that the State Fire Marshal may issue permits authorizing fires prohibited by the preceding paragraph in accordance with West Virginia State Code, Chapter 20, Article 3, Section 5 and 6 of the West Virginia Code.

14.2. Executive Order by the Governor on Open Burning

On such occasions when the Governor of the State issues an Executive Order or Proclamation to ban open burning due to weather conditions, the fire marshal may assist in the enforcement of the provisions of the Proclamation or Executive Order.

14.3. Outdoor Storage of Used Tires

The storage of used tires shall comply with the following:

- (1) All outdoor storage of used tires shall be free from all trash and debris within the site.
- (2) The owners/operators of outdoor storage of used tires shall maintain controlled access to the property with only one entrance/exit, and install security lighting for use during evening and night time hours as designated by the State Fire Marshal.

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(3) All outdoor storage of used tires shall have a perimeter security chain link fence of a minimum height of six feet.

(4) All storage of used tires, shredded or unshredded, shall be separated into individual piles on the property. No pile may exceed 50 feet by 50 feet by 15 feet in height.

(5) In the absence of an available water supply of at least 500 GPM (gallons per minute) provided by fire hydrants within 1000 feet of the facility, a minimum of 10,000 thousand gallon water supply on the site for exclusive use of fire fighting personnel shall be established.

(6) Fire lanes shall be established between all tire piles and maintained having a minimum of forty-five foot lanes capable of supporting fire apparatus.

(7) A minimum of a fifty foot wide zone around the site perimeter inside the fence line shall be maintained.

(8) All storage piles shall have a minimum of a thirty inch high earthen dike around each tire pile as the piles are established.

(9) A maximum of eighteen tire piles may be established on a single site.

(10) No site may exceed the storage of more than three hundred thousand tires without the approval of the state fire marshal.

14.4. Fireworks Defined; Labels Required (29-3-23)

The term "fireworks" means and includes any combustible or explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration or detonation, and includes blank cartridges, toy pistols, toy cannons, toy canes or toy guns in which explosives are used, the type of unmanned balloons which require Fire underneath to propel the same, firecrackers, torpedoes, skyrockets, roman candles, daygo bombs, sparklers or other fireworks of like construction and any fireworks containing any explosive or flammable compound, or any tablets or other device containing any explosive substance, except that the term "fireworks" shall not include sparklers and novelty items per Chapter 29, Article 3, Section 23 of the West Virginia Code, model rockets and model rocket engines, designed, sold and used for the purpose of propelling recoverable acro models and shall not include toy pistols, toy canes, toy guns or other devices in which paper or plastic caps manufactured in accordance with the United States department of transportation regulations for packing and shipping of toy paper or plastic caps are used and toy paper or plastic caps manufactured as provided therein,

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the sale and use of which shall be permitted at all times. Each package containing toy paper or plastic caps offered for retail sale shall be labeled to indicate the maximum explosive content per cap.

14.5. Unlawful Sale, Possession or Use of Fireworks; Permit for Public Display (29-3-24)

Except as hereinafter provided, no person, firm, co-partnership or corporation shall offer for sale, possess, expose for sale, sell at retail, keep with intent to sell at retail, or use or explode any fireworks. The granting of permits for supervised displays of fireworks by municipalities, fair associations, amusement parks, and other organizations or groups of individuals shall be in accordance with the National Fire Codes as adopted in Section 4 of this State Fire Code. The state fire marshal shall have the authority to charge a fee of ten dollars to each applicant requesting a license to be a pyrotechnic operator as set forth in this article. The state fire marshal shall charge a scaled fee for all applications requesting permits to establish a pyrotechnics display as provided in this section. All fees (as provided in Rule, Fees for Services Rendered, Series 5) required to be paid by the provisions of this section shall be paid to the state fire marshal and thereafter deposited by him into a special account for the operation of the state fire commission. Such permits may be granted upon application to said state fire marshal and after approval of the local police and fire authorities of the community wherein the display is proposed to be held as provided herein and the filing of a bond by the applicant as provided hereinafter. Every such display shall be handled by a competent operator licensed or certified as to competency (as provided by National Codes as adopted in Section 4 of this State Fire Code) by the state fire marshal and shall be of such composition, character, and so located, discharged or fired as in the opinion of the chief of the fire department, after proper inspection, and of the chief of police as to not be hazardous to property or endanger any person or persons. After such privilege shall have been granted, sales, possessions, use and distribution of fireworks for such display shall be lawful for that purpose only. No permit granted hereunder shall be transferable.

The governing body or chief executive authority of the municipality shall require a bond from the licensee in a sum not less than one thousand dollars conditioned on compliance with the provisions of this article and the rules of the state fire commission, provided no municipality shall be required to file such bond.

Before any permit for a pyrotechnic display shall be issued, the person, firm or corporation making application therefor shall furnish proof of financial responsibility (as provided by National Codes as adopted in Section 4 of this rule) to satisfy claims for damages to property or personal injuries arising out of any act or omission on the part of such person, firm or corporation or any agent or employee thereof, in such amount, character and form as the state fire marshal determines to be necessary for the protection of the public.

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14.6. (A) Necessity of License for Electrical Work

No electrical work may be performed, offered or engaged in for compensation or hire within the state of West Virginia by any person, unless such person possesses a valid license issued by the state fire marshal in accordance with Chapter 29, Article 3B of the West Virginia Code. (29-3B-2)

(B) Necessity of NICET Certification for Work Involving Fire Protection and Fire Alarm Systems Installations. No maintenance, repair or inspection work may be performed, offered or engaged in for compensation or hire within the State of West Virginia by any company unless such company maintains at least one (1) employee possessing a valid certificate of competency issued by the National Institute of Certification in Engineering Technologies (NICET). All such companies shall be registered with the State Fire Commission and shall provide annual information on the validity of NICET certificate holders employed for the purpose of maintenance, repair or inspection activities.

14.7. Residential Board and Care Occupancies

Application: All facilities classified as residential board and care occupancies shall conform to the following Life Safety Code, NFPA 101, requirements except where modified as follows:

Definitions:

~~Residential Board and Care Occupancy. A building or part of a building used to provide lodging, boarding, and personal care services for four (4) up to and including ten (10) residents unrelated by blood or marriage to its owners or operators.~~

~~Personal Care. "Personal Care" means protective care of a resident who does not require chronic or convalescent medical or nursing care. Personal care involves responsibility for the safety of the resident when in the building. Protective care may include a daily awareness by the management of the resident's functioning and his or her whereabouts, the arrangement of appointments and reminders of appointments for a resident, the ability and readiness to intervene if a crisis arises for a resident, supervision in areas of nutrition and medication, and actual provision of transient medical care.~~

~~Self-preservation. A person is capable of removing his or her physical self from situations involving imminent danger, such as fire.~~

~~Other, Definitions applicable to these requirements can be found in NFPA 101 Life Safety Code.~~

Requirements:

~~(1) All residents shall be capable of self-preservation.~~

~~(2) Minimum Construction Required: No Requirements.~~

~~(3) Height Requirements: Patient Resident sleeping rooms to be located on first and second floors only unless the facility is provided with a sprinkler system per NFPA 13, Standard for Sprinkler Systems.~~

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(42) Means of Egress: At least two (2) remote approved from each floor; at least one (1) of which shall be a door directly to the outside without traversing any corridor or space exposed to an unprotected vertical opening.

(53) Vertical Openings: Shall be properly enclosed on all at least one (1) levels above grade unless used as the primary means of egress, then shall be enclosed at all levels with 1 1/2 hour fire rated construction if used as primary means of egress all levels shall be properly enclosed with 1 hour fire rated construction.

(64) Doors: Shall be side-hinged swinging at least 32 inches wide when located in means of egress. Bathroom doors may be 24 inches wide.

(75) Existing Stairs: Shall be at least Class B.

(86) Hazardous Areas: Shall be provided with one hour fire-rated separation or provided with automatic sprinkler protection and smoke tight. Doors shall be self-closing.

(97) Interior Finish: Walls and ceilings shall be at least Class C throughout.

(108) Fire Alarm:

(a) An electrically supervised fire alarm system shall be provided approved electrically supervised and meet State Fire Code requirements for Residential: Rooming/Lodging of 11.01 & 11.04.

(b) Individual sleeping rooms shall be provided with a single station smoke detectors hardwired in accordance with NFPA 742, Household Fire Warning Equipment National Fire Alarm Code, Chapter 2.

Exception: This rule does not apply to facilities with less than four (4) residents.

(119). Sprinkler: Automatic sprinkler system is required and shall meet NFPA 13D, Sprinkler Systems in One- and Two-Family Dwellings, in all residential board and care facilities.

Exception: This rule does not apply to facilities with less than four (4) residents.

(1210) Corridor Walls: Shall be at least twenty (20) minute fire-rated and smoketight.

(13) Corridor Doors: ~~Shall be provided with self-closing devices or automatic closers. Shall be provided with latches suitable for keeping the door closed.~~

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- ~~(1411)~~ Electrical System: Shall meet the National Electric Code.
- ~~(1512)~~ Each sleeping room shall be provided with at least one (1) outside window for rescue/ventilation and must meet the requirement for windows in one and two family dwellings.
EXCEPTION: Door to the outside.
- ~~(1613)~~ Any carpet located in the facility shall meet State Fire Code for Residential Occupancies.
- ~~(1714)~~ No door in any means of egress shall be locked against egress when the building is occupied.
- ~~(1815)~~ Every bathroom door lock shall be designed to permit opening of the locked door from the outside in an emergency.
- ~~(1916)~~ Every closet door latch shall be such that it can be readily opened from the inside in case of emergency.
- ~~(20)~~ Heating, ventilating, and air conditioning equipment shall comply with the provisions of NFPA 101 Sections 7-2.1 and 7-2.2.
- ~~(2117)~~ No stove or combustion heater shall be located as to block escape in case of fire arising from malfunction of the stove or heater.
- ~~(22)~~ All facilities shall comply with the Life Safety Code, Chapter 31, Section 7, Operating Features.
- (18) Impractical residents in small facilities shall be located in rooms at grade with direct exiting to the outside. Corridor room door shall be 20 minute rated or equivalent.

14.8. Storage of DOT Classified Fireworks Wholesale Distributors

Definitions: Facility shall mean any building, igloo, barn, trailer, semitrailer or other mobile property.

Storage of Fireworks: All new and existing storage facilities for interstate wholesale fireworks distribution in accordance with W. Va. Code §29-3-25 shall meet the following requirements:

- (1) Each Storage facility shall be fire resistive construction.

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(2) Each Storage facility containing 1000 pounds or more shall have a complete automatic sprinkler system installed in accordance with NFPA 13, Installation of Sprinkler Systems.

(3) Each Storage facility shall not be located within a residential area.

(4) Each Storage facility shall not be located within 2000 feet of any assembly, educational, health care or correctional occupancies.

(5) Storage/Sale Permits shall be issued by the State Fire Marshal's Office. Permits will be issued only upon verified compliance of these rules and payment of required fee.

(6) Owner(s) or Operator(s) shall immediately notify State Fire Marshal's Office of any lost, stolen or unaccounted fireworks within 24 hours.

(7) No Smoking shall be permitted in the facility or within 50' of a facility. Conspicuous signs indicating "Warning - No Smoking" shall be posted at frequent intervals throughout the facility.

(8) No fireworks shall be sold to any West Virginia resident.

(9) A fire alarm system with complete smoke detection shall be installed throughout the facility in accordance with the State Fire Code.

(10) Each facility shall meet the requirements of the State Fire Code.

(11) Each display area shall contain only inert fireworks and be secured to prevent unauthorized access to the display area.

(12) All sales shall be recorded and shall include the name, address, city, state and zip code, business license number and tax department number of each purchase.

(13) Daily inventory of fireworks shall be maintained for each facility.

(14) All fireworks transported by vehicle from a distribution facility shall be placarded in accordance with U.S. DOT requirements. Less than 1000 pounds shall be placarded Class C Explosives. More than 1000 pounds shall be placarded Class B Explosives. Each vehicle used to transport fireworks shall meet Chapter 5 of NFPA 1124, Code for the Manufacture, Transportation and Storage of Fireworks.

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(15) Each Fire Department providing emergency services to any facility shall be notified in writing of the existence of the storage facility including information as to the type of explosives and explosive hazards. Pre-fire planning shall be completed by the fire department prior to operating the facility.

(16) The land surrounding each facility shall be kept clear of combustibles for a distance of at least 25 feet on all sides.

(17) Each storage facility shall be securely locked in accordance with NFPA 495, Explosive Material Code, Chapter 6-6.1(g).

(18) All electrical wiring and fixtures shall be in accordance with the National Electrical Code, Class II, Group E, Division I locations (Article 502 of the National Electrical Code).

(19) All Heating, Ventilation and Air Conditioning shall be in accordance with the State Fire Code. No open flaming devices on heating units shall be permitted.

(20) Each facility shall be separated from inhabited buildings, passenger railways, public highways and other storage buildings according to the distance specified in Table 2-6.5 of NFPA 1124, Code for the Manufacture, Transportation and Storage of Fireworks. (See items 3 and 4 of this rule for prohibited locations).

14.9. Stopping, Standing or Parking Prohibited in Specified Areas.

(a) No person shall stop, stand, or park a vehicle, except when necessary to avoid conflict with other traffic or in compliance with law or the directions of a police officer or traffic-control device, in any of the following places:

(4) Within fifteen feet of a fire hydrant;

(10) Within twenty feet of the driveway entrance to any fire station and on the side of a street opposite the entrance to any fire station within seventy-five feet of said entrance (when properly sign-posted) (17C-13-3)

14.10. Crossing Fire Hose

No streetcar or vehicle shall be driven over any unprotected hose of a fire department when laid down on any street, private driveway, or streetcar track, to be used at any fire or alarm of fire, without the consent of the fire department official in command.

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14.11. Emergency Vehicle Permits

(a) Authorization for all fire department vehicles and firefighters to operate Class A vehicles shall be designated by their fire chief and the State Fire Marshal's Office. Vehicles authorized by 17C-15-26 shall have red flashing warning lights and an audible signaling device, such as a siren, whistle or bell capable of emitting sound audible from a distance of not less than 500 feet. (17C-9-5 and 17C-15-26)

(b) Upon receipt of written notification from the Fire Chief of the local fire department to the State Fire Marshal requesting that an Emergency Vehicle Permit be revoked, the State Fire Marshal shall cause the permit to be revoked.

14.12. Correctional/Detention Facilities

All new correctional or detention facilities as defined in the Life Safety Code shall be protected throughout with a complete automatic sprinkler system in accordance with NFPA-13, Standard for Sprinkler Systems.

~~14.13. Primary Care Facilities~~

~~Definitions:~~

~~Primary Care Facility: Medical care and services at the point when a person first seeks assistance from the health care system for the simpler and more common illnesses, and which takes ongoing responsibility for the recipient's health maintenance and illness. Included are facilities: primary care centers, local health initiative/Kellogg Clinics, and birthing centers where patients are capable of taking action for self preservation. No more than three non-ambulatory patients are permitted.~~

~~Self-Preservation: Patients and other occupants of the facility must be capable of removing themselves from the facility with limited assistance, either physical or verbal, in an emergency, such as fire.~~

~~Minimum Construction Requirements:~~

~~A. New Construction shall meet Section 5 of this rule.~~

~~Exception: No new facility shall be constructed of protected wood frame construction (Type V(000))~~

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~~B. Existing Construction - No requirement except unprotected wood frame construction shall not be acceptable unless provided with an automatic sprinkler protection system.~~

~~Sprinkler System:~~

~~Automatic Sprinkler System. Design and installation shall be in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems.~~

~~Occupant Load:~~

~~A. Occupant Load calculation will be one person per 100 square feet of gross floor area.~~

~~B. No birthing/non-ambulatory care rooms will be located above or below the level of exit discharge.~~

~~Means of Egress Requirements:~~

~~Every aisle, passageway, corridor, exit discharge, exit location, and access shall be in accordance with NFPA 101, Life Safety Code, Means of Egress Requirements, and as modified by this rule.~~

~~Number of Exits:~~

~~There shall be not less than two remote exits provided from each floor.~~

~~Corridors:~~

~~A. No dead end corridor shall exceed 20 feet.~~

~~B. Travel distance to an exit shall not exceed 150 feet in a nonsprinklered building or 200 feet in a sprinklered building.~~

~~C. All corridors shall be a minimum of 44 inches in clear width. Primary Care facilities accepting non-ambulatory patients shall have 6 foot corridors.~~

~~D. Corridors shall be of smoke tight construction.~~

~~Doors:~~

~~A. Doors in Means of Egress shall be a minimum of 36 inches in width and comply with NFPA 101, Life Safety.~~

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~~B. All exit doors shall be equipped with panic hardware.~~

~~C. Doors not in the means of egress shall comply with NFPA 101, Life Safety Code, Means of Egress Components:~~

~~Protection:~~

~~A. Vertical Openings. All openings will comply with NFPA 101, Life Safety Code, Vertical Openings Requirements:~~

~~B. Hazardous Areas:~~

~~1. All hazardous areas shall be separated by one hour fire resistive construction with openings protected with one hour fire resistive assemblies or shall be protected with an automatic sprinkler system and construction that resists the passage of smoke.~~

~~2. General anesthetizing locations and laboratories using hazardous chemicals shall be protected in accordance with NFPA 99, Standard for Health Care Facilities:~~

~~C. Interior Finish:~~

~~Interior finish throughout the building will be Class A. Where an approved automatic sprinkler system is installed, Class B or C is acceptable.~~

~~D. Carpet:~~

~~All carpet will have a critical radiant flux minimum of 0.45 watts per square centimeter.~~

~~E. Fire Alarm:~~

~~1. The fire alarm system will comply with Section 11.1 and 11.4 of this rule. EXCEPTION: The fire alarm system is not required to be connected to a communication center.~~

~~F. Building Services:~~

~~Building services will comply with NFPA 101, Life Safety Code, Building Service and Fire Protection Equipment Requirements:~~

~~G. Rescue and Ventilation:~~

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~~Sleeping rooms will have at least one outside window for emergency rescue and ventilation. The window shall provide a clear opening of not less than 20 inches in width, 24 inches in height and 5.7 square feet in area. The bottom of these window openings will be no more than 44 inches above the floor.~~

~~H. Separation Requirements:~~

~~When a facility is located within a building having more than one occupancy, the facility will be separated from all other occupancies with a two (2) hour fire barrier, or the building will be completely protected with an automatic sprinkler system in accordance with NFPA 13, Standard for the Installation of Sprinkler System.~~

14.14. Explosives Amendment to NFPA 495, Explosive Materials Code

a. As soon as practical after all loaded blast holes (shot) are linked, they shall be immediately connected to a source of ignition and fired by a person legally permitted to do so.

b. Pre-loading blast holes (shots) to be fired at a later time shall be prohibited. In an emergency situation, this requirement may be waived by the State Fire Marshal.

§87-1-15. Severability.

The sections this rule are severable. Should any section be declared by judicial opinion unconstitutional or in any manner contrary to the laws of the State of West Virginia, that particular section shall be invalid and all other sections shall remain in full force and effect.

ATTENDANCE

REGISTRATION OF PUBLIC
AT

PUBLIC HEARING FOR STATE
FIRE CODE

State Capitol, East Wing, Room 215, Charleston, WV,

DATE: Monday, July 14, 1997

NAME	ADDRESS	REPRESENTING	PLEASE CHECK (✓) IF YOU DESIRE TO MAKE A STATEMENT
Pat Lafayette	11th St & RR Ave Elkins, W.V. 26241 PO Box 337	W.V. Propane Gas Assn	✓
Bruce Minor	Franklin, WV 26807	WV L.P. Gas Assoc.	
Bob Talbott	3601 7th Ave Charleston, WV	Brewer & Co Empire Comfort Heating Systems	
Ray Beadnell	228. Mill St Fair Oaks PA 15003	WV L.P. GAS ASSOC	
Bill Seacrest	1241 Pennsylvania Ave. St Albans, WV 25717	SEACREST FURTS, INC WV Propane Gas	
Nancy Scott	PO Box 654 Franklin, WV 26807	WV Propane Gas Assn.	
John H. Treadway Jr.	P.O. Box 434 Moorefield, WV 26836 5207 PERKINS DR	WV Propane Gas Assn.	✓
Russell L. Thaxton	CHAR. WV 25313	S.M.C'S FIRE DEPT.	

**PUBLIC HEARING
&
COMMENTS**

ORIGINAL

BEFORE THE WEST VIRGINIA STATE FIRE COMMISSION

RE: Revision of West Virginia State Fire Code

The following is a transcript of the public hearing before the West Virginia State Fire Commission held on the 14th day of July, 1997, commencing at 10:10 a.m. and concluding at 10:25 a.m., in Room 460, State Capitol Building, Charleston, Kanawha County, West Virginia, before Rita L. Jones, Certified Court Reporter and Notary Public in and for the State of West Virginia, pursuant to Notice.

PHYLLIS HAYNES EDENS, CCR, INC.

CERTIFIED COURT REPORTERS

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Charleston, West Virginia 25360

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APPEARANCES: ON BEHALF OF STATE FIRE COMMISSION:

BILL SPENCER, Chairman
KENNY MORGAN

ON BEHALF OF STATE FIRE MARSHAL'S OFFICE:

L. DARL CROSS
Chief Deputy Fire Marshal

PUBLIC:

PAT LAFAYETTE
WV Propane Gas Association

BRUCE MINOR
WV LP Gas Association

BOB TALBOTT
Brewer & Company

RON BEADNELL
Empire Comfort Heating Systems
WV LP Gas Association

BILL SEACRIST
Seacrist Fuels, Inc.
WV Propane Gas Association

NANCY SCOTT
WV Propane Gas Association

JOHN H. TREADWAY, JR.
WV Propane Gas Association

RUSSELL L. THAXTON
SMPG Fire Department

1 MR. CHAIRMAN: Good morning. My name is
2 Bill Spencer, Chairman of the West Virginia State Fire
3 Commission, and we welcome you here today to receive your
4 comments regarding the revision of the West Virginia State
5 Fire Code.

6 Before we hear your comments and introduce
7 the other members of the State Fire Commission, Kenny
8 Morgan from Charleston is the only other member of the
9 Commission present. I would like to introduce the staff
10 from the State Fire Marshal's Office, Mr. Cross, Chief
11 Deputy Fire Marshal.

12 Be advised that everyone has signed in and
13 checked if they want to speak. Also, we will receive
14 written comments up until Monday, July 21, 1997, at 4:00
15 p.m. You can submit your written comments to myself, Bill
16 Spencer, Chairman, West Virginia State Fire Commission,
17 1207 Quarrier Street, Second Floor, Charleston, West
18 Virginia 25301.

19 I'll now officially open the public
20 hearing. I don't have the sign-in sheet. Pat, were you
21 first on the sheet?

22 MR. LAFAYETTE: Yes.

23 MR. CHAIRMAN: Just state who you are, who

1 you represent and address.

2 MR. LAFAYETTE: My name is Pat Lafayette.
3 I'm representing the West Virginia Propane Gas
4 Association. I'm the Co-Chairman, along with Nancy Scott
5 who is here with us.

6 What we would like to propose is a change
7 to Title 87, Legislative Rule Fire Commission, Series 1,
8 Fire Code, Section 87-1-3 for Unvented Heaters.

