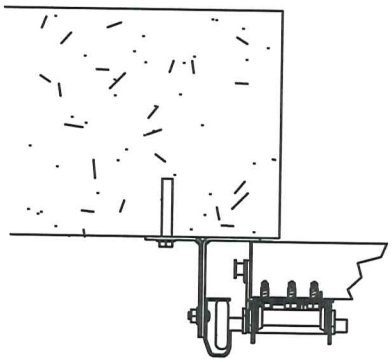
Anchor: ITW Ramset/ Redhead Tapcon, with washer that conforms to ANSI B18.22.1 type B.
ITW Ramset/ Redhead Tapcon XL, 1/4" diameter (with 13/16" diameter washer). Lesser spacing used to avoid interference with door component system must not be less than 4".
ITW Ramset/ Redhead Tapcon XL, 3/8" diameter (with 13/16" diameter washer). Lesser spacing used to avoid interference with door component system must not be less than 6".
ITW Ramset/ Redhead Large Diameter Tapcon, 1/2" diameter (with 1" diameter washer). Lesser spacing used to avoid interference with door component system must not be less than 8".
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.
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.
Add additional track brackets as required to satisfy fastener spacing in these charts.
Concrete walls shall be minimum 2000 psi concrete and shall be of sufficient strength to resist loads.
Calculation reference: ITW Ramset/ Redhead data, DASMA TDS-161a.

ALLOWABLE LOAD PER SCREW	1813#	933#	505#
Embedment	3-1/2"	2-1/2"	1-3/4"
Edge distance	3"	3"	2-1/2"
	ATTACHMENT SPACING (inches)		
	1/2	3/8	1/4

