Jamb Connection Supplement

This document provides a series of connection schedules and basic detailing concepts for the connection of garage door jambs to building frames with the use of various fasteners. DASMA Technical Data Sheet TDS-161 may be used as an alternate to this document.

P/N 324620

Rev. P8

SCHEDULE 1
3/8" DIAMETER LAG SCREWS

LOAD PER JAMB (LB/FT)[NOTE 3]	MAXIMUM SPACING OF LAG SCREWS PER JAMB (IN) MAIN SUPPORT MEMBER SPECIES		
	SYP SPECIFIC GRAVITY - 0.55	DOUGLAS FIR SPECIFIC GRAVITY - 0.46	SPF SPECIFIC GRAVITY - 0.42
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	22
280	24	23	20
300	24	22	19
320	24	20	18
340	24	19	16
360	24	18	16
380	22	17	15
400	21	16	14
420	20	15	13
440	19	15	13
460	18	14	12
480	18	13	12
500	17	13	11
520	16	12	11
540	16	12	10
560	15	11	10
580	14	11	9
600	14	11	9
620	13	10	9
640	13	10	9
660	13	10	8
680	12	9	8
700	12	9	8
720	12	9	8
740	11	8	7
760	11	8	7
780	11	8	7
800	10	8	7

1. BASED ON 3/8" DIAMETER LAG SCREWS WITH 1" O.D. WASHERS WITH A 1-9/32" THREAD PENETRATION INTO SEASONED DRY WOOD SUPPORTING STRUCTURE.
2. PROVIDE QUANTITY OF LAG SCREWS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) LAG SCREWS PER JAMB. LAG SCREWS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. MINIMUM EDGE DISTANCE SHALL BE 1-1/2" AND HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-2005.
9. LAG SCREWS SHALL CONFORM TO ANSI / ASME STANDARD B18.2.1.

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Revision P8

SCHEDULE 2
16d COMMON WIRE NAILS AND 16d THREADED HARDENED-STEEL NAILS

	MAXIMUM NAIL SPACING PER JAMB (IN)		
	MAIN SUPPORT MEMBER SPECIES		
LOAD PER JAMB (LB/FT)[NOTE 3]	SYP SPECIFIC GRAVITY - 0.55	DOUGLAS FIR SPECIFIC GRAVITY - 0.46	SPF SPECIFIC GRAVITY - 0.42
100	24	24	19
120	24	20	16
140	23	17	14
160	20	15	12
180	18	13	10
200	16	12	9
220	14	11	8
240	13	10	8
260	12	9	7
280	11	8	7
300	10	8	6
320	10	7	6
340	9	7	5
360	9	6	5
380	8	6	5
400	8	6	4
420	7	5	4
440	7	5	4
460	7	5	4
480	6	5	4
500	6	4	3
520	6	4	3
540	6	4	3
560	5	4	3
580	5	4	3
600	5	4	3
620	5	3	3
640	5	3	3
660	4	3	2
680	4	3	2
700	4	3	2
720	4	3	2
740	4	3	2
760	4	3	2
780	4	3	2
800	4	3	2

1. BASED ON 16d COMMON WIRE NAILS (0.162"x3-1/2") OR 16d THREADED HARDENED-STEEL NAILS (0.148"x3-1/2") WITH A MINIMUM PENETRATION OF 2" INTO SIDE GRAIN OF MAIN MEMBER.
2. NAILS SHALL BE PROVIDED IN PAIRS AT A MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) PAIRS OF NAILS PER JAMB. NAILS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. EDGE DISTANCES, END DISTANCES AND SPACINGS SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-2005.

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Revision P8

SCHEDULE 3
3/8"Ø A307 HEADED OR HOOKED ANCHOR BOLTS IN NORMAL WEIGHT CONCRETE

	MAXIMUM SPACING OF ANCHOR BOLTS PER JAMB (IN)		
LOAD PER JAMB (LB/FT)[NOTE 3]	2000 PSI CONCRETE	2500 PSI CONCRETE	3000 PSI CONCRETE
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	24
280	24	24	24
300	24	24	24
320	24	24	24
340	24	24	24
360	23	24	24
380	22	24	24
400	20	24	24
420	19	24	24
440	19	23	24
460	18	22	24
480	17	21	23
500	16	20	22
520	16	20	21
540	15	19	20
560	14	18	19
580	14	18	19
600	13	17	18
620	13	16	18
640	13	16	17
660	12	15	16
680	12	15	16
700	11	14	15
720	11	14	15
740	11	14	15
760	11	13	14
780	10	13	14
800	10	13	13

1. BASED ON 3/8"Ø A307 HEADED OR HOOKED (1.69" MIN. HOOK LENGTH) ANCHOR BOLTS WITH A 1" O.D. WASHER WITH A MINIMUM EMBEDMENT DEPTH OF 3" AND A MINIMUM EDGE DISTANCE OF 3".
2. PROVIDE QUANTITY OF ANCHOR BOLTS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) ANCHOR BOLTS PER JAMB. ANCHOR BOLTS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-2005 AND ACI 318-05, APPENDIX D.

