ABBREVIATIONS AND SYMBOLS
used in Architectural Door and Hardware Schedules and Specifications

FOREWORD

This listing of abbreviations and symbols is intended to serve two purposes: first, to recommend certain abbreviations and symbols for adoption as standard by the total openings industry; second, to afford architects, specification writers, door producers and others a reliable source of identification for abbreviations and symbols appearing in door and hardware schedules, specifications and lists.

For convenience, the abbreviations are listed in simple alphabetical order. Where others having the same meaning currently are in use, these are included as "also used." The latter are not as desirable as the recommended ones, and it is hoped that the use of the preferred abbreviations will become universal.

FRACTIONS AND FIGURES

1/2	When used with screws as 1/2 MS or 1/2 WS, indicates that half of the required screws shall be of the type designated; the remaining half shall be as regularly packed.
1/8 in 2	Standard door edge bevel of 1/8 of an inch in 2 inches.
2 k	Denotes two change keys
3 k	Denotes three change keys

FIRE DOOR LABELS AND RATINGS

"A"	Openings in fire walls and in walls which divide a single building into fire areas (3 hr. rating).
"B"	Openings in enclosures of vertical communications through buildings and in 2-hour rated partitions providing horizontal fire separations (1-1/2 hr. rating).
"C"	Openings in walls or partitions between rooms and corridors having a fire resistance rating of 1 hour or less (3/4 hr. rating).
"D"	Openings in exterior walls subject to severe fire exposure from outside of the building (1-1/2 hr. rating).
"E"	Openings in exterior walls subject to moderate or light fire exposure from outside of the building (3/4 hr. rating).
1/3 hr. 1/2 hr. 3/4 hr. 1 hr. 1-1/2 hr. 3 hr.	Fire door ratings

1/2 hour (30 minute) and 1/3 hour (20 minute) fire doors are for use where smoke control is a primary consideration. They are for the protection of openings in partitions between a habitable room and a corridor when the wall is constructed to have a fire resistance rating of not more than 1 hour or across corridors where a smoke partition is required.

GAUGES OF METAL

12 ga. 14 ga. 16 ga. 18 ga.	May be either B&S (Brown & Sharp) or U.S. gauge, which are different from each other in dimensions. It is preferable to use actual dimensions when describing hardware trim (e.g. .050).

SYMBOLS

"	Suffix; denotes inches, e.g., 1-3/4" means one and three-quarter inches.
'	Suffix; denotes feet, e.g., 3'0" means three feet exactly; 3'2" means three feet, two inches.
x	Indicates "by" or "with," e.g., WD x MF, lock x TMS, etc.
/	Denotes omission of words, e.g., A/TBN means "arm (furnished with) through bolts and nuts"; C/C means "cut (for) cylinder." Also used to show omission of letters forming balancing of word, especially when followed by.other related words in a phrase or expression, e.g., W/Scr means "with screws," W/O means "without."
o	Degree, generally denotes the distance the door may travel before being stopped by an obstruction (e.g., wall, stop, closer or other item of hardare).

ABBREVIATIONS AND SYMBOLS
used in Architectural Door and Hardware Schedules and Specifications

ABBREVIATIONS

A

AC	Alternating current. See also VAC
acces	Accessories
act	Active
adj	Adjustable
AF	Armored front (of a lock)
AFB	Automatic flush bolt
AHS	Allen head (screws); usually followed by MS or WS to denote screw type
AL	Aluminum (usually referenced to door or frame). Also used: Alum
Amp	Ampere
AMS	All machine screws
Anc	Anchor
ANSI	American National Standards Institute.
Ast	Astragal
AWS	All wood screws

