

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 295  
Appendix

APPENDIX A

The material contained in this appendix is for clarification purposes only. The notes, illustrations, etc. are numbered to correspond to the number of the rule as it appears in the text of the code.

A-50.10-50.25 Forms. The following forms (SB2, 8, 8A, 118, 198, 224B and SBD-4927) are referred to in sections Ind 50.10, 50.12, 50.14, 50.18, 50.20 and 50.25. Copies of these forms are available from the Division of Safety and Buildings, P.O. Box 7969, Madison, Wisconsin 53707.

Department of Industry, Labor and Human Relations

**Building**

**Inspection Report and Orders**

SB-3  
REV. 10/76

INSPECTION DATE		FILE NO. E -
-----------------	--	-----------------

OWNERS NAME			OCCUPANCY INSPECTED	
MAILING ADDRESS			LOCATED AT (STREET ADDRESS)	
CITY	STATE	ZIP CODE	CITY	COUNTY

An inspection of the above occupancy discloses violations of orders of the Dept. of Industry, Labor & Human Relations promulgated under authority of Chapter 101 of the Revised Statutes of Wisconsin

SEE REVERSE SIDE FOR APPLICABLE WISCONSIN STATUTES

Plan No. -

NOTE	ITEM	ORDER	REQUIREMENTS:	<input checked="" type="checkbox"/> Done	<input type="checkbox"/> Not Done
Sample Only					

**IMPORTANT**

- Please report when orders are completed
- Avoid Delay
- Forfeiture for violations are \$10 to \$100 each day for each violation.
- Keep us informed.

"Failure of an employer reasonably to enforce compliance by employees with such statute or order of the Department shall constitute failure by the employer to comply with such statute or order." Sec. 102.57 Wis. Stats.

COMPLIANCE DATE	VIOLATIONS EXPLAINED TO	TITLE
BY	DEPUTY	DEPUTY NO.

**SAFETY & BUILDINGS DIVISION**

Address all Correspondence Safety and Buildings Division, Department of Industry, Labor and Human Relations, P.O. Box 7147, Madison, Wisconsin 53707

**DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 297**  
**Appendix**

SB-845/77  
 PETITION FOR MODIFICATION  
 OF A RULE IN THE  
 WISCONSIN ADMINISTRATIVE CODE

**WISCONSIN DEPARTMENT OF  
 INDUSTRY, LABOR AND HUMAN RELATIONS  
 DIVISION OF SAFETY & BUILDINGS  
 P. O. BOX 7949, MADISON, WI 53707**

**PETITION REVIEW FEE - \$75.00**

Name of Owner	Building Occupancy or Use	Agent, Architect or Engineering Firm
Company	Tenant Name, if any	Street & No.
Street & No.	Building Location, Street & No.	City
City	State & Zip	County
		Phone

1. Rule Ind. \_\_\_\_\_ of the Wisconsin Administrative code cannot be entirely satisfied because

.....

.....

.....

2. In lieu of complying exactly with the rule, the following alternative is proposed as a means of providing an equivalent degree of safety

**Sample**

3. Supporting arguments are

.....

.....

.....

Verification by owner

\_\_\_\_\_ being duly sworn, says he is the petitioner herein, thus he has read the foregoing petition and that the same is true, as he verily believes

signature of owner

subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, in \_\_\_\_\_ County, Wisconsin.

Notary Public

My commission expires \_\_\_\_\_

Commission Expires	
Secretary	Date

-PETITION IS VALID ONLY IF NOTARIZED

**POSITION STATEMENT:**  
To be compiled by  
Chief of Fire Department  
SB 8-A (1-77)

WISCONSIN DEPARTMENT OF  
INDUSTRY, LABOR AND HUMAN RELATIONS  
DIVISION OF SAFETY & BUILDINGS  
P.O. BOX 7769, MADISON WI 53707

Name of Owner		Building Occupancy or Use		Agent, Architect or Engineering Firm	
Company		Tenant Name, if any		Street & No.	
Street & No.		Building Location, Street & No.		City State & Zip	
City State & Zip		City County		Phone	
1. I have read the petition for modification of rule: Ind					
2. I recommend (Check appropriate box)		Denial	Approval	Conditional Approval	No Comment
3. Explanation for Recommendation:					
<div style="font-size: 48px; opacity: 0.5; transform: rotate(-15deg);">Sample</div>					
* If desired, Fire Departments may indicate "No Comment" on non-fire safety issues such as sanitary, energy conservation, structural, barrier free environments, etc.					
4. <input type="checkbox"/> I find no conflict with local rules and regulations					
<input type="checkbox"/> I find that the petition is in conflict with local rules and regulations					
Explanation					
Signature of Fire Chief				Date	

PLEASE COMPLETE AND SUBMIT PROMPTLY TO DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS AT THE ADDRESS SHOWN ABOVE.

**DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 299**  
Appendix

**PLANS APPROVAL APPLICATION**  
SH 118 (Rev. 1/78)

Department of  
**INDUSTRY, LABOR AND HUMAN RELATIONS**

Safety & Building Division  
Box 7949  
201 E. Washington Avenue  
Madison, Wisconsin 53703

**INSTRUCTIONS:** Fill in all applicable data. Submission of Plan Approval Application form is required with each plan submittal. Examination and inspection fees, as determined on back of form, are required to be submitted with a minimum of three sets of plans. Data required on plans is described in code section Ind 50.12. Codes can be purchased from the Department of Administration, Document Sales, 207 S. Thornton Ave., Madison, Wisconsin 53703.

1. THIS APPLICATION IS FOR  Building Plan Approval  Heating Plan Approval  Other \_\_\_\_\_

2. PLANS FOR  New Building  Addition  Alteration  Structural  Fining & Foundation  
 Revision to previously approved plans  Other \_\_\_\_\_

**J. PROJECT INFORMATION**

Name of Owner		Building Occupancy or Use		Designer or Design Firm	
Company		Tenant Name, if any		Street & No.	
Street & No.		Building Location, Street & No.		City State & Zip	
City	State & Zip	City <input type="checkbox"/> Village <input type="checkbox"/> Town <input type="checkbox"/>	Country	Phone	
Previous Owner, if any		Return Plans to <input type="checkbox"/> Owner <input type="checkbox"/> Designer			

**4. DETERMINATION OF FEES SEE CHAP. IND. 69 FOR FULL SCHEDULE  
SEE BACK OF PAGE FOR FEE CALCULATION AND ABBREVIATED FEE SCHEDULE**

Total Volume	4a Building Plan Fee	\$ _____
	4b Heating/Ventilation Fee	\$ _____
	4c Other	_____
	4d Inspection	_____
	4e TOTAL	_____

**FOR OFFICE USE ONLY**

Amount Paid: \_\_\_\_\_  
Date Paid: \_\_\_\_\_  
Receipt No: \_\_\_\_\_

**5. OTHER INFORMATION**

5a. Type of Construction  
 Fire Resistive Type A  Metal Frame Protected  Exterior Masonry  Wood Frame Protected  
 Fire Resistive Type B  Heavy Timber  Metal Frame Unprotected  Wood Frame Unprotected

5b. Mechanical Information: Type of Heating \_\_\_\_\_ Net Rating of Heating Units \_\_\_\_\_

**5c. SOIL BEARING CAPACITY (See Ind. 53.21)**

Method used to determine capacity:  Verified  Presumptive

Check Value Under PSF 2000  3000  4000   
 6000  12000  Other \_\_\_\_\_

Yes	No
<input type="checkbox"/>	<input type="checkbox"/> Sprinkler System Provided?
<input type="checkbox"/>	<input type="checkbox"/> Fire Alarm Provided?
<input type="checkbox"/>	<input type="checkbox"/> Other Detection System Provided?
<input type="checkbox"/>	<input type="checkbox"/> Emergency Power Provided?

**6. DESIGN AND SUPERVISION (IND 50.13)**

The design, plans, computations and specifications for this project have been prepared under my supervision. I am registered as an  Architect  Engineer  Designer as authorized as provided in Section 443.01 of the Wisconsin Statutes  I am not registered. If this building, existing and additions, contains over 50,000 cu. ft. total volume, it must be designed by a registered person.

SEE BACK OF PAGE FOR ADDITIONAL INFORMATION ON PUBLIC RECORDS.

Signature of Designer	Registration Number	Date
-----------------------	---------------------	------

If this building, existing and additions, contains over 50,000 cu. ft. total volume, the construction of this project shall be under the supervision of a Wisconsin registered architect, engineer, or in the case of heating and ventilating, designer.

Plans for buildings over 50,000 cu. ft. will not be approved until the name of the supervising professional is known.

Name of Supervising Professional	Registration Number
----------------------------------	---------------------

**NOTE:** The supervising professional shall file a written report with the Department upon completion of construction. (Ind. No. 11)

4. DETERMINATION OF FEES

INSTRUCTIONS

1. Refer to fee schedule shown below.
2. Enter area of each floor in appropriate space.
3. Enter height of each floor (Height includes attic and space between floors).
4. Compute volume of each floor/attic space and total volume for building.
5. Compute building and/or heating fee per building.
6. Enter other fee (if any) in space per building.
7. Compute inspection fees per building.
8. Total fees and transfer information to front page.

\*The "total volume" is determined by the overall outside dimensions of length, width and height

EXAMINATION FEES PER BUILDING

- Building Plan Fee: Fee: 60 per 1000 cu. ft. Minimum Fee \$25.00
- Heating & Ventilating Plan Fee: Fee: 40 per 1000 cu. ft. Minimum Fee \$25.00
- Alterations to bldg.: Fee \$1.50 per \$1,000 est. cost. Minimum fee \$25.00
- \*Structural Plans \$25.00 per Bldg
- Revision to approved Plan \$25.00
- \*Exhaust Systems \$25.00 per Plan (Govt. Owned only)
- \*Spray Booths \$25.00 per Plan (Govt. Owned only)
- Permit to Start Construction (SS-188) \$35.00 per Bldg.
- \*Footing & Foundation Plans \$25.00 per Bldg.
- \*Stadium, Grandstand, Bleacher \$10.00/1,000 Seats
- Minimum Fee \$25.00
- \*Fire Escape \$25.00 per fire escape

NOTE

- (1) Heating & Ventilating Plans submitted separately require an inspection fee of \$44.00
- (2) Plans other than building or heating require an inspection fee of \$25.00.
- (3) Warehouses-Reduce plan examination fees (Not inspection fees) by 30%.
- (4) Building plan fee for Bldgs. exceeding 1,000,000 cu. ft. is \$500 plus \$0.40 per 1,000 cu. ft. in excess of 1,000,000 cu. ft.
- (5) Heating & Ventilation plan fee for Buildings exceeding 1,000,000 cu. ft. is \$400 plus \$0.75 per 1000 cu. ft. in excess of 1,000,000 cu. ft.

INSPECTION FEES PER BUILDING

Building Volume/Att. Cost	Fee
Up to 25,000 cu. ft./dollars	550.00
25,001 - 100,000 cu. ft./dollars	\$75.00
100,001 - 500,000 cu. ft./dollars	\$100.00
500,001 - 1,000,000 cu. ft./dollars	\$175.00
In excess of 1,000,000 cu. ft./dollars	\$150.00

No. of Floors	Area	Height	Total each Floor	Total Vol./1000	Exam Fee	Building Plan Fee
Basement/Ground	x	-	cu. ft.	x	60	\$
1st Floor	x	x	cu. ft.	Total Vol. 1000	x	Exam Fee
2nd	x	x	cu. ft.	x	40	\$
3rd	x	x	cu. ft.	<input type="checkbox"/> Structural \$25.00	<input type="checkbox"/> Alteration \$1.50/1000	Other
4th & 5th	x	-	cu. ft.	<input type="checkbox"/> Permit to Start \$35.00	<input type="checkbox"/> Exhaust \$25.00	\$
Attic & etc.	x	-	cu. ft.	<input type="checkbox"/> Eng & Found. \$75.00	<input type="checkbox"/> Revision \$25.00	\$
Total Volume is						Inspection Fee
Total Cost of Alteration						\$
TRANSFER ALL DOLLAR AMOUNTS AND VOLUME TO FRONT PAGE						Total
						\$

PUBLIC RECORDS

A copy of the plans submitted with this application will be held in the files of this division and are considered Public Records. Interested parties may, upon request, review the plans and files in this office.

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 301  
Appendix

SB-188  
Rev. 5/77



DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS  
SAFETY & BUILDINGS DIVISION  
P.O. BOX 7969  
MADISON, WISCONSIN 53707

**PERMIT TO START CONSTRUCTION**  
FEE \$35.00 (per bldg.) IN ADDITION TO EXAMINATION/INSPECTION FEES

Location of Project: \_\_\_\_\_

Owner: \_\_\_\_\_ E: \_\_\_\_\_

Street: \_\_\_\_\_ Plan File Number \_\_\_\_\_

City: \_\_\_\_\_ Date Plans Rec'd \_\_\_\_\_

County: \_\_\_\_\_

Occupancy: \_\_\_\_\_

We, the undersigned, request to begin footing and foundation work prior to approval of the plans.

Complete plans have been submitted to the Department of Industry, Labor & Human Relations, Division of Industrial Safety and Buildings, and all information requested by Code Ind. 50.12 has been included with the submittal.

We have reviewed the specific code requirements for the building structure including, but not limited to, Ind. 54.01, Ind. 55.02, Ind. 56.02, Ind. 57.01 (construction, height and allowable loads), Ind. 50.12, Ind. 51.03, Ind. 53, Ind. 55.05 and Ind. 54.30, when applicable, and have shown compliance on the drawings.

We agree to make any changes required if the plans have been reviewed and to remove or replace noncode complying parts of the foundation and/or footings.

We agree to proceed with the footings and foundation only and will not continue with the remainder of the building or structure until approval has been received.

Owner's Signature \_\_\_\_\_ Date \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Accepted By \_\_\_\_\_ Date \_\_\_\_\_

Dept. of Ind., Labor & Human Relations  
Div. of Industrial Safety & Buildings

Not Accepted Because \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Designer's Signature \_\_\_\_\_ Date \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Plans will be examined within the next \_\_\_\_\_ days.

NOTE: Footing and foundation plans submitted prior to final building plans will not be accepted for this permit.

**INSPECTION PROGRESS REPORT**  
 SB-274a  
 Rev. 8/77  
 S.101.102(2). Wisconsin Statutes, requires a \$15 inspection fee for each building inspection conducted, payable at time of plan review

Wisconsin Department of Industry, Labor & Human Relations  
 DIVISION OF SAFETY AND BUILDINGS  
 P. O. Box 79161 - Madison, Wisconsin 53707

E NO.		PLAN FILE NO		OCCUPANCY	
TO OWNER <input type="checkbox"/>		DESIGNER <input type="checkbox"/>		BUILDING ADDRESS	
NAME		ADDRESS		CITY	ZIP CODE
ADDRESS		CITY		STATE	COUNTY
CITY		STATE		ZIP	
				DATE INSPECTED	CHECK ONE
				1	<input type="checkbox"/> SB 191
				2	
				3	<input type="checkbox"/> TYPE ORDERS
				4	
				BLOG. FINAL	
				H & V FINAL	
				OTHER FINAL	COMPLIANCE DATE

(X) NOT DONE					(A) DONE	FINDINGS
INSP.	1	2	3	4	Final	
1	2	3	4	Final		

Sample

PERSON CONTACTED		TITLE	DEPUTY SIGNATURE	REC NO
OWNERS NAME (IF DIFFERENT FROM ABOVE)		IF YOU HAVE ANY QUESTIONS I WILL BE IN MY OFFICE ON		
ADDRESS				
CITY	STATE	ZIP	TELEPHONE	



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 303  
Appendix

DILHR-SBD-4927 (1/77)

CERTIFICATE OF COMPLETION

Date \_\_\_\_\_

TO: Department of Industry, Labor and Human Relations  
Safety and Buildings Division  
P. O. Box 7965  
201 E. Washington Avenue  
Madison, WI 53707

Gentlemen:

RE: File Number: \_\_\_\_\_

Plan Number: \_\_\_\_\_

Owner: \_\_\_\_\_

Occupancy: \_\_\_\_\_

Building Street Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_

This is to certify that construction of the referenced project was under my supervision, in accordance with Ind 50.10, and that to the best of my knowledge and belief it has been completed in substantial compliance with the approved plans and specifications with the following exceptions: (IF NONE, STATE NONE)

Sample

This certificate covers: Building   
Heating & Ventilation   
Structural   
Other  (Specify) \_\_\_\_\_

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Registration Number: \_\_\_\_\_

Address: \_\_\_\_\_

**A-50.20 FEES.** The following reprint of section Ind 69.09 may be used to determine the amount of fee required for building-related services offered by the department:

**Ind 69.09 Buildings, structures, heating and ventilating.** (1) **PLAN EXAMINATION AND APPROVAL FEES.** Fees for the examination and approval of all plans submitted in accordance with the requirements of Wis. Adm. Code chapters Ind 50-64 will be determined in accordance with the following schedules.