9 Members of our committee are here also. We
10 have myself, Nancy Scott, John Treadway, Bill Seacrist,
11 and we also have Ron Beadnell from Empire with the
12 unvented gas heater manufacturer.

13 What we would like to do is change the
14 regulation to conform with language in the International
15 Fuel Gas Code. This change clarifies the installation,
16 proper use, and safety concerns related to unvented gas-
17 fired heating products.

18 The International Fuel Gas Code is
19 consistent with the codes currently in existence to
20 include the National Fire Protection Association Code 54,
21 the International Mechanical Code, the Building Officials
22 and Code Administrators International, Inc. (BOCA) Code,
23 and the Council of American Building Officials (CABO)

1 Code.

2 We have the utmost concern for safety. It
3 is critical, and with the oxygen depletion sensor that was
4 installed in the unvented gas heaters in 1980, we have had
5 a very good safety record. We feel they are very safe.

6 We included in our proposed change
7 prohibitive use of these unvented gas heaters as sole
8 sources of heat which we feel is very conservative.

9 We have also included in our proposal a
10 topical report done by the American Gas Association
11 Research Division which is development of size and
12 guidelines for vent-free supplemental heating products.
13 I'd like you to note that we are in Region 4 for the
14 entire state of West Virginia, which the results safety
15 wise of Region 4 were very good for the unvented heaters.

16 I'll give you a copy of the proposal. We
17 have also included some brochures on unvented gas heaters,
18 going through the safety aspect.

19 We have six videos on vent-free inside air
20 quality research which should be real informative for you.
21 We are available if there are any questions or any
22 information you need, suggestions or anything like that.
23 We are available at any time to help you.

1 We have included a list of contacts which
2 includes people on the committee, the West Virginia
3 Propane Gas Association Board of Directors. We have also
4 included information on the CABO, BOCA, National Fuel Gas
5 Code, and the International Mechanical Code.

6 If any other information or anything at all
7 is needed, we will respond real rapidly for you. We are
8 very interested in making this code change.

9 Are there any questions or suggestions or
10 anything else we need to cover? Okay. We have John
11 Treadway who would like to speak.

12 MR. TREADWAY: My name is John Hamilton
13 Treadway, Jr. I represent West Virginia Propane Gas
14 Association. My address is Post Office Box 434,
15 Moorefield, West Virginia 26836.

16 There are a couple of points I just wanted
17 to reemphasize that Pat brought up. Under the prohibited
18 use on that first page, "One or more unvented room heaters
19 shall not be used as the sole source of comfort
20 heating..."

21 We think that's an important safety item.
22 These heaters are intended as backup or added source of
23 heat, and that's the way we would like to keep them, for

1 that type of use.

2 If you flip over to the next page, there is
3 an important item up there that they cannot be of more
4 than 40,000 output Btu's. The next item down excludes
5 your areas of educational and institutional, so they would
6 not be allowed, even if this rule change was accepted, in
7 those type facilities.

8 Two of the biggest keys in there are the
9 next two items, the room space and volume and oxygen
10 depletion system. The oxygen depletion system designed to
11 shut this unit off when the oxygen gets too low, and the
12 room and space volume of 20 Btu's per cubic foot per hour,
13 what that does, if that code's out there, it keeps the
14 room from being oversized with the unit which is very
15 important when you're talking about what we are wanting to
16 do here.

17 I just wanted to reemphasize those points,
18 and we are interested in doing this in a safe manner.
19 That's all I have, unless you have some questions of me.

20 MR. SPENCER: Thank you.

21 MR. LAFAYETTE: One thing I forgot to
22 mention is that we are only addressing the unvented gas
23 heaters. We left the code as is for anything except for

1 unvented gas heaters.

2 MR. CHAIRMAN: Is there anyone else to
3 speak on the unvented gas heater section that you all
4 represent?

5 MR. LAFAYETTE: I'm Pat Lafayette. My
6 address is Valley Supply Company, Eleventh Street and
7 Railroad Avenue, Elkins, West Virginia 26241. My phone
8 number is 304-636-4015.

9 Myself and Nancy Scott are co-chairs for
10 the West Virginia Propane Gas Association Committee to
11 review Title 87, Legislative Rule Fire Commission, Series
12 1, Fire Code, Section 87-1-3.

13 The proposal we have is to allow unvented
14 gas heaters to be permitted to be installed for display or
15 demonstration purposes in mercantile operations which we
16 designed to be exclusive from our other proposal.

17 We feel this is important to be able to
18 teach consumers and installers the proper use and
19 application and safety for the unvented gas heaters. We
20 have included some information on the safety record of
21 these heaters.

22 We also have John Treadway to speak.

23 MR. TREADWAY: I don't have much to add at

1 this time, but I'll try anyway.

2 My name is John Hamilton Treadway, Jr.,
3 Post Office Box 434, Moorefield, West Virginia 26836,
4 representing the West Virginia Propane Gas Association.

5 I don't have a whole lot to add on that
6 second proposal, but Pat mentioned being able to teach the
7 consumers. Currently we are not permitted under the West
8 Virginia Fire Code to hang these heaters up and use them
9 in our place of business for display.

10 Many times when you go to do an
11 installation, with two parents working, they have
12 Grandmother or Grandfather next door come when we come do
13 the installation during the day.

14 Of course, we teach them on how to use it,
15 but we feel if we had the opportunity to display and
16 demonstrate them in the store when those people come in,
17 that's a great learning opportunity. They are very easy
18 to use and simplistic once you are shown.

19 Sometimes people can read directions and
20 listen to us and if we can get them to work through it
21 with us there, they can see how to turn the unit off and
22 turn it on and how it works and to set the temperature on
23 it, things like that.

1 It would be extremely helpful from our
2 viewpoint and the customer's viewpoint to be able to run
3 these units in our locations for demonstration purposes.
4 Thank you.

5 MR. CHAIRMAN: Thank you. Is there anyone
6 else desiring to speak during the public hearing for
7 revisions in the West Virginia State Fire Code?

8 If not, I'll declare this hearing closed,
9 remembering that you have until Monday, July 21, 1997, at
10 4:00 p.m. to submit written comments to the Chairman of
11 the West Virginia State Fire Commission. The hearing is
12 closed.

13 (WHEREUPON, the public hearing
14 was concluded at 10:25 a.m.)

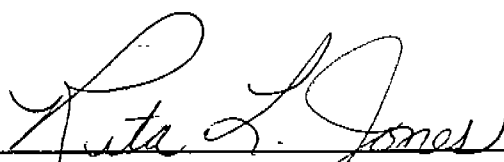
REPORTER'S CERTIFICATE

STATE OF WEST VIRGINIA,
COUNTY OF KANAWHA, To-Wit:

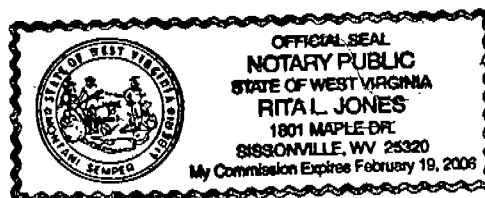
I, the undersigned, Rita L. Jones,
Certified Court Reporter, do hereby certify that the
foregoing is, to the best of my skill and ability, a true
and accurate transcript of all the testimony adduced, or
proceedings had, in the aforementioned case, as set forth
in the caption hereof.

Given under my hand this 15th day of July,
1997.

My commission expires February 19, 2006.



Certified Court Reporter
Notary Public





West Virginia
Propane Gas
Association

(703) 441-0970
FAX (703) 441-1144

107 S. West Street • Alexandria, Virginia 22314

July 11, 1997

West Virginia State Fire Commission

Dear Commission Members:

SUBJECT: Proposal

We hereby present a proposed change to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters.

This proposal was developed by the West Virginia Propane Gas Association by a special committee comprised of the following members: Nancy Scott, John Treadway, Bill Seacrist, Bill Woodward, and Pat Lafayette.

INTENT

We intend to change the regulation to conform with language in the International Fuel Gas Code (IFGC). This change clarifies the installation, proper use, and safety concerns related to unvented gas-fired heating products.

CURRENT REGULATION

Our current regulation 87-1-3. Unvented Heaters. reads as follows: All unvented fuel-fired heaters are prohibited for all occupancies except one (1) and two (2) family dwellings.

SUGGESTED CHANGE TO 87-1-3. UNVENTED HEATERS.

Our suggested change to 87-1-3 follows:

87-1-3.A. Unvented Heaters Excluding Gas-Fire Units.

All unvented fuel-fired heaters excluding gas-fired units are prohibited for all occupancies except one (1) and two (2) family dwellings.

87-1-3.B THROUGH G. UNVENTED GAS FIRED HEATERS.

87-1-3.B General

Unvented gas-fired room heaters shall be listed and labeled and shall be installed in accordance with the conditions of the listing and the manufacturer's installation instructions. Unvented room heaters shall be tested in accordance with ANSI Z 21.11.2.

87-1-3.C Prohibited Use.

One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

87-1-3.B THROUGH G. UNVENTED GAS FIRED HEATERS - Continued

87-1-3.D Input Rating.

Unvented room heaters shall not have an input rating in excess of 40,000 Btu/h (11.7kW).

87-1-3.E Prohibited Locations.

Unvented room heaters shall not be installed within occupancies in Use Groups A, E and I. NOTE: A for Assembly (movies, churches, arenas, etc.), E for Educational, and I for Institutional.

87-1-3.F Room or Space Volume.

The aggregate input rating of all unvented appliances installed in a room or space shall not exceed 20 Btu/h per cubic foot (0.21 kW/m³) of volume of such room or space. Where the room or space in which the equipment is installed is directly connected to another room or space by a doorway, archway or other opening of comparable size that cannot be closed, the volume of such adjacent room or space shall be permitted to be included in the calculations.

87-1-3.G Oxygen-Depletion Safety System.

Unvented room heaters shall be equipped with an oxygen-depletion-sensitive safety shutoff system. The system shall shut off the gas supply to the main and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater.

DOCUMENTATION

Please note that this suggested change is consistent with National Fire Protection Association (NFPA54), International Mechanical Code, Building Officials and Code Administrators International, Inc. (BOCA), and the Council of American Building Officials (CABO) One and Two Family Dwelling Code. Some information on these codes is attached.

We have included with this package six illustrated consumer guides for vent-free gas products and test results for inside air quality. We have also included with this package six each twelve-minute thirty-second VCR tapes outlining vent-free inside air quality research procedures and results.

Since 1980 over 4 million vent-free gas heating systems have been installed in the United States. These appliances (blue flame and infrared plaque air heaters and hearth products) are equipped with oxygen depletion systems (ODS) and have a history of safety. With records from 10 years of operation, the Consumer Product Safety Commission (CPSC) has not identified a single fatality for an ODS-equipped product. (Page 6, Paragraph 1 of attached American Gas Association Research Division topical report on the Development of Sizing Guidelines for Vent-Free Supplemental Heating Products)

West Virginia State Fire Commission
July 11, 1997
Page 3

Thank you for considering our proposed change to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters. Please feel free to contact us or any of our committee members at any time. We are very willing to provide additional information or literature if needed. We will also respond quickly to any questions or suggestions. Contact information is enclosed.

Sincerely,

Patrick C. Lafayette
WVPGA Committee Co-Chairperson

Nancy Scott
WVPGA Committee Co-Chairperson

Enclosures



*West Virginia
Propane Gas
Association*

(703) 441-0970
FAX (703) 441-1144

107 S. West Street • Alexandria, Virginia 22314

July 11, 1997

West Virginia State Fire Commission

Dear Commission Members:

SUBJECT: Proposal

We hereby present a proposed addition to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters.

This proposal was developed by the West Virginia Propane Gas Association by a special committee comprised of the following members: Nancy Scott, John Treadway, Bill Seacrist, Bill Woodward, and Pat Lafayette.

INTENT

We intend to add to the regulation in order to allow for display or demonstration of unvented gas heaters in mercantile occupancies. This change allows dealers to teach consumers proper use and safety procedures related to unvented gas-fired heating products.

CURRENT REGULATION

Our current regulation 87-1-3. Unvented Heaters. reads as follows: All unvented fuel-fired heaters are prohibited for all occupancies except one (1) and two (2) family dwellings.

SUGGESTED ADDITION TO 87-1-3. UNVENTED HEATERS.

87-1-3.1 - Unvented gas heaters are permitted to be installed for display or demonstration purposes in mercantile occupancies.

Since 1980 over 4 million vent-free gas heating systems have been installed in the United States. These appliances (blue flame and infrared plaque air heaters and hearth products) are equipped with oxygen depletion systems (ODS) and have a history of safety. With records from 10 years of operation, the Consumer Product Safety Commission (CPSC) has not identified a single fatality for an ODS-equipped product. (Page 6, Paragraph 1 of AGA Research division report.)

West Virginia State Fire Commission
July 11, 1997
Page 2

Thank you for considering our proposed addition to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters. Please feel free to contact us or any of our committee members at any time. We are very willing to provide additional information or literature if needed. We will also respond quickly to any questions or suggestions. Contact information is enclosed.

Sincerely,

Patrick C. Lafayette
WVPGA Committee Co-Chairperson

Nancy Scott
WVPGA Committee Co-Chairperson

Enclosure



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Contact Information - July 11, 1997

COMMITTEE

Nancy Scott, John Treadway, Bill Seacrist, Bill Woodward, and Pat Lafayette

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Contact Information - July 11, 1997 - Page 2

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304/727-2239 (FAX)

NATIONAL FUEL GAS CODE

Secretariats



INTERNATIONAL APPROVAL SERVICES - U.S. INC.
(formerly A.G.A.)



National Fire Protection
Association

An International Codes and Standards Organization

GAS

An American National Standard

ANSI Z 223.1

1996 EDITION

NFPA 54

6.19.2 Clearance.

(a) Listed heaters shall be installed with clearances from combustible material in accordance with their listing and the manufacturers' instructions.

(b) Unlisted heaters shall be installed in accordance with clearances from combustible material acceptable to the authority having jurisdiction.

(c) In locations used for the storage of combustible materials, signs shall be posted to specify the maximum permissible stacking height to maintain required clearances from the heater to the combustibles.

6.19.3 Combustion and Ventilation Air.

(a) Where unvented infrared heaters are used, natural or mechanical means shall be provided to supply and exhaust at least 4 cfm per 1000 Btu per hr (0.38 m³ per min per kW) input of installed heaters.

(b) Exhaust openings for removing flue products shall be above the level of the heaters.

6.19.4 Installation in Commercial Garages and Aircraft Hangars. Overhead heaters installed in garages for more than three motor vehicles or in aircraft hangars shall be of a listed type and shall be installed in accordance with 5.1.10 and 5.1.11.

6.20 Open-Top Broiler Units.

6.20.1 Listed Units. Listed open-top broiler units shall be installed in accordance with their listing and the manufacturers' instructions.

6.20.2 Unlisted Units. Unlisted open-top broiler units shall be installed in accordance with the manufacturers' instructions, but shall not be installed in combustible material.

6.20.3 Protection above Domestic Units. Domestic open-top broiler units shall be provided with a metal ventilating hood not less than 0.0122 in. (0.3 mm) thick with a clearance of not less than 1/4 in. (6.4 mm) between the hood and the underside of combustible material or metal cabinets. A clearance of at least 24 in. (61 cm) shall be maintained between the cooking top and the combustible material or metal cabinet, and the hood shall be at least as wide as the open-top broiler unit and centered over the unit. Listed domestic open-top broiler units incorporating an integral exhaust system and listed for use without a ventilating hood need not be provided with a ventilating hood if installed in accordance with 6.15.1(b)1.

6.20.4 Commercial Units. Commercial open-top broiler units shall be provided with ventilation in accordance with *Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment*, NFPA 96.

6.21 Outdoor Cooking Appliances.

6.21.1 Listed Units. Listed outdoor cooking appliances shall be installed in accordance with their listing and the manufacturers' instructions.

6.21.2 Unlisted Units. Unlisted outdoor cooking appliances shall be installed outdoors with clearances to combustible material of not less than 36 in. (91 cm) at the sides and back and not less than 48 in. (122 cm) at the front. In no case shall the appliance be located under overhead combustible construction.

6.22 Pool Heaters.

6.22.1 Location. A pool heater shall be located or protected so as to minimize accidental contact of hot surfaces by persons.

6.22.2 Clearance.

(a) In no case shall the clearances be such as to interfere with combustion air, draft hood or vent terminal clearance and relief, and accessibility for servicing.

(b) A listed pool heater shall be installed in accordance with its listing and the manufacturer's instructions.

(c) An unlisted pool heater shall be installed with a minimum clearance of 12 in. (30 cm) on all sides and the rear. A combustible floor under an unlisted pool heater shall be protected in an approved manner.

6.22.3 Temperature- or Pressure-Limiting Devices.

(a) An unlisted pool heater shall be provided with over-temperature protection or overtemperature and overpressure protection by means of an approved device(s).

(b) Where a pool heater is provided with overtemperature protection only, and is installed with any device in the discharge line of the heater that can restrict the flow of water from the heater to the pool (such as a check valve, shutoff valve, therapeutic pool valving, or flow nozzles), a pressure relief valve shall be installed either in the heater or between the heater and the restrictive device.

6.22.4 Bypass Valves. If an integral bypass system is not provided as a part of the pool heater, a bypass line and valve shall be installed between the inlet and outlet piping for use in adjusting the flow of water through the heater.

6.22.5 Venting. A pool heater listed for outdoor installation shall be installed with the venting means supplied by the manufacturer and in accordance with the manufacturer's instructions. (See 7.2.5, 7.2.6, 7.3.4, and Section 7.8.)

6.23 Refrigerators.

6.23.1 Clearance. Refrigerators shall be provided with clearances for ventilation at the top and back in accordance with the manufacturers' instructions. If such instructions are not available, at least 2 in. (5 cm) shall be provided between the back of the refrigerator and the wall and at least 12 in. (30 cm) above the top.

6.23.2 Venting or Ventilating Kits Approved for Use with a Refrigerator. If an accessory kit is used for conveying air for burner combustion or unit cooling to the refrigerator from areas outside the room in which it is located, or for conveying combustion products diluted with air containing waste heat from the refrigerator to areas outside the room in which it is located, the kit shall be installed in accordance with the refrigerator manufacturer's instructions.

6.24 Room Heaters.

6.24.1* Prohibited Installations. Unvented room heaters shall not be installed in bathrooms or bedrooms.

Exception No. 1: Where approved by the authority having jurisdiction, one listed wall-mounted unvented room heater equipped with an oxygen depletion safety shutoff system shall be permitted to be installed in a bathroom provided that the input rating shall not exceed 6000 Btu per hour (1760 W/hr) and combustion and ventilation air is provided as specified in 6.1(b).

Exception No. 2: Where approved by the authority having jurisdiction, one listed wall-mounted unvented room heater equipped with an oxygen depletion safety shutoff system shall be permitted to be installed in a bedroom provided that the input rating shall not exceed 10,000 Btu per hour (2930 W/hr) and combustion and ventilation air is provided as specified in 6.1(b).

6.24.2 Installations in Institutions. Room heaters shall not be installed in institutions such as homes for the aged, sanitariums, convalescent homes, orphanages, etc.

6.24.3 Clearance. A room heater shall be placed so as not to cause a hazard to walls, floors, curtains, furniture, doors when open, etc., and to the free movements of persons within the room. Heaters designed and marked "For use in noncombustible fireplace only" shall not be installed elsewhere. Listed room heaters shall be installed in accordance with their listings and the manufacturers' instructions. In no case shall the clearances be such as to interfere with combustion air and accessibility.

Unlisted room heaters shall be installed with clearances from combustible material not less than the following:

(a) *Circulating Type.* Room heaters having an outer jacket surrounding the combustion chamber, arranged with openings at top and bottom so that air circulates between the inner and outer jacket, and without openings in the outer jacket to permit direct radiation, shall have clearance at sides and rear of not less than 12 in. (30 cm).

(b) *Radiating Type.* Room heaters other than those of circulating type described above shall have clearance at sides and rear of not less than 18 in. (46 cm); except that heaters that make use of metal, asbestos, or ceramic material to direct radiation to the front of the heater shall have a clearance of 36 in. (91 cm) in front and, if constructed with a double back of metal or ceramic, shall be permitted to be installed with a clearance of 18 in. (46 cm) at sides and 12 in. (30 cm) at rear. Combustible floors under unlisted room heaters shall be protected in an approved manner.

6.24.4 Wall-Type Room Heaters. Wall-type room heaters shall not be installed in or attached to walls of combustible material unless listed for such installation.

6.25 Sauna Heaters.

6.25.1 Location and Protection.

(a) A sauna heater shall be so located as to minimize the possibility of accidental contact by a person in the room.

(b) A sauna heater shall be protected from accidental contact by a guard or barrier of material having a low coefficient of thermal conductivity. Wood shall be satisfactory for this application. The guard shall have no substantial effect on the transfer of heat from the heater to the room.

6.25.2 Installation of Heater.

(a) A listed sauna heater shall be installed in accordance with its listing and the manufacturer's instructions.

(b) An unlisted sauna heater shall be installed in accordance with the following:

1. The heater shall be installed on noncombustible flooring or on flooring that has been equivalently protected in an approved manner.

2. The heater shall be installed in compliance with the manufacturer's instructions, except that clearances to the sides, back, and top of the heater shall be not less than 36 in. (91 cm).

(c) An unlisted sauna heater shall not be installed in or attached to combustible material.

(d) A direct-vent sauna heater shall be installed with the vent/air intake terminal in the outside atmosphere. The thickness of the wall on which the heater is mounted shall be within the range of wall thicknesses marked on the heater and covered in the manufacturer's installation instructions.

(e) Panels, grilles, and access doors that are required to be removed for normal servicing operations shall not be attached to the building.

(f) A sauna heater of other than the direct-vent type shall be installed generally in accordance with Figure 9. If the combustion air inlet and the draft hood are in a dressing room adjacent to the sauna room, there shall be provisions to physically prevent blocking the combustion air inlet and the draft hood inlet, and to prevent physical contact with the draft hood and vent assembly, or warning notices shall be posted to avoid such contact. Any warning notice shall be easily readable, shall contrast with its background, and the wording shall be in letters not less than 1/4 in. (6.4 mm) high.

6.25.3 Connection. The provisions of Section 5.5 shall be followed.

Exception: Where access to controls is from an adjacent room, connections shall be made in that room.

6.25.4 Combustion and Ventilation Air.

(a) Combustion air shall not be taken from inside the sauna room.

(b) Combustion and ventilation air for a heater not of the direct vent type shall be provided to the area in which the combustion air inlet and draft hood are located by suitable means. (See Section 5.3.)

6.25.5 Means for Heat or Exposure Limitation.

(a) A sauna heater shall be equipped with a thermostat that limits room temperature to 194°F (90°C). If the thermostat is not an integral part of the heater, the heat sensing element shall be located within 6 in. (15 cm) of the ceiling. If the heat sensing element is a capillary tube and bulb, the assembly shall be attached to the wall or other support and shall be protected against physical damage.

(b) A timer, if provided to control main burner operation, shall have a maximum operating time of 1 hr. The control for the timer shall be located outside the sauna room.