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Revision P8

SCHEDULE 4
3/8"Ø SIMPSON TITEN HD SCREW ANCHORS

	MAXIMUM SPACING OF ANCHORS PER JAMB (IN)		
LOAD PER JAMB (LB/FT)[NOTE 4]	2000 PSI CONCRETE[NOTE 1]	4000 PSI CONCRETE[NOTE 1]	2000 PSI GROUT FILLED CMU[NOTE 2]
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	24
280	24	24	24
300	24	24	24
320	24	24	22
340	24	24	21
360	24	24	20
380	24	24	18
400	24	24	18
420	24	24	17
440	24	24	16
460	24	24	15
480	23	23	15
500	22	22	14
520	21	21	13
540	20	20	13
560	19	19	12
580	19	19	12
600	18	18	12
620	18	18	11
640	17	17	11
660	16	16	10
680	16	16	10
700	15	15	10
720	15	15	10
740	15	15	9
760	14	14	9
780	14	14	9
800	13	13	9

1. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1" O.D. WASHER INTO NORMAL WEIGHT CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 2-3/4".
2. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1" O.D. WASHER INTO GROUT FILLED CMU WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4", A MINIMUM EDGE DISTANCE OF 4", AND A MINIMUM END DISTANCE OF 4". CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. PROVIDE QUANTITY OF SCREW ANCHORS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) SCREW ANCHORS PER JAMB. SCREW ANCHORS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
4. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

5. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
6. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
7. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 4.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-2005.
9. SCREW ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

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Revision P8

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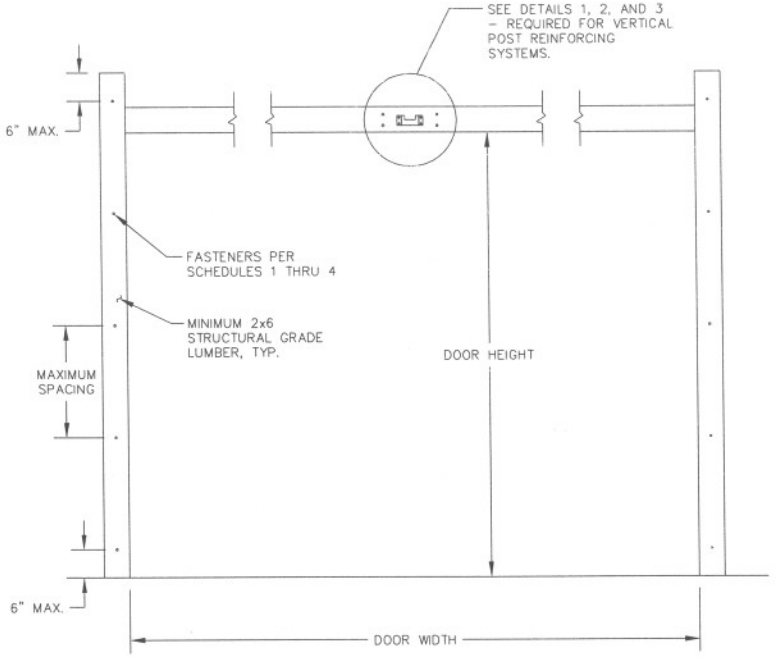
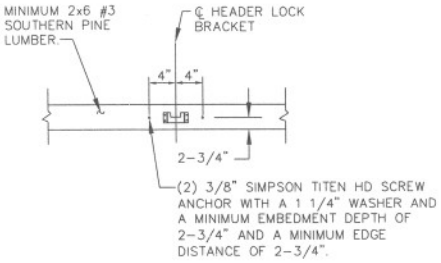
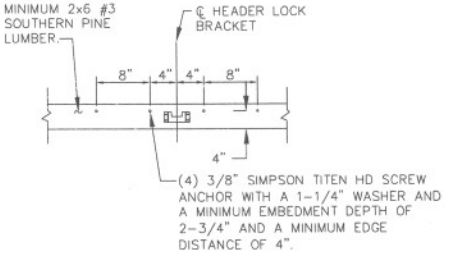
REVISIONS

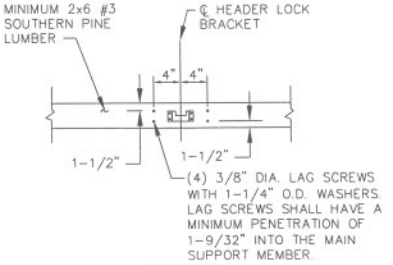




DETAIL 1
MINIMUM 2000 PSI CONCRETE
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2085 LBS.



DETAIL 2
MINIMUM 2000 PSI GROUT FILLED CMU
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2400 LBS.



DETAIL 3
WOOD SUPPORT STRUCTURE
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2430 LBS.

5/30/08
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	DATE	NAME
DRAWN	5/24/07	GRT
CHECKED	5/24/07	MRB

JAMB CONNECTION SUPPLEMENT

DRAWING PART NO.	REV.
324620	P8