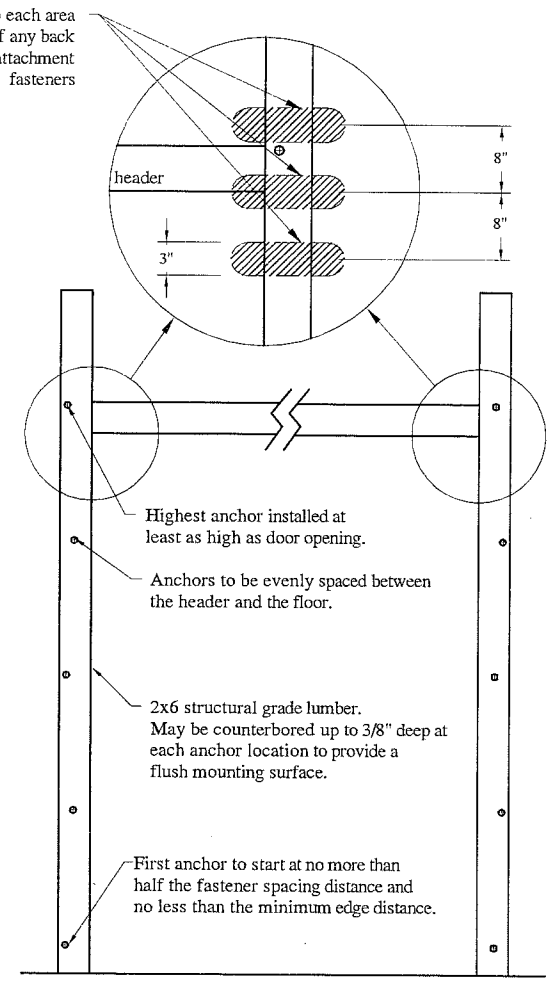
Anchor: ITW Tapcon or Tapcon LDT or Simpson Strong-Tie Sleeve-All or Wedge-All.
ITW Ramset/ Redhead Tapcon, 1/4" diameter, minimum 3" long with washer that conforms to ANSI B18.22.1 type B.
ITW Ramset/ Redhead Large Diameter Tapcon, 3/8" diameter, minimum 4" long with washer that conforms to ANSI B18.22.1 type B.
Simpson Sleeve-All / Wedge-All, 3/8" diameter, minimum 4" long with washer that conforms to ANSI B18.22.1 type B.
This chart applies to wood species with specific gravity greater than or equal to 0.42 including spruce pine fir (SPF) and southern pine (SP).
See chart for minimum washer diameter. Washer diameters in chart are based on use of Spruce Pine Fir. Washers may be 10% smaller when Southern Pine is used.
See chart for minimum edge distance required. Lowest anchor to be greater than the minimum edge distance up from the floor and less than 10-inches from the floor.
See chart for allowable load per anchor. Load per jamb = 0.5 x door width x max positive pressure x door height.
These charts do not address spring pad connections to the building.
Maximum spacing shown in chart. Lesser spacing may be used to avoid interference with door component system.
8" CMU block walls shall be of sufficient strength to resist loads.