(a) *Building; heating and ventilating.* Fees for the examination and approval of all building and heating and ventilating plans will be computed on the basis of the total volume of the building and at the following rates:

**Note:** For the purpose of determining fees, the volume is determined by the overall outside dimensions of length, width and height.

<u>Total volume</u>	<u>Building plans</u>	<u>Heat &amp; vent plans</u>
0-1,000,000 cubic feet	\$0.60 per 1000 cubic feet. Minimum fee—\$25.00 per plan.	\$0.40 per 1000 cubic feet. Minimum fee—\$25.00 per plan.
Over 1,000,000 cubic feet	\$600 plus \$0.40 per 1000 cubic feet in excess of 1,000,000 cubic feet.	\$400 plus \$0.25 per 1000 cubic feet in excess of 1,000,000 cubic feet.

**1. Exceptions.**

a. *Warehouses.* The fees for plan examination and approval of warehouses shall be determined in accordance with Ind 69.09 (1) (a) except that the fee may be reduced by 30%. Minimum fee—\$25.00.

b. *Replacement of heating equipment.* The replacement of a boiler or a furnace in an existing heating system with no alterations to the heating system requires no fee. See Ind 69.03 (5) for registration fee for boilers and pressure vessels.

(b) Permit to start.....\$35.00 per permit.

(c) Alteration plans for buildings and structures and heating and ventilating may be determined in accordance with (1) (a), based on total building volume affected by such alteration, or the following:

\$1.50 for every \$1000 or fraction of \$1000 estimated cost. Minimum fee—\$25.00 per plan.

(Estimated fee need not include cost of razing, piping, electrical, painting or decorating.)

(d) Revisions to previously examined plans.....\$25.00 per plan.

(Applies when plans are revised, for reasons other than those that were requested by the department, before construction of the specific item commences.)

(e) Footing and foundation plans submitted separately.....\$25.00 per plan.

(f) Structures.....\$25.00 per plan.

(Applies when submitted separately and not included with general building plans, such as trusses, precast concrete and other structures.)

(g) Fire escapes.....\$25.00 per plan.

(h) Stadia, grandstands and bleachers..... \$10.00 per 1000 seats  
or fraction of 1000 seats.  
Minimum fee—\$25.00.

(i) Industrial exhaust systems for dusts, fumes, vapors and gases (government owned only).....\$25.00 per plan.

(j) Spray booth plans (government owned only).....\$25.00 per plan.

(2) **APPROVAL NUMBERS.** The fee for approval numbers issued by the department for the approval of materials, equipment and devices.....\$200.00 per approval.

**DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 305**  
Appendix

(3) **INSPECTION FEES.** Field inspection fees shall be remitted for each building or structure in accordance with the following:

(a) *General building, heating and ventilating inspection fees.* When plans for the building and the heating and ventilating system are submitted together, inspection fees shall be determined in accordance with the following:

<u>New building construction (cubic feet)</u>	<u>Fee</u>
Up to 25,000 cubic feet.....	\$50.00
25,001 - 100,000 cubic feet .....	75.00
100,001 - 500,000 cubic feet .....	100.00
500,001 - 1,000,000 cubic feet .....	125.00
1,000,001 cubic feet and over.....	150.00

(b) *Heating and ventilating inspection fees.* Heating and ventilating inspection fee, when plans are submitted separately from building plans .....\$44.00.

(c) *Inspection fees for alterations to existing buildings.* Inspection fees for alterations to existing buildings shall be determined in accordance with (3) (a) or the following:

<u>Alteration or repair (dollar amount)</u>	<u>Fee</u>
Up to \$25,000 .....	\$50.00
\$25,001 - \$100,000.....	75.00
\$100,001 - \$500,000.....	100.00
\$500,001 - \$1,000,000.....	125.00
\$1,000,001 and over.....	150.00

(d) *Miscellaneous inspection fees.* Miscellaneous inspection fees include fire escapes, stadia and grandstands, exhaust systems, spray booths and other structures for which plan submission is required .....\$25.00.

(4) **COLLECTION OF FEES.** All fees shall be remitted at the time the plans are submitted. No plan examinations, approvals or inspections will be made until the fees are received.

(5) **MICROFILM FEES.** Microfilm prints of approved plans for the years 1967-1972 are available at a nominal cost upon approval of the original designer.

(6) **PETITIONS FOR MODIFICATION.** The department will consider and may grant modification to an administrative rule upon receipt of a fee of \$75.00, a completed petition for modification form from the owner, and a position statement from the fire department having responsibility and an interest in the rule, provided an equivalent degree of safety is established in the petition for modification which meets the intent of the rule being petitioned.

A-51.01 (12) **BUILDING.** The intent was to consider permanent awnings as part of a building.

A-51.01 (42) **FAMILY.** The intent of this definition is to clarify the use of the word "family" in reference to subsection Ind 57.001 (2) (a); it is not intended as a variance to requirements stated under Ind 57.001 (2) (b).

A-51.01 (67a) **HABITABLE ROOM.** It is the intent that rooms designated as recreation, study, den, family room, office, etc. and providing the only space for living and/or sleeping are considered habitable rooms.

A-51.01 (115) **SETBACK.** The intent was to not include gutters, downspouts, outdoor lighting fixtures, signs and similar attachments as parts of a building.

A-51.01 (121) **STORIES, NUMBER OF.** For further clarification, refer to A-51.02 (14).

A-51.01 (144) **WALL (DIVISION).**

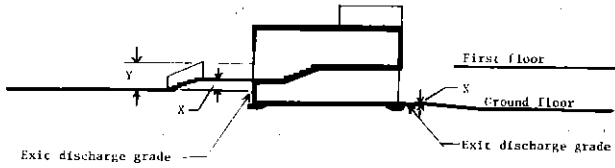
(a) *Building division wall* is intended to denote a wall constructed in a manner sufficient to meet requirements for a party wall [see "Wall (Party)"] and is acceptable as a dividing wall or enclosing wall when determining the volume of a building as referred to in sections Ind 60.07, 50.10 and 50.12.

(b) *Fire division wall* is intended to relate to construction that provides separation between portions of a building to satisfy allowable floor area limitations, separation between 2 classes of construction, or separation of hazardous occupancies. For other separations, see "occupancy separations" and isolation of hazards sections of this code.

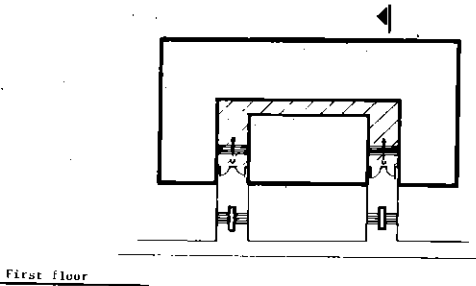
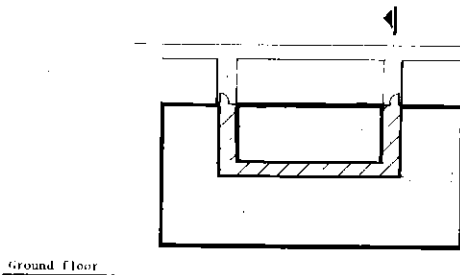
**A-51.01 (151) WALL (PARTY).** It is intended that a property consisting of joining plotted subdivisions owned by one individual, that can be owned by separate individuals, is included in the definition of party wall.

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 307  
Appendix

A-51.02 (14) DETERMINATION OF NUMBER OF STORIES. The following illustrations are provided to give visual aid to this rule and the definition of Ind 51.01 (121) Stories, Number of.



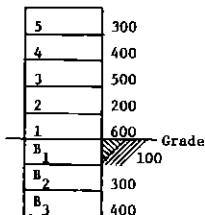
Note: X = 3'-0" (maximum)  
Y = 6'-0" (maximum)



A-51.042 (6) The use of the term "high hazard" as referred to in this section is intended to apply to the following list of operations and occupancies:

1. Aircraft hangars.
2. Dry cleaning establishments: using or storing gasoline or other volatile flammable liquids.
3. Enameling or japanning operations.
4. Mills: sugar, starch, cereal, feed, flour and grist mills.
5. Paint and varnish: manufacturing, storing, handling, spraying, and other related operations.
6. Pyroxylin products: manufacture and storage.
7. Repair garages.
8. Smoke houses.
9. Storage of: explosive gases under pressure (15 psi and over 2,500 cubic feet) such as acetylene, hydrogen, natural gas, etc.
10. Storage of: materials with a flash point under 200° F. such as celluloid products, kerosene, oils, etc.
11. Woodworking establishments.

A-51.15 (6) EXAMPLE TO DETERMINE TOTAL AGGREGATE EXIT WIDTH.



Type No. 1 sprinklered construction.

Aggregate exit width required from a floor into the stairwell is 30 inches per 100 people on that floor; i.e.,

5th floor to stairwell =  $3 \times 30 = 90''$

4th floor to stairwell =  $4 \times 30 = 120''$

3rd floor to stairwell =  $5 \times 30 = 150''$

Stair width required:

5th to 4th - 300 persons (100%)  $\times 30''/100$  persons = 90"

4th to 3rd - [400 persons (100%) + 300 persons (50%)]  $30''/100$  persons = 165"

3rd to 2nd - [500 persons (100%) + 400 persons (50%) + 300 persons (25%)]  $30''/100$  persons = 232.5"

2nd to 1st - [200 persons (100%) + 500 persons (50%) + 400 persons (25%)]  $30''/100$  persons = 165" (Use 232.5")

1st to exterior - [600 persons (100%) + (200 persons + 100 persons) (50%) + (500 persons + 300 persons) (25%)]  $30''/100$  persons = 285"

B<sub>1</sub> to 1st - [100 persons (100%) + 300 persons (50%) + 400 persons (25%)]  $30''/100$  persons = 105" (Use 150")

B<sub>2</sub> to B<sub>1</sub> - [300 persons (100%) + 400 persons (50%)]  $30''/100$  persons = 150"

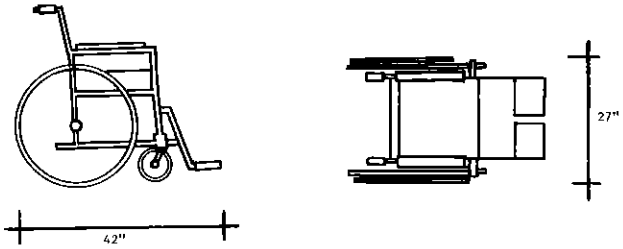
B<sub>3</sub> to B<sub>2</sub> - 400 persons (100%)  $\times 30''/100$  persons = 120"

Stair width required from B<sub>1</sub> to 1 is 150" as stair cannot decrease in width along path to exit [Ind 51.16 (2) (c)].

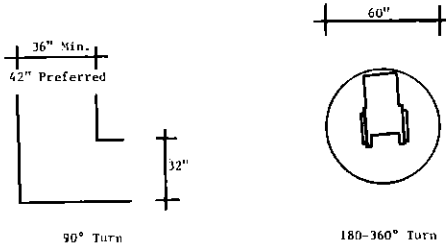
DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 309  
Appendix

A-52.04 REQUIREMENTS FOR BARRIER-FREE ENVIRONMENTS. The following illustrations are provided to give the designer visual aids for making facilities accessible.

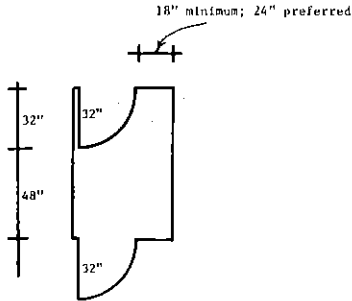
WHEELCHAIR DIMENSIONS



TURNING SPACE



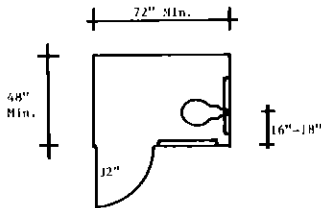
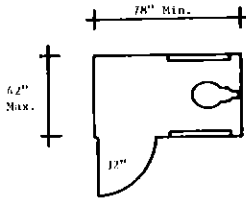
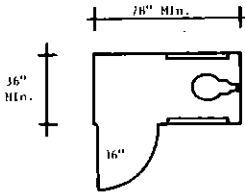
## DOORS IN SERIES



Doors in series should be hinged on the same side and should swing in the same direction. A minimum of 18 inches of clear space should be provided on the door knob side of the door. The length of the vestibule should be a minimum of 48 inches plus the width of the door in the open position (i.e., 32-inch door plus 48 inches length equals 80 inches overall length of vestibule).

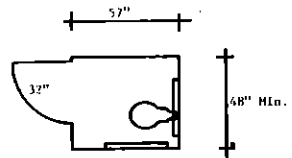
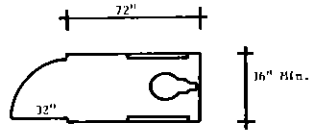


EXAMPLES OF ACCESSIBLE TOILET COMPARTMENTS  
 AS SPECIFIED IN TABLE 52.04-A



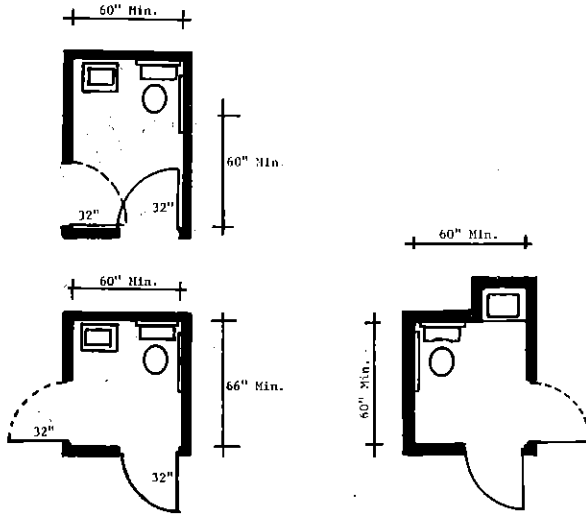
Recommended fixtures:

1. Elongated bowl;
2. Wall mounted.



The door of the 48" x 57" water closet compartment having a frontal approach should not align with the placement of the water closet.

EXAMPLES OF ACCESSIBLE TOILET ROOMS  
CONTAINING ONE LAVATORY AND ONE WATER CLOSET

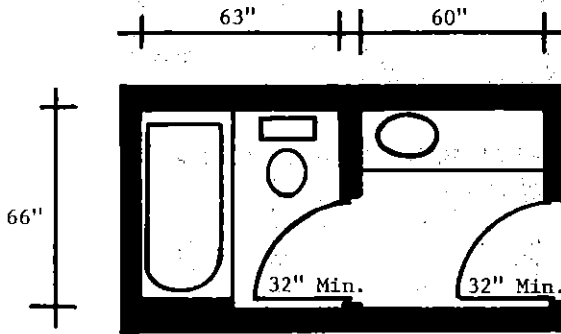
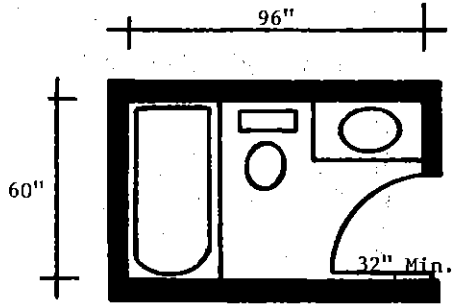


Note #1: These examples of accessible toilet rooms may be used in health care facilities in that sufficient room for the attendant is provided.