B

B & S	Brown & Sharp (gauges)
B3E	Beveled on 3 edges, usually top and 2 sides (kick, mop and armor plates)
B4E	Beveled on 4 edges (kick, mop and armor plates)
BB	Ball bearing
BC	Back check
Bev	Beveled (as lock front or door edge)
Blt	Bolt
BP	Brass pin (in hinges)
BPl	Back plate (half surface hinges in composite doors)
BS	Backset (of a lock); distance from front to center of hub or keyhole
BT	Ball tip (on hinges)
BTB	Back to back (as pulls). Also used: B to B

C

C to C	Centerline to centerline (location)
C to E	Center to end; measurement from center of latch hole to end of lip (lock strike)
Cap	Capacity
CB	Cement box
C/BK	Cut for bit key
CBS	Cast box strike
C/C	Cut for cylinder
CCTV	Closed circuit television
CFTP	Cut for turn piece (plate)
CIF	Channel iron (door) frame
CK	Construction key
C/L	Center or centerline (dimension point)
CLS	Curved lip strike
CMkd	Construction masterkeyed
Corr	Corridor
Ctsk	Countersunk
Cyl	Cylinder (of a lock)

D

DA	Double acting
Dble	Double
DC	Direct current. See also VDC
DDB	Dutch door bolt
DE	Double egress. Also used: Dble Eg
Deg	Degree
Del	Delayed action
Det	Detector
DK	Display key
DP	Dust proof
DPS	Dust proof strike
Dr	Door
DS	Dead stop
DT	Dummy trim

E

Ea	Each
El Clsr	Electric closer
El Hge	Electric hinge
El Mag Hld	Electro-magnetic holder
El Pvt	Electric pivot
El Str	Electric strike
EMK	Emergency master key
EMkd	Emergency masterkeyed (hotel lock)
Ent	Entrance
EO	Exit only
ES	Expansion shield
Esc	Escutcheon
Ex	Extra
Ext	Exterior

F

F	Front or face (of a lock)
F Dr	Fire door
FB	Flush bolt
FBT	Flat button tip (on hinges)
FF	Finished floor
FH	Flat head (screws)
FL	Fusible link (on a closing device)
Flr	Floor. Also used: FLR
Fr	Frame
Ft	Foot (of a door closer or door holder); the terminal member of a closer holder arm, being the end which fastens to door or frame.
Ft Blt	Foot bolt

G

ga	Gauge, e.g., 16 ga., 14 ga., etc.
GGMK	Great grand masterkey(s)
GGMkd	Great grand masterkeyed; indicates a cylinder or bitted lock operable by at least four categories of keys, i.e., change, master, grand master and great grand masterkey
GMK	Grand master key(s)
GMkd	Grand masterkeyed; indicates a cylinder or bitted lock operable by at least three categories of keys, i.e., change, master and grand master
GN	Grommet nut
Grp	Group

H

HB	Head bolt
HC	Hollow core
Hcp	Handicapped
Hdg	Heading
Hdl	Handle
Hdwe	Hardware
HM	Hollow metal
HMD	Hollow Metal Door
HMF	Hollow Metal Frame
HO	Hold open
HOA	Hold open arm; designates closing device with hold-open arm mechanism
Hor	Horizontal
HPDL	High pressure decorative laminate (door)
Hr	Hour (as 3/4 hr., 1-1/2 hr., 3 hr. fire door ratings)
HT	Hospital (or asylum) tip (on hinge or pivot)
HW	Hardware (often used as HW #4 or HW 4, meaning Hardware Set 4)
HZ	Electrical cycles per second; e.g., 60HZ

I

ID	Inside diameter
Inact	Inactive
Ins T	Inside trim
Int	Interior
Ion	Ionization
IR	Identification recall

J

J	Jamb
JD	Jamb depth

K

K	keys, e.g., 3k. means 3 keys
KA	Keyed alike; operable by identical change keys
Kal	Kalemein
KD	Keyed different; operable by different change keys
KDn	Knocked down; packed unassembled. Also used: KD, when referencing frame
KV	Key valve (on a closing device)