FASTENER SPACING (inches)								DOOR WIDTH (feet and inches) at a given DESIGN PRESSURE (PSF)																		
2000 psi concrete						Grouted CMU	Hollow CMU																			
ITW Tapcon				Simpson Strong-Tie		ITW Tapcon																				
1/4"	1/4"	3/8"	3/8"	3/8" Sleeve-All	3/8" Wedge-All	3/8"	3/8"	18.6psf	20.2psf	22.9psf	27.1psf	28.6psf	34.1psf	36.8psf	39.7psf	43.5psf	47.8psf	53.1psf	58.2psf	62.6psf	68psf	75.7psf	81.7psf	87psf	92psf
24	24	24	24	24	24	24	24	12'-3"	11'-4"	10'-0"	8'-5"	8'-0"	6'-8"	6'-2"	5'-9"	5'-3"	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	23	12'-10"	11'-9"	10'-5"	8'-9"	8'-4"	7'-0"	6'-5"	6'-0"	5'-5"	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	22	13'-5"	12'-4"	10'-10"	9'-2"	8'-8"	7'-3"	6'-9"	6'-3"	5'-8"	5'-2"	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	21	14'-0"	12'-11"	11'-5"	9'-7"	9'-1"	7'-8"	7'-1"	6'-7"	6'-0"	5'-5"	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	20	14'-9"	13'-7"	12'-0"	10'-1"	9'-7"	8'-0"	7'-5"	6'-11"	6'-3"	5'-8"	5'-2"	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	19	15'-6"	14'-3"	12'-7"	10'-8"	10'-1"	8'-5"	7'-10"	7'-3"	6'-7"	6'-0"	5'-5"	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24	24	24	24	24	24	24	18	16'-4"	15'-1"	13'-4"	11'-3"	10'-8"	8'-11"	8'-3"	7'-8"	7'-0"	6'-4"	5'-9"	5'-2"	n/a	n/a	n/a	n/a	n/a	n/a
24	23	24	24	24	24	24	17	17'-4"	16'-0"	14'-1"	11'-11"	11'-3"	9'-5"	8'-9"	8'-1"	7'-5"	6'-9"	6'-1"	5'-6"	5'-1"	n/a	n/a	n/a	n/a	n/a
24	23	24	24	24	24	24	16	17'-10"	16'-5"	14'-6"	12'-3"	11'-7"	9'-9"	9'-0"	8'-4"	7'-7"	6'-11"	6'-3"	5'-8"	5'-3"	n/a	n/a	n/a	n/a	n/a
24	22	24	24	23	24	24	16	18'-5"	17'-0"	15'-0"	12'-8"	12'-0"	10'-0"	9'-4"	8'-7"	7'-10"	7'-2"	6'-5"	5'-10"	5'-5"	5'-0"	n/a	n/a	n/a	n/a
24	21	24	24	23	24	24	15	18'-10"	17'-4"	15'-3"	12'-11"	12'-3"	10'-3"	9'-6"	8'-9"	8'-0"	7'-4"	6'-7"	6'-0"	5'-7"	5'-1"	n/a	n/a	n/a	n/a
24	20	24	24	22	23	24	15	19'-8"	18'-1"	15'-11"	13'-6"	12'-9"	10'-8"	9'-11"	9'-2"	8'-5"	7'-7"	6'-10"	6'-3"	5'-10"	5'-4"	n/a	n/a	n/a	n/a
24	19	24	23	20	21	24	14	20'-9"	19'-1"	16'-10"	14'-3"	13'-6"	11'-4"	10'-6"	9'-9"	8'-10"	8'-1"	7'-3"	6'-7"	6'-2"	5'-8"	5'-1"	n/a	n/a	n/a
24	18	24	21	19	20	23	13	22'-3"	20'-6"	18'-1"	15'-3"	14'-6"	12'-2"	11'-3"	10'-5"	9'-6"	8'-8"	7'-9"	7'-1"	6'-7"	6'-1"	5'-5"	5'-0"	n/a	n/a
24	17	24	20	18	19	22	12	23'-4"	21'-5"	18'-11"	16'-0"	15'-2"	12'-8"	11'-9"	10'-11"	9'-11"	9'-0"	8'-2"	7'-5"	6'-11"	6'-4"	5'-8"	5'-3"	n/a	n/a
24	16	24	19	17	18	21	12	24'-5"	22'-6"	19'-10"	16'-9"	15'-10"	13'-4"	12'-4"	11'-5"	10'-5"	9'-6"	8'-6"	7'-9"	7'-3"	6'-8"	6'-0"	5'-6"	5'-2"	n/a
24	16	24	18	16	17	20	11	25'-8"	23'-7"	20'-10"	17'-7"	16'-8"	14'-0"	12'-11"	12'-0"	10'-11"	9'-11"	8'-11"	8'-2"	7'-7"	7'-0"	6'-3"	5'-10"	5'-5"	5'-2"
23	15	24	17	15	16	18	10	27'-5"	25'-3"	22'-3"	18'-10"	17'-10"	14'-11"	13'-10"	12'-10"	11'-8"	10'-8"	9'-7"	8'-9"	8'-1"	7'-6"	6'-8"	6'-2"	5'-10"	5'-6"