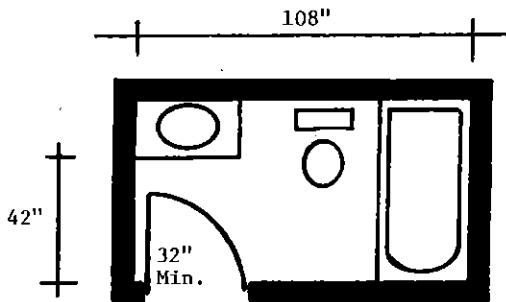
Note #2: These examples may be modified by substituting pocket sliding doors for the swing doors shown in the examples. Surface-mounted hardware is recommended for pocket sliding doors.

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 313  
Appendix

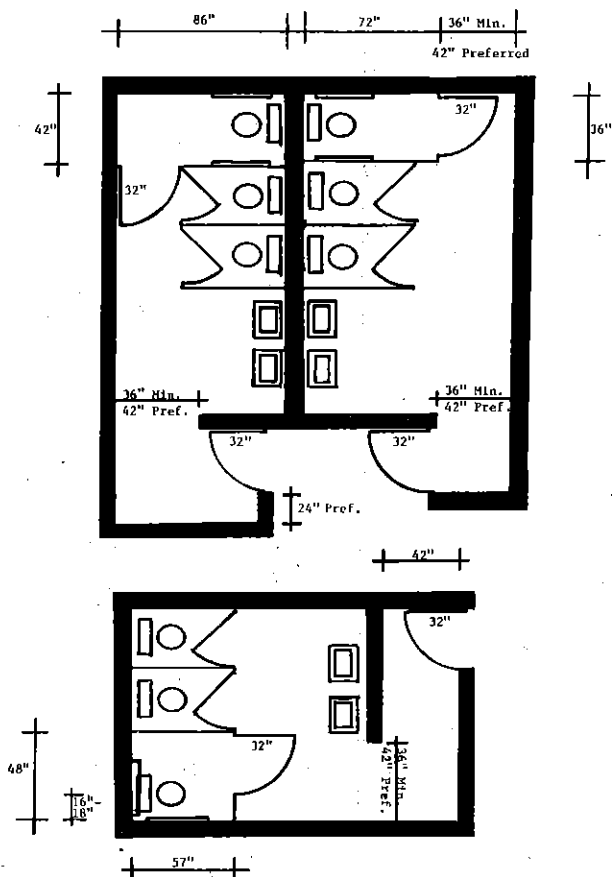
EXAMPLES OF ACCESSIBLE BATHROOM LAYOUTS  
FOR RESIDENTIAL LIVING UNITS



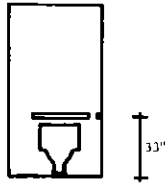
*see pg  
318*



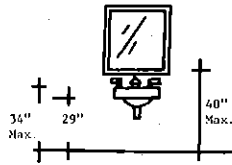
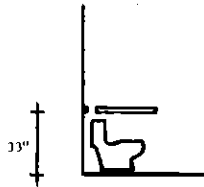
## EXAMPLES OF ACCESSIBLE TOILET ROOMS



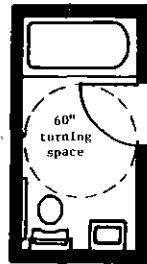
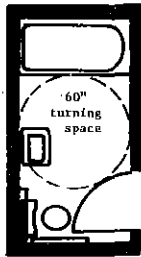
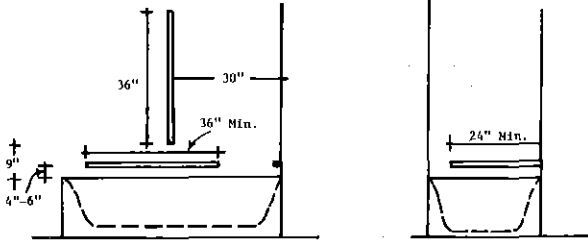
ACCESSIBLE TOILET ROOMS



It is recommended that grab bars be from 30 to 42 inches in length and located no more than 12 inches from the back wall.

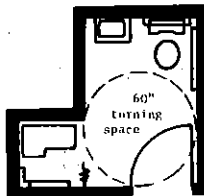
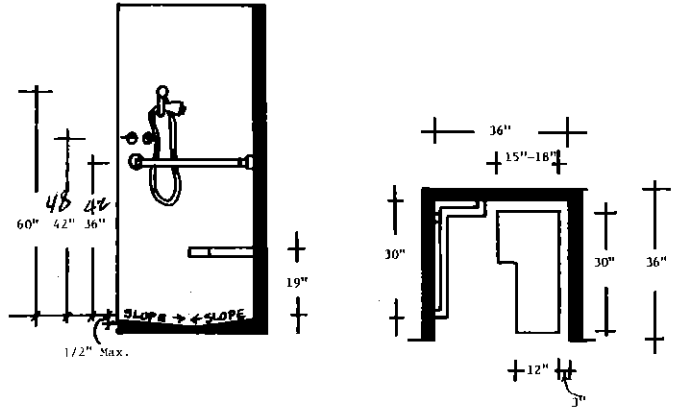


ACCESSIBLE BATHING FACILITIES

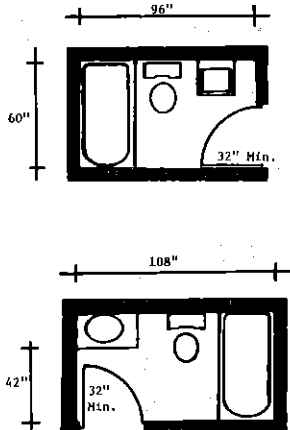


These diagrams are examples of accessible bathrooms which may be used for motels, hotels, hospitals and nursing homes.

ACCESSIBLE BATHING FACILITIES



EXAMPLES OF ADAPTABLE BATHROOM LAYOUTS  
FOR RESIDENTIAL LIVING UNITS  
(not including hotels and motels)



These examples may be modified for accessibility by using outward swinging doors or pocket sliding doors.





INTERNATIONAL SYMBOL FOR BARRIER-FREE ENVIRONMENTS

A-52.04 (4) (b) *Lifts for the physically disabled.* The stair-mounted lifting devices, providing interior circulation for the physically disabled, are either of a platform type accommodating the wheelchair and its user or a seat type which requires the person to transfer from the wheelchair.

In new construction, the seat-type lifting device will be acceptable only in private group type occupancies such as, but not limited to, senior citizen centers, fraternal organizations, small churches with less than 100 occupants, and private residences. In remodeled situations where adequate space for other lifting devices is not available, a seat-type lifting device will be acceptable.

The following guidelines should be used for lifting devices provided for interior circulation:

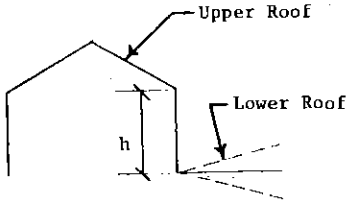
1. If the lifting device is to be located in a required exit stairway, the lifting device, in its open position, cannot infringe upon the required exit width for the floor the stairway serves. To determine the required exit width, refer to the specific occupancy chapters of this code.
2. The department recommends that the building plans submitted for approval indicate the type of lifting device to be used, the location, and the width of the lifting device in its open position.
3. The guidelines of the elevator section of this department require platform lifts to be designed with proper safety devices such as 42-inch high sides and gates, gate locks and contacts, guarding of space under the lift, etc., to provide safety for the public and persons using the lift with aids such as wheelchairs, crutches, braces or canes.
4. Vertical lifts having a travel distance in excess of 56 inches are considered to be elevators and must comply with the requirements for passenger elevators, Wis. Adm. Code chapter Ind 4, Elevator Code.
5. After the building plans are approved for the location and use, 3 sets of mechanical drawings for the lifting device must be submitted to the elevator section in accordance with chapter Ind 4, Elevator Code.
  - a. Two copies of the elevator application form are required to be submitted along with an examination fee and an inspection fees.
  - b. A copy of the building approval letter should accompany the mechanical drawings.

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 321  
Appendix

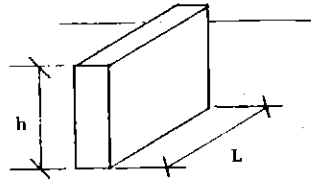
A-53.11 (4) (b) *Increase in roof loads.* The following design provisions may be used to determine the increase in roof loads as required by this section.

SNOW LOAD DISTRIBUTIONS AND COEFFICIENTS

ROOF SHAPES

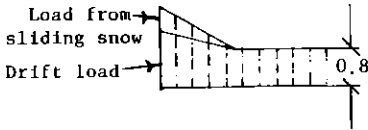


Lower of multi-level roofs with upper roof sloped towards lower roof



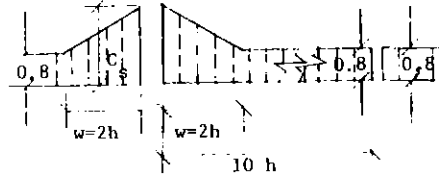
Roof areas adjacent to projections and obstructions on roofs

SNOW LOAD DISTRIBUTIONS AND COEFFICIENTS. LIMITATIONS



Design lower roof for loads applicable to multi-level roofs plus a portion of the sliding snow from the upper roof

Design upper roof for loads applicable to single-level roofs



$$C_s = 10 \frac{h}{g}$$

When  $10 \frac{h}{g} < 0.8$  use  $C_s = 0.8$

When  $10 \frac{h}{g} > 2.0$  use  $C_s = 2.0$

When  $L < \frac{g}{6}$  use  $C_s = 0.8$

$$w = 2 h$$

When  $h < 5$  ft use  $w = 10$  ft

When  $h > 15$  ft use  $w = 30$  ft

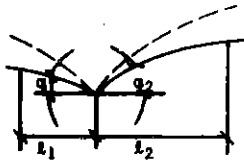
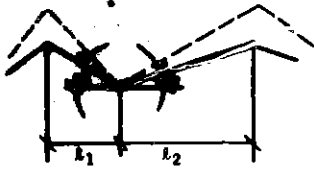
$h$  = height of projection in ft

$g$  = roof live load in psf [53.11 (4)]

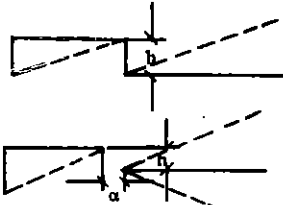
$w$  = width of snow drift in ft

$L$  = length of projection in ft

ROOF SHAPES

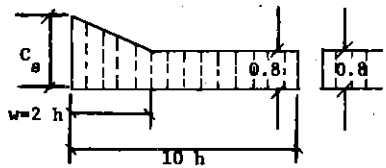
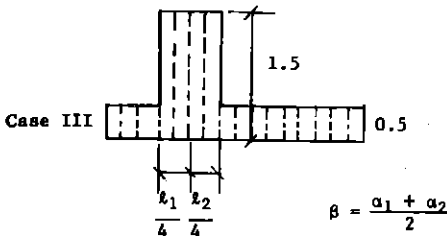
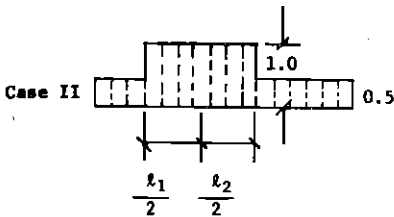
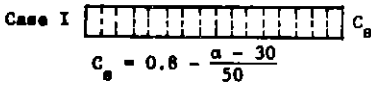


Valley areas of two-span and multiple series sloped or curved roofs



Lower level of multi-level roofs (when upper roof is part of the same building or on an adjacent building not more than 15 ft. away)

SNOW LOAD DISTRIBUTIONS AND COEFFICIENTS LIMITATIONS



$$C_s = 15 \frac{h}{g}$$

when  $15 \frac{h}{g} < 0.8$  use  $C_s = 0.8$

when  $15 \frac{h}{g} > 3.0$  use  $C_s = 3.0$

$$w = 2h$$

when  $h < 5$  ft use  $w = 10$  ft

$h > 15$  ft use  $w = 30$  ft

$h$  = difference of roof heights in ft

$g$  = roof live load in PSF [Ind 53.11(4)]

$w$  = width of drift from higher bldg. ft

$\alpha$  = distance between buildings < 15 ft

Design upper roof for loads applicable to single-level roofs

For  $\beta < 10^\circ$  use Case I only

For  $10^\circ < \beta < 20^\circ$  use Case I and II

For  $\beta \geq 20^\circ$  use Case I, II and III

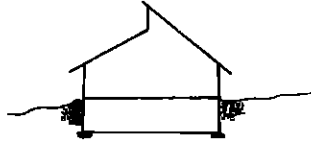
DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 323  
Appendix

A-53.15 LOAD COMBINATIONS. It is the intent of this section that the loads specified in sections Ind 53.10 through Ind 53.14 be considered to act in the following combinations, whichever is critical, for the design of the building frame, foundation or structural member:

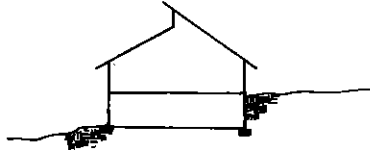
1. Dead load plus live load.
2. Dead load plus wind load.
3. Dead load plus live load plus wind load.
4. Dead load plus live load plus crane loads.

Distribution of live loads which would cause the maximum shear, bending moment or stress in structural members should be investigated.

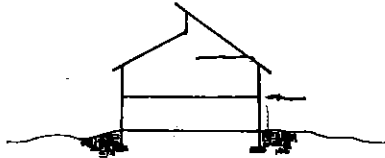
A-53.64 WOOD FOUNDATIONS. The following illustrations are provided to give visual aid to the limitations specified in this rule and to indicate the three typical designs permitted by the rule.



One-story with full basement



One-story with ground floor



Two-story with wood foundation  
(No basement or crawl space)

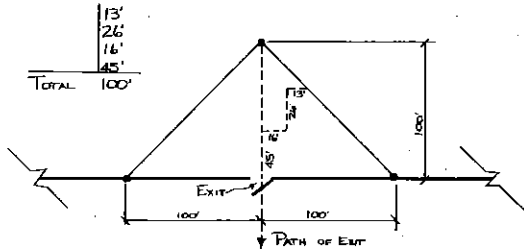
DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 325  
Appendix

A-54.02 (4). EXIT DISTANCE. The following illustrations and text are provided to explain the procedure and intent of using the triangulation method of exit distance determination:

Exit travel must terminate at one of the following types of exits:

1. Standard exit to grade (Ind 51.15)
2. Enclosed stairways (Ind 51.17 and 51.18)
3. Horizontal exits (Ind 51.19)
4. Fire escapes (Ind 51.20)

Therefore, exit distance must be measured from one of these exit types. All exits must lead to a street, alley or open court which is connected to a street or alley.



Procedure:

1. Beginning at designated exit type, measure required exit distance (100 feet, for example) at right angles to and parallel with (on both sides) the exit.
2. Connect end points to form the "exit triangle."
3. All areas within the triangle are within the required exit distance when traveling toward or at right angles to the exit.
4. All the interior space of a building must fall within the "exit triangles" formed by using the required exits for the building.
5. When measuring exit distance in stairways, only the horizontal travel distance is included in the determination.

- A-57.18 The intent of this section is to apply to floor levels not more than one story below grade (at building).
- A-57.18 (6) It is the intent of this subsection that each living unit needs only one means of exit from within the unit and that the entire building be provided with no less than 2 exits.
- A-60.19 (4). The standard is available from the National Fire Protection Association, 470 Atlantic Ave. Boston, Massachusetts 02210.
- A-60.24 Class A fires are fires in ordinary combustible materials such as wood, cloth, paper, rubber, and many plastics. Class B fires are fires in flammable liquids, gases and greases.
- A-60.36 See A-60.24.
- A-60.38 (1) (a). See A-60.19 (4).
- A-62.25 (1) *Clearance limitations.* The intent is to require the minimum 7 feet 0 inches clearance only in traffic lanes and in all areas normally used by the public to leave and return to their vehicles.
- A-63.41 FORM. Copies of the following form (SED 5315) are available from the Division of Safety and Building, P.O. Box 7969, Madison, Wisconsin 53707. This form may be used to verify compliance with the illumination requirements of this section.