L

L to C	Lip (of a lock strike) to center of latch bolt hole
Lam	Laminate
LBR	Less bottom rod (of a vertical rod type exit device)
LC	Less cylinder; denotes lock without cylinder
Lev	Lever
LH	Left hand
LHR	Left hand reverse bevel. Also used:LHRB
LL	Lead lining (of a door)
Lox	Locks
LP	Light proof (door)
LS	Lead shield

R

R Sprg	Reverse spring
Rab	Rabbeted
Rad	Radium
RB	Reverse bevel
RC	Rounded corners
Reg	Regular
Rein	Reinforced
Rem	Removable
Rem Mul	Removable mullion
Rev	Reverse
RF	Rounded (or radius) front; denotes lock or flush bolt with convex front for application in door having rounded edge
RF/Str	Rounded front and strike; for use with pairs of doors having rounded meeting edges
RH	Right hand
RHd	Round head (screws)
RHR	Right hand reverse bevel. Also used: RHRB
RK	Removal key
Rm	Room
RPl	Rawl plug

S

SA	Single acting
SB	Sex bolt
SC	Solid core (door)
SCWD	Solid core wood door
Scr	Screw or screws
Sec Std	Security stud
Sect	Section
Sgl	Single
Sh	Shield
SKd	Single keyed, no master
Sl	Sleeve
SMS	Sheet metal screws
SNB	Sex nut and bolt
SP	Sound proof
Sp Hd	Spanner head
Spdl	Spindle
Sprg	Spring
SS	Stainless steel
St	Stile
Std	Standard
Stk	Strike; that part of a lock or other fastening device which receives the bolt(s) when projected
Stk Sz	Stock size
STMS	Strike to template with machine screws
STS	Self-tapping screw(s)
Sub	Substitution
Surf	Surface
Sw	Swivel (spindle)

T

TB	Through bolts
TBGN	Through bolts and grommet nuts
TC	Tin clad
TG	Tempered glass
TgB	Toggle bolts
Thrs	Threshold
TK	Turn knob
TMS	To template with machine screws
TP	Thumb piece or turn piece
Transf	Transformer
TS	Tampin shield

U

UC	Undercut
UL	Underwriters' Laboratories
Univ	Universal
US	United States; commonly used as prefix to a number to denote it as taken from United States federal standard stock catalogs

V

V	Volt
VA	Volt-ampere
VAC	Volt alternating current
VDC	Volt direct current
Vert	Vertical
Vest	Vestibule

W

WB	Wall bumper
WBS	Wrought box strike
WD	Wood
WD x MF	Wood door x metal frame Also used: WD x HMF
WD x WF	Wood door x wood frame
Wrt	Wrought
WS	Wood screws. See AWS and 1/2 WS
WS x LES	Wood screw by lead expansion shield
Wstp	Weatherstrip

X

x	See under "Symbols"
X bar	Cross bar (of an exit device)

dhi Lock Function Chart

DHI is pleased to be able to offer to you this LOCK FUNCTION CHART. The reference source for the information contained here is from the Builders Hardware Manufacturers Association (BHMA). Note that we have included the equivalent "old" federal function numbers, which have been discontinued for some time, but which still appear in some government specifications. Two lock series are shown: #1000 (Mortise) and #4000 (Bored). For more information on these locks, including grade levels, components and testing, see BHMA A156.2 ("American National Standard for Bored and Preassembled Locks & Latches") and BHMA A156.13 ("American National Standard for Mortise Locks & Latches").

For your convenience and information, we have included information on the industry standards for materials and finishes. This widely-accepted standard involves a three digit number that identifies both the finish and base metal. For further information, see BHMA A156.18 ("Materials and Finishes").

Finally, we have also shown references to door handing. These particulars are not a necessary part of plans and specifications. However, you should be reasonably knowledgeable of them so that you may speak intelligently with contractors, industry suppliers and other related personnel.