6.26 Stationary Gas Engines. The installation of gas engines shall conform with *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, NFPA 37.

6.27 Gas-Fired Toilets.

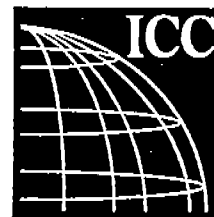
6.27.1 Clearance. A listed gas-fired toilet shall be installed in accordance with its listing and the manufacturer's instructions, provided that the clearance shall in any case be sufficient to afford ready accessibility for use, cleanout, and necessary servicing.

6.27.2 Mounting. Listed gas-fired toilets specifically listed for installation on combustible floors shall be permitted to be so installed.

6.27.3 Installation. Vents or vent connectors that are capable of being contacted during casual use of the room in which the toilet is installed shall be protected or shielded to prevent such contact.

***I*nternational *M*echanical *C*ode**

1996



INTERNATIONAL
CODE COUNCIL



**SECTION 926
UNVENTED ROOM HEATERS**

926.1 General. An unvented room heater shall not be used as the sole source of comfort heating in a dwelling unit.

926.2 Input rating. Unvented room heaters shall not have an input rating in excess of 40,000 Btu/h (11.7 kW).

926.3 Prohibited locations. Unvented room heaters shall not be installed within occupancies in Use Groups A, E and I. The location of unvented room heaters shall also comply with Section 303.3.

926.4 Room or space volume. The aggregate input rating of all unvented appliances installed in a room or space shall not exceed 20 Btu/h per cubic foot (0.21 kW/m³) of volume of such room or space. Where the room or space in which the equipment is installed is directly connected to another room or space by a doorway, archway or other opening of comparable size that cannot be closed, the volume of such adjacent room or space shall be permitted to be included in the calculations.

926.5 Oxygen-depletion safety system. Unvented room heaters shall be equipped with an oxygen-depletion-sensitive safety shutoff system. The system shall shut off the gas supply to the main and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater.

926.6 Kerosene and oil stoves. Kerosene and oil-fired stoves shall comply with NFPA 31.

**SECTION 927
VENTED ROOM HEATERS**

927.1 General. Vented gas-fired room heaters shall be listed and labeled and shall be installed in accordance with the conditions of the listing and the manufacturer's instructions. Such appliances shall be tested in accordance with ANSI Z21.11.1 and shall be designed and equipped as specified in Section 907.2.

Exception for
Assembly
Educational
Institutional
303.3- page 22,
Bedroom, bathroom, etc
* 5-95 10,000 in BR
6,000 in Bath

supports shall be designed and installed for the seismic forces in accordance with the building code.

SECTION 302 PROTECTION OF STRUCTURE

302.1 Penetrations of floor/ceiling assemblies and fire-resistance-rated assemblies. Penetrations of floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with the building code.

302.2 Cutting, notching and boring holes. Notches on the ends of solid wood joists shall not exceed one-fourth of the depth. Holes bored for pipes or cable shall not be within 2 inches (51 mm) of the top or bottom of the solid wood joist, and the diameter of any such hole shall not exceed one-third of the depth of the joist. Notches for pipes in the top or bottom of solid wood joists shall not exceed one-sixth of the depth and shall not be located in the middle one-third of the span.

302.3 Notching and cutting of wood studs. In exterior walls and bearing partitions, wood studs shall not be cut or notched to a depth exceeding 25 percent of its depth. Wood studs shall not be cut or notched to a depth exceeding 40 percent of the depth of the stud in nonload-bearing partitions supporting no loads other than the weight of the partition.

302.3.1 Bored holes. The diameter of a bored hole shall not exceed 40 percent of the stud depth.

Exceptions:

1. In nonload-bearing partitions, the diameter of a bored holes shall not exceed 60 percent of the depth of the stud.
2. Where each stud that is bored is doubled and not more than two adjacent double studs are bored, the diameter of bored holes shall not exceed 60 percent of the depth of the stud.

302.3.1.1 Location. The edge of the bored hole shall not be nearer than $\frac{5}{8}$ inch (15.9 mm) to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

SECTION 303 EQUIPMENT AND APPLIANCE LOCATION

303.1 General. Equipment and appliances shall be located as required by this section, specific requirements elsewhere in this code and the conditions of the equipment and appliance listing.

303.2 Hazardous locations. Equipment shall not be located in a hazardous location unless listed and approved for the specific installation.

303.3 Prohibited locations. Fuel-fired appliances shall not be located in, or obtain combustion air from, any of the following rooms or spaces:

1. Sleeping rooms.
2. Bathrooms.
3. Toilet rooms.
4. Storage closets.
5. Surgical rooms.

Exception: This section shall not apply to the following appliances:

1. Direct-vent appliances that obtain all combustion air directly from the outdoors.
2. Vented gas-fired room heaters, vented decorative gas appliances and decorative gas-fired appliances for installation in vented solid fuel-burning fireplaces, provided that the room is not a confined space and the building is not of unusually tight construction.
3. Solid fuel-fired appliances and fireplaces, provided that the room is not a confined space and the building is not of unusually tight construction.
4. Appliances installed in an enclosure in which all combustion air is taken from the outdoors and the enclosure is equipped with a solid weather-stripped door and self-closing device.

303.4 Protection from damage. Equipment shall not be installed in a location where it is subject to mechanical damage unless protected by approved barriers.

303.5 Indoor locations. Fuel-fired equipment other than boilers not listed for closet or alcove installation shall be installed in rooms or spaces having a volume at least 12 times the total volume of the fuel-fired equipment. Fuel-fired boilers not listed for closet or alcove installation shall be installed in rooms having a volume at least 16 times the total volume of the boilers. The room volume shall be computed using the gross floor area and the actual ceiling height up to a maximum computational height of 8 feet (2438 mm).

303.6 Outdoor locations. Equipment installed in other than indoor locations shall be listed and labeled for outdoor installation.

303.7 Pit locations. Equipment installed in pits or excavations shall not come in direct contact with the surrounding soil. The sides of the pit or excavation shall be held back a minimum of 12 inches (305 mm) from the equipment. Where the depth exceeds 12 inches (305 mm) below adjoining grade, the walls of the pit or excavation shall be lined with concrete or masonry extending a minimum of 4 inches (102 mm) above adjoining grade having sufficient lateral load bearing capacity to resist collapse. The equipment shall be protected from flooding in an approved manner.

SECTION 304 INSTALLATION

304.1 General. Equipment shall be installed as required by the terms of its approval. Equipment and appliances shall be installed in accordance with the conditions of listing and the manufacturer's installation instructions and this code. Manufacturer's installation instructions shall be available on the job site at the time of inspection.

304.2 Elevation of ignition source. Equipment and appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in hazardous locations and public garages, private garages,

CHAPTER 7 COMBUSTION AIR

SECTION 701 GENERAL

701.1 Scope. The provisions of this chapter shall govern the requirements for combustion and dilution air for fuel-burning appliances or equipment.

701.2 Combustion and dilution air required. Every room or space containing fuel-burning appliances shall be provided with combustion and dilution air as required by this code. Combustion and dilution air shall be provided in accordance with Section 702, 703, 704, 705, 706, 707 or 708 or shall be provided by an approved engineered system. Direct vent appliances or equipment that do not draw combustion air from the inside of the building, are not required to be considered in the determination of the combustion and dilution air requirements.

701.3 Circulation of air. The equipment within every room containing fuel-burning appliances shall be installed so as to allow free circulation of air. Provisions shall be made to allow for the simultaneous operation of mechanical exhaust systems, fireplaces or other equipment and appliances operating in the same room or space from which combustion and dilution air is being drawn. Such provisions shall prevent the operation of such appliances, equipment and systems from affecting the supply of combustion and dilution air.

701.4 Crawl space and attic space. For the purposes of this chapter, an opening to a naturally ventilated crawl space or attic space shall be considered equivalent to an opening to the outdoors.

701.4.1 Crawl space. Where lower-combustion air openings connect with crawl spaces, such spaces shall have unobstructed openings to the outdoors at least twice that required for the combustion air openings. The height of the crawl space shall comply with the requirements of the building code and shall be without obstruction to the free flow of air.

701.4.2 Attic space. Where combustion air is obtained from an attic area, the attic ventilating openings shall not be subject to ice or snow blockage, and the attic shall have not less than 30 inches (762 mm) vertical clear height at its maximum point. Attic ventilation openings shall be sufficient to provide the required volume of combustion air and the attic ventilation required by the building code. The combustion air openings shall be provided with a sleeve of not less than 0.019-inch (0.5 mm) (No. 26 Gage) galvanized steel or other approved material extending from the appliance enclosure to at least 6 inches (152 mm) above the top of the ceiling joists and insulation.

SECTION 702 INSIDE AIR

702.1 Air from the same room or space. The room or space containing fuel-burning appliances shall be an unconfined

space. Combustion air requirements shall be determined based on the simultaneous operation of all fuel-burning appliances drawing combustion and dilution air from the room. In buildings of unusually tight construction, combustion air shall be obtained from the outdoors in accordance with Section 703, 704, 706 or 707.

702.2 Air from adjacent spaces. Where the volume of the room in which the fuel-burning appliances are located does not comply with Section 702.1, additional inside combustion and dilution air shall be obtained by opening the room to adjacent spaces so that the combined volume of all communicating spaces meets the volumetric requirement of Section 702.1. Openings connecting the spaces shall comply with Sections 702.2.1 and 702.2.2.

702.2.1 Number and location of openings. Two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor.

702.2.2 Size of openings. The net free area of each opening, calculated in accordance with Section 710, shall be a minimum of 1 square inch per 1,000 Btu/h (2201 mm²/kW) of input rating of the fuel-burning appliances drawing combustion and dilution air from the communicating spaces and shall be not less than 100 square inches (64 516 mm²).

SECTION 703 OUTDOOR AIR (CONDITION 1)

703.1 All air from the outdoors. Where all combustion and dilution air is to be provided by outdoor air, the required combustion and dilution air shall be obtained by opening the room to the outdoors. Openings connecting the room to the outdoor air shall comply with Sections 703.1.1 through 703.1.4.

703.1.1 Number and location of openings. Two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor.

703.1.2 Size of direct openings. The net free area of each direct opening to the outdoors, calculated in accordance with Section 710, shall be a minimum of 1 square inch per 4,000 Btu/h (550 mm²/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room.

703.1.3 Size of horizontal openings. The net free area of each opening, calculated in accordance with Section 710 and connected to the outdoors through a horizontal duct, shall be a minimum of 1 square inch per 2,000 Btu/h (1100 mm²/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room. The cross-sectional area of the duct shall be equal to or greater than the required size of the opening.

703.1.4 Size of vertical openings. The net free area of each opening, calculated in accordance with Section 710 and

connected to the outdoors through a vertical duct, shall be a minimum of 1 square inch per 4,000 Btu/h (550 mm²/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room. The cross-sectional area of the duct shall be equal to or greater than the required size of the opening.

703.2 Prohibited sources. Openings and ducts shall not connect appliance enclosures with a space in which the operation of a fan will adversely affect the flow of combustion air. Combustion air shall not be obtained from a hazardous location, except where the fuel-fired appliances are located within the hazardous location and are installed in accordance with this code. Combustion air shall not be taken from a refrigeration machinery room. Combustion air shall not be obtained from a bathroom or bedroom.

SECTION 704 OUTDOOR AIR (CONDITION 2)

704.1 All air from the outdoors for gas-fired appliances. Where approved, this section shall be an alternative to the provisions of Section 703 and shall apply to gas-fired appliances only. Where all combustion and dilution air for gas-fired appliances is to be provided by outdoor air, the required combustion and dilution air shall be obtained by opening the room or enclosure to the outdoors. The openings connecting the room or enclosure to the outdoor air and the appliance installations shall comply with Sections 704.1.1 through 704.1.3.

704.1.1 Number and location of openings. One opening shall be provided and located within 12 inches (305 mm) of the ceiling of the room or enclosure.

704.1.2 Size and configuration of the opening. The opening shall directly connect to the outdoors or shall connect by means of vertical or horizontal ducts. The net free area of the opening calculated in accordance with Section 710 shall be a minimum of 1 square inch per 3,000 Btu/h (734 mm²/kW) of input rating of the gas-fired appliance drawing combustion and dilution air from the room or enclosure and not less than the cross-sectional flow area of the appliance vent. The cross-sectional area of the duct shall be equal to or greater than the required size of the opening.

704.1.3 Appliance installation clearance. The appliance shall have a minimum clearance to the surfaces of the room or enclosure of 1 inch (25 mm) at the sides and back of the appliance and 6 inches (152 mm) at the front of the appliance.

SECTION 705 COMBINED USE OF INSIDE AND OUTDOOR AIR (CONDITION 1)

705.1 Combination of air from inside and from outdoors. Where the building in which the fuel-burning appliances are located is not of unusually tight construction and the communicating interior spaces containing the fuel-burning appliances comply with all of the requirements of Section 702, except the volumetric requirement of Section 702.1, required combustion and dilution air shall be obtained by opening the room to the

outdoors utilizing a combination of inside and outdoor air, prorated in accordance with Section 705.1.6. Openings connecting the interior spaces shall comply with Sections 702.2.1 and 702.2.2. The ratio of interior spaces shall comply with Section 705.1.5. The number, location and ratios of openings connecting the space with the outdoor air shall comply with Sections 705.1.1 through 705.1.4.

705.1.1 Number and location of openings. At least two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor.

705.1.2 Ratio of direct openings. Where direct openings to the outdoors are provided in accordance with Section 703.1, the ratio of direct openings shall be the sum of the net free areas of both direct openings to the outdoors, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.2.

705.1.3 Ratio of horizontal openings. Where openings connected to the outdoors through horizontal ducts are provided in accordance with Section 703.1, the ratio of horizontal openings shall be the sum of the net free areas of both such openings, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.3.

705.1.4 Ratio of vertical openings. Where openings connected to the outdoors through vertical ducts are provided in accordance with Section 703.1, the ratio of vertical openings shall be the sum of the net free areas of both such openings, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.4.

705.1.5 Ratio of interior spaces. The ratio of interior spaces shall be the available volume of all communicating spaces, divided by the required volume as determined in accordance with Section 702.1.

705.1.6 Prorating of inside and outdoor air. In spaces that utilize a combination of inside and outdoor air, the sum of the ratios of all direct openings, horizontal openings, vertical openings and interior spaces shall equal or exceed 1.

SECTION 706 COMBINED USE OF INSIDE AND OUTDOOR AIR (CONDITION 2)

706.1 General. Where the building in which fuel-burning appliances are located is of unusually tight construction and meets the volumetric requirements for indoor air specified in Section 702.1, combustion air supplied by a combined use of indoor and outdoor air shall be supplied through openings and ducts extending to the appliance room or to the vicinity of the appliance.

706.1.1 Openings and supply ducts. Openings shall be provided, located and sized in accordance with Section 702.2; additionally, there shall be one opening to the outdoors having a free area of at least 1 square inch per 5,000 Btu/h (1100 mm²/1.47 kW) of total input of all appliances in the space.

SECTION 707 FORCED COMBUSTION AIR SUPPLY

707.1 General. Where all combustion air and dilution air is provided by a mechanical forced-air system, the combustion air and dilution air shall be supplied at the minimum rate of 1 cfm per 2,400 Btu/h [0.00067 m³/(s · kW)] of combined input rating of all the fuel-burning appliances served. Each of the appliances served shall be electrically interlocked to the mechanical forced-air system so as to prevent operation of the appliances when the mechanical system is not in operation. Where combustion air and dilution air is provided by the building's mechanical ventilation system, the system shall provide the specified combustion/dilution air rate in addition to the required ventilation air.

SECTION 708 DIRECT CONNECTION

708.1 General. Fuel-burning appliances that are listed and labeled for direct combustion air connection to the outdoors shall be installed in accordance with the manufacturer's installation instructions.

SECTION 709 COMBUSTION AIR DUCTS

709.1 General. Combustion air ducts shall:

1. Be of galvanized steel complying with Chapter 6 or of equivalent corrosion-resistant material approved for this application.

Exception: Within dwellings units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.

2. Have a minimum cross-sectional dimension of 3 inches (76 mm).
3. Terminate in an unobstructed space allowing free movement of combustion air to the appliances.
4. Have the same cross-sectional areas as the free area of the openings to which they connect.
5. Serve a single appliance enclosure.
6. Not serve both upper and lower combustion air openings. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.
7. Not be screened where terminating in an attic space.

SECTION 710 OPENING OBSTRUCTIONS

710.1 General. The required size of openings for combustion and dilution air shall be based on the net free area of each opening. The net free area of an opening shall be that specified by the manufacturer of the opening covering. In the absence of such information, openings covered with metal louvers shall be deemed to have a net free area of 75 percent of the area of the opening, and openings covered with wood louvers shall be

deemed to have a net free area of 25 percent of the area of the opening.

710.2 Dampered openings. Where the combustion air openings are provided with volume, smoke or fire dampers, the dampers shall be electrically interlocked with the firing cycle of the appliances served, so as to prevent operation of any appliance that draws combustion and dilution air from the room when any of the dampers are closed. Manually operated dampers shall not be installed in combustion air openings.

SECTION 711 OPENING LOCATION AND PROTECTION

711.1 General. Combustion air openings to the outdoors shall comply with the location and protection provisions of Sections 401.7 and 401.8 applicable to outside air intake openings.

COMBUSTION AIR. Air necessary for complete combustion of a fuel, including theoretical air and excess air.

COMBUSTION CHAMBER. The portion of an appliance within which combustion occurs.

COMBUSTION PRODUCTS. Constituents resulting from the combustion of a fuel with the oxygen of the air, including the inert gases, but excluding excess air.

COMMERCIAL FOOD HEAT-PROCESSING EQUIPMENT. Equipment used in a food establishment for heat-processing food or utensils, and which produces grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system.

COMPRESSOR. A specific machine, with or without accessories, for compressing a gas.

COMPRESSOR, POSITIVE DISPLACEMENT. A compressor in which increase in pressure is attained by changing the internal volume of the compression chamber.

COMPRESSOR UNIT. A compressor with its prime mover and accessories.

CONCEALED GAS PIPING. Piping that is enclosed in the building construction without means of access.

CONCEALED LOCATION. A location that cannot be accessed without damaging permanent parts of the building structure or finish surface. Spaces above, below or behind readily removable panels or doors shall not be considered as concealed.

CONDENSATE. The liquid that condenses from a gas (including flue gas) caused by a reduction in temperature.

CONDENSER. A heat exchanger designed to liquefy refrigerant vapor by removal of heat.

CONDENSING UNIT. A specific refrigerating machine combination for a given refrigerant, consisting of one or more power-driven compressors, condensers, liquid receivers (when required), and the regularly furnished accessories.

CONDITIONED SPACE. An area, room or space being heated or cooled by any equipment.

CONFINED SPACES. A space having a volume less than 50 cubic feet per 1,000 British thermal units per hour (Btu/h) (4.8 m³/kW) of the aggregate input rating of all appliances installed in that space.

CONSTRUCTION DOCUMENTS. All of the written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of the project necessary for obtaining a building permit. The construction drawings shall be drawn to an appropriate scale.

CONTINUOUS PILOT. A pilot that burns without turndown, whether or not the main burner is firing.

CONTROL. A manual or automatic device designed to regulate the gas, air, water or electrical supply to, or operation of, a mechanical system.

CONVERSION BURNER. A burner designed to supply gaseous fuel to an appliance originally designed to utilize another fuel.

COOKING EQUIPMENT. See "Commercial food heat-processing equipment."

CUBIC FOOT. The amount of gas which occupies 1 cubic foot (0.02832 m³) when at a temperature of 60°F. (16°C.), saturated with water vapor and under a pressure equivalent to that of 30 inches of mercury (101 kPa).

DAMPER. A manually or automatically controlled device to regulate draft or the rate of flow of air or combustion gases.

Volume damper. A device that, when installed, will restrict, retard or direct the flow of air in a duct, or the products of combustion in a heat-producing equipment, its vent connector, vent or chimney therefrom.

DAMPER VENT DEVICE, AUTOMATIC. A device intended for installation in the venting system, in the outlet of or downstream of the appliance draft hood, of an individual automatically operated fuel-gas-burning appliance and that is designed to open the venting system automatically when the appliance is in operation and to close off the venting system automatically when the appliance is in a standby or shutdown condition.

Electrically operated. Employs electrical energy to control the device.

Mechanically actuated. Dependent for operation upon the direct application or transmission of mechanical energy without employing any type of energy conversion.

Thermally actuated. Dependent for operation exclusively upon the direct conversion of the thermal energy of the vent gases into mechanical energy.

DECORATIVE GAS APPLIANCE, VENTED. A vented gas-fired appliance wherein the primary function lies in the aesthetic effect of the flames.

DECORATIVE GAS APPLIANCES FOR INSTALLATION IN VENTED FIREPLACES. A vented gas-fired appliance designed for installation within the fire chamber of a vented fireplace, wherein the primary function lies in the aesthetic effect of the flames.

DEMAND. The maximum amount of gas input required per unit of time, usually expressed in cubic feet per hour, or Btu/h (1 Btu/h = 0.2931 W).

DESIGN WORKING PRESSURE. The maximum allowable working pressure for which a specific part of a system is designed.

DILUTION AIR. Air that is introduced into a draft hood and is mixed with the flue gases.

DIRECT GAS-FIRED MAKEUP AIR HEATER. A heater in which all of the products of combustion generated by the gas-burning device are released into the outside airstream being heated.

DIRECT REFRIGERATION SYSTEM. A system in which the evaporator or condenser of the refrigerating system is in direct contact with the air or other substances to be cooled or heated.

DIRECT-VENT APPLIANCES. Appliances that are constructed and installed so that all air for combustion is derived

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CHAPTER 3

USE OR OCCUPANCY

SECTION 301.0 GENERAL

301.1 Scope: The provisions of this chapter shall control the classification of all buildings and structures as to use group.

301.2 Application of other laws: The provisions of this chapter shall not be deemed to nullify any provisions of the zoning law or any other statute of the jurisdiction pertaining to the location or occupancy of buildings, except as is specifically required by the provisions of this code.

SECTION 302.0 CLASSIFICATION

302.1 General: All structures shall be classified with respect to occupancy in one or more of the use groups listed below. Where a structure is proposed for a purpose which is not specifically provided for in this code, such structure shall be classified in the use group which the occupancy most nearly resembles.

1. Assembly (see Section 303.0): Use Groups A-1, A-2, A-3, A-4 and A-5
2. Business (see Section 304.0): Use Group B
3. Educational (see Section 305.0): Use Group E
4. Factory and Industrial (see Section 306.0): Use Groups F-1 and F-2
5. High Hazard (see Section 307.0): Use Groups H-1, H-2, H-3 and H-4
6. Institutional (see Section 308.0): Use Groups I-1, I-2 and I-3
7. Mercantile (see Section 309.0): Use Group M
8. Residential (see Section 310.0): Use Groups R-1, R-2, R-3 and R-4
9. Storage (see Section 311.0): Use Groups S-1 and S-2
10. Utility and Miscellaneous (see Section 312.0): Use Group U

302.1.1 Specific occupancy areas: Specific occupancy areas which are incidental to the main use group shall be separated and protected in accordance with Table 302.1.1 and shall be classified in accordance with the main use group of the portion of the building in which the specific occupancy area is located. Where the building, or portion thereof, containing the specific occupancy area is required to be protected with an automatic fire suppression system, the separation alternative of Table 302.1.1 shall not apply.