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 327  
Appendix

**SUBMIT 4 COPIES**

ILLUMINATION BUDGET  
CALCULATION FORM  
DILWR-SBD-3315 (6.5/78)

Department of  
INDUSTRY, LABOR AND HUMAN RELATIONS

Safety & Building Division  
Box 7946  
201 E. Washington Avenue  
Madison, Wisconsin 53707

SEE BACK OF SHEET FOR NOTES AND INSTRUCTIONS

PROJECT INFORMATION

Name of Owner	Building Occupancy or Use	Designer or Design Firm
Company	Tenant Name, if any	Street & No.
Street & No.	Building Location, Street & No.	City State & Zip
City State & Zip	City <input type="checkbox"/> Village <input type="checkbox"/> Town <input type="checkbox"/>	County Phone

ALLOWABLE ILLUMINATION BUDGET				INSTALLED ILLUMINATION			
Room or area descg (1)	Room area (Sq. Ft.) (2)	Allowable watts Per Sq. Ft. Ind (3) 41 (3)	Room wattage (4)	Fixture type (5)	No. of fix. (6)	Watts per fix. (7)	Total wattage (8)
<b>SAMPLE ONLY</b>							
Signature of designer:							
Registration Number		Date					
				Sheet Totals			
				- Building Totals (Final Sheet)			

(SEAL)

Sheet \_\_\_ of \_\_\_

## NOTES AND INSTRUCTIONS

1. Fixture schedules must accompany this form, or be shown on the plans, or in the specifications.
2. A completed SB-118, *Plans Approval Application Form*, must accompany these calculations if they are submitted separately from the building plans.
3. The first sheet of this form must be signed and sealed by a Wisconsin registered architect, engineer or electrical designer if the total building volume is greater than 50,000 cubic feet.
4. All electric discharge lighting must meet the minimum power factor requirements of Ind 63.40.
5. Use of form:
  - A. Calculations are on an individual room or area basis.
  - B. Enter room or area designation in column (1). This should correspond to the designations shown on the building plans.
  - C. Calculate the floor area, in Sq. Ft., of the room or area. Enter area in column (2).
  - D. Determine the allowable "Watts per Sq. Ft." from Ind 63.41. Enter this value in column (3).
  - E. Multiply value in column (2) by value in column (3). Enter product in column (4).
  - F. Enter fixture type(s) from fixture schedule in column (5).
  - G. Enter number of fixtures of each type, located in the room or area, in column (6).
  - H. Enter the wattage for one fixture of that type in column (7).
  - I. Multiply value in column (6) by value in column (7). Enter product in column (8).
  - J. Total columns (4) and (8), entering sheet totals at the bottom of each sheet, and the total of all sheets at the bottom of the final sheet.
  - K. Column (8) building total must be less than, or equal to, the building total in column (4).

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 329  
Appendix

A-64.20. EQUIPMENT RATINGS AND SAFETY CONTROLS. The department recognizes the following reference standards or the testing and installation of heating and ventilating equipment:

- (1) National Fire Protection Association, 470 Atlantic Ave., Boston, Mass. 02210:
  - (a) OIL-BURNING EQUIPMENT, NFPA No. 31;
  - (b) NATIONAL FUEL GAS CODE, NFPA No. 54.
- (2) American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018:
  - (a) GAS-FIRED ROOM HEATERS, Vol. 1, ANSI Z21.11.1;
  - (b) GAS-FIRED LOW PRESSURE STEAM AND HOT WATER BOILERS, ANSI Z21.13;
  - (c) GAS UNIT HEATERS, ANSI Z21.16;
  - (d) DOMESTIC GAS CONVERSION BURNERS, ANSI Z21.17;
  - (e) GAS APPLIANCE PRESSURE REGULATORS, ANSI Z21.18;
  - (f) AUTOMATIC GAS IGNITION SYSTEMS AND COMPONENTS, ANSI Z21.20;
  - (g) AUTOMATIC GAS VALVES, ANSI Z21.21;
  - (h) RELIEF VALVES AND AUTOMATIC GAS SHUTOFF DEVICES FOR HOT WATER SYSTEMS, ANSI Z21.22;
  - (i) GAS APPLIANCE THERMOSTATS, ANSI Z21.23;
  - (j) GAS-FIRED DUCT FURNACES, ANSI Z21.34;
  - (k) GAS FILTERS ON APPLIANCES, ANSI Z21.35;
  - (l) GAS-FIRED GRAVITY AND FAN TYPE DIRECT VENT WALL FURNACES, ANSI Z21.44;
  - (m) GAS-FIRED GRAVITY AND FORCED AIR CENTRAL FURNACES, ANSI Z21.47;
  - (n) GAS-FIRED GRAVITY AND FAN TYPE FLOOR FURNACES, ANSI Z21.48;
  - (o) GAS-FIRED GRAVITY AND FAN TYPE VENTED WALL FURNACES, ANSI Z21.49;
  - (p) VENTED DECORATIVE GAS APPLIANCES, ANSI Z21.50;
  - (q) GAS-FIRED SINGLE FIREBOX BOILERS, ANSI Z21.52;
  - (r) GAS-FIRED HIGH PRESSURE STEAM AND HOT WATER BOILERS (Inputs not over 400,000 Btu/hour), ANSI Z21.59;
  - (s) DECORATIVE GAS APPLIANCES FOR INSTALLATION IN VENTED FIREPLACES, ANSI Z21.60;
  - (t) DIRECT GAS-FIRED MAKE-UP AIR HEATERS, ANSI Z83.4;
  - (u) GAS-FIRED HEAVY DUTY FORCED AIR HEATERS, ANSI Z83.5;
  - (v) GAS-FIRED INFRARED HEATERS, ANSI Z83.6.
- (3) Underwriters' Laboratories, Inc., 207 East Ohio St., Chicago, Illinois 60611:
  - (a) OIL BURNERS, UL 296;
  - (b) CONTROLS, PRIMARY SAFETY FOR GAS- AND OIL-FIRED APPLIANCES, UL 372;
  - (c) HEATING APPLIANCES, ELECTRIC, UL 499;
  - (d) HEAT PUMPS, UL 559;
  - (e) OIL-FIRED BOILER ASSEMBLIES, UL 726;
  - (f) OIL-FIRED CENTRAL FURNACES, UL 727;
  - (g) HEATERS, AIR, AND DIRECT-FIRED HEATERS, OIL-FIRED, UL 733;
  - (h) COMMERCIAL-INDUSTRIAL GAS HEATING EQUIPMENT (Inputs over 400,000 Btu/hour), UL 795;
  - (i) HEATERS, ELECTRIC, FOR USE IN HAZARDOUS LOCATIONS; Class I, Groups A, B, C and D, and Class II, Groups E, F and G, UL 823;
  - (j) ELECTRIC BOILERS, UL 834;
  - (k) HEATERS, ELECTRIC DRY BATH, UL 875;
  - (l) FAN COIL UNITS AND ROOM FAN HEATER UNITS, UL 883;
  - (m) HEATERS, ELECTRIC AIR, UL 1025;
  - (n) HEATING EQUIPMENT, ELECTRIC BASEBOARD, UL 1042;
  - (o) HEATING EQUIPMENT, ELECTRIC CENTRAL AIR, UL 1096.

Note: The table on the following page is a tabular summary of UL 296 and UL 795.

TABULAR SUMMARY UL STANDARD 296 AND UL STANDARD 795

FUNCTION/BURNER INPUTS	OIL BURNERS UL 296				COMMERCIAL/INDUSTRIAL GAS UL 795				ATM Draft
	3 GPH 400,000 Btu or less	7 GPH 1 million Btu or less	20 GPH 3 million Btu or less	Over 20 GPH 3 million Btu	Mechanical Draft Burners				
					Over 400,000 to 2,500,000	Over 2,500,000 to 5,000,000	Over 5,000,000 to 12,500,000	Over 12,500,000	
Prepurge timing	--	--	--	--	4	4	4	4	90 sec <sup>3</sup>
Air changes	--	--	--	--	4	4	4	4	--
Interlock Controls (Recycle)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Proven combustion air	8	8	8	8	Yes	Yes	Yes	Yes	Yes
Valve seal overtravel <sup>3</sup>	--	--	--	--	--	Optional	Yes	Yes	13
Low gas pressure	--	--	--	--	--	Yes <sup>20</sup>	Yes <sup>20</sup>	Yes <sup>20</sup>	13
High gas pressure	--	--	--	--	--	Yes <sup>20</sup>	Yes <sup>20</sup>	Yes <sup>20</sup>	13
Low fire start	11	11	11	11	11	11	11	11	13
High limit (press. or temp.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Low water cutoff	Boilers <sup>21</sup>	Boilers <sup>21</sup>	Boilers <sup>21</sup>	Boilers <sup>21</sup>	Boilers	Boilers	Boilers	Boilers	13
Pilot - Intermittent	Optional	Optional	Optional	--	Optional	Optional	Optional	Optional	12
Pilot - Interrupted	19	19	19	Yes <sup>5</sup>	Optional	Optional <sup>2</sup>	Optional <sup>2</sup>	Optional <sup>2</sup>	2, 10
Direct spark ignition	Yes	Yes	Yes	Yes <sup>5</sup>	--	--	--	--	--
System & sequence approved safety control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Approved safety shutoff valves (SSOV)	IN	BURNER	DESIGN	--	Yes <sup>14</sup>	Yes <sup>14</sup>	Yes <sup>14</sup>	Yes <sup>14</sup>	Yes <sup>13, 14</sup>
No vent valve	--	--	--	--	--	--	--	--	13
Pilot valve	18	18	18	Yes	Yes <sup>5</sup>	Yes	Yes	Yes	Yes
Proved pilot	Optional	Optional	Optional	Yes	Yes	Yes	Yes	Yes	Yes
Trial for pilot	17	17	17	15 sec	15 sec	10 sec	10 sec	10 sec	13
Trial for main flame	90 sec <sup>2, 17</sup>	30 sec <sup>2, 17</sup>	15 sec <sup>2, 17</sup>	10/30 sec <sup>7</sup>	15 sec <sup>22</sup>	10 sec	10 sec	10 sec	13
Flame failure response time	90 sec <sup>17</sup>	4 sec max <sup>16, 17</sup>	4 sec max <sup>15, 17</sup>	4 sec max	4 sec max	4 sec max	4 sec max	2 sec max	13
Valve closing time (max.)	23	23	23	23	5 sec max	1 sec max	1 sec max	1 sec max	13
Supervise main flame	17	17	17	Yes	--	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	2, 10
Action on flame failure	Recycle optional <sup>1</sup>	1	1	Lockout or recycle	Lockout or recycle <sup>5</sup>	Lockout	Lockout	Lockout	13
Action on limit open	Close SSOV	Close SSOV	Close SSOV	Close SSOV	Close SSOV	Close SSOV	Close SSOV	Close SSOV	13

See following page for footnotes.

FOOTNOTES TO TABULAR SUMMARY UL  
STANDARD 296 AND UL STANDARD 795:

SSOV=Safety shutoff valve.

<sup>1</sup>May relight if ignition is re-energized within 0.8 sec. See 15 and 16.

<sup>2</sup>Where intermittent pilot is desired, it is allowable to switch from pilot detector to main flame detector if main flame detector responds to main flame only.

<sup>3</sup>Without shutters, no prepurge required.

<sup>4</sup>Options (whichever is chosen, a minimum of 4 air changes must be provided): 30 sec at high fire rate; OR  
60 sec at 1/2 high fire rate; OR  
90 sec at 1/3 high fire rate.

<sup>5</sup>With 2-stage lightoff, direct ignition is permitted if first stage is 20 gph or less (requirements for 20 gph or less apply). Pilot is required if igniting more than 20 gph.

<sup>6</sup>Lockout on interrupted pilot applications; recycle on intermittent pilot applications.

<sup>7</sup>10 sec for distillate fuel (No. 1 or No. 2); 30 sec for residual fuel (No. 4, 5, 6).

<sup>8</sup>Conventional type pressure burner—none needed. Needed for applications with combustion air supply separate from oil supply.

<sup>9</sup>Valve seal overtravel switch can be wired into either the start circuit or pre-ignition interlock circuit (if provided).

<sup>10</sup>Interrupted pilot over 2.5 million Btuh if modulating or high/low firing rate. Otherwise over 5 million Btuh.

<sup>11</sup>If low fire start is not proved, UL will test for smooth lightoff at high fire.

<sup>12</sup>Intermittent up to 5 million Btuh unless firing rate control is over 2,500,000 Btuh.

<sup>13</sup>Requirements same as mechanical draft burners.

<sup>14</sup>See Table 1 at end of footnotes for main gas valves.

<sup>15</sup>Up to 15 sec is permitted if intermittent ignition is employed, or if the ignition system is re-energized in not more than 0.8 sec after flame is extinguished.

<sup>16</sup>Up to 30 sec is permitted if intermittent ignition is employed, or if the ignition system is re-energized in not more than 0.8 sec after flame is extinguished.

<sup>17</sup>If proved pilot igniter is used, timings for over 20 gal flame safeguard control may be applied.

<sup>18</sup>Required for electrically ignited, gas-piloted systems.

<sup>19</sup>Interrupted pilot may be required if using flame safeguard control with a proved pilot. Otherwise, interrupted pilot is optional.

<sup>20</sup>Safety shutdown by this limit can be accomplished either by manual reset limits or in the programmer limit circuit.

<sup>21</sup>Required on boilers fired by oil burners—not a requirement of UL 296.

<sup>22</sup>If intermittent pilot is used, no main burner flame-establishing period is required.

<sup>23</sup>If a separate oil valve is used, it must close within 5 sec max when de-energized.

TABLE 1—AUTOMATIC MAIN GAS SAFETY SHUTOFF VALVES (SSOV) FOR MECHANICAL OR ATMOSPHERIC BURNERS—UL 795 REQUIREMENTS, EFFECTIVE OCTOBER 1, 1974

	400,000 to 2,500,000 BTUH	Over 2,500,000 to 5,000,000 BTUH	Over 5,000,000 to 12,500,000 BTUH	Over 12,500,000 BTUH
<b>Main Valve Requirement</b>	One valve rated for safety shut-off services (SSOV). Closing time 5 sec.	Two SSOV's in series, or one SSOV of the type incorporating a valve seal over-travel interlock. Closing time 1 sec max.	Two SSOV's in series, one of which incorporates a valve seal over-travel interlock. Closing time 1 sec max.	Two SSOV's in series, one of which incorporates a valve seal over-travel interlock. When fuel gas has specific gravity of less than 1.0, include a N.O. 1/4 inch or larger electrically operated valve in a vent line between the two SSOV's.

**INDEX**

*See also first page of each chapter for listing of section headings.*

**NOTE:** An asterisk (\*) following a subject reference indicates further requirements will be found in the "occupancy chapters" of the code—chapters Ind 54 through 62.

**A**

	<u>Ind Section No(s).</u>
<b>ACADEMIES</b> .....	56.001
<b>ACCESS</b>	
Access or accessible, for physically disabled.....	52.04
To panels, for fire department.....	52.02
To roofs.....	51.02
<b>ACCESSIBLE CONSTRUCTION, Requirements for</b> .....	52.04
<b>ACCESSORY ROOM, Definition of</b> .....	51.01
<b>ACOUSTICAL MATERIAL</b> .....	51.03
<b>ADDITIONS, TO EXISTING BUILDINGS</b> .....	50.03, 50.07, 52.04
<b>ADJOINING BUILDINGS, Doors and windows</b> .....	51.03
<b>ADJOINING PROPERTY, Protection of</b> .....	53.26
<b>ADMINISTRATION AND ENFORCEMENT</b>	
Additions.....	50.03, 50.07, 52.04
Alterations.....	50.03, 50.07, 50.12
Appeals.....	50.24
Application of code.....	50.03
Approval by certified city inspector.....	50.22
Approval of materials, equipment and devices.....	50.19
Approval of plans and specifications.....	50.12, 63.01, 64.02
Approval, revocation of.....	50.16
Buildings exempt from code requirements.....	50.04
Certificate of occupancy, local requirement.....	50.06
Change of use.....	50.03, 52.04, 63.001
Changes to plans and specifications.....	50.09, 63.001
Design.....	50.07
Enforcement.....	50.23
Evidence of plan approval.....	50.15
Existing buildings (also refer to chapters Ind 160-164).....	50.05
Expiration of plan approval.....	50.17
Fees (also refer to chapter Ind 69).....	50.20
First class city examination and approval.....	50.21
Footing and foundation approval.....	50.13
Local regulations.....	50.06
Penalties.....	50.26
Permit to start construction.....	50.14
Petition for modification.....	50.25
Plans prepared outside Wisconsin.....	50.08
Right of entry on premises (refer to chapter 101, Wis. Stats.)	