If you have questions, we suggest you contact the professional consultants of our industry. Seek out an AHC (Architectural Hardware Consultant) or CDC (Certified Door Consultant). They have received their credentials based upon years of experience and the successful passing of in-depth examinations.

LIST OF FINISH SYMBOLS

BHMA FINISH STANDARDS

BASE MATERIAL

United States Standard	General Description	Steel	Brass	Bronze	Stainless Steel
U1B	Bright japanned	601	—	—	—
US1D	Dead black	100	150	—	—
US2C	Zinc plated (commercial)	602	—	—	—
US2G	Zinc plated (govemment specifications)	603	—	—	—
US2H	Hot dipped galvanized	101	—	—	—
US3	Bright brass	632	605	—	—
US3A	Bright brass, no lacquer on brass metal only	—	151	—	—
US4	Satin brass	633	606	—	—
US10	Satin bronze	639	152	612	—
US10A	Satin bronze, oxidized, lacquered	641	—	614	—
US10B	Satin bronze, oxidized and oil rubbed on solid bronze metal only	—	—	613	—
	Satin bronze, oxidized, lacquered on steel	641	—	—	—
US14	Nickel plated, bright	645	618	618	—
US15	Nickel plated, satin	646	619	619	—
US17A	Nickel plated imitation half-polished iron oxidized and relieved	648	621	621	—
US20	Statuary bronze	649	—	623	—
US20A	Statuary bronze, dark	650	—	624	—
US26	Chromium plated, bright	651	625	625	—
US26D	Chromium plated, satin	652	626	626	—
US28	Aluminum metal, satin, anodized	—	—	—	—
US32	Stainless steel metal	—	—	—	629
US32D	Stainless steel metal, satin	—	—	—	630
USP	Primed for painting or staining	600	163	163	—

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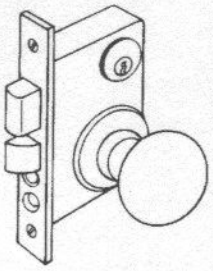
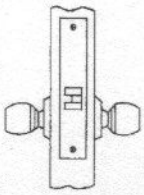
MORTISE TYPE
Series 1000



SELECTOR CHART

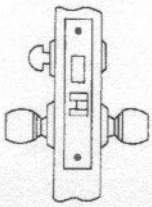
- Stopwork
- Plain Latchbolt
- Anti-Friction Latchbolt
- Deadbolt
- Rigid Knob
- Split Deadbolt
- Indicator
- Auxiliary Deadlatching Bolt

PASSAGE OR CLOSET LATCH
ANSI TYPE F01
(Fed. Types 85N, 86N, 87N)



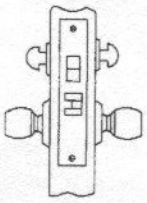
Latchbolt operated by knob from either side at all times.

PRIVACY, BEDROOM OR BATH LOCK
ANSI TYPE F02
(Fed. Type 86L)



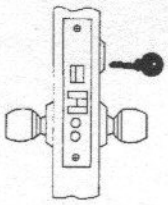
Latchbolt operated by knob from either side. Deadbolt operated by turn from inside and by emergency release from outside.

COMMUNICATING LOCK
ANSI TYPE F03
(Fed. Type 86M)



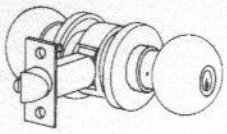
Latchbolt operated by knob from either side. Two deadbolts or split deadbolt operated independently by turns from both sides. Should not be used on doors in rooms that have no other entrance.

ENTRY LOCK
ANSI TYPE F04
(Fed. Types 85E, 86E, 87E)

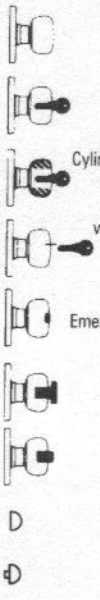


Latchbolt operated by knob from either side except when outside knob is made inoperative by a stop or mechanical means other than key. When outside knob is locked, latchbolt may be retracted by key from outside or by rotating inside knob. Auxiliary deadlatch.