Exception: Specific occupancy areas within and serving a dwelling unit are not required to comply with this section.

**Table 302.1.1
SPECIFIC OCCUPANCY AREAS**

Room or area ^b	Separation ^a /protection
All use groups:	
Paint shops in occupancies other than Use Group F employing hazardous materials in quantities less than those which cause classification as Use Group H	2 hours; or 1 hour and automatic fire suppression system
Waste and soiled linen collection rooms and chute termination rooms	1 hour and automatic fire suppression system
Waste and soiled linen chute access rooms	1 hour; or automatic fire suppression system with smoke partitions
Boiler and furnace rooms	1 hour; or automatic fire suppression system with smoke partitions
Incinerator rooms	2 hours and automatic fire suppression system
Use Groups A, B, E, I-1, R-1, R-2:	
Storage rooms more than 50 square feet in area but not more than 100 square feet in area	1 hour; or automatic fire suppression system with smoke partitions
Storage rooms more than 100 square feet in area	Automatic fire suppression system with smoke partitions
Physical plant maintenance shop and workshop	2 hours; or 1 hour and automatic fire suppression system
Use Groups I-2, I-3:	
Boiler and furnace rooms	1 hour and automatic fire suppression system
Handicraft shops, kitchens, and employee locker rooms	1 hour; or automatic fire suppression system with smoke partitions
Laundries greater than 100 square feet in area	1 hour and automatic fire suppression system
Storage rooms more than 50 square feet in area but not more than 100 square feet in area	Automatic fire suppression system with smoke partitions
Storage rooms more than 100 square feet in area	1 hour and automatic fire suppression system
Physical plant maintenance shop and workshop	1 hour and automatic fire suppression system
Use Group I-2:	
Gift/retail shops and laboratories employing hazardous quantities less than those which cause classification as Use Group H	1 hour; or automatic fire suppression system with smoke partitions
Use Group I-3 padded cells	1 hour and automatic fire suppression system

Note a. For requirements for fire-resistance rated separations and smoke partitions, see Section 302.1.1.1.

Note b. 1 square foot = 0.093 m².

302.1.1.1 Separation: Where Table 302.1.1 requires a fire-resistance rated separation, the specific occupancy area shall be separated from the remainder of the building with *fire separation assemblies* (see Section 709.0). Where Table 302.1.1 requires smoke partitions, the smoke partitions shall be constructed of materials consistent with the type of construction and shall be capable of resisting the passage of smoke. The smoke partitions shall extend from the floor to the underside of the fire-resistance rated floor/ceiling or roof/ceiling assembly or to the underside of the floor or roof deck above. All doors shall be self-closing or automatic-closing upon detection of smoke. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80 listed in Chapter 35.

302.1.2 Accessory areas: Except for accessory areas of Use Group H in accordance with Section 302.1.2.1 and specific occupancy areas indicated in Section 302.1.1, a *fire separation assembly* shall not be required between the main use group and accessory areas where the aggregate area devoted to all accessory occupancies does not occupy more than 10 percent of any *fire area*; the aggregate area devoted to all accessory uses within a story does not exceed 10 percent of the area of the story; and the aggregate area devoted to an accessory occupancy is not more than 10 percent of the allowable area permitted by Section 503.0 based on the accessory use group. The required type of construction and the *automatic fire suppression* requirements in Section 904.0 shall be based on the main use group of the *fire area*.

302.1.2.1 High-hazard uses: In buildings that are three stories or less in *height* and equipped throughout with an *automatic sprinkler system* in accordance with Section 906.2.1, an occupancy in Use Group F or S is permitted to have accessory areas of Use Group H-2, H-3 or H-4, provided that such areas do not occupy more than 10 percent of any *fire area*, nor more than 10 percent of the allowable area permitted by Section 503.0 based on the use group of the accessory area. A *fire separation assembly* shall not be required between the F or S use group and the accessory H use group. The maximum quantity of *hazardous materials* within the accessory H use group shall not exceed twice the permitted exempt amount specified in Table 307.8(1) or Table 307.8(2). The required type of construction shall be based on the main use group of the *fire area*.

302.2 Mixed use: All buildings and structures that include more than one use group shall be further designated as a mixed use and shall comply with Section 313.0. Specific occupancy areas and accessory areas complying with Sections 302.1.1 and 302.1.2, respectively, shall be classified in accordance with the main use group.

SECTION 303.0 ASSEMBLY USE GROUPS

303.1 General: All structures which are designed or occupied for the gathering together of persons for purposes such as civic,

social or religious functions, recreation, food or drink consumption or awaiting transportation, shall be classified as Use Group A-1, A-2, A-3, A-4 or A-5. A room or space used for assembly purposes by less than 50 persons and which is accessory to another use group shall be included as a part of that main use group. The term "Use Group A" shall include Use Groups A-1, A-2, A-3, A-4 and A-5.

303.2 Use Group A-1, theaters: This use group shall include all theaters and all other buildings and structures intended for the production and viewing of performing arts or motion pictures; and which are usually provided with fixed seats — including theaters, motion picture theaters and television and radio studios admitting an audience. *Stages* and *platforms* shall comply with Section 412.0.

303.3 Use Group A-2 structures: This use group shall include all buildings and places of public assembly, without theatrical stage accessories, designed for occupancy as dance halls, nightclubs and for similar purposes, including all rooms, lobbies and other spaces connected thereto with a common *means of egress* and entrance.

303.4 Use Group A-3 structures: This use group shall include all buildings with or without an auditorium in which persons assemble for amusement, entertainment or recreation purposes, as well as incidental motion picture, dramatic or theatrical presentations, lectures or other similar purposes without theatrical stage other than a raised *platform*; and which are principally occupied without permanent seating facilities, including art galleries, exhibition halls, museums, lecture halls, libraries, restaurants other than nightclubs, and recreation centers; and buildings designed for similar assembly purposes, including passenger terminals.

303.5 Use Group A-4 structures: This use group shall include all buildings and structures which are occupied exclusively for the purpose of worship or other religious services.

303.6 Use Group A-5, outdoor assembly: This use group shall include structures utilized for outdoor assembly intended for participation in or reviewing activities, including *grandstands* (Section 1013.0), *bleachers* (Section 1013.0), coliseums, stadiums, amusement park structures (Section 413.0) and fair or carnival structures. Such structures shall comply with all pertinent provisions of this code.

SECTION 304.0 BUSINESS USE GROUP

304.1 General: All buildings and structures which are occupied for the transaction of business, for the rendering of professional services, or for other services that involve stocks of goods, wares or merchandise in limited quantities which are incidental to office occupancies or sample purposes, shall be classified as Use Group B.

304.2 List of business occupancies: The occupancies listed in Table 304.2 are indicative of and shall be classified as Use Group B.

Table 304.2
BUSINESS OCCUPANCIES

Airport traffic control towers	Fire stations
Animal hospitals, kennels, pounds	Florists and nurseries
Automobile and other motor vehicle showrooms	Laboratories; testing and research
Banks	Laundries; pickup and delivery stations and self-service
Barber shops	Police stations
Beauty shops	Post offices
Car wash	Print shops
Civic administration	Professional services; attorney, dentist, physician, engineer, etc.
Clinic, outpatient	Radio and television stations
Dry cleaning; pickup and delivery stations and self-service	Telecommunication equipment building
Electronic data processing	

SECTION 305.0 EDUCATIONAL USE GROUP

305.1 General: All structures other than those occupied for business training or vocational training, which accommodate more than five persons for educational purposes through the 12th grade, shall be classified as Use Group E.

Exception: A room or space occupied for educational purposes by less than 50 persons, 5 years of age or more, and which is accessory to another use group shall be classified as a part of the main use group.

305.1.1 Day care facilities: A day care facility which provides care for more than five persons more than 2½ years of age for less than 24 hours per day shall be classified as Use Group E.

305.2 Business or vocational training: Structures occupied for business training or vocational training shall be classified in the same use group as the business or vocation taught.

SECTION 306.0 FACTORY AND INDUSTRIAL USE GROUPS

306.1 General: All structures in which occupants are engaged in work or labor in the fabricating, assembling or processing of products or materials, shall be classified as Use Group F-1 or F-2. This includes, among others, factories, assembling plants, industrial laboratories and all other industrial and manufacturing occupancies. The term "Use Group F" shall include Use Groups F-1 and F-2.

306.2 Use Group F-1 structures: Factory and industrial occupancies which are not otherwise classified as low-hazard Use Group F-2, shall be classified as a moderate-hazard factory and industrial occupancy, Use Group F-1. The manufacturing processes listed in Table 306.2 are indicative of and shall be classified as Use Group F-1.

306.3 Use Group F-2 structures: Factory and industrial occupancies which involve the fabrication or manufacturing of non-combustible materials that, during finishing, packing or processing, do not contribute to a significant fire hazard, shall be classified as Use Group F-2. The manufacturing processes listed in Table 306.3 are indicative of and shall be classified as Use Group F-2.

Table 306.2
MODERATE-HAZARD FACTORY AND INDUSTRIAL OCCUPANCIES

Aircraft	Film, photographic
Appliances	Food processing
Athletic equipment	Furniture
Automobiles and other motor vehicles	Hemp and jute products
Bakeries	Laundries
Beverages, alcoholic	Leather and tanneries, excluding enameling or japanning
Bicycles	Machinery
Boat building	Millwork and woodworking, wood distillation
Boiler works	Motion picture and television filming
Brooms or brushes	Musical instruments
Business machines	Optical goods
Cameras and photo equipment	Paper mills or products
Canneries, including food products	Plastic products
Clothing	Printing or publishing
Condensed and powdered milk manufacture	Recreational vehicles
Construction and agricultural machinery	Refuse incinerators
Disinfectants	Shoes
Dry cleaning using other than flammable liquids in cleaning or dyeing operations or other than classified in Section 307.0	Soaps and detergents
Electric light plants and power houses	Sugar refineries
Electrolytic-reducing works	Textile mills, including canvas, cotton cloth, bagging, burlap, carpets and rags
Electronics	Tobacco
Engines, including rebuilding	Trailers
	Upholstery and manufacturing shops

Table 306.3
LOW-HAZARD FACTORY AND INDUSTRIAL OCCUPANCIES

Beverages, nonalcoholic	Gypsum
Brick and masonry	Ice
Ceramic products	Metal fabrication and assembly
Foundries	Water-pumping plants
Glass products	

SECTION 307.0 HIGH-HAZARD USE GROUPS

307.1 General: All structures which are occupied for the manufacturing, processing, generation, storage or other use of *hazardous materials* in excess of the exempt quantities specified in Section 307.8 shall be classified as Use Group H-1, H-2, H-3 or H-4 in accordance with the hazards presented by each material as described in Sections 307.3 through 307.6. The term "Use Group H" shall include Use Groups H-1, H-2, H-3 and H-4.

307.1.1 Information required: Separate floor plans shall be submitted for buildings and structures with an occupancy in Use Group H, identifying the locations of anticipated contents and processes so as to reflect the nature of each occupied portion of every building and structure. A report identifying all *hazardous materials* including, but not limited to, materials representing hazards that are classified in Use Group H to be stored or utilized, shall be submitted and the methods of protection from such hazards shall be indicated on the *construction documents*.

307.2 Definitions: The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

Aerosol: A product that is dispensed from an *aerosol container* by a propellant.

Aerosol container: Metal cans, glass or *plastic* bottles designed to dispense an *aerosol*. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or *plastic* bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

Barricade: A structure that consists of a combination of walls, floor and roof, which is designed to withstand the rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other effective method of shielding from *explosive* materials by a natural or artificial barrier.

Boiling point: The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch (psia) or 760 mm of mercury. Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for the purposes of this classification, the 10 percent of a distillation performed in accordance with ASTM D86 listed in Chapter 35 shall be used as the boiling point of the liquid.

Closed system: The use of a solid or liquid *hazardous material* in a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations; and all uses of *compressed gases*. Examples of closed systems for solids and liquids include product conveyed through a piping system into a closed vessel, system or piece of equipment.

Combustible dusts: Dusts and any similar solid material sufficiently comminuted for suspension in still air which, when so suspended, is capable of self-sustained combustion.

Combustible fibers: Includes readily ignitable and free-burning fibers such as cotton, sisal, henequen, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled wastepaper, kapok, hay, straw, excelsior, Spanish moss and other like material.

Combustible liquids: Any liquids having a *flash point* at or above 100 degrees F. (38 degrees C.) shall be known as Class II or III liquids. Combustible liquids shall be divided into the following classifications:

Class II: Liquids having *flash points* at or above 100 degrees F. (38 degrees C.) and below 140 degrees F. (60 degrees C.).

Class IIIA: Liquids having *flash points* at or above 140 degrees F. (60 degrees C.) and below 200 degrees F. (93 degrees C.).

Class IIIB: Liquids having *flash points* at or above 200 degrees F. (93 degrees C.).

Compressed gas: A gas or mixture of gases as contained having an absolute pressure exceeding 40 psi at 70 degrees F. (276 kPa at 21 degrees C.) or, regardless of the pressure at 70 degrees F. (21 degrees C.), having an absolute pressure exceeding 140 psi at 130 degrees F. (965 kPa at 54 degrees C.); or any liquid material having a vapor pressure exceeding 40

psi absolute at 100 degrees F. (276 kPa at 38 degrees C.) as determined by ASTM D323 listed in Chapter 35.

Control area: Spaces within a building which are enclosed and bounded by exterior walls, *fire walls*, *fire separation assemblies* and roofs, or a combination thereof, where quantities of *hazardous materials* not exceeding the exempt amounts are stored, dispensed, used or handled.

Corrosive: A chemical that causes visible destruction of, or irreversible *alterations* in, living tissue at the point of contact. A chemical shall be considered a corrosive if, when tested on the intact skin of albino rabbits by the test method described by DOTn 49 CFR; 173 listed in Chapter 35, such chemical destroys or changes irreversibly the structure of the tissue at the point of contact following an exposure period of 4 hours. This term shall not refer to action on inanimate surfaces.

Cryogenic liquids (flammable or oxidizing): Any liquid that has a *boiling point* below -200 degrees F. (-129 degrees C.).

Deflagration: An exothermic reaction, such as the extremely rapid oxidation of a *flammable* dust or vapor in air, in which the reaction progresses through the unburned material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

Detached storage building: A separate single-story building, without a *basement* or crawl space, used for the storage of *hazardous materials* and located an approved distance from all structures.

Detonation: An exothermic reaction characterized by the presence of a shock wave in the material which establishes and maintains the reaction. The reaction zone progresses through the material at a rate greater than the velocity of sound. The principal heating mechanism is one of shock compression. *Detonations* have an explosive effect.

Dispensing: The pouring or transferring of any material from a container, tank or similar vessel, whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

Explosive: Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord and igniters.

The term "explosive" includes any material determined to be within the scope of USC Title 18; Chapter 40 listed in Chapter 35 and also includes any material classified as an explosive by the Hazardous Material Regulations of DOTn 49 CFR listed in Chapter 35.

Flammable: Capable of being readily ignited from common sources of heat or at a temperature of 600 degrees F. (316 degrees C.) or less.

Flammable compressed gas: Either a mixture of 13 percent or less (by volume) with air forms a *flammable* mixture, or the *flammable* range with air is wider than 12 percent, regardless of the lower limitation. These limitations shall be determined at atmospheric temperature and pressure.

Flammable liquids: Any liquid that has a *flash point* below 100 degrees F. (38 degrees C.), and has a vapor pressure not exceeding 40 psia (276 kPa) at 100 degrees F. (38 degrees C.). Flammable liquids shall be known as Class I liquids and shall be divided into the following classifications:

Class IA: Liquids having a *flash point* below 73 degrees F. (23 degrees C.) and having a *boiling point* below 100 degrees F. (38 degrees C.).

Class IB: Liquids having a *flash point* below 73 degrees F. (23 degrees C.) and having a *boiling point* at or above 100 degrees F. (38 degrees C.).

Class IC: Liquids having a *flash point* at or above 73 degrees F. (23 degrees C.) and below 100 degrees F. (38 degrees C.).

Flammable solid: A solid, other than a blasting agent or *explosive*, that is capable of causing fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which has an ignition temperature below 212 degrees F. (100 degrees C.) or which burns so vigorously and persistently when ignited as to create a serious hazard. A chemical shall be considered a flammable solid as determined in accordance with the test method of CPSC 16 CFR; 1500.44 listed in Chapter 35, if it ignites and burns with a self-sustained flame at a rate greater than 0.1 inch (3 mm) per second along its major axis.

Flash point: The minimum temperature in degrees Fahrenheit at which a *flammable liquid* will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The flash point of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D56 and ASTM D93 listed in Chapter 35.

Handling: The deliberate transport by any means to a point of storage or use.

Hazardous materials: Those chemicals or substances which are *physical hazards* or *health hazards* as defined and classified in this section and the fire prevention code listed in Chapter 35, whether the materials are in usable or waste condition.

Health hazard: A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals which are *toxic* or *highly toxic*, *irritants*, *corrosives*, *sensitizers*, or *radioactive*.

Highly toxic: A chemical falling within any of the following categories is considered highly toxic.

1. A chemical that has a median lethal dose (LD₅₀) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD₅₀) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
3. A chemical that has a median lethal concentration (LC₅₀) in air of 200 parts per million-by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for 1 hour (or

less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

Incompatible materials: Materials which, when mixed, have the potential to react in a manner that generates heat, fumes, gases or by-products which are hazardous to life or property.

Irritant: A chemical which is not *corrosive*, but which causes a reversible inflammatory effect on living tissue by chemical action at the point of contact. A chemical shall be considered an irritant if, when tested on the intact skin of albino rabbits by the test method of CPSC 16 CFR; 1500.41 listed in Chapter 35 for 4 hours exposure, it results in an empirical score of 5 or more. A chemical is an eye irritant if so determined by the procedure in CPSC 16 CFR; 1500.42 listed in Chapter 35.

Open system: The use of a solid or liquid *hazardous material* in a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.

Organic peroxide: An organic compound that contains the bivalent double-bonded oxygen structure and which is considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical.

Unclassified detonable: Organic peroxides which are capable of *detonation*. These peroxides present an extremely high explosion hazard through rapid explosive decomposition.

Class I: Class I organic peroxides are capable of *deflagration*, but not *detonation*. These peroxides present a high explosion hazard through rapid decomposition.

Class II: Class II organic peroxides burn very rapidly and present a severe reactivity hazard.

Class III: Class III organic peroxides burn rapidly and present a moderate reactivity hazard.

Other health-hazard material: A *hazardous material* that affects target organs of the body, which includes, but is not limited to, those materials which cause liver damage, kidney damage or damage to the nervous system; act on the blood to decrease hemoglobin function; deprive the body tissue of oxygen; or affect reproductive capabilities, including mutations (chromosomal damage) or teratogens (effects on fetuses).

Oxidizer: A material that is capable, generally by yielding oxygen, of causing or enhancing the combustion of other materials.

Class 4: An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. Additionally, the oxidizer will enhance the burning rate and is capable of causing spontaneous ignition of combustibles.

Class 3: An oxidizer that will cause a severe increase in the burning rate of combustible materials with which the oxidizer comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.

Class 2: An oxidizer that will cause a moderate increase in the burning rate or that is capable of causing spontaneous ignition of combustible materials with which the oxidizer comes in contact.

Class 1: An oxidizer whose primary hazard is a slight increase in the burning rate but which does not cause spontaneous ignition when the oxidizer comes in contact with combustible materials.

Physical hazard: A chemical for which there is evidence in the referenced standards listed in Chapter 35 that it is a *combustible liquid, compressed gas, cryogenic, explosive, flammable gas, flammable liquid, flammable solid, organic peroxide, oxidizer, pyrophoric or unstable (reactive) or water-reactive material*.

Pyrophoric: A material that will spontaneously ignite in air at or below a temperature of 130 degrees F. (54 degrees C.).

Radioactive material: Any material or combination of material that spontaneously emits ionizing radiation.

Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Tires, bulk storage of: Storage of 10,000 or more average-sized passenger vehicle tires weighing approximately 25 pounds (111 N) each (see Section 307.5).

Toxic: A chemical that is within any of the following categories shall be considered toxic:

1. A chemical that has a median lethal dose (LD₅₀) of more than 50 milligrams per kilogram, but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD₅₀) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
3. A chemical that has a median lethal concentration (LC₅₀) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

Unstable (reactive) material: A material which, in the pure state or as commercially produced, will vigorously polymerize, decompose or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure or temperature.

Class 4: Materials that in themselves are readily capable of *detonation* or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes, among others, materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

Class 3: Materials that in themselves are capable of *detonation* or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. This class includes, among others, materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

Class 2: Materials that readily undergo violent chemical change at elevated temperatures and pressures. This class includes, among others, materials that exhibit an exotherm at temperatures less than or equal to 150 degrees C. when tested by differential scanning calorimetry.

Class 1: Materials that in themselves are normally stable, but which can become unstable at elevated temperatures and pressures. This class includes, among others, materials that change or decompose on exposure to air, light or moisture, and materials that exhibit an exotherm at temperatures greater than 150 degrees C., but less than or equal to 300 degrees C., when tested by differential scanning calorimetry.

Water-reactive material: A material which has the potential to become spontaneously *flammable* or to give off *flammable, highly toxic or toxic* gases or other gases with a LC₅₀ value of 5,000 ppm or less at a rate greater than 1 liter per kilogram of material per hour when tested in accordance with the method described in Section 4 of Appendix E to DOTn 49 CFR; 173 listed in Chapter 35. Class 1 water reactive materials are not subject to regulation in this code. Water reactive materials are classified into three groups as follows:

Class 3: A material which reacts vigorously with water at ambient temperatures and generally demonstrates a tendency for gas produced to ignite spontaneously or which reacts readily with water at ambient temperatures such that the rate of evolution of *flammable* or *toxic* gas is equal to or greater than 10 liters per kilogram of material over any 1 minute. In accordance with DOTn 49 CFR; 172 listed in Chapter 35, the classification for these materials is 4.3, Packing Group I.

Class 2: A material which reacts readily with water at ambient temperatures such that the maximum rate of evolution of *flammable* or *toxic* gas is equal to or greater than 20 liters over kilogram of material per hour, and which does not meet the criteria of Class 3 water reactive materials. In accordance with DOTn 49 CFR; 172 listed in Chapter 35, the classification for these materials is 4.3, Packing Group II.

Class 1: A material which reacts slowly with water at ambient temperatures such that the maximum rate of evolution of *flammable* or *toxic* gas is greater than 1 liter per kilogram of material per hour, and which does not meet the criteria from Class 2 or 3 water reactive materials. In accordance with DOTn 49 CFR; 172 listed in Chapter 35, the classification for these materials is 4.3, Packing Group III.