Scope of code (See also chapters Ind 51-64) .....	50.02
Tests and test reports .....	50.19, 51.044, 64.20
AGED, HOMES FOR .....	57.001
AGGREGATES	
Concrete .....	53.40-53.42
Masonry mortar .....	53.312
Moisture content.....	53.312
AGRICULTURAL BUILDINGS, farm use exempt.....	50.04
AIR CONDITIONING .....	64.01
Definition of .....	51.01, 64.12
AIRCRAFT HANGARS.....	50.12, 54.50
AIR DUCTS.....	64.31-64.45
AIR INTAKES	
Combustion equipment (solid and liquid fuels) .....	64.09
Fresh air.....	64.19
Projection booths, indoor.....	55.44
AIRPLANE HANGARS.....	50.12, 54.50
AISLES*	
ALARM SYSTEMS.....	51.24
ALLEY, Definition of .....	51.01
ALLEYS, Location and maintenance of .....	52.21
ALLOWABLE AREAS AND HEIGHT OF BUILDINGS* .....	51.02, 51.03
ALLOWABLE STRESSES .....	53.14, 53.322, 53.323
ALTERATIONS.....	50.03, 50.07, 50.12, 52.04
ALTERNATE CONSTRUCTION METHODS PERMITTED .....	50.19
ALTERNATE MATERIALS PERMITTED.....	50.19
ALUMINUM CONSTRUCTION.....	53.54
AMERICAN PREFIX STANDARDS (see STANDARDS)	
AMUSEMENT PARK BUILDINGS AND STRUCTURES	
Amusement structures (Refer to chapter Ind 47)	
Assembly occupancies .....	55.001
Exhibition buildings.....	54.001
ANCHORAGE, ANCHORS	
Bolts.....	53.34
Concrete slabs on masonry (restrained) .....	53.322
Masonry, general.....	53.316, 53.322, 53.323, 53.34
Masonry, veneer.....	53.322, 53.36
Steel floor joists .....	53.52
Timber fasteners.....	53.322, 53.61, 53.63
Uplift and suction forces on buildings, structures, roofs.....	53.12
Walls and partitions, intersecting .....	53.63
Wood fasteners.....	53.61
Wood floor framing to masonry.....	53.322, 53.323
Wood floor joists or beams on masonry.....	53.322, 53.323
Wood framing around openings.....	53.63
Wood headers.....	53.63
Wood joist anchors .....	53.63



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 335

Wood nailing schedule .....	53.63
Wood partitions .....	53.63
Wood sill anchors.....	53.63
Wood trusses .....	53.12, 53.62
ANTENNA, RECEIVING, Television and Radio.....	62.35-62.41
APARTMENT BUILDINGS, HOTELS, PLACES OF DETENTION .....	57.001
APARTMENTS .....	57.001
APPEALS.....	50.24
APPLIANCES	
Chimneys .....	64.45-64.50
Combustion air required.....	64.09
Enclosure, fire-resistive*	
APPLICATION FOR PERMIT.....	50.13
APPROVAL (see ADMINISTRATION AND ENFORCEMENT)	
APPROVED, Definition of .....	51.01
APPROVED TESTING LABORATORIES .....	51.044
APPROVING OFFICIAL (see BUILDING OFFICIAL)	
ARC WELDS (see WELDING)	
ARCHITECT OR PROFESSIONAL ENGINEER, Services of, required.....	50.07, 50.08, 50.10, 50.12
AREA (GROSS) and (NET), definitions of .....	51.01
AREAS, ALLOWABLE	
Allowable areas*	
Attic areas.....	51.02
Existing buildings.....	50.03
Increase in area allowed when sprinklered.....	54.01
Unlimited areas.....	54.01
AREAWAY, Definition of.....	51.01
ARENA, HORSE.....	54.001 or 55.01
ARMORIES .....	55.01
ARTIFICIAL STONE, Bonding .....	53.316
ASBESTOS	
Proscenium curtain.....	55.32
Roofing material .....	51.03-A, 51.05
ASPHALT, Roof coverings .....	51.03-A, 51.05
ASSEMBLY HALLS	
Net capacity 100 persons or less.....	54.001
Net capacity more than 100 persons.....	55.01
ASSEMBLY PLANTS.....	54.001
ATTIC	
Access .....	51.02, 57.25
Compartmentalization .....	51.02
Definition of .....	51.01
AUDITORIUMS (see ASSEMBLY HALLS)	
AUTOMATIC FIRE SPRINKLER SYSTEM, Definition of .....	51.01

**AUTOMATIC SPRINKLERS (see SPRINKLERS AND STANDPIPES)****AUTOMOBILE**

Garages.....	54.50
Parking structures .....	62.20
Service stations .....	54.51
Tire and battery shops.....	54.52

**B**

<b>BALCONY (EXTERIOR) and (INTERIOR), Definitions of.....</b>	<b>51.01</b>
Exterior balcony, as exit .....	54.03, 57.12
Fire escapes .....	51.20

**BARRIER-FREE DESIGN .....** 52.04**BARS**

Concrete, reinforcing .....	53.316, 53.40
Panic.....	51.15

**BASEMENT, Definition of.....** 51.01**BASEMENT ROOMS\*****BATHROOM (see TOILETS)****BEAMS (also see GIRDERS)**

Concrete design .....	53.40
Fire cuts .....	53.63
Fire protective and fire-resistive requirements ..	51.03, 51.043, 51.045
Plywood beams.....	53.61
Reinforced concrete .....	53.40
Reinforced masonry.....	53.323
Steel.....	53.50
Structural, glue laminated .....	53.61
Timber, heavy .....	53.61
Wood .....	53.61

**BEARING**

For wood beams and girders .....	53.34, 53.63
For wood columns.....	53.60

**BEARING, SOIL CAPACITY.....** 53.21**BEARING WALL (see MASONRY, WOOD CONSTRUCTION)**

Definition of .....	51.01
---------------------	-------

**BLEACHERS, Temporary seats.....** 55.56**BLOCKS, CONCRETE MASONRY UNITS .....** 53.311**BOILERS .....** 64.22**BOLTS (see ANCHORAGE AND ANCHORS)****BOND, MASONRY**

Masonry, hollow units.....	53.322
Masonry, solid units .....	53.322
Mortar .....	53.312
Reinforcement.....	53.316, 53.322
Veneered walls .....	53.36

**BOWLING ALLEYS.....** 54.001 or 55.01**BRACING**

Exterior stud walls.....	53.63
--------------------------	-------

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 337

Masonry walls, lateral .....	53.322
Smokestacks .....	64.47
<b>BRICK-CLAY, CONCRETE, ETC. (see MASONRY CONSTRUCTION)</b>	
<b>BRIDGING</b>	
Joists, steel .....	53.50, 53.52
Joists, wood .....	53.63
<b>BUILDING</b>	
Allowable areas and heights* .....	51.02, 51.03
Change of use .....	50.03, 52.04, 63.001
Changes to building .....	50.03, 50.07
Classified by use or occupancy*	
Definition .....	51.01
Existing .....	50.05
Height, definition of .....	51.01
Locations .....	51.02, 51.03, 54.51, 62.22
Maintenance .....	52.64, 55.50, 57.16, 61.21
New .....	50.03, 50.07
Pole .....	51.03
Temporary .....	50.04
<b>BUILDING CODE</b>	
Administration (see ADMINISTRATION AND ENFORCEMENT)	
Scope* .....	50.02
<b>BUILDING OFFICIAL OR APPROVING OFFICIAL (referred to in this code as the department or as the department of industry, labor and human relations [superceding the industrial commission])</b>	
Classifies buildings .....	51.03
Inspection (also see ch. 101, Wis. Stats) .....	50.18
May approve alternate construction or materials .....	50.19
May enter premises (refer to ch. 101, Wis. Stats.)	
May order occupancy of building discontinued .....	50.06
May require plans and calculations by Wis. registered engineer or architect .....	50.07, 50.08, 50.12, 64.02
May require tests .....	53.21
Record of approvals .....	50.15
Reports required .....	50.07, 53.21
Reviews plans .....	50.12
<b>BUILDING OFFICIALS AUTHORIZATION REQUIRED</b>	
Before changing plans .....	50.09
For changes of use or occupancy .....	50.03
For structural alterations .....	50.03
<b>BUILDING PLAN APPROVAL</b> .....	50.12
<b>BUSINESS OCCUPANCIES</b> .....	54.001
<b>BUTTRESS, Definition of</b> .....	51.01

**C**

<b>CAFES</b> .....	54.001 or 55.01
<b>CAISSONS</b> .....	53.24
<b>CALCULATIONS REQUIRED</b> .....	50.12, 51.046

<b>CANOPIES</b>	
Service stations .....	54.51
<b>CAST STONE</b> .....	53.311
<b>CAVITY WALL, Definition of</b> .....	51.01
<b>CEILING PROTECTION, Definition of</b> .....	51.01
<b>CEILINGS</b> .....	51.03, 51.045
<b>CELLAR (see BASEMENT)</b>	
<b>CEMENT (See PORTLAND CEMENT)</b>	
<b>CERTIFICATE OF OCCUPANCY</b> .....	50.06
<b>CERTIFIED CITIES, PLANS APPROVED BY</b> .....	50.22
<b>CHANGE OF OCCUPANCY (Change of use)</b> .....	50.03, 52.04, 63.001
<b>CHILDREN, DAY CARE CENTERS FOR</b> .....	60.001
<b>CHILDREN, HOMES FOR</b> .....	57.001
<b>CHIMNEYS</b> .....	64.45, 64.46, 64.48
<b>CHURCHES (see ASSEMBLY HALLS)</b>	
<b>CIRCULATION, INTERIOR</b> .....	52.04
<b>CLASSIFICATION OF BUILDINGS</b>	
Construction classification .....	51.03
Occupancy classifications (see OCCUPANCY CHAPTERS)	
<b>CLASSROOMS</b>	
Mobile training units .....	56.40
Relocatable .....	56.30
<b>CLEARANCE LIMITATIONS</b> .....	51.16, 62.25
<b>CLOSING DEVICE (FIRE DOOR), Definition of</b> .....	51.01
<b>CLUBS</b> .....	54.001 or 55.01
<b>CODE, SCOPE*</b> .....	50.02
<b>COLLEGES AND UNIVERSITIES</b> .....	56.001
<b>COLUMNS</b>	
Fire protection requirements .....	51.02, 51.03, 51.045
Footings supporting .....	53.11
Heavy timber .....	51.03
Masonry .....	53.322
Reinforced concrete .....	53.40
Structural steel .....	53.50
Wood .....	53.61, 53.63
<b>COMBUSTIBLE</b>	
Construction, Definition of .....	51.01
Material, Definition of .....	51.01
Material, Storage of .....	60.19
<b>COMBUSTION AIR</b> .....	64.09
<b>COMMUNITY-BASED RESIDENTIAL FACILITIES (CBRF)</b> .....	61.001
<b>COMPLIANCE</b> .....	50.10
<b>COMPOSITE WALLS</b> .....	53.322
<b>COMPOSITION ROOFING</b> .....	51.05
<b>CONCRETE</b> .....	53.40-53.42

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 339

Types of .....	51.045
CONCRETE BLOCKS.....	53.311
CONSERVATION OF ENERGY.....	63.001
CONSTRUCTION	
Aluminum .....	53.54
Classes of.....	51.03
Concrete.....	53.40
Definition of .....	51.01
Masonry .....	51.03
Stage separation.....	55.21
Steel.....	53.50
Temporary .....	50.04
Types of .....	51.03
Wood frame .....	51.03
Wood framing.....	53.60
CONVALESCENT HOMES .....	57.001
CONVENTS .....	57.001
CORBELING MASONRY.....	53.34
CORRIDOR, Definition of.....	51.01
CORRIDORS, AS REQUIRED EXITS.....	51.03
Definition of .....	51.01
COURT WALLS, REQUIRED FIRE-RESISTIVE.....	51.03
CURB, CUT FOR BARRIER-FREE ACCESS .....	52.04
CURTAIN, PROSCENIUM.....	55.23
CURTAIN WALL, Definition of.....	51.01
CURVED STAIRS .....	51.16

D

DAMPERS AND SHUTTERS, FIRE .....	64.42
DANCE HALLS.....	54.001 or 55.01
DAY CARE CENTERS.....	60.001
DEAD LOADS.....	53.10
DECKS	
Public parking.....	62.20
Steel roof, fire protective requirements.....	51.03
DECORATIVE FEATURES	
Fire protective requirements.....	51.02
Projections.....	51.03
Wood and other combustibles.....	51.02
DEFINITIONS	
Certain words and topics .....	51.01
Occupancies (see OCCUPANCY CHAPTERS)	
Types of construction.....	51.03
DEPARTMENT, Definition of .....	51.01
DEPOTS, FREIGHT.....	54.001
DEPTH OF FOUNDATIONS	
Governed by soil conditions .....	53.21

Pole foundations .....	53.28
Support of adjoining buildings and structures .....	53.26
DESIGN AND SUPERVISION OF CONSTRUCTION.....	50.07, 50.10
DETECTION, SMOKE.....	57.27, 61.14
DIAPHRAGMS, PLYWOOD .....	53.61
DINING ROOMS.....	54.001 or 55.01
DISPERSAL AREA, SAFE .....	52.21
DISPLAY SIGNS.....	54.17, 55.06
DISPOSAL, SEWAGE .....	52.62
DISTANCE BETWEEN BUILDINGS .....	51.03
DIVISION WALL, Definition of.....	51.01
DOORS AND DOOR ASSEMBLIES, RATED .....	51.047
Fire-resistive, when required.....	51.03
DORMITORIES.....	57.001
DRAFT STOPS.....	53.63
DRAWINGS (see ADMINISTRATION AND ENFORCEMENT)	
DRESSING ROOMS, STAGE.....	55.28
DRINKING FOUNTAINS* .....	52.04, 52.60
DRY CLEANING (refer to chapter Ind 7)	
DRY STANDPIPES.....	51.21
DUCT, Definition of .....	51.01
DUCT FURNACE, Definition of.....	51.01
DUCTS .....	64.31-64.40
DUMB WAITERS (refer to chapter Ind 4)	
DWELLINGS	
Apartments.....	57.001
One and 2-family units exempt .....	50.04
(also refer to Uniform Dwelling Code)	

## E

EARTH PRESSURE.....	53.21, 53.24, 53.28
ECCENTRIC LOADS .....	53.11
EGRESS (see MEANS OF EGRESS)	
ELECTRIC WELDING .....	53.53
ELECTRICAL WORK (see also Wis. Electrical Code) .....	52.20, 61.25
ELEVATORS (refer to chapter Ind 4)	
ELEVATOR SHAFTS (see VERTICAL OPENINGS)	
ENCLOSURE OF VERTICAL OPENINGS (see STAIRS AND STAIRWAYS and TYPES OF CONSTRUCTION)	
ENERGY CONSERVATION (Chapter Ind 63)	
DESIGN CONDITIONS	
Design criteria .....	63.12
General requirements .....	63.11
HEATING AND AIR CONDITIONING	