BORED TYPE
Series 4000

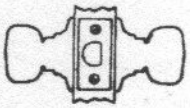


SELECTOR CHART



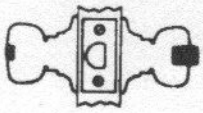
- Plain Knob
- Cylinder Knob
- Cylinder Knob Rigid
- Cylinder Knob with Occupancy Indicator
- Emergency Release
- Turn Button
- Push Button
- Plain Latch
- Deadlatch

PASSAGE OR CLOSET LATCH
ANSI TYPE F75
(Fed. Types 160N, 161N)



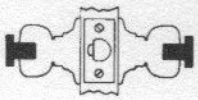
Latchbolt operated by knob from either side at all times.

PRIVACY, BEDROOM OR BATH LOCK
ANSI TYPE F76
(Fed. Types 160L, 161L)



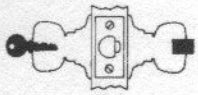
Latchbolt operated by knob from either side. Outside knob is locked by push button or other locking device inside and unlocked by emergency release outside, rotating inside knob or closing door.

COMMUNICATING LOCK
ANSI TYPE F78
(Fed. Types 160M, 161M)



Deadlocking latchbolt operated by knob from either side. Turn button in either knob or locking device on either side locks or unlocks opposite knob. Should not be used on doors in rooms that have no other entrance.

ENTRY LOCK
ANSI TYPE F82
(Fed. Types 160B, 161B)



Deadlocking latchbolt operated by knob from either side except when outside knob is locked by push button or other locking device on inside. When outside knob is locked, operating key in outside knob or rotating inside knob unlocks push button or other locking device and retracts latchbolt. Closing door does not release push button or other locking device.

Left hand: Hinges on left, opens inward

Left Hand
When the hinges are on the left (concealed from view) and the door swings away from you (into the room/building), the door is Left Hand (LH).

Left hand reverse: Hinges on left, opens outward

Left Hand Reverse
When the hinges are on the left (visible) and the door swings toward you, the door is Left Hand Reverse (LHR).

Right hand: Hinges on right, opens inward

Right Hand
When the hinges are on the right (concealed from view) and the door swings away from you (into the room/building), the door is Right Hand (RH).

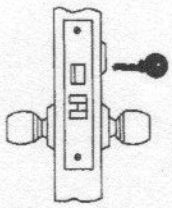
Right hand reverse: Hinges on right, opens outward

Right Hand Reverse
When the hinges are on the right (visible) and the door swings toward you, the door is Right Hand Reverse (RHR).

Face the outside surface of the door to determine hand.

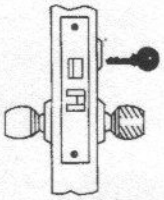
NOT SHOWN: Apartment, Exit or Public Toilet Lock - ANSI F09 (86G) + ANSI F88 (161C)

CLASSROOM LOCK
ANSI TYPE F05
(Fed. Type 86J)



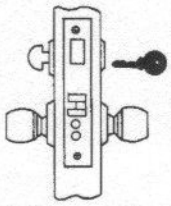
Latchbolt operated by knob from either side except when outside knob is locked from outside by key. When outside knob is locked, latchbolt may be retracted by key from outside or by rotating inside knob. Auxiliary deadlatch.

STORE ROOM OR CLOSET LOCK
ANSI TYPE F07
(Fed. Types 85EW, 86EW)



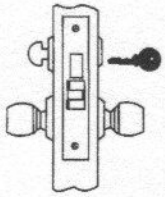
Latchbolt operated by key from outside or by rotating inside knob. Outside knob is always inoperative. Auxiliary deadlatch.