307.3 Use Group H-1 structures: All buildings and structures which contain materials that present a *detonation* hazard, shall be classified as Use Group H-1. Such materials shall include but not be limited to:

*Explosives**Organic peroxides*, unclassified detonable*Oxidizers*, Class 4*Unstable (reactive) materials*, Class 3 detonable, and Class 4
Detonable *pyrophoric* materials

307.4 Use Group H-2 structures: All buildings and structures which contain materials that present a *deflagration* hazard or a hazard from accelerated burning, shall be classified as Use Group H-2. Such materials shall include but not be limited to:

*Combustible dusts**Combustible liquids*, Class II and Class IIIA*Cryogenic liquids, flammable or oxidizing**Flammable gases**Flammable liquids**Organic peroxides*, Class I and Class II*Oxidizers*, Class 3*Oxidizing gases**Pyrophoric* liquids, solids and gases, nondetonable*Unstable (reactive) materials*, Class 3, nondetonable

307.5 Use Group H-3 structures: All buildings and structures which contain materials that readily support combustion or present a *physical hazard*, shall be classified as Use Group H-3. Such materials shall include but not be limited to:

Aerosols, Level 2 and Level 3*Combustible fibers**Combustible liquids*, Class IIIB*Flammable solids**Organic peroxides*, Class III*Oxidizers*, Class 1 and Class 2*Tires, bulk storage of**Unstable (reactive) materials*, Class 2*Water-reactive materials*, Class 2 and Class 3

307.6 Use Group H-4 structures: All buildings and structures which contain materials that are *health hazards*, shall be classified as Use Group H-4. Such materials shall include but not be limited to:

*Corrosives**Highly toxic* materials*Irritants**Radioactive materials**Sensitizers**Toxic* materials

307.7 Multiple hazards: All buildings and structures containing a material or materials representing hazards that are classified in one or more of Use Groups H-1, H-2, H-3 and H-4, shall conform to the code requirements for each of the use groups so classified.

307.8 Exceptions: The following shall not be classified in Use Group H, but shall be classified in the use group which they most nearly resemble. *Hazardous materials* in any quantity shall conform to the requirements of this code, including Section 417.0, and the fire prevention code listed in Chapter 35.

1. All buildings and structures which contain not more than the exempt quantities of *hazardous materials* as shown in Tables 307.8(1) and 307.8(2) provided that such buildings are maintained in accordance with the fire prevention code listed in Chapter 35.

2. Buildings utilizing *control areas* in accordance with Section 417.2 which contain not more than the exempt quantities of *hazardous materials* as shown in Tables 307.8(1) and 307.8(2).
3. Buildings and structures occupied for the storage of 10,000 or less vehicle tires weighing approximately 25 pounds (111 N) each, provided that such buildings are equipped throughout with an *automatic sprinkler system* in accordance with Section 906.2.1.
4. Buildings and structures occupied for the application of *flammable* finishes, provided that such buildings or areas conform to the requirements of Section 419.0 and NFPA 33, NFPA 34 and the fire prevention code listed in Chapter 35.
5. Rooms containing *flammable liquids* in tightly closed containers of 1-gallon capacity (3.8 L) or less for private utilization on the premises and in quantities not exceeding 2 gallons per square foot (82 L/m²) of room area.
6. Wholesale and retail sales and storage of *flammable* and *combustible liquids* in mercantile occupancies conforming to NFPA 30 and the fire prevention code listed in Chapter 35.
7. *Closed systems* housing *flammable* or *combustible liquids* or gases utilized for the operation of machinery or equipment.
8. Cleaning establishments which utilize *combustible liquid* solvents having a *flash point* of 140 degrees F. (60 degrees C.) or higher in *closed systems* employing equipment listed by an *approved testing agency*, provided that this occupancy is separated from all other areas of the building by 1-hour fire-resistance rated *fire separation assemblies*.
9. Cleaning establishments which utilize a liquid solvent having a *flash point* at or above 200 degrees F. (93 degrees C.).
10. Liquor stores and distributors without bulk storage.
11. Refrigeration systems.
12. The storage or utilization of materials for agricultural purposes on the premises.
13. Stationary batteries utilized for facility emergency power, uninterrupted power supply or telecommunication facilities provided that the batteries are provided with safety venting caps and *ventilation* is provided in accordance with the mechanical code listed in Chapter 35.
14. *Corrosives*, *irritants* and *sensitizers* shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
15. Buildings and structures occupied for *aerosol* manufacturing or storage shall be classified as Use Group F-1 or S-1, provided that such buildings conform to the requirements of NFPA 30B and the fire prevention code listed in Chapter 35.
16. Display and storage of nonflammable solid and nonflammable or noncombustible liquid *hazardous materials* in mercantile occupancies in accordance with Section 417.2.1.
17. The storage of Level 2 and Level 3 *aerosol* products in occupancies in Use Groups A, B, E, F, M, I and R provided such occupancies conform to the fire prevention code listed in Chapter 35.

Table 307.8(1)
EXEMPT AMOUNTS OF HAZARDOUS MATERIALS, LIQUIDS AND CHEMICALS PRESENTING A PHYSICAL HAZARD
MAXIMUM QUANTITIES PER CONTROL AREA^{a,1}

Material	Class	Use Group	Storage ^b			Closed systems ^b			Open systems ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible liquid ^{c,k}	II	H-2	Not applicable	120 ^{d,e}	Not applicable	Not applicable	120 ^d	Not applicable	Not applicable	30 ^d
	IIIA	H-2		330 ^{d,e}			330 ^d			80 ^d
	IIIB	H-3		13,200 ^{e,f}			13,200 ^f			3,300 ^f
Combustible dust pounds per 1,000 cubic feet		H-2	1 ^g	Not applicable	Not applicable	1 ^g	Not applicable	Not applicable	1 ^g	Not applicable
Combustible fiber	Loose Baled	H-3	(100) (1,000)	Not applicable	Not applicable	(100) (1,000)	Not applicable	Not applicable	(20) (200)	Not applicable
Cryogenics, flammable or oxidizing		H-2	Not applicable	45 ^d	Not applicable	Not applicable	45 ^d	Not applicable	Not applicable	10 ^d
Explosives		H-1	1 ^{e,h,i}	(1) ^{e,h,i}	Not applicable	1/4 ^h	(1/4) ^h	Not applicable	1/2 ^h	(1/2) ⁱ
Flammable gas	Gaseous Liquefied	H-2	Not applicable	Not applicable	1,000 ^{d,e}	Not applicable	Not applicable	750 ^{d,e}	Not applicable	Not applicable
				30 ^{d,e}	Not applicable	30 ^{d,e}	Not applicable			
Flammable liquid ^c	IA	H-2	Not applicable	30 ^{d,e}	Not applicable	Not applicable	30 ^d	Not applicable	Not applicable	10 ^c
	IB			60 ^{d,e}			60 ^d			15 ^c
	IC			90 ^{d,e}			90 ^d			20 ^c
Combination (IA, IB, IC)		H-2	Not applicable	120 ^{d,e,j}	Not applicable	Not applicable	120 ^{d,j}	Not applicable	Not applicable	30 ^{d,i}
Flammable solid		H-3	125 ^{d,e}	Not applicable	Not applicable	25 ^d	Not applicable	Not applicable	25 ^c	Not applicable
Organic peroxide	UD	H-1	1 ^{e,h}	(1) ^{e,h}	Not applicable	1/4 ^h	(1/4) ^h	Not applicable	1/2 ^h	(1/2) ⁱ
	I	H-2	5 ^{d,e}	(5) ^{d,e}		1 ^d	(1) ^d		1 ^c	(1) ^c
	II	H-3	50 ^{d,e}	(50) ^{d,e}		50 ^d	(50) ^d		10 ^c	(10) ^c
	III	H-3	125 ^{d,e}	(125) ^{d,e}		125 ^d	(125) ^d		25 ^c	(25) ^c
Oxidizer	4	H-1	1 ^{e,h}	(1) ^{e,h}	Not applicable	1/4 ^h	(1/4) ^h	Not applicable	1/2 ^h	(1/2) ⁱ
	3	H-2	10 ^{d,e}	(10) ^{d,e}		2 ^d	(2) ^d		2 ^c	(2) ^c
	2	H-3	250 ^{d,e}	(250) ^{d,e}		250 ^d	(250) ^d		50 ^c	(50) ^c
	1	H-3	4,000 ^{d,e}	(4,000) ^{d,e}		4,000 ^d	(4,000) ^d		1,000 ^d	(1,000) ^d
Oxidizer — gas	Gaseous Liquefied	H-2	Not applicable	Not applicable	1,500 ^{d,e}	Not applicable	Not applicable	1,500 ^{d,e}	Not applicable	Not applicable
Pyrophoric		H-2	4 ^{e,h}	(4) ^{e,h}	50 ^{e,h}	1 ^h	(1) ^h	10 ^{e,h}	0	0
Unstable (reactive)	4	H-1	1 ^{e,h}	(1) ^{e,h}	10 ^{d,h}	1/4 ^h	(1/4) ^h	2 ^{e,h}	1/2 ^c	(1/2) ⁱ
	3	H-1 or H-2	5 ^{d,e}	(5) ^{d,e}	50 ^{d,e}	1 ^d	(1) ^d	10 ^{d,e}	1 ^c	(1) ^c
	2	H-3	50 ^{d,e}	(50) ^{d,e}	250 ^{d,e}	50 ^d	(50) ^d	250 ^{d,e}	10 ^c	(10) ^c
Water reactive	3	H-3	5 ^{d,e}	(5) ^{d,e}	Not applicable	5 ^d	(5) ^d	Not applicable	1 ^c	(1) ^c
	2	H-3	50 ^{d,e}	(50) ^{d,e}		50 ^d	(50) ^d		10 ^c	(10) ^c

Note a. For use of control areas, see Section 417.2.

Note b. The aggregate quantity in utilization and storage shall not exceed the quantity listed for storage.

Note c. The quantities of alcoholic beverages in retail sales occupancies shall not be limited, provided the liquids are packaged in individual containers not exceeding 1 gallon. In retail sales and storage occupancies, the quantities of medicines, foodstuffs and cosmetics, containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1 gallon.

Note d. Maximum quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.

Note e. Quantities shall be increased 100 percent when stored in approved cabinets, gas cabinets, fume hoods, exhausted enclosures, or safety cans as specified in the fire prevention code listed in Chapter 35. Where Note d also applies, the increase for both notes shall be applied accumulatively.

Note f. The permitted quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1.

Note g. A dust explosion potential is considered to exist where 1 pound or more of combustible dust per 1,000 cubic feet of volume is normally in suspension or could be put into suspension in all or a portion of an enclosure or inside pieces of equipment. This also includes combustible dust which accumulates on horizontal surfaces inside buildings or equipment and which could be put into suspension by an accident, sudden force or small explosion.

Note h. Permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1.

Note i. One pound of black sporting powder and 20 pounds of smokeless powder are permitted in sprinklered or unsprinklered buildings. The maximum quantities of black sporting and smokeless powder shall be the amounts specified in NFPA 495 where such powder is stored in accordance with NFPA 495 listed in Chapter 35.

Note j. Containing not more than the exempt amounts of Class I-A, Class I-B or Class I-C flammable liquids.

Note k. Inside a building, the maximum capacity of a combustible liquid storage system that is connected to a fuel-oil piping system shall be 660 gallons provided such system conforms to the fire prevention code listed in Chapter 35.

Note l. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column. 1 cubic foot = 0.028 m³; 1 pound = 0.454 kg; 1 gallon = 3.785 L.

Table 307.8(2)
EXEMPT AMOUNTS OF HAZARDOUS MATERIALS, LIQUIDS AND CHEMICALS PRESENTING A HEALTH HAZARD
MAXIMUM QUANTITIES PER CONTROL AREA ^{a, b, i}

Material	Storage ^c			Closed systems ^c			Open systems ^c	
	Solid pounds ^{d,e}	Liquid gallons (pounds) ^{d,e}	Gas cubic feet	Solid pounds ^d	Liquid gallons (pounds) ^d	Gas cubic feet	Solid pounds ^d	Liquid gallons (pounds) ^d
Corrosive	5,000	500	810 ^{d,e,h}	5,000	500	810 ^{d,e,h}	1,000	100
Highly toxic	1	(1)	20 ^f	1	(1)	20 ^f	¼	(¼)
Irritant	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited
Radioactive ^g	25 rem - unsealed source 100 rem - sealed source			100 rem - sealed source			25 rem - sealed source	
Sensitizer	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited
Toxic	500	(500)	810 ^{d,e}	500	(500)	810 ^{d,e}	125	(125)
Other health hazards	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited	810 ^{d,e}	Not limited	Not limited

Note a. For use of control areas, see Section 417.2.

Note b. In retail sales occupancies, the quantities of medicines, foodstuffs and cosmetics, containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1 gallon.

Note c. The aggregate quantity in utilization and storage shall not exceed the quantity listed for storage.

Note d. Maximum quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.

Note e. Maximum quantities shall be increased 100 percent when stored in approved storage cabinets, gas cabinets, fume hoods, exhausted enclosures, or safety cans as specified in the fire prevention code listed in Chapter 35. Where Note d also applies, the increase for both notes shall be applied accumulatively.

Note f. Permitted only when stored in approved exhausted gas cabinets, exhausted enclosures or fume hoods.

Note g. Maximum dosage permitted in any single exposure.

Note h. A single cylinder containing 150 pounds or less of anhydrous ammonia in a single control area in a nonsprinklered building shall be considered an exempt quantity. Two cylinders, each containing 150 pounds or less in a single control area shall be considered an exempt quantity provided the building is equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1.

Note i. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column. 1 cubic foot = 0.028 m³; 1 pound = 0.454 kg; 1 gallon = 3.785 L.

SECTION 308.0 INSTITUTIONAL USE GROUPS

308.1 General: All structures in which people suffering from physical limitations because of health or age are harbored for medical or other care or treatment, or in which people are detained for penal or correction purposes, or in which the liberty of the inmates is restricted, shall be classified as Use Group I-1, I-2 or I-3. The term "Use Group I" shall include Use Groups I-1, I-2 and I-3.

308.2 Use Group I-1: This use group shall include buildings and structures which house six or more individuals who, because of age, mental disability or other reasons, must live in a supervised environment but who are physically capable of responding to an emergency situation without personal assistance. Where accommodating persons of the above description, the following types of facilities shall be classified as I-1 facilities: board and care facilities, half-way houses, group homes, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. A facility such as the above with five or less occupants shall be classified as a residential use group.

308.3 Use Group I-2: This use group shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of six or more persons who are not capable of self-preservation. Where accommodating persons of the above description, the following types of facilities shall be classified as I-2 facilities: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals and detoxification facilities. A facility such as the above with five or less occupants shall be classified as a residential use group.

308.3.1 Child care facility: A child care facility which accommodates more than five children 2½ years of age or less for any length of time shall be classified as Use Group I-2.

308.4 Use Group I-3: This use group shall include buildings and structures which are inhabited by six or more persons who are under some restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. Where accommodating persons of the above description, the following types of facilities shall be classified as I-3 facilities: prisons, jails, reformatories, detention centers, correctional centers and pre-release centers. Buildings of Use Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.4.1 through 308.4.5 (see Section 410.0).

308.4.1 Occupancy Condition I: This occupancy condition shall include all buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. An Occupancy Condition I facility shall be classified as Use Group R.

308.4.2 Occupancy Condition II: This occupancy condition shall include all buildings in which free movement is allowed from sleeping areas and any other occupied *smoke compartment* to one or more other *smoke compartments*. Egress to the exterior is impeded by locked *exits*.

308.4.3 Occupancy Condition III: This occupancy condition shall include all buildings in which free movement is allowed within individual *smoke compartments*, such as within a residential unit comprised of individual sleeping

rooms and group activity spaces, where egress is impeded by remote-controlled release of *means of egress* from such *smoke compartment* to another *smoke compartment*.

308.4.4 Occupancy Condition IV: This occupancy condition shall include all buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from all sleeping rooms, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments*.

308.4.5 Occupancy Condition V: This occupancy condition shall include all buildings in which free movement is restricted from an occupied space. Staff-controlled release is provided to permit movement from all sleeping rooms, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments*.

SECTION 309.0 MERCANTILE USE GROUP

309.1 General: All buildings and structures which are occupied for display and sales purposes involving stocks of goods, wares or merchandise incidental to such purposes and open to the public, shall be classified as Use Group M. This includes, among others, retail stores, automotive service stations, shops, sales-rooms and markets. An automotive service station is that portion of a property where motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles or approved containers, including any building used for the sale of automotive accessories, or for minor automotive repair work. Minor repairs include the exchange of parts, oil changes, engine tune-ups and similar routine maintenance work. Retail sales of *hazardous materials* shall comply with Section 307.8.

SECTION 310.0 RESIDENTIAL USE GROUPS

310.1 General: All structures in which sleeping accommodations are provided, excluding those that are classified as institutional occupancies, shall be classified as Use Group R-1, R-2, R-3 or R-4. The term "Use Group R" shall include Use Groups R-1, R-2 and R-3.

310.2 Definitions: The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

Dwellings

Boarding house: A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

Dormitory: A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group.

Dwelling unit: A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

* **Multiple-family dwelling:** A building or portion thereof containing more than two *dwelling units* and not meeting the requirements for a *multiple single-family dwelling*.

Multiple single-family dwelling: A building or portion thereof containing more than two *dwelling units* (see Section 310.5).

One-family dwelling: A building containing one *dwelling unit* with not more than five lodgers or boarders.

Two-family dwelling: A building containing two *dwelling units* with not more than five lodgers or boarders per family.

310.3 Use Group R-1 structures: This use group shall include all hotels, motels, *boarding houses* and similar buildings arranged for shelter and sleeping accommodations for more than five occupants who are primarily transient in nature, occupying the facilities for a period of less than 30 days.

310.4 Use Group R-2 structures: This use group shall include all *multiple-family dwellings* having more than two *dwelling units*, except as provided for in Section 310.5 for *multiple single-family dwelling units*, and shall also include all *boarding houses* and similar buildings arranged for shelter and sleeping accommodations in which the occupants are primarily not transient in nature.

310.4.1 Dormitories: A *dormitory* facility which accommodates more than five persons more than 2½ years of age shall be classified as Use Group R-2.

310.5 Use Group R-3 structures: This use group shall include all buildings arranged for occupancy as *one-* or *two-family dwelling units*, including not more than five lodgers or boarders per family and *multiple single-family dwellings* where each unit has an independent *means of egress* and is separated by a 2-hour *fire separation assembly* (see Section 709.0).

Exceptions

1. In *multiple single-family dwellings* that are equipped throughout with an approved *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, the fire-resistance rating of the *dwelling unit* separation shall not be less than 1 hour. *Dwelling unit* separation walls shall be constructed as *fire partitions* (see Section 711.0).
2. In *multiple single-family dwellings* that are equipped throughout with an approved *automatic sprinkler system* installed in accordance with Section 906.2.3, the fire-resistance rating between each *dwelling unit* shall not be less than 1 hour and shall be constructed as a *fire partition*.

310.5.1 Child care facilities: A child care facility which accommodates five or less children of any age shall be classified as Use Group R-3.

310.6 Use Group R-4 structures: This use group shall include all detached *one-* or *two-family dwellings* not more than three stories in *height*, and the *accessory structures* as indicated in the one- and two-family dwelling code listed in Chapter 35. All such structures shall be designed in accordance with the one- and two-family dwelling code listed in Chapter 35 or in accordance with the requirements of this code applicable to Use Group R-3.

SECTION 311.0 STORAGE USE GROUPS

311.1 General: All structures which are primarily used for the storage of goods, wares or merchandise shall be classified as Use Group S-1 or S-2. This includes, among others, warehouses, storehouses and freight depots. The quantity of *hazardous mate-*

rials in storage shall comply with Section 307.8. The term "Use Group S" shall include Use Groups S-1 and S-2.

311.2 Moderate-hazard storage, Use Group S-1: Buildings occupied for the storage of moderate-hazard contents which are likely to burn with moderate rapidity, but which do not produce either poisonous gases, fumes or *explosives* including, among others, the materials listed in Table 311.2, shall be classified as Use Group S-1. A motor vehicle repair garage is that portion of a property wherein major repairs, such as engine overhauls, painting or body work, are performed on motorized vehicles.

**Table 311.2
MODERATE-HAZARD STORAGE OCCUPANCIES**

Barns ^a	Linoleum
Bags, cloth, burlap and paper	Livestock shelters ^a
Bamboo and rattan	Lumber yards
Baskets	Motor vehicle repair garages
Belting, canvas and leather	Petroleum warehouses for storage of lubricating oils with a flash point of 200 degrees F. (93.33 degrees C.) or higher
Books and paper in rolls or packs	Photo engraving
Boots and shoes	Public garages (Group 1) and stables
Buttons, including cloth covered, pearl or bone	Silk
Cardboard and cardboard boxes	Soap
Clothing, woolen wearing apparel	Sugar
Cordage	Tobacco, cigars, cigarettes and snuff
Furniture	Upholstering and mattress manufacturing
Furs	Wax candles
Grain silos ^a	
Glue, mucilage, paste and size	
Horn and combs, other than celluloid	
Leather, enameling or japanning	

Note a. For the use group classification where such structures are accessory to a residential occupancy, see Section 312.1.

311.3 Low-hazard storage, Use Group S-2: Low-hazard storage occupancies shall include buildings occupied for the storage of noncombustible materials, and of low-hazard wares that do not ordinarily burn rapidly such as products on wood pallets or in paper cartons without significant amounts of combustible wrappings, but with a negligible amount of *plastic* trim such as knobs, handles or film wrapping. Such occupancies shall be classified as Use Group S-2 including, among others, the materials listed in Table 311.3.

**Table 311.3
LOW-HAZARD STORAGE OCCUPANCIES**

Asbestos	Gypsum board
Beer or wine up to 12% alcohol in metal, glass or ceramic containers	Inert pigments
Cement in bags	Ivory
Chalk and crayons	Meats
Dairy products in nonwaxed coated paper containers	Metal cabinets
Dry cell batteries	Metal desks with plastic tops and trim
Electrical coils	Metal parts
Electrical motors	Metals
Food products	Mirrors
Foods in noncombustible containers	New empty cans
Fresh fruits and vegetables in nonplastic trays or containers	Oil-filled and other types of distribution transformers
Frozen foods	Open parking structures
Glass	Porcelain and pottery
Glass bottles, empty or filled with noncombustible liquids	Public garages (Group 2)
	Stoves
	Talc and soapstones
	Washers and dryers

SECTION 312.0 UTILITY AND MISCELLANEOUS USE GROUP

312.1 General: Buildings and structures of an accessory character and miscellaneous structures not classified in any specific use group shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Use Group U shall include structures that are accessory to a residential occupancy including, but not limited to, those listed in Table 312.1.

**Table 312.1
UTILITY AND MISCELLANEOUS OCCUPANCIES**

Agricultural buildings	Livestock shelters
Barns	Detached private garages
Carports	Greenhouses
Grain silos	Sheds having a building area less than 2,500 square feet ^a
Stables	

Note a. 1 square foot = 0.093 m².

SECTION 313.0 MIXED USE GROUPS

313.1 Two or more use groups: Where a building is occupied by two or more occupancies not included in the same use group, the building or portion thereof shall comply with Section 313.1.1, 313.1.2 or 313.1.3 or with combinations of these sections, except that occupancies in Use Group H shall be separated from occupancies of Use Groups A, E, I, M, R and nonaccessory areas of Use Group B in accordance with Section 313.1.2 or 313.1.3. Buildings that include an open parking structure located beneath an A, B, I, M or R Use Group shall comply with Sections 313.1.1, 313.1.2, 313.1.3 or 313.2.