20psf	22psf	24.5psf	27.5psf	31.5psf	32.9psf	34.3psf	36psf	37.8psf	41.1psf	43psf	46.7psf	51.8psf	56psf	61psf	66.4psf	73.4psf	82.3psf	87psf	93.5psf	1/2	3/8	1/4
25'-3"	22'-11"	20'-7"	18'-4"	16'-0"	15'-4"	14'-8"	14'-0"	13'-4"	12'-3"	11'-8"	10'-9"	9'-8"	9'-0"	8'-3"	7'-7"	6'-10"	6'-1"	5'-9"	5'-4"	36	36	24
26'-4"	23'-11"	21'-6"	19'-1"	16'-8"	16'-0"	15'-3"	14'-7"	13'-11"	12'-9"	12'-3"	11'-3"	10'-1"	9'-4"	8'-7"	7'-11"	7'-2"	6'-4"	6'-0"	5'-7"	36	36	23
27'-6"	25'-0"	22'-5"	20'-0"	17'-5"	16'-8"	16'-0"	15'-3"	14'-6"	13'-4"	12'-9"	11'-9"	10'-7"	9'-10"	9'-0"	8'-3"	7'-6"	6'-8"	6'-3"	5'-10"	36	36	22
n/a	26'-2"	23'-6"	20'-11"	18'-3"	17'-6"	16'-9"	16'-0"	15'-2"	14'-0"	13'-5"	12'-4"	11'-1"	10'-3"	9'-5"	8'-8"	7'-10"	7'-0"	6'-7"	6'-2"	36	36	21
n/a	27'-6"	24'-8"	22'-0"	19'-2"	18'-4"	17'-7"	16'-9"	16'-0"	14'-8"	14'-1"	12'-11"	11'-8"	10'-9"	9'-11"	9'-1"	8'-3"	7'-4"	6'-11"	6'-5"	36	36	20
n/a	n/a	26'-2"	23'-3"	20'-3"	19'-5"	18'-7"	17'-9"	16'-11"	15'-6"	14'-10"	13'-8"	12'-4"	11'-5"	10'-6"	9'-7"	8'-8"	7'-9"	7'-4"	6'-10"	36	35	18
n/a	n/a	26'-10"	23'-11"	20'-10"	20'-0"	19'-1"	18'-3"	17'-4"	16'-0"	15'-3"	14'-1"	12'-8"	11'-9"	10'-9"	9'-10"	8'-11"	7'-11"	7'-6"	7'-0"	36	34	18
n/a	n/a	27'-7"	24'-7"	21'-5"	20'-6"	19'-8"	18'-9"	17'-10"	16'-5"	15'-8"	14'-5"	13'-0"	12'-1"	11'-1"	10'-2"	9'-2"	8'-2"	7'-9"	7'-2"	36	33	17
n/a	n/a	n/a	25'-5"	22'-2"	21'-3"	20'-4"	19'-5"	18'-6"	17'-0"	16'-3"	14'-11"	13'-6"	12'-6"	11'-5"	10'-6"	9'-6"	8'-6"	8'-0"	7'-5"	36	32	17
n/a	n/a	n/a	26'-2"	22'-10"	21'-11"	20'-11"	20'-0"	19'-0"	17'-6"	16'-9"	15'-5"	13'-10"	12'-10"	11'-9"	10'-10"	9'-9"	8'-9"	8'-3"	7'-8"	36	31	16
n/a	n/a	n/a	27'-2"	23'-8"	22'-8"	21'-9"	20'-8"	19'-9"	18'-2"	17'-4"	16'-0"	14'-5"	13'-4"	12'-3"	11'-3"	10'-2"	9'-1"	8'-7"	7'-11"	36	30	16
n/a	n/a	n/a	n/a	24'-5"	23'-5"	22'-5"	21'-4"	20'-4"	18'-9"	17'-11"	16'-6"	14'-10"	13'-9"	12'-7"	11'-7"	10'-6"	9'-4"	8'-10"	8'-3"	36	29	15
n/a	n/a	n/a	n/a	25'-3"	24'-2"	23'-2"	22'-1"	21'-0"	19'-4"	18'-6"	17'-0"	15'-4"	14'-2"	13'-0"	11'-11"	10'-10"	9'-8"	9'-1"	8'-6"	36	28	15
n/a	n/a	n/a	n/a	26'-3"	25'-2"	24'-1"	23'-0"	21'-11"	20'-2"	19'-3"	17'-9"	16'-0"	14'-9"	13'-7"	12'-5"	11'-3"	10'-0"	9'-6"	8'-10"	36	27	14
n/a	n/a	n/a	n/a	27'-2"	26'-1"	25'-0"	23'-10"	22'-8"	20'-10"	19'-11"	18'-4"	16'-6"	15'-4"	14'-0"	12'-11"	11'-8"	10'-5"	9'-10"	9'-2"	36	26	14
n/a	n/a	n/a	n/a	n/a	27'-3"	26'-1"	24'-10"	23'-8"	21'-9"	20'-10"	19'-2"	17'-3"	16'-0"	14'-8"	13'-6"	12'-2"	10'-10"	10'-3"	9'-7"	36	25	13
n/a	n/a	n/a	n/a	n/a	n/a	27'-1"	25'-10"	24'-7"	22'-7"	21'-8"	19'-11"	17'-11"	16'-7"	15'-3"	14'-0"	12'-8"	11'-3"	10'-8"	9'-11"	36	24	13
n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-1"	25'-9"	23'-8"	22'-8"	20'-10"	18'-10"	17'-5"	16'-0"	14'-8"	13'-3"	11'-10"	11'-2"	10'-5"	36	23	12
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-10"	24'-8"	23'-8"	21'-9"	19'-7"	18'-2"	16'-8"	15'-3"	13'-10"	12'-4"	11'-8"	10'-10"	36	22	11
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25'-9"	24'-8"	22'-8"	20'-6"	18'-11"	17'-4"	15'-11"	14'-5"	12'-10"	12'-2"	11'-4"	36	21	11
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-3"	26'-1"	24'-0"	21'-7"	20'-0"	18'-4"	16'-10"	15'-3"	13'-7"	12'-10"	11'-11"	36	20	10
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-4"	25'-2"	22'-8"	21'-0"	19'-3"	17'-8"	16'-0"	14'-3"	13'-6"	12'-6"	36	19	10
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-8"	24'-1"	22'-3"	20'-5"	18'-9"	17'-0"	15'-2"	14'-4"	13'-4"	35	18	9
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-3"	24'-7"	22'-9"	20'-10	19'-2"	17'-4"	15'-5"	14'-7"	13'-7"	34	18	9
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25'-4"	23'-6"	21'-6"	19'-9"	17'-11"	15'-11"	15'-1"	14'-1"	33	17	9
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-3"	24'-3"	22'-3"	20'-5"	18'-6"	16'-6"	15'-7"	14'-6"	32	17	8
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-2"	25'-1"	23'-0"	21'-2"	19'-2"	17'-1"	16'-2"	15'-0"	31	16	8
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-9"	25'-9"	23'-7"	21'-8"	19'-7"	17'-6"	16'-7"	15'-5"	30	15	8
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-8"	24'-6"	22'-6"	20'-4"	18'-2"	17'-2"	15'-11"	29	15	8
n/a	n/a	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'-5"	23'-4"	21'-2"	18'-10"	17'-10"	16'-7"	28	14	7
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-5"	24'-3"	22'-0"	19'-7"	18'-6"	17'-3"	27	14	7
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-6"	25'-3"	22'-11"	20'-5"	19'-4"	17'-11"	26	13	7
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-0"	23'-7"	21'-0"	19'-10"	18'-6"	25	13	7
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-2"	24'-7"	21'-11"	20'-9"	19'-4"	24	12	6
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25'-9"	22'-11"	21'-9"	20'-2"	23	12	6
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-0"	24'-1"	22'-10"	21'-2"	22	11	6
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	25'-4"	24'-0"	22'-4"	21	11	6
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26'-3"	24'-10"	23'-1"	20	10	6
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27'-9"	26'-3"	24'-5"	19	10	5
20psf	22psf	24.5psf	27.5psf	31.5psf	32.9psf	34.3psf	36psf	37.8psf	41.1psf	43psf	46.7psf	51.8psf	56psf	61psf	66.4psf	73.4psf	82.3psf	87psf	93.5psf	1/2	3/8	1/4
																				ATTACHMENT SPACING (inches)		



Alternative design may be approved by a registered professional engineer.

Supporting structural elements shall be designed by a registered professional engineer for wind loads in addition to other loads.

This drawing does not address the jamb/wall design, but only door attachment. Jamb/wall construction is shown only for illustration purposes. The building designer is responsible for ensuring that the jamb/wall is sufficient to carry the door live and static loads.

STATE OF TEXAS
JOHN E. SCATES
56308
PROFESSIONAL ENGINEER

John E. Scates
9/28/11

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

John E. Scates, P.E.
3121 Fairgate Drive
Carrollton, Texas 75007
TXPE 56308, F-2203

C.H.I. OVERHEAD DOORS

SCALE none

DATE 7-11-2011

Concrete Wall Attachment Detail

C.H.I. Drawing: BJA-105-01