22	14	24	16	14	15	17	10	n/a	27'-0"	23'-10"	20'-2"	19'-1"	16'-0"	14'-10"	13'-9"	12'-6"	11'-5"	10'-3"	9'-4"	8'-8"	8'-0"	7'-2"	6'-8"	6'-3"	5'-11"
20	13	24	15	13	14	16	9	n/a	n/a	25'-8"	21'-8"	20'-7"	17'-3"	16'-0"	14'-10"	13'-6"	12'-3"	11'-1"	10'-1"	9'-4"	8'-7"	7'-9"	7'-2"	6'-9"	6'-4"
19	12	24	14	12	13	15	8	n/a	n/a	27'-8"	23'-5"	22'-2"	18'-7"	17'-3"	16'-0"	14'-7"	13'-3"	11'-11"	10'-11"	10'-1"	9'-4"	8'-4"	7'-9"	7'-3"	6'-10"
17	11	24	12	11	12	13	7	n/a	n/a	n/a	25'-8"	24'-4"	20'-4"	18'-10"	17'-6"	16'-0"	14'-6"	13'-1"	11'-11"	11'-1"	10'-2"	9'-2"	8'-6"	8'-0"	7'-6"
15	10	24	11	10	11	12	7	n/a	n/a	n/a	n/a	26'-9"	22'-5"	20'-9"	19'-3"	17'-7"	16'-0"	14'-5"	13'-1"	12'-2"	11'-3"	10'-1"	9'-4"	8'-9"	8'-3"
14	9	24	10	9	9	11	6	n/a	n/a	n/a	n/a	n/a	24'-11"	23'-1"	21'-5"	19'-6"	17'-9"	16'-0"	14'-7"	13'-7"	12'-6"	11'-2"	10'-4"	9'-9"	9'-2"
12	8	21	9	8	8	10	n/a	n/a	n/a	n/a	n/a	n/a	27'-11"	25'-11"	24'-0"	21'-11"	19'-11"	17'-11"	16'-4"	15'-2"	14'-0"	12'-7"	11'-8"	10'-11"	10'-4"
11	7	18	8	7	7	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-5"	25'-0"	22'-9"	20'-6"	18'-8"	17'-5"	16'-0"	14'-4"	13'-4"	12'-6"	11'-10"
9	6	16	7	6	6	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-3"	23'-7"	21'-6"	20'-0"	18'-5"	16'-6"	15'-4"	14'-5"	13'-7"
8	5	14	6	n/a	5	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-8"	25'-3"	23'-6"	21'-7"	19'-5"	18'-0"	16'-11"	16'-0"
2000 psi concrete						Grouted CMU	Hollow CMU	18.6psf	20.2psf	22.9psf	27.1psf	28.6psf	34.1psf	36.8psf	39.7psf	43.5psf	47.8psf	53.1psf	58.2psf	62.6psf	68psf	75.7psf	81.7psf	87psf	92psf
Tapcon				Sleeve-All	Wedge-All	Tapcon		DOOR WIDTH (feet and inches) at a given DESIGN PRESSURE (PSF)																		
1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	FASTENER DIAMETER																		
2.5"	2.5"	3"	3"	3"	3"	2"	2"	FASTENER LENGTH																		
1.75"	1.75"	2.5"	2.5"	1.5"	1.75"	1.5"	1.5"	EMBEDMENT LENGTH																		
1-1/4"	7/8"	1-1/2"	1"	1"	1"	1-1/8"	7/8"	WASHER DIAMETER																		
2-1/2"	2-1/2"	3"	3"	3"	3"	3"	3"	EDGE DISTANCE																		
505#	319#	859#	371#	336#	351#	398#	229#	FASTENER LOAD CAPACITY																		

Alternative design may be approved by a registered professional engineer.
Supporting structural elements shall be designed by registered professional engineer for wind loads in addition to other loads.
Calculation reference:
DASMA TDS #161C, 2005 AF&PA NDS for Wood Construction and Simpson Strong-Tie data.

STATE OF TEXAS
JOHN E. SCATES
56308
John E. Scates 9/28/11

Professional Engineer's seal provided only for verification of windload construction details

John E. Scates, P.E.
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Carrollton, Texas 75007
TXPE 56308, F-2203

C.H.I. OVERHEAD DOORS

SCALE none

DATE 9-28-2011

Back Jamb Attachment Detail
Concrete Anchors

C.H.I. Drawing: BJA-101-02