Exception: *Fire areas* of Use Group H-1 shall be in separate and detached buildings and structures in accordance with Section 707.1.1.

313.1.1 Nonseparated use groups: Each portion of the building shall be individually classified as to use. The required type of construction for the building shall be determined by applying the *height* and *area* limitations for each of the applicable use groups to the entire building. The most restrictive type of construction, so determined, shall apply. The other requirements of this code shall apply to each portion of the building based on the use group of that occupancy, except that the most restrictive applicable provisions of Section 403.0 and Chapter 9 shall apply to these nonseparated use groups. A *fire separation assembly* is not required between use groups, except as required by other sections of this code.

313.1.2 Separated use groups: Each portion of the building shall be individually classified in a use group and shall be completely separated from adjacent *fire areas* by *fire separation assemblies* (see Section 709.0) and floor/ceiling assemblies (see Section 713.0) having a fire-resistance rating determined in accordance with Table 313.1.2, for the use groups being separated. Each *fire area* shall comply with the code based on the use group of that space. Each *fire area* shall comply with the *height* limitations of Section 503.0 based on the use of that space and the type of construction classification. In each story, the *building area* shall be such that the sum of the ratios of the floor area of each use group divided by the allowable *area* from Section 503.0 for each use group shall not exceed one.

Exception: Where the building is equipped throughout with an *automatic sprinkler system* in accordance with

Section 906.2.1, the required fire-resistance rating of fire separation assemblies separating areas of other than Use Group H, shall be reduced from those indicated in Table 313.1.2 by 1 hour but to not less than 1 hour and to not less than that required by Table 602 for floor construction.

313.1.3 Separate buildings: Each use group shall be considered a separate building where each such use group is completely separated from adjacent use groups by fire walls having a fire-resistance rating corresponding to that required by Table 602. Each building shall then comply with the provisions of this code applicable to the use group of that building.

313.2 Open parking structures beneath other use groups: Open parking structures constructed under Use Groups A, I, B, M and R shall not exceed the height and area limitations permitted under Section 406.0. The height and area of the portion of the building above the open parking structure shall not exceed the limitations in Section 503.0 for the upper use group. The height, in both feet and stories, of the portion of the building above the open parking structure shall be measured from grade plane and shall include both the open parking structure and the portion of the building above the parking structure.

Fire separation assemblies between the parking occupancy and the upper occupancy shall correspond to the required fire-resistance rating prescribed in Table 313.1.2 for the uses involved. The type of construction shall apply to each occupancy individually, except that all structural members — including main bracing within the open parking structure which is necessary to support the upper occupancy — shall be protected with the more restrictive fire-resistive assemblies of the occupancies involved as shown in Table 602. Exit facilities for the upper occupancy shall conform to Chapter 10 and shall be separated from the parking area by fire separation walls having at least a 2-hour fire-resistance rating as required by Table 602 and self-closing doors complying with Section 717.0. Means of egress from the open parking facility shall comply with Section 1010.5.

313.3 Use Group R: In buildings of Type 2C, 3B or 5B construction with an occupancy in Use Group R, the first floor shall not be occupied for use groups other than Use Group R, unless the floor/ceiling assembly and the enclosure walls are protected to afford a 1-hour fire-resistance rating and the exits from the residential floors are separately enclosed in accordance with the requirements of Chapter 10.

Table 313.1.2
FIRERESISTANCE RATING REQUIREMENTS FOR FIRE SEPARATION ASSEMBLIES BETWEEN FIRE AREAS^a

Use Group	FIRERESISTANCE RATING REQUIREMENTS FOR FIRE SEPARATION ASSEMBLIES BETWEEN FIRE AREAS ^a																							NP — Not Permitted	NA — Not Applicable
	A-1	A-2	A-3	A-4	A-5	B	E	F-1	F-2	H-1	H-2	H-3	H-4	I-1	I-2	I-3	M	R-1	R-2	R-3	S-1	S-2	U ^b		
A-1	2	2	2	2	2	2	2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
A-2		2	2	2	2	2	2	3	2	NP	4	3	2	3	3	3	2	2	2	2	3	2	3		
A-3			2	2	2	2	2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
A-4				2	2	2	2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
A-5					NA	2	2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
B						2	2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
E							2	3	2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
F-1								3	3	NP	4	3	3	3	3	3	3	3	3	3	3	3	3		
F-2									2	NP	4	3	2	2	3	3	2	2	2	2	3	2	3		
H-1										NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP		
H-2											4	4	4	4	4	4	4	4	4	4	4	4	4		
H-3												3	3	3	3	3	3	3	3	3	3	3	3		
H-4													2	2	2	2	2	2	2	2	3	2	3		
I-1														2	3	3	2	2	2	2	3	2	3		
I-2															3	3	3	3	3	3	3	3	3		
I-3																3	3	3	3	3	3	3	3		
M																	2	2	2	2	3	2	3		
R-1																		2	2	2	3	2	3		
R-2																			2	2	3	2	3		
R-3																				2	3	2	3		
S-1																					3	3	3		
S-2																						2	3		
U																							3		

Note a. Fire-resistance ratings are expressed in hours.
 Note b. For requirements for private garages, see Section 407.0.

NICK ARVIA

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**BUILDING OFFICIALS & CODE ADMINISTRATORS
INTERNATIONAL, INC.**

CHAPTER 12

CHIMNEYS AND VENTS

SECTION M-1201.0 GENERAL

M-1201.1 Scope: This chapter shall govern the installation, maintenance, repair and approval of all chimneys, *vents* and connectors.

M-1201.2 Location: Chimney or *vent* termination openings shall be located a minimum of 10 feet (3048 mm) from the lot line unless otherwise approved.

M-1201.3 Size of chimney or vent: The size of the chimney or *vent*, in other than multiple connections and engineered systems, shall have a minimum area equal to the area of the *appliance* connection.

M-1201.4 Abandoned inlet openings: Abandoned inlet openings in chimneys and *vents* shall be closed by an approved method.

M-1201.5 Cutting or notching: A structural member shall not be cut, notched or pierced in excess of the limitations specified in the building code listed in Chapter 21, unless proven safe by a structural analysis.

SECTION M-1202.0 DEFINITIONS

M-1202.1 General: The following words and terms shall, for the purposes of this chapter and as stated elsewhere in this code, have the meanings shown herein.

Appliance (mechanical):

Appliance, high heat: Any appliance operating at higher temperatures than a medium-heat appliance.

Appliance, low heat: Any appliance in which the products of combustion at the point of entrance to the flue under normal operating conditions have a temperature of 1,000 degrees F. (538 degrees C.) or less.

Appliance, medium heat: Any appliance in which the products of combustion at the point of entrance to the flue under normal operating conditions have a temperature not greater than 2,000 degrees F. (1093 degrees C.).

Appliance, unvented: An appliance designed or installed in such a manner that the products of combustion are not conveyed by a *vent* or chimney directly to the outside atmosphere.

Appliance, vented: An appliance designed and installed in such a manner that all of the products of combustion are conveyed directly from the appliance to the outside atmosphere through an approved chimney or *vent* system.

Chimney: A primarily vertical enclosure containing one or more passageways.

Factory-built: A chimney that is factory made and *labeled* by an approved testing or inspection agency for the venting of gas *appliances*, gas incinerators and solid or liquid fuel-burning *appliances*.

High-heat appliance type: An approved chimney for removing the products of combustion from fuel-burning, high-heat *appliances* producing combustion gases in excess of 2,000 degrees F. (1093 degrees C.) measured at the *appliance* fuel outlet.

Low-heat appliance type: An approved chimney for removing the products of combustion from fuel-burning, low-heat *appliances* producing combustion gases not in excess of 1,000 degrees F. (538 degrees C.) under normal operating conditions, but capable of producing combustion gases of 1,400 degrees F. (760 degrees C.) during intermittent forced firing for periods up to 1 hour. All temperatures shall be measured at the *appliance* flue outlet.

Masonry: A field-constructed chimney of solid masonry units, stones or reinforced concrete.

Medium-heat appliance type: An approved chimney for removing the products of combustion from fuel-burning, medium-heat *appliances* producing combustion gases not exceeding 2,000 degrees F. (1093 degrees C.) measured at the *appliance* flue outlet.

Metal: A field-constructed chimney made of metal.

Chimney connector: A pipe that connects a fuel-burning *appliance* to a chimney.

Chimney liner: The lining material of approved fire clay or other approved material.

Vent: A conduit or passageway for conveying products of combustion from fuel-fired *appliances*, or their *vent connectors*, to the outside atmosphere.

Vent connector: The pipe that connects an approved fuel-fired *appliance* to a chimney or *vent*.

SECTION M-1203.0 WHERE REQUIRED

M-1203.1 General: Every fuel-burning *appliance* shall discharge the products of combustion to a *vent*, factory-built chimney, masonry chimney or metal chimney, except for *appliances* conforming to Section M-1203.2. The chimney or *vent* shall be designed for the type of *appliance* being *vented*.

M-1203.1.1 Special vent systems: *Appliances* that have been tested for utilization with a special *vent* system shall be vented in accordance with the manufacturer's installation instructions.

M-1203.2 Unvented appliances: A chimney or *vent* shall not be required for *appliances* that are tested for unvented operation. Unvented *appliances* shall be operated and installed in accordance with the manufacturer's installation instructions.

SECTION M-1204.0 VENT SYSTEM

M-1204.1 Approval: All *vent* systems shall bear the *label* of an approved agency. Type B and BW *vents* shall be tested in accordance with UL 441 listed in Chapter 21. Type L *vents* shall be tested in accordance with UL 641 listed in Chapter 21.

M-1204.2 Connection and size: *Appliances* shall be approved for connection to a *vent* system.

M-1204.3 Installation: *Vent* systems shall be installed and terminated in accordance with the manufacturer's installation instructions.

M-1204.3.1 Starting height: The *vent* system shall originate at a point that is convenient for the *appliance* installation.

M-1204.3.2 Protection of the vent system: *Vent* systems shall be protected from physical damage, except for the floor where the connecting *appliance* is located. Floor and ceiling penetrations shall be firestopped in accordance with the building code listed in Chapter 21.

SECTION M-1205.0 FACTORY-BUILT CHIMNEYS

M-1205.1 Approval: All factory-built chimneys shall bear the *label* of an approved agency. Factory-built chimneys for residential-type and building-heating *appliances* shall be tested in accordance with UL 103 listed in Chapter 21. Factory-built chimneys for medium-heat *appliances* shall be tested in accordance with UL 959 listed in Chapter 21.

M-1205.2 Installation: Factory-built chimneys shall be installed in accordance with the manufacturer's installation instructions.

M-1205.2.1 Starting height: The chimney shall originate at a point that is convenient for the *appliance* installation.

M-1205.2.2 Protection of the chimney: Factory-built chimneys shall be protected from physical damage, except for the floor where the connecting *appliance* is located. Floor and ceiling penetrations shall be firestopped in accordance with the building code listed in Chapter 21.

M-1205.2.3 Termination: Factory-built chimneys shall terminate outdoors above the roof of the building. Chimney outlets shall be located a minimum of 3 feet (914 mm) above the highest point that the chimney penetrates the roof. Chimney outlets shall be a minimum of 2 feet (610 mm) higher than any portion of the building within 10 feet (3048 mm).

M-1205.3 Connection: Factory-built chimneys for installation with closed combustion, wood-burning residential and low-heat *appliances* shall comply with the "Type HT" requirements of UL 103 listed in Chapter 21. Chimneys for factory-built fireplaces shall conform to UL 127 listed in Chapter 21. Factory-built chimneys for open combustion chamber free-standing fireplace

stoves conforming only to UL 737 in Chapter 21 shall utilize residential-type and building-heating *appliance* chimneys that conform to UL 103 listed in Chapter 21.

SECTION M-1206.0 MASONRY CHIMNEYS, GENERAL REQUIREMENTS

M-1206.1 Foundations: Masonry chimneys shall be supported on approved *noncombustible* foundations. The supports shall be independent of the building construction and the load shall be transferred to the ground.

M-1206.2 Structural design: Chimneys shall not support any structural load other than the weight of the chimney unless such chimneys are designed to act as supporting members. Chimneys shall be anchored laterally at the ceiling lines and at each floor line that is more than 6 feet (1829 mm) above grade.

M-1206.3 Corbeling: Masonry chimneys shall not be corbeled from a wall more than 6 inches (152 mm). A masonry chimney shall not be corbeled from a wall that is less than 12 inches (305 mm) in thickness, unless the chimney projects equally on each side of the wall. In the second story of a two-story building, corbeling of masonry chimneys on the exterior of the enclosing walls shall not exceed the exterior wall thickness. The maximum horizontal projection of each course of brick shall not exceed one-half of the height of the masonry unit and one-third of the thickness or depth of the masonry unit.

M-1206.4 Change in size or shape: Masonry chimneys shall not change in size or shape within 6 inches (152 mm) above or below any *combustible* floor, ceiling or roof component penetrated by the chimney.

M-1206.5 Offsets: Where a masonry chimney is constructed with a fire-clay flue liner surrounded by one wythe of masonry, the maximum offset shall be such that the centerline of the flue above the offset does not extend beyond the center of the chimney wall below the offset. Where the chimney offset is supported by masonry below the offset in an approved manner, the maximum offset limitations shall not apply. Each individual corbeled masonry course of the offset shall not exceed the projection limitations specified in Section M-1206.3.

M-1206.6 Cleanouts: All masonry chimneys, except chimneys serving fireplaces, shall be provided with an approved cleanout having a tight-fitting cover. Such cleanouts shall be installed at least 12 inches (305 mm) below the lowest chimney inlet opening.

M-1206.7 Firestopping: All spaces between chimneys and floors and ceilings through which chimneys pass shall be firestopped with *noncombustible material*. The firestopping of spaces between chimneys and wood joists, beams or headers shall be to a depth of 1 inch (25 mm), and shall only be placed on strips of metal or metal lath laid across the spaces between *combustible material* and the chimney.

SECTION M-1207.0 MASONRY CHIMNEYS FOR LOW-HEAT APPLIANCES

M-1207.1 Construction: Masonry chimneys for low-heat *appliances* shall be constructed of solid masonry units or reinforced concrete with walls not less than 4 inches (102 mm) thick or rubble stone masonry not less than 12 inches (305 mm) thick.

CHAPTER 10

COMBUSTION AIR

SECTION M-1001.0 GENERAL

M-1001.1 Scope: The provisions of this chapter shall govern the requirements for combustion air for all fuel-burning *appliances* or equipment.

M-1001.2 Combustion air required: All fuel-burning *appliances* shall be provided with adequate combustion air. Combustion air shall be inside or outdoor air, or shall be provided by a direct outdoor connection or a special engineered system.

M-1001.3 Circulation of air: Every room containing fuel-burning equipment shall be designed for the free circulation of air. Adequate provisions shall be made for any openings or devices which cause the depletion of combustion air.

SECTION M-1002.0 DEFINITIONS

M-1002.1 General: The following words and terms shall, for the purposes of this chapter and as stated elsewhere in this code, have the meanings shown herein.

Combustion air: The amount of air required for safe and proper combustion.

SECTION M-1003.0 INSIDE AIR

M-1003.1 Amount of air: Inside air shall be available for each fuel-burning *appliance* at a rate of 40 cubic feet of room air volume per 1,000 British thermal units per hour (Btuh) (3.86 m³/kW) input rating. In buildings of tight construction where the air exchange rate is less than 0.5 air changes per hour, additional air shall be provided in accordance with Section M-1004.0 or M-1006.0.

M-1003.2 Openings: Where the room in which the *appliance* is located does not meet the criterion specified in Section M-1003.1, openings to adjacent spaces shall be provided so that the combined volume of all spaces meets the criterion. Two openings shall be provided, one near the top of the room and one near the bottom.

M-1003.2.1 Size of opening: Each opening shall have an unobstructed area equal to a minimum of 1 square inch per 1,000 Btuh (2201 mm²/kW) input rating of all *appliances* installed in the space, but not less than 100 square inches (64516 mm²).

SECTION M-1004.0 OUTDOOR AIR

M-1004.1 Connections to outdoors: Where the space in which fuel-burning *appliances* are located does not meet the criterion for indoor air as specified in Section M-1003.1, the room shall

have two openings to the outdoors. One opening shall be located near the top of the room and one near the bottom. Openings are permitted to connect to spaces directly communicating with the outdoors, such as *ventilated* crawl spaces or attic spaces.

M-1004.2 Size of horizontal openings: Each opening through a horizontal duct shall have an unobstructed area equal to a minimum of 1 square inch per 2,000 British thermal units per hour (Btuh) (1100 mm²/kW) total input rating. Each direct opening through a wall shall have an unobstructed area equal to a minimum of 1 square inch per 4,000 Btuh (550 mm²/kW) total input rating.

M-1004.3 Size of vertical openings: Each opening through a floor, ceiling or vertical duct shall have an unobstructed area equal to a minimum of 1 square inch per 4,000 Btuh (550 mm²/kW) total input rating.

M-1004.4 Operation of openings: Combustion air openings shall be open when the fuel-burning *appliance* is operating. Dampers are permitted to be electrically connected to the firing cycle of the *appliance*.

SECTION M-1005.0 DIRECT CONNECTION

M-1005.1 General: Fuel-burning *appliances* that have been tested for direct combustion air connection to the outdoors shall be installed in accordance with the manufacturer's installation instructions.

SECTION M-1006.0 MECHANICAL VENTILATION

M-1006.1 General: Combustion air is permitted to be provided by the mechanical *ventilation* system. The supply air rate shall be increased over the required *ventilation air* by a rate equal to a minimum of 1 cubic foot per minute per 3,000 British thermal units per hour (0.00047 m³/s per 0.8793 kW) total input rating. Each *appliance* shall be electrically connected to the *ventilation* system to prevent fuel burning when the *ventilation* system is not in operation.

SECTION M-1007.0 OPENING OBSTRUCTIONS

M-1007.1 General: The unobstructed area of each opening shall be considered for determining combustion air. The opening determined by the manufacturer shall be considered unobstructed.

M-1007.2 Louvered openings: The unobstructed area of metal-louvered openings shall be considered 75 percent of the total area. The unobstructed area of wood-louvered openings shall be considered 25 percent of the total area.

MAY/JUNE 1997



BOCA

THE BUILDING OFFICIALS
CODE ADMINISTRATOR MAGAZINE

BOCA's first Student Chapter recognized at 1997 Spring Meeting, Oak Brook, Illinois.



FEATURES

1997 Spring Meeting Wrap-Up

**Code-Required Special Inspections
of Concrete**

**Playground Structures: Keeping
Safe For Our Children**

**Anniversary of a Tragedy: Beverly Hills
Supper Club**



BOCA, ICC and CABO Hearings Top Spring Meeting Agenda

THE 1997 PROPOSED CHANGES to the *BOCA National Building Code*, the *ICC International Plumbing, Private Sewage Disposal, and Mechanical Codes* (and drafts of the *International Property Maintenance and Zoning Codes*), and the *CABO One and Two Family Dwelling Code* and *Model Energy Code* were the subjects of public hearings conducted April 7-17, in conjunction with BOCA's Annual Spring Meeting at the Hyatt Regency in Oak Brook, Illinois.

More than 500 people attended the 11 days of testimony and heard lively — and sometimes lengthy — discussion on nearly 800 proposed code changes.



BOCA National Building Code

Code development hearings got underway bright and early Monday morning, April 7, with proposed changes to the *BOCA National Building Code* being heard by the Building Code Development Committee. Committee members include: Paul E. Myers, C.B.O., Cincinnati, Ohio; James T. Ryan, C.B.O., Overland Park, Kansas; Kenneth W. Andrews, Hooksett, New Hampshire; William D. Dupler, Chesterfield, Virginia; Ronald E. Estep, Neshanic, New Jersey; Jeffrey K. Feid, Normal, Illinois; Wayne R. Jewell, Southfield, Michigan; Alan J. Pinkstaff, C.B.O., St. Louis County, Missouri; and David L. Wismer, P.E., C.B.O., Philadelphia, Pennsylvania. Testimony continued through Tuesday evening, April 8. During the two days, 167 code change proposals to the *BOCA National Building Code* were heard. Proposed code changes recommended for approval include the following topics: new provisions for residential care facilities; a new section regarding storage racks; revised opening requirements for exterior stairways; new provisions for unisex toilet facilities; revised weather protection requirements for exterior walls; revised provisions for exit lobby, vestibule and passageway; revised guard height adjacent to stairs and guards in Use Groups R-2 and R-3; revised handrail height in dwelling units; revised attic ventilation requirements; revised EIFS special inspection provisions; revised wind loads; new provisions for wood frame construction in high wind areas; revised snow loads; a new section regarding lateral resistance for cold-formed steel stud walls; new load and resistance factor (LRFD) design methodology for wood members and connections; and revised design requirements for loads on glass.



International Codes

Code change hearings to the *International Codes* began Wednesday, April 9, and continued through Monday, April 14, with a total of 414 proposed changes being heard. Testimony to each of the *International Codes* was heard by a committee, comprised of representatives from the BOCA, ICBO and SBCCI organizations. Representing BOCA are:

ICC Plumbing Code Development Committee: James Anjam, Arlington, Virginia; Judson W. Collins, Oklahoma City, Oklahoma; and Robert G. Konyndyk, Lansing, Michigan.

ICC Mechanical Code Development Committee: Thomas Chandler, Tulsa, Oklahoma; Shahriar Amiri, Fairfax, Virginia; and Ray Sebastian, Clermont County, Ohio.

ICC Property Maintenance Code Development Committee: Al Goldman, University City, Missouri; Charles J. Mallory, Lexington, Kentucky; and Sherman Edmondson, Norfolk, Virginia.

ICC Zoning Code Subcommittee: Rodney A. Blane, Rolling Meadows, Illinois; John R. Schury, Matteson, Illinois; and David L. Wismer, Philadelphia, Pennsylvania.

International Mechanical, Plumbing Codes Highlights

A total of 145 *ICC International Mechanical Code* change proposals were submitted and approximately 55 percent were recommended for approval as submitted or as modified. Several changes would result in improved organization of text. The reorganization was intended to improve understanding, to make the code easier to read and to make it easier to locate specific provisions. Several definitions were revised or added including: story, ignition source, machinery room, furnace room, commercial food heat-processing equipment and closet/alcove.

Highlights of the *ICC International Mechanical Code* development hearings included:

- M44-97 would introduce text requiring VAV systems to monitor and maintain the required outdoor air rate supplied to the zones served.

- M51-97 would clarify the requirements for ventilation of spaces in which motor vehicles operate. The current text has been interpreted many ways.
- Several proposed changes would reorganize, revise and add to the commercial kitchen exhaust system provisions of the code.
- The intent and application of the hazardous exhaust text, Section 510, would be clarified by proposed changes M81, M82 and M83-97.
- New text would be added by M113-97 that addresses the occupancy location of commercial cooking appliances.
- M143-97 would add several new gas pipe sizing tables to Chapter 13.