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 341

<b>EQUIPMENT AND SYSTEMS</b>	
Controls.....	63.21
Cooling with outdoor air.....	63.23
Equipment efficiencies.....	63.20
Insulation.....	63.22
Maintenance.....	63.24
<b>ILLUMINATION</b>	
Controls.....	63.42
Distribution.....	63.40
Lighting.....	63.41
<b>NONDEPLETABLE ENERGY SOURCES</b>	
Documentation.....	63.51
Solar, wind, geothermal and others.....	63.50
<b>SCOPE AND PURPOSE</b>	
General.....	63.001
Plans and specifications.....	63.01
Purpose.....	63.002
<b>SYSTEMS ANALYSIS DESIGN</b>	
Annual energy consumption.....	63.60
Documentation.....	63.62
Simulation.....	63.61
<b>WATER HEATING</b>	
Conservation of hot water.....	63.32
Insulation.....	63.33
Purpose.....	63.30
Water heaters, storage tanks and boilers.....	63.31
<b>ENERGY EFFICIENCY RATIOS.....</b>	<b>63.20</b>
<b>ENGINEER AND ARCHITECT</b>	
Design and supervision required.....	50.07, 50.10
Name required on plans.....	50.12
<b>EQUIPMENT, Definition of.....</b>	<b>51.01</b>
<b>EXCAVATIONS (also refer to chapter Ind 1070, Safety &amp; Health Code).....</b>	<b>53.26, 53.27</b>
<b>EXHAUST VENTILATION SYSTEMS.....</b>	<b>64.08</b>
Definition of.....	51.01
<b>EXHIBITION BUILDINGS.....</b>	<b>54.001</b>
<b>EXISTING, Definition of.....</b>	<b>51.01</b>
<b>EXISTING BUILDINGS</b>	
Additions, alterations, repairs.....	50.03, 50.07
Application of code.....	50.03
Barrier-free environment.....	52.04
General orders on (refer to chapters Ind 160-164).....	
<b>EXIT COURT, Definition of.....</b>	<b>51.01</b>
<b>EXIT DISCHARGE GRADE, Definition of.....</b>	<b>51.01</b>
<b>EXIT LIGHTS*.....</b>	<b>51.15</b>
<b>EXIT TRIANGLE.....</b>	<b>54.02</b>
<b>EXIT, VERTICAL, Definition of.....</b>	<b>51.01</b>
<b>EXITS (see MEANS OF EGRESS)</b>	

EXPLOSIVES, Storage of (refer to chapter Ind 5)	
EXPOSED EXTERIOR STRUCTURAL COLUMNS AND FRAMING.....	51.02, 51.03
EXTERIOR MASONRY (ORDINARY) CONSTRUCTION .....	51.03
EXTERIOR OPENINGS	
Doors (see DOORS AND DOOR ASSEMBLIES)	
Ducts.....	64.19
Exits.....	51.15, 51.20
Fire protection.....	51.047, 51.048, 51.049
Framing, wood.....	51.03
Horizontal exits.....	51.19
Intakes.....	64.19
Shutters.....	51.03
Vents.....	64.19, 64.39, 64.40
Windows.....	52.02
EXTERIOR OPENINGS, PROTECTION REQUIRED	
Because of location on property .....	51.03, 54.50, 62.22
Because of type of construction.....	51.03
EXTERIOR STAIRWAYS.....	51.16, 51.20, 54.03
EXTERIOR WALL	
Construction.....	51.03
Definition of .....	51.01

## F

FABRICATOR.....	53.50
FACTORIES.....	54.001
FALLOUT SHELTER.....	50.07
FAMILY, Definition of.....	51.01
FARM BUILDINGS, exempt.....	50.04
FEE SCHEDULE (refer to chapter Ind 69)	
FENCES (refer to chapter Ind 35)	
FILLING STATIONS.....	54.51
FILM, MOTION PICTURE.....	55.39
FINES (refer to chapter 101, Wis. Stats.) .....	50.26
FIRE	
Alarms .....	51.24
Dampers .....	51.049, 64.42
Detectors.....	57.27, 61.14
Doors .....	51.047
Escapes.....	51.20
Exits*	
Extinguishers, portable.....	51.22, 61.20
Protection of misc. heating devices*	
Protection requirements .....	51.02, 51.03
Ratings of material and assemblies .....	51.04
Sprinklers.....	51.23
Standpipes.....	51.21
Stopping.....	53.63
Walls.....	51.02



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 343

FIRE DISTRICTS, Establishment of .....	50.06
FIRE DOOR, Definition of .....	51.01
FIRE DOOR ASSEMBLY, Definition of.....	51.01
FIRE DOOR CLOSING DEVICE, Definition of.....	51.01
FIRE EXTINGUISHING SYSTEMS (see SPRINKLERS and STANDPIPES)	
FIRE PREVENTION, DETECTION AND SUPPRESSION .....	52.01
FIRE PROTECTED PASSAGEWAYS* .....	51.02, 51.03
FIRE RESISTANCE AND FIRE RESISTIVE MATERIAL, definition .....	51.01
FIRE RESISTANCE RATINGS	
Assemblies .....	51.045
Construction .....	51.03
Materials .....	51.045
Separation of classes of construction .....	51.02
Separation of occupancies* .....	51.08
Standards and references .....	51.04
FIRE RESISTIVE	
Classification, definition of.....	51.01
Protection, definition of.....	51.01
Protection, directly applied, definition of .....	51.01
Rating, definition of .....	51.01
Standards.....	51.04
FIRE RETARDANT	
Roof coverings, definition of .....	51.01
Treated wood, definition of.....	51.01
FIRESTOPPING	
Between wood sleepers.....	51.03
For wood frame construction .....	53.63
FIRE WINDOW ASSEMBLY, Definition of.....	51.01
FIRE ZONES, local requirement .....	50.06
FIRST FLOOR, Definition of.....	51.01
FLAMEPROOFING REQUIRED .....	55.19, 55.60
FLAME-SPREAD CLASSIFICATION, Definition of.....	51.01
FLAMMABLES (see STORAGE OF FLAMMABLES)	
FLOODPLAIN, CONSTRUCTION ON.....	50.07
FLOOR	
Area, definition of.....	51.01
Anchorage (see ANCHORAGE, ANCHORS)	
Definition of .....	51.01
Drainage .....	52.60
Finish.....	52.57
Fire resistance .....	51.03
Level, definition of .....	51.01
Loads .....	53.10, 53.11, 53.13
Mezzanine, definition of .....	51.01
Pits, in garage.....	54.50
Plenum systems .....	64.41
Plywood.....	53.61

Posting loads .....	54.17
Protection for stoves, water heaters .....	52.16
Trap door, stage .....	55.22
<b>FLUES</b> .....	64.46
<b>FOOTING (see FOUNDATIONS)</b> .....	53.20
<b>FORMS, CONCRETE</b> .....	53.40
<b>FOUNDATIONS</b>	
Basement wall loads .....	53.11
Caissons .....	53.24
Concrete, plain and reinforced .....	53.40
Design .....	53.11
Frost penetration .....	53.23
Masonry .....	53.322
Permit for .....	50.13, 50.14
Piers .....	53.322
Piles .....	53.24
Pole .....	53.28
Protection of adjoining property .....	53.26
Settlement .....	53.25
Soil bearing .....	53.21
Walls .....	51.02
Wood and timber, treated .....	51.02, 53.61, 53.64
<b>FOYER, Definition of</b> .....	51.01
<b>FRAME BUILDINGS</b> .....	51.03
<b>FRAMING</b>	
At chimneys .....	53.63, 64.46, 64.49
Floor .....	51.02, 51.03
Steel .....	53.50, 53.52
Vertical .....	51.02, 51.03
Wood .....	53.61-53.63
<b>FREEZING</b>	
Concrete .....	53.40
Fixtures .....	52.61
Foundations .....	53.23
Masonry .....	53.33
<b>FRONT YARD, Definition of</b> .....	51.01
<b>FROST, DEPTH OF FOUNDATION FOR</b> .....	53.23
<b>FUEL CONTRIBUTED CLASSIFICATION (FCC),</b>	
Definition of .....	51.01
<b>FURNACE</b>	
Definition of .....	51.01
Duct, definition of .....	51.01
Requirements .....	64.21, 64.22
<b>FURRING</b> .....	51.03
<b>FUSIBLE LINKS REQUIRED</b>	
For fire doors .....	54.02
For horizontal exits .....	51.19
For motion picture machine booths .....	55.43, 55.44
For stage smoke outlets .....	55.24

G

GALLERY—GALLERIES .....	56.001
GALVANIZED	
Ducts.....	64.34
Roofing.....	51.05
Siding.....	51.03
GARAGES.....	54.50
Mini-Garages.....	54.22
GASOLINE SERVICE STATIONS.....	54.51
GIRDERS.....	51.03
GLASS	
Block assemblies.....	51.048
Labeling and identity.....	51.048
Maximum areas.....	51.03, 51.048
Wired.....	51.048
GLAZING, SAFETY (refer to CPSC Standard for Architectural Glazing Material)	
GRADE	
At building, definition of.....	51.01
Exit discharge grade, definition of.....	51.01
Marked lumber.....	53.61
Marked plywood.....	53.61
GRADING LUMBER (see GRADE)	
GRAIN ELEVATORS, combined with place of employment.....	54.001
GRANDSTANDS.....	55.51-55.57
GRAVITY EXHAUST VENTILATION, Definition of.....	51.01
GREENHOUSE	
As place of employment.....	54.001
Retail sales.....	54.001
Special requirements.....	53.11
GROSS AREA, Definition of.....	51.01
GROUND FLOOR, Definition of.....	51.01
GROUP OCCUPANCY	
Assembly.....	54.001 or 55.01
Business.....	54.001
Child day care.....	60.001
Community-based residential facilities.....	61.001
Hazardous.....	54.50-54.52
Industrial.....	54.001
Institutional.....	57.001
Outdoor assembly.....	55.58-55.68
Residential.....	57.001
Schools.....	56.001
Specialty.....	62.001
Storage.....	54.001
Theaters.....	55.001
GROUT MASONRY.....	53.313, 53.321
GUARDRAILS	
Grandstands.....	55.55

Parking structures .....	62.28
GUNNITE.....	53.42
GYMNASIUMS.....	56.13
GYPSUM	
Concrete .....	53.41
Fire resistance ratings .....	51.045
Reinforced.....	53.41
Wallboard .....	51.045

## H

### HABITABLE ROOM

Definition of .....	51.01, 61.01
Floors below grade.....	57.18

### HALLS

Assembly .....	54.001 or 55.01
Dance.....	54.001 or 55.01
Recreation.....	54.001 or 55.01

### HANDRAILS

Balconies .....	51.16
Fire escapes .....	51.20
Parking structures .....	62.28
Ramps* .....	52.04
Stairways.....	51.16

### HANGARS, AIRPLANE..... 54.50

### HAZARDOUS OCCUPANCIES

Automobile filling stations .....	54.51
Automobile garages .....	54.50
Automobile parking structures .....	62.20
Automobile tire and battery shops.....	54.52

### HAZARDOUS PIPING, Definition of..... 51.01

### HAZARDS, ISOLATION OF\*

### HEADROOM..... 51.16, 62.25

### HEATING SYSTEM, Definition of .....

### HEATING, VENTILATING AND AIR

#### CONDITIONING (Chapter Ind 64)

Air cleansing devices .....	64.16
Air movement and distribution .....	64.06
Air velocities .....	64.31
Approval of drawings and specifications .....	50.07, 50.12, 64.02
Automatic controls .....	64.17
Chimneys, Factory built .....	64.48
Chimneys, Masonry .....	64.46
Combustion air intakes .....	64.09
Contamination of air .....	64.18
Dampers and damper controls.....	64.09, 64.42
Design.....	50.07
Duct connectors .....	64.35
Duct construction .....	64.34
Duct design.....	64.31
Duct use .....	64.32
Equipment installations.....	64.21

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 347

Equipment ratings and safety controls.....	64.20
Exhaust ventilation system .....	64.08
Fans and blowers .....	64.44
Fire dampers and fire doors .....	64.42
Gas vents.....	64.50
Gravity ventilation ducts .....	64.38
Heat loss and capacity .....	64.03
Inside design temperatures and ventilation.....	64.05
Insulation.....	64.37
Location of outside air intakes or exhausts.....	64.19
Mechanical ventilation systems .....	64.06
Natural ventilation systems .....	64.07
Occupancy requirements .....	64.54-64.68
Outside temperature design conditions .....	64.04
Piping .....	64.23
Relief vents .....	64.40
Smoke pipes.....	64.49
Smokestacks, Metal.....	64.47
Special equipment requirements .....	64.22
Suspended ceiling plenum .....	64.41
Tempered air requirements.....	64.13
Tempered outside air requirements .....	64.14
Underground duct construction and installation .....	64.33
Ventilation discharge .....	64.39
Vertical shafts .....	64.36
<b>HEAVY TIMBER CONSTRUCTION .....</b>	<b>51.03</b>
<b>HEIGHT AND AREAS*</b>	
Affect stairways.....	51.15
Affect windloads .....	53.12
Chimneys .....	64.45
Classification of construction.....	51.03
Masonry walls (also see MASONRY CONSTRUCTION).....	53.322
Parapet walls.....	51.02, 53.322
Raising adjoining chimneys and vents.....	64.45
Restrictions.....	51.03
Towers, spires, poles.....	53.61, 62.35
Types of construction.....	51.03
<b>HEIGHT OF BUILDINGS*</b>	
Classes of construction.....	51.03
Definition of .....	51.01
Measurement of .....	51.01
<b>HOLLOW BONDED WALL, Definition of.....</b>	<b>51.01</b>
<b>HOLLOW MASONRY</b>	
Units .....	53.311
Walls.....	53.321, 53.322, 53.34
<b>HOMES FOR AGED AND INFIRM .....</b>	<b>57.001</b>
<b>HOODS, KITCHEN EXHAUST.....</b>	<b>64.67</b>
<b>HORIZONTAL EXITS .....</b>	<b>51.19</b>
<b>HORSE ARENA.....</b>	<b>54.001 or 55.01</b>
<b>HOSE</b>	
Sprinklers.....	51.23
Standpipes .....	51.21

HOSPITALS.....	57.001
HOTELS.....	57.001
HOUSE LODGING OCCUPANCY.....	57.001

## I

ICE PLANTS.....	54.001
ILLUMINATION OF EXITS*	
INCREASE IN AREAS ALLOWED.....	54.01
INDOOR PROJECTION BOOTHS.....	55.40-55.48
INDUSTRIAL BOILERS.....	64.22
INDUSTRIAL OCCUPANCY.....	54.001
INFILTRATION, CONTROL OF.....	64.03
INNER LOT LINE COURT, Definition of.....	51.01
INSPECTIONS (also see chapter 101, Wis. Stats.).....	50.18
INSTITUTIONAL OCCUPANCY.....	57.001
INSULATING	
Ducts.....	63.22, 64.37
Linings, duct.....	64.36
Pipe coverings.....	63.22, 64.23
INTAKE, OUTSIDE AIR, Definition of.....	51.01
INTERIOR BALCONY (see MEZZANINE)	
Definition of.....	51.01
INTERIOR FINISHES	
General.....	51.03
Floor finish, toilet rooms.....	52.57
Walls, toilet rooms.....	52.58
INTERIOR PARTITIONS.....	51.02
INTERIOR STAIRWAYS, ENCLOSED.....	51.18

## J

JAILS.....	57.001
JOISTS	
Anchorage (see ANCHORAGE, ANCHORS)	
Bridging (see BRIDGING)	
Concrete.....	53.40
Decay resistance.....	53.63
Fastenings (see ANCHORAGE, ANCHORS)	
Fire cuts.....	53.63
Fire resistance ratings.....	51.045
Fire stopping.....	53.63
Floor framing.....	53.63
Steel.....	53.50, 53.52
Wood.....	53.60-53.63