FRONT DOOR LOCK
ANSI TYPE F08
(Fed. Types 85A, 86A)



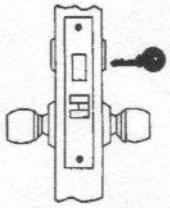
Latchbolt operated by knob from either side except when outside knob is made inoperative by a stop or mechanical means other than key. Deadbolt operated by turn inside. Key outside operates both bolts.

DORMITORY OR EXIT LOCK
ANSI TYPE F13
(Fed. Type None)



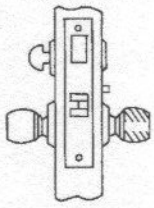
Latchbolt operated by knob from either side. Deadbolt projected by key from outside and turn from inside. Rotating inside knob retracts both bolts.

STORE DOOR LOCK
ANSI TYPE F14
(Fed. Types 85C, 86C)



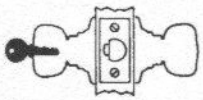
Latchbolt operated by knob from either side. Deadbolt operated by key from either side.

HOTEL GUEST ROOM LOCK
ANSI TYPE F15
(Fed. Type 86H)



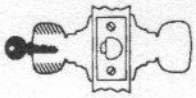
Latchbolt operated by key from outside or by rotating inside knob. Outside knob is always inoperative. Deadbolt operated by turn from inside, which shuts out all keys except emergency and display key. Auxiliary deadlatch. Indicator button. When so specified, inside knob will retract both bolts.

CLASSROOM LOCK
ANSI TYPE F84
(Fed. Types 160R, 161R)



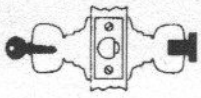
Deadlocking latchbolt operated by knob from either side except when outside knob is locked from outside by key. When outside knob is locked, latchbolt is operated by key in outside knob or by rotating inside knob.

STORE ROOM OR CLOSET LOCK
ANSI TYPE F86
(Fed. Types 160D, 161D)



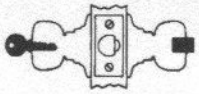
Deadlocking latchbolt operated by key in outside knob or by rotating inside knob. Outside knob is always fixed.

ENTRANCE OR STORE ROOM LOCK
ANSI TYPE F81
(Fed. Types 160A, 161A)



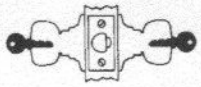
Deadlocking latchbolt operated by knob from either side except when outside knob is locked by turn button or other locking device inside. When outside knob is locked, latchbolt is operated by key in outside knob or by rotating inside knob. Turn button or other locking device must be manually operated to unlock outside knob.

CORRIDOR LOCK
ANSI TYPE F90
(Fed. Types 160T, 161T)



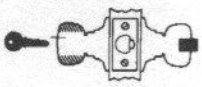
Deadlocking latchbolt operated by knob from either side except when outside knob is locked by key in outside knob or by push button or other locking device in inside. Key in outside knob locks or unlocks outside knob. Rotating inside knob releases push button or other locking device placed in a locked position. Closing door releases push button or other inside locking device. Inside knob always operates.

STORE DOOR LOCK
ANSI TYPE F91
(Fed. Type 161G)



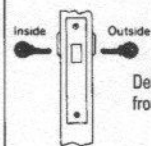
Deadlocking latchbolt operated by knob from either side except when both knobs are locked by key in knob from either side.

HOTEL GUEST ROOM LOCK
ANSI TYPE F93
(Fed. Types 160H, 161H)



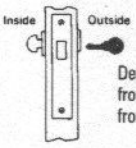
For hotel guest room, dormitory or apartment entrance locks. Deadlocking latchbolt operated by knob from inside at all times. Outside knob always fixed. Latchbolt operates by key from outside except when push button or other locking device inside is operated, thus shutting out all keys except emergency key. Operating push button or other locking device operates visual indicator outside, showing room is occupied.

MORTISE DEADLOCK



ANSI TYPE F16
(Fed. Type 86T)
Deadbolt operated by key from either side.