Highlights of the ICC *International Plumbing Code* development hearings included:

- Backflow prevention: P22-97 would require all backflow preventers including air gaps to be inspected annually, and would require all backflow prevention assemblies to be tested at the time of installation, immediately after repairs or relocation and at least once a year.
- Backflow prevention: P42-97 and P85-97 would revise the minimum backflow prevention requirements for faucets with pull-out spouts. The proposal would allow two single-check valves to serve as the minimum protection against backflow.
- Water heater relief valves: P55-97 would revise the current requirement for relief valve discharge piping to terminate directly over an indirect waste receptor or floor drain. The proposal would permit relief valve discharge pipe to terminate above a floor served by a floor drain.
- Maximum water consumption requirements: P65-97 would revise the water consumption requirements to be consistent with the Energy Policy Act of 1992. The proposal would require all water closets, except blowout designs, to use 1.6 gallons per flush or less, and all urinals to use 1.0 gallons per flush or less.
- Macerating toilet systems: P113-97 would permit the use of, and provide installation criteria for, macerating toilet systems. The proposal would permit 3/4-inch discharge openings for grinder pump assemblies.
- Accessibility: P29-97 would require accessible unisex toilet and bathing rooms in large assembly and mercantile occupancies to accommodate and provide privacy for persons with disabilities who need assistance.
- Computerized vent design: P135-97 would permit the sizing and layout of a vent system to be determined by an approved computer program design method.
- Oil separators: P143-97 would require an oil interceptor for car washing facilities with engine or undercarriage cleaning capabilities.

CABO Hearings

The remainder of the Spring Meeting was devoted to hearings on the CABO *One and Two Family Dwelling Code* and *Model Energy Code*. More than 200 proposed code changes to the



CABO *One and Two Family Dwelling Code* and the *Model Energy Code* were heard by committees starting on Tuesday, April 15, and concluding on Thursday, April 17.

BOCA representatives on the CABO *One and Two Family Dwelling Code Building Committee* are: Kenneth W. Andrews, Hooksett, New Hampshire; James R. Lowery, Jr., Fairfax, Virginia; and Gary Shripka, Troy, Michigan. The CABO *One and Two Family Dwelling Code Mechanical Committee* has the following BOCA representatives: Thomas M. Chandler, Tulsa, Oklahoma; John Hill, Bloomington, Illinois; and Ray Sebastian, C.B.O., Clermont County, Ohio. Representing BOCA on the CABO *One and Two Family Dwelling Code Plumbing Committee* are: Robert G. Konyndyk, Lansing, Michigan; Jim Moore, Fairfax, Virginia; and Joel Shelton, Claremore, Oklahoma. BOCA representatives on the *Model Energy Code Committee* are: William Lycos, Lansing, Michigan; Joseph E. Moore, University City, Missouri; Steve P. Regoli, AIA, Reynoldsburg, Ohio; and Kurt Stenberg, Providence, Rhode Island.

CABO Highlights

Model Energy Code

- The committee considered numerous proposals (E1, E6, E7, E8 and E9) which attempted to simplify the compliance mechanism for alterations and repairs to existing buildings as well as provide exceptions for limited size additions relative to code compliance. The proposals were recommended for denial due to interpretative problems and lack of substantiation demonstrating why an addition of limited size should be exempt from the energy requirements.
- The committee recommended for denial a proposed code change (E12) which attempted to delete the solar heat gain evaluation requirements of Section 102.3 in favor of default tables for glazing. The committee determined that windows required some type of identification to ascertain code compliance.
- The committee recommended for approval the inclusion of an alternative method of energy compliance for residential structures via the codification of ASHRAE 90.2-1993, *Energy Efficient Design of New Low-Rise Residential Buildings*.
- Prescriptive alternative paths of code compliance (E26 and E27) were submitted and recommended for denial as being an oversimplification based on overly conservative glazing area assumptions.
- A follow-up proposal (E34) to E23-96 which allowed slab edge insulation to be deleted in areas subject to very

(Continued on following page)

Spring Meeting Highlights

(Continued from preceding page)

heavy termite exposure was recommended for approval. This proposal requires other methods of analysis to show that the lack of slab edge insulation does not create an energy loss to the building.

- Code Change E43 proposed an entire new chapter on alternative compliance for small nonresidential buildings in lieu of ASHRAE 90.1. The committee recommended the proposal for denial based on the need for minor changes to the text and maps, but felt that the simplified approach to ASHRAE 90.1 had merit.

One and Two Family Dwelling Code — Building

- The committee recommended for approval a proposal (R1), with modifications, which provides additional criteria/clarification for permit extensions.
- The committee considered three comprehensive proposals relative to the design of the lateral force-resisting system for high-wind areas (R97) and areas of high seismicity (2 versus 3 and 4, R72 and R5, respectively). The committee agreed with the need to have the *One and Two Family Dwelling Code* address those areas. However, the committee recommended for denial R5 and R72 with specific direction to the proponents to coordinate their proposals and ensure a user-friendly format. The committee also recommended for denial R97 with direction to the proponent as to numerous areas that required reworking as well as the need to evaluate whether or not these requirements are better suited in a standard than in the code.
- The committee recommended for approval a change (R13) that specifically states that the clear opening dimensions of emergency escape windows are to be achieved through normal operation of the window, similar to the requirements in Section 1010.4 of the 1996 *BOCA National Building Code*.
- The committee considered two code changes to revise the current 7 $\frac{3}{4}$ "/10" riser/tread stairway requirements. Code Change R24 proposed a 7"/11" configuration while R25 proposed to reinstate the 8 $\frac{1}{4}$ "/9" configuration. Both proposals were recommended for denial and the committee cited the BOCA Ad Hoc Stairway Committee's work which recommended the 7 $\frac{3}{4}$ "/10" configuration with no additional information substantiating the need to change the 7 $\frac{3}{4}$ "/10" requirements. In a related proposal (R19), the committee revised the 8 $\frac{1}{4}$ " step down at exterior door landings to 7 $\frac{3}{4}$ " for consistency with the maximum riser dimension for stairs.
- The committee recommended for approval code change R34, similar to BOCA's Section 1021.3, which specifically states that a guard constructed in a ladder configuration is prohibited because children may be able to climb over the guard.

- The committee heard considerable testimony relative to termite infestation and the impact on foundation foam plastic insulation (R39 and R40). Ultimately, the committee agreed that termite infestation is a real world problem but a code requirement for bait stations/maintenance (R39) was beyond the scope of the code. However, the committee did recommend for approval R40 which prohibits certain types of foam plastics to be used in areas subject to very heavy termite infestation due to the inability to make a visual inspection for termites.
- The committee heard two proposals relative to insulated footings. R50 attempted to expand the application of insulated footings to unheated buildings. This was recommended for denial due to maintenance and installation considerations requiring that the insulation be placed around the building such that it can't be breached due to landscaping. R51 proposed to delete all the insulated footing requirements — the committee recommended these proposals be denied based on the premise that the code requirements for insulated footings for heated buildings, as approved for the 1995 edition, were valid and well documented at the time of inclusion in the code.
- The committee heard two cold-formed steel proposals (R74 and R91) as a follow-up to last cycle's inclusion of prescriptive floor and wall requirements. R74 attempted to expand the requirements for studs; however, it was recommended for denial for lack of substantiation provided to the committee in advance of the hearing. R91 was a comprehensive proposal addressing steel roof framing. The committee believed that the proposal had merit but cited discrepancies between the snow load requirements and the provisions of the AISI standard, as well as the need for substantiating calculations, as reasons for recommending the denial.

One and Two Family Dwelling Code — Mechanical

- The committee heard numerous proposals to align the mechanical provisions in the *One and Two Family Dwelling Code* with those of the *ICC International Mechanical Code*, namely: general (R100); heating and cooling (R101); room heaters (R103); combustion air (R108); vents (R110), and miscellaneous appliances (R116). The committee recommended denial for these proposals, citing that coordination between the two codes was not adequate justification to change the mechanical provisions in the *One and Two Family Dwelling Code*.
- The committee recommended for approval Code Change R104 which provides prescriptive details relative to the use of unvented room heaters in bedrooms and bathrooms based on consistency with NFPA 54.
- The committee recommended for approval R111 which includes provisions for sizing chimneys and vents to accommodate new appliance installations. The code was previously silent on this issue.

- Code Change R128 was recommended for approval, resulting in a prohibition of running threads for gas piping in both concealed and exposed locations due to the potential for gas leaks caused by running threads.

One and Two Family Dwelling Code — Plumbing

- The committee recommended for approval R132 which allows nonplastic water supply systems to be tested with either water or an air test of not less than 50 psi. This is consistent with the ICC *International Plumbing Code* and allows a viable option in climates subject to freezing temperatures.
- An exception to the “hot water on the left” requirement for faucets has been recommended for approval for shower and tub-shower mixing valves conforming to ASSE/ANSI 1016 in accordance with R138. The committee made this recommendation based on specific language which requires the device to be marked showing the hot water flow.
- Two proposals were submitted relative to the water heater sizing “guidelines” found in Table 3301.2. R140 attempted to revise the language from permissive to mandatory while R141 proposed to delete the water heater sizing tables in total due to nonenforceable language. The committee decided that the appropriate action was to delete the tables and, therefore, recommended R141 for approval because of the lack of enforceable requirements.
- The requirements for air gap protection for the water supply system were recommended for revision in accordance with R144 in order to be consistent with the requirements found in the IPC and for consistency with ASME A112.1.2.
- The committee recommended for denial a proposed change that would have replaced the venting requirements of Chapter 36 with those found in the IPC. The proponent testified that, although the requirements are similar, there is no reason to have different requirements in the two codes and that the CABO Code includes ambiguous and unenforceable text. However, the committee recommended that the proposal be denied because of the proposed deletion of current figures in the CABO Code which enhanced the user-friendliness of the code, as well as the majority of the committee feeling that the CABO provisions were adequate.

Actions Taken

A list of the actions taken at the public hearings appears on the following pages. The proposed change number is listed followed by the hearing result. This list indicates when a modification was made and accepted to a proposed change, and in the case of the ICC codes, if the hearing result was brought about by a committee action or an assembly action.

Proposed changes were heard on the following codes: *BOCA National Building Code/1996*; *ICC International Mechanical*

Code/1996 with 1997 Supplement; *ICC International Plumbing Code/1997*; *ICC International Private Sewage Disposal Code/1997*; *ICC International Property Maintenance Code (First Draft)*; *ICC International Zoning Code (Second Draft)*; *CABO One and Two Family Dwelling Code/1995* with 1996 & 1997 Amendments; and *Model Energy Code/1995* with 1996 & 1997 Amendments.

Hearing Action Documents

The Committee Recommendations on the 1997 Proposed Code Changes to the BOCA National Codes, the Report of the Public Hearing on the International Mechanical Code/1996, International Plumbing Code/1997, International Private Sewage Disposal Code/1997, International Property Maintenance Code (First Draft) and International Zoning Code (Second Draft), and the Report of the Public Hearing on the CABO One and Two Family Dwelling Code and Model Energy Code contain detailed accounts of all actions taken on proposed changes, including whether an action was by committee or the assembly, the reasons for the action and any modifications made to the proposed change. The hearing action documents will be available the first week of June 1997. Proponents of proposed code changes and all public hearing registrants will automatically receive a copy of the applicable or requested hearing action document. Other interested parties may obtain one copy, at no charge, by completing and returning the coupon found in the May 5, 1997, *BOCA Bulletin* or contacting the BOCA Codes and Standards Department.

The deadline for receipt of challenges to the committee recommendations on proposed changes to the *BOCA National Building Code* is 4:30 p.m. (CDT) on July 1, 1997. The deadline for receipt of challenges to the hearing actions on proposed changes to the *ICC International Mechanical, Plumbing, Private Sewage Disposal, Property Maintenance (First Draft) and Zoning (Second Draft) Codes* is July 7, 1997. The deadline for receipt of negative ballots to the committee recommendations on proposed changes to the *CABO One and Two Family Dwelling Code* and *Model Energy Code* is July 25, 1997.

Final Actions Timetable

Public hearings on challenges to the proposed changes to the *BOCA National Building Code* and the *ICC International Codes* will be held during BOCA's 82nd Annual Conference this fall in Norfolk, Virginia. Challenges published in the *BOCA Final Hearing Roster* and the *ICC Challenge Agenda* will serve as the agenda for final action by voting members during the Code Development Hearings Tuesday, September 30, through Thursday, October 2. For a proposal to be heard in a second round of debate at that time, the public hearing's action on that proposal must be challenged. Hearing actions that are not challenged will be block-voted without further testimony.

Final action on the proposed changes to the *CABO One and Two Family Dwelling* and *Model Energy Codes* will take place October 27-29 in San Diego during CABO's Second Hearing Meeting. For a proposal to be heard in a second round of debate at that time, the committee's recommendation on that proposal must receive a negative ballot. Negative committee recommendations that do not receive negative ballots will be block-voted without further testimony.

**CABO
ONE AND TWO FAMILY
DWELLING CODE
1995 EDITION**

SECOND PRINTING

**UNDER THE
NATIONALLY RECOGNIZED MODEL CODES**

BOCA National Building Code

BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL, INC. (BOCA)

4051 West Flossmoor Road
Country Club Hills, Illinois 60478-5795

Uniform Building Code

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO)

5360 Workman Mill Road
Whittier, California 90601-2298

Standard Building Code

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL, INC. (SBCCI)

900 Montclair Road
Birmingham, Alabama 35213-1206

PREFACE

The purpose of this code is to provide minimum requirements to safeguard life or limb, health, and public welfare and to protect property as it relates to these safeguards by regulating and controlling the design, construction, prefabrication, equipment or appliance installation, quality of materials, use and occupancy, location, and repair of detached one- and two-family dwellings not more than three stories in height. This code further standardizes requirements by using a compilation of data from the following national model codes:

BUILDING

BOCA National Building Code
Standard Building Code
Uniform Building Code

PLUMBING

BOCA National Plumbing Code
Standard Plumbing Code
International Plumbing Code

MECHANICAL

BOCA National Mechanical Code
Code for the Installation of Heat-Producing Appliances
Standard Gas Code
Standard Mechanical Code
Uniform Mechanical Code

ELECTRICAL

National Electrical Code

This code is dedicated to the development of better building construction and greater safety to the public; to uniformity in building laws; to the granting of full justice to all building materials on a fair basis of the true merits of each material; and to development on a sound economic basis for the future growth of our urban areas through unbiased and equitable dealing with building construction.

All of the nationally recognized model codes on which this code is based are comprehensive and flexible and make provisions for the use of all safe materials or methods of construction. Consequently, there are construction materials and practices other than those listed in this code which are adequate for the purposes intended. These other methods represent seldom-used systems or performance-type systems which require individual consideration by the professional architect or engineer based on test data or engineering analysis and are therefore not included herein.

The *One and Two Family Dwelling Code* (OTFDC) addresses traditional residential construction materials and practices. This is accomplished with prescriptive provisions, thus making the document useful and simple to follow. The nationally recognized model codes are comprehensive and flexible and provide for the use of all safe materials and methods of construction. The OTFDC allows the performance-type provisions of the model code, adopted by the jurisdiction, to be used as an alternate to specific prescriptive requirements in the OTFDC. Therefore, whenever possible, the OTFDC is maintained as a prescriptive document without performance-type provisions.

Many editorial enhancements have been included in this edition. Most notably, numbering and titling of paragraphs have been revised to agree with several nationally used codes. The building portion of this code has been reformatted to align the provisions with typical construction sequence from foundation to roofing. The mechanical and plumbing portions have been restructured to sequence the provisions in accordance with the common code format established by the Council of American Building Officials (CABO). Several appendix chapters have been relocated to the body of the code and the standards chapter has been reorganized to consolidate standards alphabetically. Following the preface is a brief cross-reference table of the 1995 edition provisions which indicates the general location of the provisions from the 1992 edition. Thorough cross-reference tables to individual sections are also available to assist in locating provisions of the 1992 edition in the 1995 edition.

Electrical provisions have been included in this edition through an agreement with the National Fire Protection Association (NFPA). The maintenance process for the electrical provisions of future *One and Two Family Dwelling Code* editions will be undertaken by NFPA. A cross-reference table of the CABO electrical provisions to the *National Electrical Code* is provided in this publication.

The *One and Two Family Dwelling Code* has been metricated for the 1995 edition. The metric conversions are provided in parentheses following the English unit. Tables and figures are provided with metric conversion factors for each tabulated unit of measurement in the form of footnotes.

Vertical lines in the margins indicate changes from the 1992 edition except where the entire chapter was revised, a new chapter was added or the change was minor. Where an entire chapter was changed or a new chapter was added, a notation appears at the beginning of that chapter.

Arrows (◀) in the margins indicate locations from which the 1992 edition text has been deleted.

CHAPTER 21

CHIMNEYS AND VENTS

SECTION 2101 GENERAL

2101.1 Vent required. Fuel-burning appliances shall be vented to the outside in accordance with their listing and label and manufacturer's installation instructions except appliances listed and labeled for unvented use. Venting systems shall consist of approved chimneys or vents, or venting assemblies which are integral parts of labeled appliances.

2101.2 Draft requirements. A venting system shall satisfy the draft requirement of the equipment in accordance with the manufacturer's installation instructions and shall be constructed and installed to develop a positive flow to convey combustion products to the outside atmosphere.

2101.3 Inspection of chimneys. Before connecting a vent connector to a chimney, the chimney passageway shall be clean and free of obstructions. When inspection reveals that an existing chimney is not safe for the intended application, it shall be rebuilt to conform to Sections 1001 and 1002, lined or relined with an approved liner, or replaced with an approved vent or chimney.

2101.4 Mechanical draft systems. A mechanical draft system shall be used only with equipment listed and labeled for such use. Provision shall be made to prevent the flow of fuel to the equipment when the draft system is not operating. Forced draft systems and all portions of induced draft systems under positive pressure during operation shall be designed and installed so as to prevent leakage of flue gases into a building.

2101.5 Direct vent appliances. Direct vent appliances shall be listed and labeled and shall be installed in accordance with the manufacturer's installation instructions.

2101.6 Support. Venting systems shall be adequately supported for the weight of the material used.

2101.7 Duct penetrations. Vents or vent connectors shall not extend into or through supply and return air ducts or plenums.

2101.8 Firestopping. Vent and chimney installations shall be firestopped in accordance with Section 602.7.

2101.9 Unused openings. Unused openings in any venting system shall be closed or capped.

SECTION 2102 VENT COMPONENTS

2102.1 Draft hoods. Draft hoods shall be located in the same room or space as the combustion air openings for the appliances.

2102.2 Vent dampers. Vent dampers shall comply with Sections 2102.2.1 and 2102.2.2.

2102.2.1 Manually operated. Manually operated dampers shall not be installed except in connectors or chimneys of solid-fuel-burning appliances.

2102.2.2 Automatically operated. Automatically operated dampers shall be installed in accordance with the terms of their listing and label and shall be installed to prevent firing of the burner unless the damper is opened to a safe position. Automatic dampers shall conform to ANSI Z21.66.

2102.3 Draft regulators. Draft regulators shall be provided for oil-fired appliances required to be connected to a chimney. Draft regulators provided for solid-fuel-burning appliances to reduce draft intensity shall be installed and set in accordance with the manufacturer's installation instructions.

2102.3.1 Location. When required, draft regulators shall be installed in the same room or enclosure as the appliance such that no difference in pressure between the air at the regulator and the combustion air supply will exist.

SECTION 2103 CHIMNEY AND VENT CONNECTORS

2103.1 General. Connectors shall be used to connect fuel-burning appliances to a vertical chimney or vent unless the chimney or vent is attached directly to the appliance.

2103.2 Connectors for gas appliances. Connectors for labeled gas appliances and appliances equipped with a listed and labeled gas burner and draft hood shall be of Type B or Type L vent material, or single-wall metal pipe. The minimum nominal thickness of a single-wall vent connector shall be 0.019 inch (0.483 mm) (No. 28 gage) for galvanized steel, 0.022 inch (0.559 mm) (No. 26 B.&S. gage) for copper, and 0.020 inch (0.508 mm) (No. 24 B.&S. gage) for aluminum. Connectors for Category II, III and IV equipment shall be as specified by the manufacturer's instructions.

2103.3 Connectors for oil and solid fuel appliances. Connectors for oil and solid-fuel-burning appliances shall be from factory-built chimney material, Type L vent material, or single-wall metal pipe having resistance to corrosion and heat, and thickness not less than that of galvanized steel as specified in Table 2103.3.

**TABLE 2103.3
THICKNESS FOR SINGLE-WALL METAL PIPE CONNECTORS**

DIAMETER OF CONNECTOR (Inches)	SHEET METAL GAGE NUMBER
Less than 6	26
6 to 10	24

For SI: 1 inch = 25.4 mm.

WRITTEN COMMENTS



West Virginia
Propane Gas
Association

(703) 441-0970
FAX (703) 441-1144

107 S. West Street • Alexandria, Virginia 22314

July 11, 1997

West Virginia State Fire Commission

Dear Commission Members:

SUBJECT: Proposal

We hereby present a proposed change to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters.

This proposal was developed by the West Virginia Propane Gas Association by a special committee comprised of the following members: Nancy Scott, John Treadway, Bill Seacrist, Bill Woodward, and Pat Lafayette.

INTENT

We intend to change the regulation to conform with language in the International Fuel Gas Code (IFGC). This change clarifies the installation, proper use, and safety concerns related to unvented gas-fired heating products.

CURRENT REGULATION

Our current regulation 87-1-3. Unvented Heaters. reads as follows: All unvented fuel-fired heaters are prohibited for all occupancies except one (1) and two (2) family dwellings.

SUGGESTED CHANGE TO 87-1-3. UNVENTED HEATERS.

Our suggested change to 87-1-3 follows:

87-1-3.A. Unvented Heaters Excluding Gas-Fire Units.

All unvented fuel-fired heaters (excluding gas-fired units) are prohibited for all occupancies except one (1) and two (2) family dwellings.

87-1-3.B THROUGH G. UNVENTED GAS FIRED HEATERS.

87-1-3.B General

Unvented gas-fired room heaters shall be listed and labeled and shall be installed in accordance with the conditions of the listing and the manufacturer's installation instructions. Unvented room heaters shall be tested in accordance with ANSI Z 21.11.2.

87-1-3.C Prohibited Use.

One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

87-1-3.B THROUGH G. UNVENTED GAS FIRED HEATERS - Continued

87-1-3.D Input Rating.

Unvented room heaters shall not have an input rating in excess of 40,000 Btu/h (11.7kW).

87-1-3.E Prohibited Locations.

Unvented room heaters shall not be installed within occupancies in Use Groups A, E and I. NOTE: A for Assembly (movies, churches, arenas, etc.), E for Educational, and I for Institutional.

87-1-3.F Room or Space Volume.

The aggregate input rating of all unvented appliances installed in a room or space shall not exceed 20 Btu/h per cubic foot (0.21 kW/m³) of volume of such room or space. Where the room or space in which the equipment is installed is directly connected to another room or space by a doorway, archway or other opening of comparable size that cannot be closed, the volume of such adjacent room or space shall be permitted to be included in the calculations.

87-1-3.G Oxygen-Depletion Safety System.

Unvented room heaters shall be equipped with an oxygen-depletion-sensitive safety shutoff system. The system shall shut off the gas supply to the main and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater.