## L

LABELS	
Exit door bolts.....	51.15
Fire doors.....	51.047

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 349

Roofing.....	51.05
Windows.....	51.048
LADDERS, ACCESS TO ATTIC OR ROOF.....	51.02
LAMINATED MATERIALS.....	53.60
LATERAL BRACING.....	53.50
LAUNDRY ROOMS, Protection for.....	57.20, 60.37
LAVATORIES*.....	52.60
LIBRARIES.....	56.001
LIGHT	
For exit signs.....	51.15
For occupancy groups*.....	
LIME, For masonry construction.....	53.314
LINTEL.....	51.03
LIQUEFIED PETROLEUM GAS (refer to chapter Ind 9)	
LIQUIDS, FLAMMABLE (refer to chapter Ind 8)	
LIVING UNIT, Definition of.....	51.01
LOADS, DEAD.....	53.10
LOADS, DESIGN COMBINATIONS.....	53.15
LOADS, FOOTINGS AND FOUNDATIONS.....	53.20
LOADS, LIVE	
Concentrated.....	53.11
Cranes.....	53.13
Floor loads, occupancy.....	53.11
Footings.....	53.11
Impact.....	53.13
Items not covered.....	53.11
Occupancy loads.....	53.11
Posting loads.....	54.17
Reduction of loads.....	53.11
Roof.....	53.11
Sidewalks.....	53.11
Soil.....	53.21
Tests.....	53.21
Wind.....	53.12
LOADS, PILES.....	53.24
LOADS, RAILINGS.....	51.16, 62.28
LOADS, WIND.....	53.12
LOBBY	
Definition of.....	51.01
In theater.....	55.15
LOCAL REGULATIONS.....	50.06
LOCKS ON DOORS, Prohibited.....	51.15
LODGES.....	55.01
LODGING HOUSES.....	57.001
LOT LINE, Definition of.....	51.01
LOT LINES, Plot plan required.....	50.12

LOTS, PARKING, Considerations for physically disabled.....	52.04
LUMBER .....	53.61

## M

MAINTENANCE.....	51.23, 52.01, 52.64, 61.21, 64.52
MAJOR APPARATUS, Definition of .....	51.01
MANSARDS .....	51.03
MANUFACTURING PLANT, Occupancy .....	54.001
MARKETS, Business occupancy .....	54.001
MASONRY CONSTRUCTION	
Aggregate .....	53.312
Basement walls.....	53.322
Block.....	53.311
Bond (see BOND, MASONRY)	
Brick .....	53.311
Cast stone .....	53.311
Cavity walls .....	53.321, 53.322
Cementitious materials .....	53.314
Ceramic .....	53.36
Ceramic veneer.....	53.36
Change in thickness.....	53.34
Chases.....	53.34
Chimney walls .....	53.321
Clay or shale units .....	53.311
Composite .....	53.322
Concrete units .....	53.311
Construction .....	53.33
Corbeling.....	53.34
Definition of .....	51.01
Design.....	53.32
Design, empirical .....	53.322
Design, engineered.....	53.323
Details, construction.....	53.34
Erection, general .....	53.01
Fire resistance materials .....	51.043-51.045
Fire resistance ratings .....	51.043
Glass blocks .....	51.043
Grout .....	53.313
Gypsum, mortar .....	53.312
Gypsum units .....	53.311
Hollow units .....	53.311
Jointing .....	53.322, 53.36
Lateral support .....	53.322
Materials .....	53.31
Mortar .....	53.312
Piers.....	53.322
Protection against freezing.....	53.33
Reinforced, ties and anchors .....	53.316
Stone.....	53.311
Terra cotta.....	53.36
Tests .....	53.35
Types .....	53.321
Units.....	53.311



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 351

Veneered walls .....	53.36
Wall thickness .....	53.322
Water .....	53.315
Working stresses .....	53.311, 53.312
<b>MATERIALS, METHODS AND DEVICES, Approval of .....</b>	<b>50.19</b>
<b>MEANS OF EGRESS*</b>	
Aisles*	
Arrangement of exits*	
Balconies, exterior .....	51.02
Capacity of exits .....	51.15
Courts .....	52.05
Doors, exit* .....	51.15
Doors, revolving, sliding .....	51.15
Enclosure of exits* .....	51.02
Fire alarms .....	51.24
Fire escapes .....	51.20
Foyer .....	55.15
General provisions*	
Hardware .....	51.15
Horizontal exits .....	51.19
Illumination (refer to chapter Ind 19)	
Monumental stairs .....	54.08
Number of exits*	
Number of persons*	
Outlets, exits .....	52.21
Panic hardware .....	51.15
Ramps (see RAMPS)	
Rescue platforms .....	54.03, 57.12
Signs* .....	51.15
Sliding glazed patio type .....	57.09
Stairway, construction .....	51.16
Units of width .....	51.15
<b>MECHANICAL VENTILATION (see VENTILATION)</b>	
<b>MENTAL HOSPITALS .....</b>	<b>57.001</b>
<b>MERCANTILE, Occupancy .....</b>	<b>54.001</b>
<b>METAL</b>	
Anchors (see ANCHORAGE - ANCHORS)	
Ducts (see DUCTS)	
Fire escapes .....	51.20
Roof covering .....	51.05
Smoke pipes .....	64.49
Smokestacks .....	64.47
Veneers .....	53.56
Window frames .....	51.048
<b>METAL FRAME BUILDINGS, Protected and unprotected .....</b>	<b>51.03</b>
<b>METHODS OF CONSTRUCTION .....</b>	<b>50.19</b>
<b>MEZZANINE, MEZZANINE FLOOR .....</b>	<b>51.01, 51.02</b>
<b>MILL CONSTRUCTION (Heavy timber) .....</b>	<b>51.03</b>
<b>MINI-GARAGES AND WAREHOUSES .....</b>	<b>54.22</b>
<b>MINIMUM DESIGN LOADS .....</b>	<b>53.11</b>
<b>MOBILE TRAINING CLASSROOMS .....</b>	<b>56.40-56.46</b>

MONASTERIES .....	56.001
MONITORS, ROOF .....	51.02, 51.14
MONUMENTAL STAIRS .....	54.08
MORTAR .....	53.312
MOTELS .....	57.001
MOTION PICTURE THEATERS.....	55.001
MOTOR, AUTO GARAGES	
Private garages .....	54.50
Public garages .....	54.50
MOTOR, AUTOMOTIVE SERVICE STATIONS.....	54.51
Business occupancy .....	54.001
General construction requirements .....	54.51
MOVING STAIRWAYS, ESCALATORS (refer to chapter Ind 4)	
MULTIPLE DWELLING (APARTMENT HOUSE)	
Definition .....	57.001
Occupancy, Residential.....	50.04
MUSEUMS .....	56.001

## N

NAILS.....	53.63
"NATIONAL" PREFIX STANDARDS (see STANDARDS)	
NET AREA, Definition of.....	51.01
NEW MATERIALS OR METHODS OF CONSTRUCTION .....	50.19
NONBEARING PARTITIONS OF WALLS.....	51.02
Definition of .....	51.01
Fire protective requirements.....	51.03
Fire resistance ratings .....	51.03
Masonry .....	53.322
NONCOMBUSTIBLE CONSTRUCTION, Definition of.....	51.01
NURSERIES (HOSPITAL) .....	57.001
NURSING HOMES.....	57.001

## O

## OBSTRUCTION - PROHIBITED\*

Aisles .....	52.21
Exit outlet.....	51.15
Horizontal exit .....	51.19
Stairways.....	51.16
OCCUPANCY OR USE, Definition of.....	51.01

## OCCUPANCY CHAPTERS

APARTMENT BUILDINGS, HOTELS AND PLACES OF DETENTION (including all apartment buildings, row houses, rooming houses, hotels, dormitories, convents, mon- asteries, hospitals, children's homes, homes for the aged and infirm, nursing homes, convalescent hospitals, convalescent homes, mental hospitals, jails, and other places of abode or detention) .....	Chapter Ind 57
---	----------------

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 353

CHILD DAY CARE FACILITIES (including all public and private day care centers accommodating children, including all buildings, or parts of buildings, used as child day care facilities) ..... Chapter Ind 60

COMMUNITY-BASED RESIDENTIAL FACILITIES (CBRF) (including facilities providing care, treatment and services to 9 through 20 unrelated adults located in existing buildings) ..... Chapter Ind 61

FACTORIES, OFFICE AND MERCANTILE BUILDINGS (including all factories and workshops, office buildings, telegraph and telephone offices, mercantile establishments where commodities are bought or sold, taverns, warehouses, railroad stations, exhibition buildings, and places where not more than 100 persons assemble for recreation, entertainment, worship, or dining purposes) ..... Chapter Ind 54

HAZARDOUS OCCUPANCIES (including all garages [except private garages], filling stations and related buildings and structures, automobile tire or battery shops, and other occupancies where flammable or combustible liquids or other hazardous materials are manufactured, processed, stored, or otherwise handled) ..... 54.50-54.52

SCHOOLS AND OTHER PLACES OF INSTRUCTION (including all public and private schools, universities, colleges, academies, seminaries, libraries, museums and art galleries, including all buildings or parts of buildings used primarily for instructional purposes) ..... Chapter Ind 56

SPECIALTY OCCUPANCIES (including open parking structures and radio and television transmitting and receiving antenna) ..... Chapter Ind 62

THEATERS AND ASSEMBLY HALLS (including all buildings, or parts of buildings, containing an assembly hall having a stage which may be equipped with curtains or permanent or movable scenery, or which is otherwise adaptable to the showing of plays, operas, motion pictures or similar forms of entertainment; and all buildings, or parts of buildings, other than theaters, which will accommodate more than 100 persons for entertainment, recreation, worship or dining purposes) ..... Chapter Ind 55

OCCUPANT LOAD.....51.15

OCCUPIED, Definition of.....51.01

OFFICE BUILDINGS .....54.001

OFFICIAL, BUILDING (see ADMINISTRATION AND ENFORCEMENT)

OIL STORAGE.....64.23

OLD PEOPLES HOMES.....57.001

OPENINGS

Combustion air.....64.09

Elevator enclosures\* ..... 51.02, 51.03

Exterior walls .....51.03

Exterior walls for fire department.....52.02

Horizontal protection .....51.03

Motion picture projection booths .....	55.39
Protected with fire doors or windows .....	51.047, 51.048
Rated construction .....	51.045
Stairways or shaftways .....	51.02, 51.03
OPEN PARKING STRUCTURES .....	62.20
OPEN SPACES, Definition of .....	51.01
OPEN WEB STEEL JOIST .....	53.52
ORDINARY MASONRY BUILDINGS .....	51.03
ORIEL WINDOWS (Bay) .....	51.03
ORPHANAGES .....	57.001
OUTDOOR OPENINGS, Definition of .....	51.01
OUTDOOR PLACES OF ASSEMBLY .....	55.58-55.68
OUTDOOR THEATERS .....	55.68
OUTLET (SUPPLY OPENING), Definition of .....	51.01
OUTSIDE AIR, OUTSIDE AIR INTAKE, Definition of .....	51.01
OUTSIDE STAIRS .....	51.16, 51.20
OVERCROWDED PROHIBITED (Posted) .....	54.05, 55.06
OVERLOAD OF FLOORS—Not permitted (Posted) .....	54.17
OVERTURNING MOMENTS—For wind calculations .....	53.12
OWNER	
Application for permit .....	50.12
Definition (Refer to chapter 101, Wis. Stats.)	
Maintenance of buildings .....	52.64
Responsibility .....	50.11

## P

PANEL WALL, Definition of .....	51.01
PANIC HARDWARE .....	51.15
PARAPET WALL .....	51.02, 53.34
PARKING GARAGE, OPEN DECK .....	62.20
PARKING SPACES, Reserved for physically disabled .....	52.04
PARTITION .....	51.02
Definition of .....	51.01
PARTY WALL, Definition of .....	51.01
PASSAGEWAYS* .....	52.21
PATENT CHIMNEYS .....	64.48
PENALTIES AND VIOLATIONS .....	50.26
PENTHOUSE .....	51.02, 51.03
Definition of .....	51.01
PERMISSIBLE TEMPERATURE ON COMBUSTIBLE MATERIALS .....	51.042
PERMITS, BUILDING .....	50.06
To start construction .....	50.14
PETROLEUM STORAGE (refer to chapter Ind 8)	
PEWS, Width .....	55.13

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 355

PHYSICALLY DISABLED, General requirements.....	52.04
PICTURE PROJECTION BOOTH.....	55.39
PIERS	
Definition of .....	51.01
Masonry .....	53.322
PILASTERS, Masonry .....	53.322
PILES .....	53.24
PIPE	
Duct .....	64.33
Smoke .....	64.49
Steam or hot water .....	64.23
PIPING, HAZARDOUS, Definition of.....	51.01
PLACE OF EMPLOYMENT, Definition of .....	51.01
PLACES OF OUTDOOR ASSEMBLY .....	55.68
PLANS	
Examination and approval .....	50.12
Fee (also refer to chapter Ind 69) .....	50.20
Plot .....	50.12
Prepared outside Wisconsin.....	50.08
Required for permit to start.....	50.14
Types of .....	50.12
PLANT, MANUFACTURING, Occupancy .....	54.001
PLATFORMS.....	51.16
Rescue platforms .....	54.03, 57.12
PLENUM, SUSPENDED CEILING .....	64.41
PLOT DIAGRAM OR PLAN, Required.....	50.12
PLYWOOD .....	53.61
POLE BUILDING .....	51.03
POLE FOUNDATIONS.....	53.28
POLICE STATION, Occupancy .....	57.001
PORCH, Definition of.....	51.01
PORTLAND CEMENT, Masonry mortar .....	53.35
POSTING	
Floor loads .....	54.17
Occupancy permit for changed loading .....	54.18, 55.06
Permits .....	50.06
POWER AND DUTY OF BUILDING OFFICIAL.....	50.06, 50.12
POWER PLANT, Occupancy.....	54.001
PRESSURE TANKS .....	51.21, 51.23
PRESSURE TREATED WOOD	
Fire retardant, Definition of .....	51.01
For decay prevention.....	53.63
PRESTRESSED CONCRETE .....	53.40
PRINTING PLANT, Occupancy .....	54.001
PRISON, Occupancy.....	57.001
PRIVATE, Exempt from code.....	50.04, 54.50, 57.001

PRIVATE GARAGES .....	54.50
PRIVATE SCHOOLS.....	56.001
PROCEDURE, Appeals.....	50.24
PROJECTION FROM BUILDINGS .....	51.03
PROPERTY, ADJOINING, Protection of .....	53.26
PROPERTY LINE, Definition of .....	51.01
PROSCENIUM, STAGE AND APPURTENANT ROOMS (see chapter Ind 55)	
PROTECTION AGAINST DECAY AND TERMITES .....	53.63
PROTECTION OF DOOR OPENINGS IN WALLS AND PARTITIONS.....	51.047
PROTECTION OF VERTICAL OPENINGS, STAIRS AND ELEVATORS* .....	51.02, 51.03
PROTECTION OF WALL OPENINGS .....	51.047, 51.048, 51.049
PUBLIC BUILDING, Definition of .....	51.01
PUBLIC GARAGES .....	54.50
PUBLIC SCHOOLS.....	56.001
PUBLIC SEWERS, Connection with.....	52.62
PUBLIC THOROUGHFARE, Definition of .....	51.01
PUMPS, FIRE.....	51.21, 51.23

## R

RADIATION AND CONVECTION EQUIPMENT .....	64.21
RADIO RECEIVING ANTENNA.....	62.35
RAIL AROUND OPENINGS.....	51.16, 54.10, 62.28
RAILING (see HANDRAILS)	
RAMPS	
Apartment buildings, hotels and places of detention .....	57.07
Barrier-free environments .....	52.04
Factories, office and mercantile buildings.....	54.03
Open parking structures .....	62.26
Schools and other places of instruction.....	56.06
Theaters and assembly halls .....	55.08
RANGE HOODS, Ventilating .....	64.67
RANGES, Clearances.....	52.17
RECEIVING ANTENNAE, Television and radio .....	62.35
RECORD CARD	
Fire alarm tests .....	51.24
Fire prevention inspections .....	60.19
RECREATION HALLS .....	54.001 or 55.01
REDUCTIONS, Live loads .....	53.11
REFINERIES, Flammable liquids .....	54.001
REFORMATORIES .....	57.001
REFRIGERATION.....	64.10
REGISTERED ARCHITECT OR ENGINEER,	