ANSI TYPE F18
(Fed. Type 86S)
Deadbolt operated by key from outside only.



ANSI TYPE F17
(Fed. Type 86P)
Deadbolt operated by key from outside and by turn from inside.

ANSI TYPE E06091/E16091
(Fed. Type None)
Deadbolt operated by key from outside. Turn from inside will retract but will not project deadbolt.

MORTISE DEADLOCK AND DEADLATCH NARROW BACKSET

ANSI TYPE E0211/E8211
(Fed. Type None)
Deadlock: For single-swinging doors. Key on both sides projects or retracts pivoted or conventional deadlocking bolt. Front may be flat, radiused, beveled or radiused with integral weather-seal.

ANSI TYPE E0221/E8221
(Fed. Type None)
Deadlock: For single-swinging doors. Key on outside, turn knob on inside projects or retracts bolt; otherwise same as types E8211, etc.

ANSI TYPE E0231/E8231
(Fed. Type None)
Deadlatch: For single-swinging doors. Key on outside, paddle or lever on inside retracts latchbolt. Auxiliary deadlatch. Latchbolts may be held retracted.

TECH TALK

Hollow Metal Frame Profiles and Elevations by *Richard J. Maslar, AHC/CDC*

In order to understand hollow metal frames, one must first be familiar with the nomenclature. There are some cases where parts may have different names, but they tend to be similar sounding. The standard frame profile shown in Figure 1 details all of the bends that make up the frame. This profile is called a *double rabbetted frame.* The rabbetted portions can be either equal or unequal to each other. Where the door sits in the frame, the standard rabbet is $1^{15}/_{16}$" for a $1^{3}/_{4}$" thick door. Typical stop height is $^{5}/_{8}$", and a 2" face would also be standard. The backbend is normally $^{1}/_{2}$", giving the frame a throat size that is 1" less than the overall width of the frame.

Figure 1

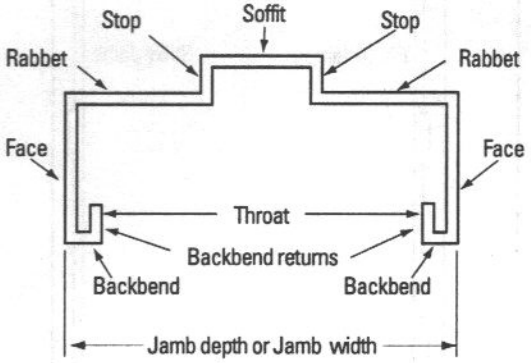
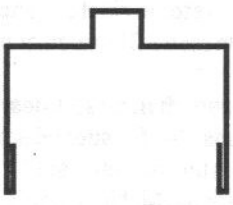


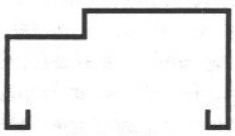
Figure 1a



The overall width of the frame is referred to as the *jamb width* or *jamb depth.* The backbend on some frames can also be bent back toward the inside face of the frame, which is known as a *hemmed backbend* (Figure 1a). On some frames, usually referred to as *dry-wall frames,* there is another leg at a right angle to the backbend referred to as a *backbend return.* This helps the frame slide over sheetrock walls without tearing the paper face when the frame is installed after the wall is built.

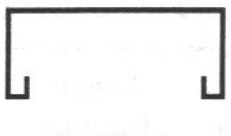
There are more frame profiles than can be detailed here; however, this will give you information about the various standard profiles and show some of the more popular custom styles and their variations. Figure 2 is a *single rabbet* and is typical for thin walls where there is no room on the frame for a stop and another rabbet due to a narrow jamb width. Figure 3 details a *cased opening frame* used to finish off an opening where no door is called for, or for bi-fold or by-passing openings. You would also use this frame for double acting doors where you cannot have a stop. Most face profiles are also available in a cased opening frame. Figure 4 shows the *double unequal rabbet* profile. Figure 5 is one type of *slip buck with rough buck.* This frame can be used where the rough buck is fastened to the wall, and the frame is slid into place at a later time and fastened to the rough buck with screws or by welding.