DOCUMENTATION

Please note that this suggested change is consistent with National Fire Protection Association (NFPA54), International Mechanical Code, Building Officials and Code Administrators International, Inc. (BOCA), and the Council of American Building Officials (CABO) One and Two Family Dwelling Code. Some information on these codes is attached.

We have included with this package six illustrated consumer guides for vent-free gas products and test results for inside air quality. We have also included with this package six each twelve-minute thirty-second VCR tapes outlining vent-free inside air quality research procedures and results.


Since 1980 over 4 million vent-free gas heating systems have been installed in the United States. These appliances (blue flame and infrared plaque air heaters and hearth products) are equipped with oxygen depletion systems (ODS) and have a history of safety. With records from 10 years of operation, the Consumer Product Safety Commission (CPSC) has not identified a single fatality for an ODS-equipped product. (Page 6, Paragraph 1 of attached American Gas Association Research Division topical report on the Development of Sizing Guidelines for Vent-Free Supplemental Heating Products)

Thank you for considering our proposed change to Title 87, Legislative Rule Fire Commission, Series 1, Fire Code, Section 87-1-3. Unvented Heaters. Please feel free to contact us or any of our committee members at any time. We are very willing to provide additional information or literature if needed. We will also respond quickly to any questions or suggestions. Contact information is enclosed.

Sincerely,



Patrick C. Lafayette
WVPGA Committee Co-Chairperson



Nancy Scott
WVPGA Committee Co-Chairperson

• Enclosures



Richard A. Robb, Mayor

South Charleston Fire Department

P. O. Box 8597
South Charleston, West Virginia 25303



C. W. Sigman, Fire Chief

July 14, 1997

Bill Spencer, Chairman
West Virginia State Fire Commission
1207 Quarrier Street
Charleston, WV 25301



Dear Mr. Spencer,

I would like to comment on the adoption of the 1997 Fire Codes for the State of West Virginia.

The current fire code for WV is in force and effect for almost everyone except the fire departments. Many of the National Fire Protection Association codes deal specifically with the operations of fire departments and the state fire code nullifies them.

The NFPA minimum standards for our operations should be just that, minimum standards. The general attitude it seems is that we cannot achieve the NFPA minimums while I feel that we should work on staying above them. The NFPA codes are a nationally recognized standard and I ask, why can't West Virginia Fire Departments meet them? Every small town police officer in the state must meet minimum requirements, why not every small town firefighter.

I encourage the commission to adopt the NFPA codes in their entirety and not eliminate codes that affect fire department operations. An effort needs to be made the bring West Virginia up to and stay above the national standards.

A handwritten signature in cursive script, appearing to read "C. W. Sigman".

C. W. Sigman, Chief
South Charleston Fire Department



Richard A. Robb, Mayor

South Charleston Fire Department

P. O. Box 8597
South Charleston, West Virginia 25303



C. W. Sigman, Fire Chief

July 16, 1997

Bill Spencer, Chairman
West Virginia State Fire Commission
1207 Quarrier Street East
Charleston, WV 25305

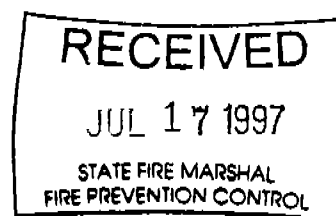
Dear Mr. Spencer,

I would like the State Fire Commission to consider asking the legislature to enact a law similar to Huntington WV regarding fire works or making an addition to the WV State Fire Code. If we can't eliminate fire works then we should try to ensure they are handled and stored in a responsible manner.

Sincerely,

A handwritten signature in cursive script, appearing to read "C.W. Sigman".

C.W. Sigman, Chief
South Charleston Fire Department



AN ORDINANCE OF COUNCIL AMENDING, MODIFYING AND RE-ENACTING SECTION 545.10 OF THE CODIFIED ORDINANCES OF THE CITY OF HUNTINGTON, AS REVISED, BY ADDING THERETO FOUR (4) NEW SUB-SECTIONS, DESIGNATED AS SUB-SECTIONS (C), (D), (E), (F), (G), (H), (I) AND (J) TO ADOPT REGULATIONS REGARDING THE SALE, DISPLAY AND STORAGE OF SPARKLERS AND NOVELTIES WITHIN THE CITY OF HUNTINGTON.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF HUNTINGTON, CABELL AND WAYNE COUNTIES, WEST VIRGINIA, that Section 545.10 of the Codified Ordinances of the City of Huntington, as revised, are hereby AMENDED, MODIFIED and RE-ENACTED by adding four (4) new sub-Sections thereto, designated as Sub-Sections (c), (d), (e), (f), (g), (h), (i) and (j), which shall read as follows:

545.10. FIREWORKS SALE, POSSESSION, DISCHARGE, DISPLAY AND STORAGE; PENALTIES; ENFORCEMENT.

.....
(c) The regulations contained within this Sub-Section are hereby ADOPTED with respect to the display of Class C fireworks and novelties, as defined in West Virginia Code Section 29-3-23, being sold inside new mercantile occupancies. As used in this Sub-Section, "mercantile occupancies" shall include, but not be limited to, the following:

- (1) Stores, markets and other rooms, buildings or structures for the display and sale of merchandise; and
- (2) New buildings or portions thereof used as mercantile occupancies; and
- (3) Additions made to, or used as, mercantile occupancies; and
- (4) Alterations, modernizations, repairs or

renovations of existing mercantile occupancies; and

(5) Existing buildings or portions thereof upon change of occupancy to mercantile occupancies.

Display for Class C fireworks and novelties being sold inside of a mercantile occupancy shall be displayed in a glass or transparent showcase which shall be locked at all times.

The sale of such fireworks and novelties shall be under the direct supervision and control of a competent person at least twenty-one (21) years of age and duly qualified and responsible for enforcing all safety regulations, standards and measures.

Smoking, matches, open flames and any and all other spark-producing devices and firearms, except those firearms within the legal possession of duly authorized law enforcement officials, shall not be permitted within twenty-five (25) feet of a showcase. Signs shall be posted in conspicuous places in, on and around all indoor displays with the words "FIREWORKS - NO SMOKING" in letters of not less than four (4) inches in height. Not less than two (2) exits shall be maintained upon the premises and shall remain unobstructed at all times with no exceptions.

Extinguishing equipment shall be kept and maintained upon the premises and shall include, but not be limited to, a sprinkler system installed in accordance with N.F.P.A. Standard 13 of the National Fire Code, and a ten (10) pound A.B.C. fire extinguisher shall be kept and maintained a distance of not more than six (6) feet from each showcase.

Emergency lighting and illuminated exit signs shall be

installed and maintained upon the premises.

All electrical fixtures contained upon the premises shall be dust-ignition proof. All electrical wiring shall comply with Articles 500 and 502 of the National Electrical Code and N.F.P.A. Standard 70 of the National Fire Code. Electrical receptacles or unguarded light fixtures shall not be permitted within twenty-five (25) feet of any fireworks or pyrotechnic composition. Light fixtures located within twenty-five (25) feet of any fireworks or novelties shall be properly secured. Electrical disconnect devices shall be located outside each storage area and shall be arranged and engineered to de-energize all electrical power to the building, room, trailer, semi-trailer, mobile facility or other structure constituting a new mercantile occupancy.

(d) The regulations contained within this Sub-Section are hereby ADOPTED with respect to the display of Class C fireworks and novelties being sold inside existing buildings and structures.

Display for Class C fireworks and novelties being sold inside of an existing building or structure shall be displayed in a glass or transparent showcase which shall be locked at all times.

The sale of such fireworks and novelties shall be under the direct supervision and control of a competent person at least twenty-one (21) years of age and duly qualified and responsible for enforcing all safety regulations, standards and measures.

Smoking, matches, open flames and any and all other spark-producing devices and firearms shall not be permitted within twenty-five (25) feet of a showcase. Signs shall be posted in conspicuous places in, on and around all indoor displays with the words "FIREWORKS - NO SMOKING" in letters of not less than four (4) inches in height. Not less than two (2) exits shall be maintained upon the premises and shall remain unobstructed at all times with no exceptions.

Extinguishing equipment shall be kept and maintained upon the premises and shall include, but not be limited to, a ten (10) pound A.B.C. fire extinguisher to be kept and maintained a distance of not more than six (6) feet from each showcase.

Emergency lighting and illuminated exit signs shall be kept and maintained upon the premises.

All electrical fixtures contained upon the premises shall be dust-ignition proof. All electrical wiring shall comply with Articles 500 and 502 of the National Electrical Code and N.F.P.A. Standard 70 of the National Fire Code. Electrical receptacles or unguarded light fixtures shall not be permitted within twenty-five (25) feet of any fireworks or pyrotechnic composition. Light fixtures located within twenty-five (25) feet of any fireworks or novelties shall be properly secured. Electrical disconnect devices shall be located outside each storage area and shall be arranged and engineered to de-energize all electrical power to the existing building, room, trailer, semi-trailer, mobile facility or other structure.

(e) The regulations contained within this Sub-Section are hereby ADOPTED with respect to the display of Class C fireworks and novelties being sold outdoors.

No Class C fireworks or novelties shall be offered for sale within three hundred (300) feet of the property line of any church, hospital or school, or shall be offered for sale within fifty (50) feet of the property line upon which any flammable liquid dispensers or flammable liquid storage areas are located.

Any vendor offering such fireworks or novelties for sale shall maintain his or her property free of all weeds, dried grass and other combustible materials for a distance of not less than twenty-five (25) feet in any direction from the outer edge of any building or structure within which such items are offered for sale.

Every outdoor display shall be located not less than twenty-five (25) feet from all rights-of-way including, but not limited to, highways, streets, avenues, roads, plazas, alleys, curbs, ways, lots, lanes, sidewalks or any other building or structure located on the same property.

Every outdoor display shall be presented in the form of empty boxes or containers bearing the brand name of the Class C fireworks and novelties being displayed for sale and shall be situated on a table or in a booth. All samples of Class C fireworks and novelties displayed for sale shall be kept in a locked glass or transparent showcase.

The sale of such fireworks and novelties shall be under

the direct supervision and control of a competent person at least twenty-one (21) years of age and duly qualified and responsible for enforcing all safety regulations, standards and measures.

Fireworks or other unauthorized open flames are prohibited in any tent or other temporary membrane structure.

Smoking, matches, open flames and any and all other spark-producing devices and firearms, except those firearms within the legal possession of duly authorized law enforcement officials, shall not be permitted inside any outdoor display or within twenty-five (25) feet thereof. Signs shall be posted in conspicuous places in, on and around all outdoor displays with the words "FIREWORKS - NO SMOKING" in letters of not less than four (4) inches in height. A ten (10) pound A.B.C. fire extinguisher shall be kept and maintained not less than a distance of six (6) feet from the outdoor display.

(f) The regulations contained within this Sub-Section are hereby ADOPTED with respect to the storage of Class C fireworks and novelties.

Class C fireworks and novelties shall be stored and maintained in a building or a room located inside a building, trailer, semi-trailer or other mobile facility. Such building, trailer, semi-trailer or other mobile facility shall be constructed in such a manner so as to resist fire from any external or internal source, and shall be weather-resistant and theft-resistant in accordance with the standards governing a two (2) hour fire rating. All openings shall be equipped with

appropriate means for locking. All doors shall open outward. All exits shall be clearly marked. All aisles and exit doors shall be kept and maintained unobstructed at all times with no exceptions.

All electrical fixtures contained upon the premises shall be dust-ignition proof. All electrical wiring shall comply with Articles 500 and 502 of the National Electrical Code and N.F.P.A. Standard 70 of the National Fire Code. Electrical receptacles or unguarded light fixtures shall not be permitted within twenty-five (25) feet of any fireworks or pyrotechnic composition. Light fixtures located within twenty-five (25) feet of any fireworks or novelties shall be properly secured. Electrical disconnect devices shall be located outside each storage area and shall be arranged and engineered to de-energize all electrical power to the building, room, trailer, semi-trailer, or mobile facility.

All storage areas shall be under the direct supervision and control of a competent person at least twenty-one (21) years of age and duly qualified and responsible for enforcing all safety regulations, standards and measures. All doors in such storage areas shall be kept locked at all times.

Class C fireworks and novelties shall be stored in their original packages in unopened containers, cases and cartons. All containers shall be organized and placed neatly and in a stable and properly secure manner.

All tools used for opening containers, cases and

cartons shall be spark-proof. :

All storage areas shall be kept and maintained in a clean and dry manner, free and clear of all grit, paper, empty used packages, boxes, containers, cases, cartons and all other garbage, rubbish and litter.

All garbage, rubbish and solid waste from storage areas shall be disposed of properly and as specified in Article 951 of these Ordinances.

All fireworks of any kind, type or nature shall be removed from the interior of the storage area prior to the performance of any repairs to be made thereto. In addition, such interior shall be cleaned prior to the making of any such repairs.

All fireworks of any kind, type or nature shall be removed from the exterior of the storage area prior to the performance of any repairs to be made thereto. In addition, such exterior shall be cleared of all dead vegetation, garbage, rubbish and other solid waste prior to the making of any such repairs.

Smoking, matches, open flames and any and all other spark-producing devices and firearms, except those firearms within the legal possession of duly authorized law enforcement officials, shall not be permitted inside of any storage area or within twenty-five (25) feet thereof. Signs shall be posted in conspicuous places in, on and around all outdoor displays with the words "FIREWORKS - NO SMOKING" in letters of not less than

four (4) inches in height. A ten (10) pound A.B.C. fire extinguisher shall be kept and maintained not less than a distance of six (6) feet from all storage areas.

(g) As used in this Article, the term "novelties", as defined in West Virginia Code Section 29-3-23 and in N.F.P.A. Standard 1123 of the National Fire Code, shall mean any device containing small amounts of pyrotechnic or explosive composting, or both, but not described as consumer fireworks, and which produce limited visible or audible effects.

(h) As used in this Article, the term "Class C fireworks", as defined in N.F.P.A. Standard 1123 of the National Fire Code, shall mean any small fireworks device designed primarily to produce visible effects by combustion or deflagration that complies with the construction, chemical composition, and labeling regulations of the United States Consumer Product Safety Commission.

(i) Whoever violates any of the provisions of this Section shall be fined not more than Five Hundred Dollars (\$500.00), or imprisoned not more than thirty (30) days, or both. Each violation of the provisions of this Section shall constitute a separate offense.

(j) The provisions of this section shall be enforced by the Fire Marshal, or his designee, by warrant or citation in the Municipal Court.

SPONSORED BY _____

APPROVED AS TO FORM BY FGS, III

FIRST READING _____

SECOND READING _____

DATE _____

ANN C. SHAYE, CITY CLERK

DATE _____

JEAN DEAN, MAYOR

APPROVE _____

DATE _____

VETO _____



ELECTRONIC SPECIALTY COMPANY

1325 Dunbar Ave.
P. O. Box 400
Dunbar, WV 25064
AC 304-766-8277
800-642-5500

July 18, 1997
(our 50th year)

Bill Spencer, Chairman
WV State Fire Commission
1207 Quarrier Street
Charleston, WV 25301

Re: Proposed Addition to the State Fire Code
NICET Certification of Companies Engaged in Fire Alarm/Sprinkler
Work

Dear Mr. Spencer:

The enclosed paragraph represents our suggestion for expanding the State Fire Code to include a requirement for companies engaged in fire alarm/sprinkler work to provide evidence of competency.

Our company has been involved in the fire alarm business for more than thirty-five (35) years and possess much experience with some of the things that are good and bad for the life safety aspects of our work. The single most troublesome difficulty we continue to encounter is the lack of knowledge and training by many people who work on these life safety systems. We are all aware of numerous horror stories related to fire alarm systems and components that were incorrectly installed or maintained or poorly inspected and were being depended upon as a means of evacuating people from a fire. Fortunately, we find and fix many of these problems before there is a fire but it is very frightful to realize that many such problems remain and continue to be introduced to fire alarm systems in our state. The National Institute for Certification in Engineering Technologies (NICET) is the nationally recognized organization who provides the training and certification essential for personnel who conduct system maintenance, repairs and inspection activities. Many other states have adopted the proposed requirement for NICET certification as it provides a level of assurance that those employed to service the life safety system are competent to do so.

Our company like many others in the industry receives a great deal of education for its employees through special factory schooling and "in-house" classes and in some cases specialized certification for some of the newer technology in use today. We firmly believe that all companies should maintain some form of continuing education program in order to be competent in this kind of work.

We sell and install and service quality systems
Sound... Fire Alarm... E.P.V... Time... Monitor Control
WV Contractors License # WV 010229

Bill Spencer, Chairman
July 18, 1997
Page Two

Re: Proposed Addition to the State Fire Code

The NICET organization maintains a continuing education program which makes it the organization of choice for adoption by most states. We very much appreciate your consideration of this proposal. Please advise me if I may be of some assistance in furthering the proposed change.

Regards,



Owen S. Higgins
President

cc: Walter Smittle, III
State Fire Marshal

ELECTRONIC SPECIALTY COMPANY

1325 Dunbar Ave.
P. O. Box 400
Dunbar, WV 25064
AC 304-766-6277
800-642-5500

July 18, 1997
(our 50th year)

Bill Spencer, Chairman
WV State Fire Commission
1207 Quarrier Street
Charleston, WV 25301

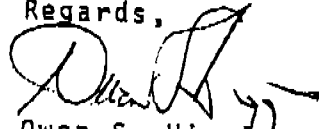
Re: Proposed Addition to the State Fire Code
NICET Certification of Companies Engaged in Fire
Alarm/Sprinkler Work

Dear Mr. Spencer:

We request your consideration of incorporating the
following addition to the proposed State Fire Code.

Thank you for your consideration of this proposal.

Regards,


Owen S. Higgins
President

14.6.1 Necessity of NICET Certification for Work Involving Fire Protection and Fire Alarm Systems Installations

No maintenance, repair or inspection work may be performed,
offered or engaged in for compensation or hire within the State
of West Virginia by any company unless such company maintains at
least one (1) employee possessing a valid certificate of competency
issued by the National Institute of Certification in Engineering
Technologies (NICET). All such companies shall be registered with
the State Fire Commission and shall provide annual information on
the validity of NICET certificate holders employed for the purpose
of maintenance, repair or inspection activities.

cc: Walter Smittle, III
State Fire Marshal

We sell and install and service quality systems
Sound... Fire Alarm... E.C.P.V... Time... Monitor Control

WV Contractors License # WV 010229

**STATE FIRE
COMMISSION
RESPONSE**



The Department of Military Affairs and Public Safety

BILL L. SPENCER
Chairman
JAMES W. FIFE
Vice-Chairman
DANIEL I. W. HESS
Secretary

CECIL H. UNDERWOOD, GOVERNOR
OTIS G. COX, JR.
Secretary
STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301

WALTER SMITTLE III
State Fire Marshal
Phone (304) 558-2191
FAX (304) 558-2537

July 21, 1997

Mr. Patrick C. Lafayette
Ms. Nancy Scott
WVPGA Committee Co-Chairpersons
107 S. West Street
Alexandria, VA 22314

Dear Mr. Lafayette and Ms. Scott:

The West Virginia State Fire Commission considered your comments regarding amendments to the State Fire Code. Your proposals were rejected by the Fire Commission for the following reasons:

- (1) Exemption of fuel fired heaters using the Building Code definition conflict with the Life Safety Code in specific identification of the occupancies for authorization of the exemption.
- (2) Fire fighter safety has not been clarified relating to the units involved in a fire whereby gas would be released, thus increasing the intensity of the fire.
- (3) Furnaces and hot water heaters that are gas fueled are not demonstrated in mercantile occupancies.
- (4) Mixed occupancies were not addressed within the same building.
- (5) A ruptured line within the unit and the procedure for shut down of the unit with an automatic valve was questioned.



The Department of Military Affairs and Public Safety

BILL L. SPENCER
Chairman
JAMES W. FIFE
Vice-Chairman
DANIEL I. W. HESS
Secretary

CECIL H. UNDERWOOD, GOVERNOR
OTIS G. COX, JR.
Secretary
STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301

WALTER SMITTLE III
State Fire Marshal
Phone (304) 558-2191
FAX (304) 558-2537

July 21, 1997

Mr. C. W. Sigman, Chief
South Charleston Fire Department
P. O. Box 8597
South Charleston, WV 25303

Dear Chief Sigman:

Your proposal to the State Fire Code to remove the language that prohibited the State Fire Code to be applicable to the operations of fire departments has been approved.

As you may be aware, the State Fire Code must be submitted to the Legislature Rule Making Review process before it is submitted to the legislative in January.

The State Fire Commission appreciates your input into the code process.

Sincerely,

Bill L. Spencer
Bill L. Spencer
Chairman

BLS/nlo

cc: Assistant Attorney General Chad Cardinal
cc: Members of the State Fire Commission
cc: State Fire Marshal

Ref: 072197-2



The Department of Military Affairs and Public Safety

BILL L. SPENCER
Chairman
JAMES W. FIFE
Vice-Chairman
DANIEL I. W. HESS
Secretary

CECIL H. UNDERWOOD, GOVERNOR
OTIS G. COX, JR.
Secretary
STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301

WALTER SMITTLE III
State Fire Marshal
Phone (304) 558-2191
FAX (304) 558-2537

July 21, 1997

Mr. Owen S. Higgins
President
Electronic Specialty Company
1325 Dunbar Avenue
P. O. Box 400
Dunbar, WV 25064

Dear Mr. Higgins:

Your proposal to include NICET Certification for Fire Protection and Fire Alarm Systems has been approved by the State Fire Commission. Your proposal has been added to Section 14.6 as a subsection with the provision of implementation January 1, 1999.

Should you have any questions, please contact us.

Sincerely,

Bill L. Spencer/nls

Bill L. Spencer
Chairman

BLS/nls

cc: Assistant Attorney General Chad Cardinal
cc: Members of the State Fire Commission
cc: State Fire Marshal

Ref: 072197-3



The Department of Military Affairs and Public Safety

BILL L. SPENCER
Chairman
JAMES W. FIFE
Vice-Chairman
DANIEL I. W. HESS
Secretary

CECIL H. UNDERWOOD, GOVERNOR
OTIS G. COX, JR.
Secretary
STATE FIRE COMMISSION
1207 Quarrier Street, 2nd Floor
Charleston, West Virginia 25301

WALTER SMITTLE III
State Fire Marshal
Phone (304) 558-2191
FAX (304) 558-2537

July 21, 1997

Mr. C. W. Sigman
Fire Chief
South Charleston Fire Department
P. O. Box 8597
South Charleston, WV 25303

Dear Chief Sigman:

Your proposal to regulate Class C Fireworks and novelty items as defined by Chapter 29, Article 3, Section 23 of the West Virginia Code has been reviewed. The State Fire Commission believes this proposal should be specifically addressed by the enactment of statutory law.

The State Fire Commission will support your efforts through legislation to implement fire safety requirements in the best interest of the consumer. It is noted several jurisdictions, county and city, have successfully passed ordinances requiring safety requirements for fireworks and novelty items per West Virginia Code, Chapter 29, Article 3, Section 23.

Should you have any questions, please feel free to contact me.

Sincerely,

Bill L. Spencer/nlo
Bill L. Spencer
Chairman

BLS/nlo

cc: Assistant Attorney General Chad Cardinal
cc: Members of the State Fire Commission
cc: State Fire Marshal

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