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 357

Services required.....	50.07, 50.10, 50.12
REGISTERS (see FIRE DAMPERS)	
REINFORCED CONCRETE.....	53.40
REINFORCED GYPSUM CONCRETE.....	53.41
REINFORCED MASONRY.....	53.323
REINFORCEMENT (see REINFORCED CONCRETE and MASONRY)	
RELOCATABLE CLASSROOMS.....	56.30
REMODELING AND ALTERATIONS.....	50.03, 50.07, 50.12, 52.04
Definition of .....	51.01
REPAIR.....	52.21, 52.64, 55.50, 57.15, 60.19
REPAIR SHOPS, AUTO .....	54.52, 64.61
REQUIRED, Definition of .....	51.01
REQUIRED EXIT CORRIDOR, Definition of .....	51.01
REQUIREMENTS BASED ON OCCUPANCY (see chapters Ind 54-62)	
REQUIREMENTS BASED ON TYPES OF CONSTRUCTION .....	51.03
RESCUE PLATFORMS .....	54.03, 57.12
RESIDENCES, One- and two-family exempt.....	50.04
(Also refer to Uniform Dwelling Code)	
RESIDENTIAL HEALTH CARE FACILITIES .....	57.26
REST ROOMS* .....	52.50, 54.12
RESTAURANTS .....	55.01
RESTRAINED SUPPORT, Definition of.....	51.01
RETAIL STORES, BUSINESS.....	54.001
Auto service stations .....	54.51, 54.52
Exiting, egress .....	54.02, 54.03
Types of construction.....	51.03
RETAINING WALL .....	53.27, 53.34
Definition of .....	51.01
RETROACTIVITY .....	50.02, 61.26, 63.001
RETURN (or EXHAUST OPENING), Definition of .....	51.01
REVIEWING STANDS .....	55.51
REVOLVING DOORS, at nonrequired exit.....	51.15
RISERS, for stairways .....	51.16
ROADWAY, Definition of.....	51.01
ROOF, ROOF CONSTRUCTION	
Access to attic or rood.....	51.02, 51.20, 57.25
Anchorage (see also ANCHORAGE, ANCHORS) .....	53.12
Coverings.....	51.02, 51.05
Definition.....	51.01
Drainage.....	53.11
Fire-resistance ratings.....	51.043
Fire-resistive construction.....	51.03
Heavy timber.....	51.03

Joists (see JOISTS)	
Live loads.....	53.11
Mansard roofs.....	51.03
Materials, roofing.....	51.02, 51.05
Nailing schedule.....	53.63
Over stages.....	55.24
Parapets.....	51.02, 53.34
Protection of adjoining buildings.....	51.03, 53.26
Scuttles.....	51.02
Sheathing.....	53.61
Skylights.....	51.02
Towers.....	62.36
Wind loads.....	53.12
Wood frame construction.....	53.60-53.63
ROOF COVERING, Definition of.....	51.01
ROOF COVERINGS.....	51.02, 51.05
ROOF LOADS.....	53.11
ROOF SHEATHING.....	53.61
ROOFING (see ROOF, ROOF CONSTRUCTION and ROOF COVERINGS)	
ROOM, Definition of.....	51.01
ROOM, SPACE HEATERS.....	64.22
ROOMING HOUSE.....	57.001
ROW HOUSE.....	57.25
RUBBLE MASONRY.....	53.322
RUNNING TRACKS.....	56.13

## S

## SAFE PLACE

Defined (refer to chapter 101, Wis. Stats.)	
Exit to.....	52.21
SAFEGUARDS, for physically disabled.....	52.04
SAND	
Bearing soil capacity.....	53.21
Concrete.....	53.40
Mortar.....	53.12
SANITARIUM, Occupancy.....	57.001
SANITATION (See also rules of department of health and social services).....	52.50-52.64
SCHOOLS.....	56.001
SCOPE OF CODE (see also chapters Ind 51-64).....	50.02
SCUTTLE.....	51.02, 57.25
SEATS, SEATING	
Grandstands, bleachers, places of outdoor assembly.....	55.54
Physically disabled.....	52.04
Schools, auditoriums, gymnasiums, field houses.....	56.13, 56.14
Theaters, assembly halls.....	55.13

## SELF-CLOSING DOORS

Register, December, 1978, No. 276  
Building and heating, ventilating  
and air conditioning code



DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 359

Normally closed (furnace rooms, shaft enclosures, etc.)\*  
 Normally open (sliding, horizontal exit).....54.01

SEMINARIES .....56.001

SEPARATION, CLASS OF CONSTRUCTION .....51.02

SEPTIC TOILETS .....52.62

SERVICE STATIONS, AUTO .....54.52

SETBACK, Definition of .....51.01

SHAFT  
 Definition of .....51.01  
 Rated ..... 51.02, 51.03

SHALL, Definition of .....51.01

SHORING, Adjoining foundations .....53.26

SHUTTERS, FIRE .....51.03

SIAMESE CONNECTIONS ..... 51.21, 51.23

SIGNS  
 Capacity of occupancy..... 54.18, 55.06  
 Clearance limitation .....62.25  
 Definition of .....51.01  
 Exit signs\* .....51.15  
 Identification signs .....52.04  
 Illumination of exits\* .....51.15  
 Posting floor loads .....54.17  
 Toilet rooms .....52.52

SIMPLE SUPPORT, Definition of .....51.01

SINKS (see LAVATORIES)

SKATING RINKS (Indoor) .....54.001 or 55.01

SKYLIGHTS, DOMES .....51.02

SLAB  
 Minimum thickness, for fire-resistive purposes .....51.043  
 Minimum thickness, for floors .....51.043  
 Minimum thickness, for roofs .....51.043  
 Reinforced concrete .....53.40

SLATE, ROOFING .....51.05

SLEEPERS .....51.03

SMOKE DETECTION..... 57.27, 61.14

SMOKE PIPES, SMOKESTACKS AND BREECHING ... 64.45-64.50

SMOKEPROOF STAIR ENCLOSURE .....51.18

SMOKE VENTS, STAGE .....55.24

SOIL .....53.20

SPACE HEATERS .....64.22  
 Definition of .....51.01

SPECIAL OCCUPANCIES  
 Airplane hangars .....54.50  
 Amusement park buildings .....54.001  
 Assembly occupancies .....55.01  
 Auto service stations ..... 54.51, 54.52  
 Bowling alleys .....54.001 or 55.01

Churches .....	54.001 or 55.01
Day care centers.....	60.001
Dry cleaning establishments .....	54.001
Farm buildings.....	50.04
Garages (public and private) .....	54.50
Grandstands .....	55.50
Greenhouses.....	54.001, 53.11
Hazardous.....	54.50-54.52
Stadiums .....	55.50
Temporary structures.....	50.04
Tents.....	55.58
<b>SPECIALTY OCCUPANCIES .....</b>	<b>62.001</b>
Open parking structures.....	62.20
Television and radio transmitting and receiving antenna .....	62.35
<b>SPECIFICATIONS ADOPTED (see STANDARDS)</b>	
<b>SPECIFICATIONS, Required for plan approval .....</b>	<b>50.12</b>
<b>SPIRAL STAIRS .....</b>	<b>51.16</b>
<b>SPLICES .....</b>	<b>53.50, 53.51</b>
<b>SPRAY PAINTING (refer to chapter Ind 1910, Safety &amp; Health Code)</b>	
<b>SPRINKLERS</b>	
Area increase permitted.....	54.01
Assembly occupancy.....	55.35
Automatic sprinklers.....	51.23
Basement .....	51.23
Distance of travel increase*	
Fire department connection .....	51.23
High-rise buildings .....	52.01
Hose threads.....	51.23
Maintenance.....	51.23
Materials.....	51.23
Requirements .....	51.23
School occupancy .....	56.05
Standards.....	51.23
Supervisory facilities .....	51.23
Tests, water supply.....	51.23
<b>STADIUMS.....</b>	<b>55.50</b>
<b>STAGE (see chapter Ind 55)</b>	
<b>STAIRS AND STAIRWAYS</b>	
Design features.....	51.16
Enclosure of shaft.....	51.02, 51.03
Exterior .....	51.16, 54.03, 54.08
Fire escape .....	51.20
Interior enclosed stairs.....	51.17
Occupancy requirements*	
Spiral .....	51.16
Smokeproof tower*.....	51.18
<b>STANDARDS AND SPECIFICATIONS ADOPTED</b>	
Aluminum Association.....	51.27
American Concrete Institute (ACI) .....	51.26
American Institute of Steel Construction .....	51.27

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 361

American Institute of Timber Construction .....	51.27
American Iron and Steel Institute.....	51.27
American National Standards Institute (ANSI) .....	51.27
American Society for Testing and Materials (ASTM) .....	51.25
American Welding Society .....	51.27
American Wood Preservers Bureau .....	51.27
National Bureau of Standards.....	51.27
National Fire Protection Association.....	51.27
National Forest Products Association .....	51.27
Steel Joist Institute .....	51.27
Truss Plate Institute .....	51.27
STANDARDS, INFILTRATION .....	64.03
STANDPIPES .....	51.21
STEAM PIPES AND HOT WATER PIPES .....	64.23
STEEL (see STEEL CONSTRUCTION)	
STEEL CONSTRUCTION	
Aluminum .....	53.54
Caissons.....	53.24
Certification and identification .....	53.50
Fabrication.....	53.50
Fire resistance ratings .....	51.043
Fire resistive construction, type 1 and type 2.....	51.03
Joists, open web construction .....	53.52
Marking.....	53.50
Metal frame protected construction, type 3.....	51.03
Metal frame unprotected construction, type 6 .....	51.03
Piles, steel .....	53.24
Reinforcing .....	53.316
Stainless steel.....	53.55
Structural steel.....	53.50
Veneered walls .....	53.36
Welding .....	53.53
STEEL PILES .....	53.24
STEPS .....	54.03, 55.09
STONE MASONRY .....	53.311, 53.322
STOP WORK ORDERS (refer to chapter 101, Wis. Stats.)	
STORAGE OF FLAMMABLES (also refer to chapter Ind 8) .....	60.19
STORES .....	54.001
STORIES	
Definition of .....	51.01
Determination of number of .....	51.02
STORY, Definition of .....	51.01
STOVES (see RANGES)	
STREET	
Definition of .....	51.01
Location of.....	54.01
STRUCTURAL REQUIREMENTS (Chapter Ind 53)	
Concrete.....	53.40
Foundations.....	53.20
Loads, minimum allowable.....	53.10

Masonry .....	53.30
Metals .....	53.50
Wood and wood fiber products .....	53.60
STRUCTURE, Definition of .....	51.01
STUDS .....	53.63
SUPERVISION (of construction) .....	50.10
SUPPORT (RESTRAINED and SIMPLE), Definitions of .....	51.01

### T

TAVERNS .....	54.001 or 55.01
TELEGRAPH AND TELEPHONE OFFICES .....	54.001
TEMPERATURE DESIGN .....	64.04, 64.05
TEMPERED AIR, Definition of .....	51.01
TEMPERED OUTSIDE AIR, Definition of .....	51.01
TEMPORARY BUILDINGS OR STRUCTURES .....	50.04
TENTS AND PLACES OF OUTDOOR ASSEMBLY .....	55.58-55.68
TERRACE, Definition of .....	51.01
TESTING LABORATORIES, Approved .....	51.044
TESTS	
Fire alarm .....	51.24
Fire doors .....	51.047
Fire resistance ratings of assemblies .....	51.043
Heating equipment .....	64.20
Load .....	53.23
Noncombustible material .....	51.01
Rating methods .....	51.043
Soil bearing .....	53.21
Sprinkler .....	51.23
Standpipes .....	51.21
THEATERS AND ASSEMBLY HALLS (Chapter Ind 55)	
THREADS, HOSE .....	51.21, 51.23
TILE (Veneers) .....	53.36
TIMBER	
Glued-laminated structural .....	53.61
Heavy construction .....	51.03
TIRE SHOPS .....	54.52
TITLE AND SCOPE*	
TOILET COMPARTMENTS	
Floors .....	52.57
Walls and ceilings .....	52.58
Width of compartment .....	52.04, 52.59
TOILETS	
Chemical .....	52.62
Compartments .....	52.04, 52.59
Fixtures .....	52.04, 52.60
Outdoor .....	52.63
Rooms* .....	52.50, 52.56

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 363

TOWERS.....	62.35
TREADS, STAIRS.....	51.16
TREATED WOOD (Fire Retardant), Definition of.....	51.01
TRIANGLE, EXIT.....	54.02
TRIM, WOOD.....	51.02, 51.03
TRUSSES.....	53.62
TYPES OF CONSTRUCTION, Features summarized.....	51.03

U

UNDERPINNING.....	53.26
UNDERTAKING PARLORS.....	54.001
UNENCLOSED	
Ramps.....	52.04
Stairs.....	51.16
UNIFORM TREADS AND RISERS.....	51.16
UNIT HEATERS.....	64.21
Definition of.....	51.01
UNIVERSITIES.....	56.001
UNLAWFUL	
To change.....	50.09
To proceed.....	50.12
UNLIMITED AREA.....	54.01
URINALS*.....	52.60
USE, Definition of.....	51.01

V

VENEERED WALL	
Anchorage masonry units.....	53.36
Definition of.....	51.01
On wood frame.....	53.36
VENTILATION	
Air-cleansing devices.....	64.16
Air for combustion.....	64.09
Air movement and distribution.....	64.15
Automatic controls.....	64.17
Contamination of air.....	64.18
Definitions.....	51.01, 64.12
Exhaust ventilation systems.....	64.08
Gravity exhaust ventilation, definition of.....	51.01
Location of intakes.....	64.19
Mechanical ventilation, definition of.....	51.01
Mechanical ventilation systems.....	64.06
Natural ventilation systems.....	64.07
Occupancy requirements.....	64.05
Tempered air.....	64.13
Tempered outside air.....	64.14
VENTS.....	64.45-64.50
VENT SHAFTS*.....	51.02, 51.03

VERTICAL EXIT, Definition of .....	51.01
VERTICAL FRAMING, WOOD .....	53.63
VERTICAL OPENINGS, ENCLOSURES* .....	51.02, 51.03
VIOLATION AND PENALTIES .....	50.26
VOLUME (TOTAL), Definition of .....	51.01

## W

### WALKWAYS

From parking facilities, required .....	52.04
Live loads .....	53.11

### WALLS AND PARTITIONS .....

Anchorage (see ANCHORAGES-ANCHORS)	
Assemblies, fire resistance ratings and standards .....	51.043
Definitions .....	51.01
Elevator enclosures .....	51.02, 51.03
Exterior .....	51.03
Fire division .....	51.02
Fire protective requirements .....	51.03
Fire resistance rating for assemblies .....	51.045
Foundation .....	53.322
Furnace and boiler rooms*	
Glass block .....	51.048
Masonry (see MASONRY CONSTRUCTION)	
Materials, fire resistance ratings and standards .....	51.043
Noncombustible .....	51.01
Openings, fire protections .....	51.047, 51.048, 51.049
Parapets .....	51.02
Party wall, definition of .....	51.01
Stairways and exit enclosures .....	51.03
Wood stud .....	53.63

### WAREHOUSES .....

Mini-warehouses .....	54.22
-----------------------	-------

### WATER CLOSETS .....

.....	52.60
-------	-------

### WELDER, Certification of .....

.....	53.53
-------	-------

### WELDING .....

.....	53.53
-------	-------

### WHOLESALE STORES .....

.....	54.001
-------	--------

### WIDTH, Aggregate exit .....

.....	51.15
-------	-------

### WIND LOADS DESIGN .....

.....	53.12
-------	-------

### WINDOWS

Area limitation at rated wall .....	51.03
Fire .....	51.048
Required for natural light*	
Required for ventilation .....	64.07
Safety devices for cleaning .....	52.03

### WIRED GLASS

Fire-resistive doors and windows .....	51.047, 51.048
--	----------------

### WIRING, ELECTRICAL (see also Wis.

State Electrical Code) .....	52.20, 61.25
------------------------------	--------------

### WOOD AND WOOD FIBER CONSTRUCTION .....

.....	53.60-53.63
-------	-------------

DEPT. OF INDUSTRY, LABOR & HUMAN RELATIONS 365

WOOD FOUNDATIONS .....	51.02, 53.61, 53.64
WOOD FRAME CONSTRUCTION .....	51.03
WOODWORKING FACTORIES .....	54.001
WORK	
Footing and foundation .....	50.13
Permit to start.....	50.14
Stop order (refer to chapter 101, Wis. Stats.)	

Y

YARD

Definition of .....	51.01
Required.....	57.06