Figure 2



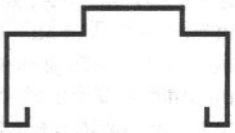
Single Rabbet

Figure 3



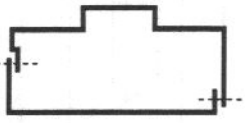
Cased Opening

Figure 4



Double Unequal Rabbet

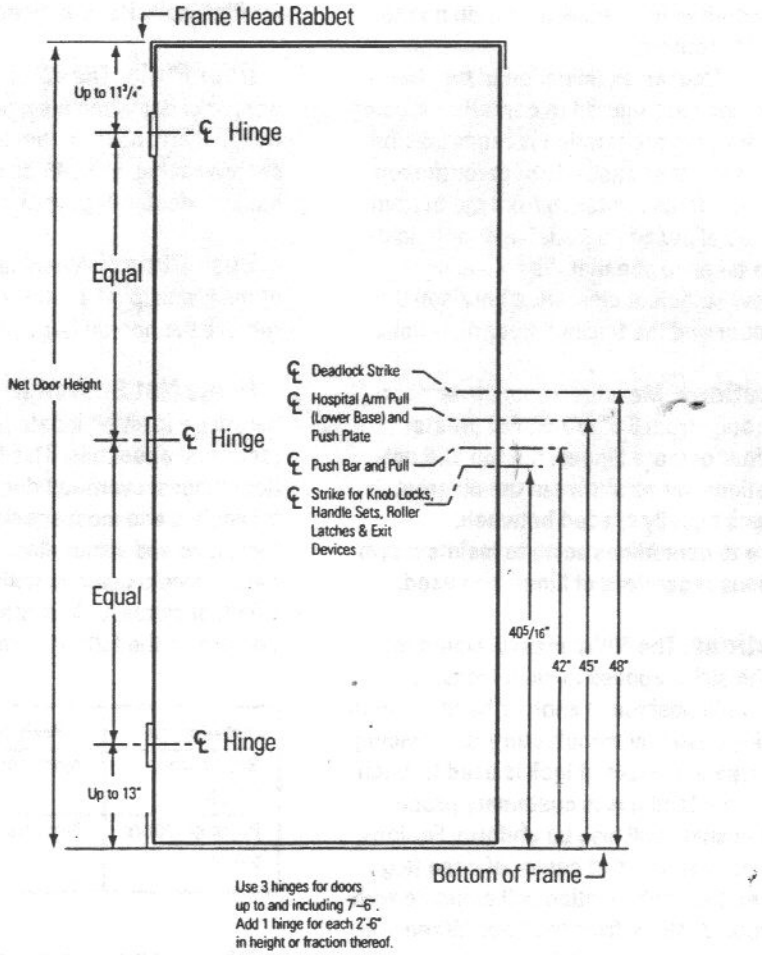
Figure 5



Slip Buck with Rough Buck

RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR STANDARD STEEL DOORS AND FRAMES

Locations Diagram



The need for a formal recommendation concerning hardware locations arises principally from changing conditions in the building construction field. Architectural handbooks treat the subject from the standpoint of traditional practice, which was based on wood doors and frames, job-fitted for hardware. In today's buildings, frames are usually of steel, and a large percentage of doors, whether of wood or metal, are being pre-fitted for hardware.

Advance procurement and early installation of metal door frames has made necessary a certain amount of standardization insofar as hardware preparations are concerned. Locations are an indispensable part of such standards.

The objective, then, is to find a set of dimensions which will recognize the unavoidable demands of modern production technique without sacrificing architectural design considerations. The dimensions presented herein are believed to accomplish this aim.

Any recommendation specifying dimensions must be predicated on assumed conditions or situations.