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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 411241

Rev. P4

SCHEDULE 1
5/16" 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	22
240	24	24	20
260	24	22	19
280	24	20	17
300	24	19	16
320	22	18	15
340	21	16	14
360	20	16	13
380	19	15	13
400	18	14	12
420	17	13	11
440	16	13	11
460	15	12	10
480	15	12	10
500	14	11	10
520	14	11	9
540	13	10	9
560	13	10	8
580	12	9	8
600	12	9	8
620	11	9	8
640	11	9	7
660	11	8	7
680	10	8	7
700	10	8	7
720	10	8	6
740	9	7	6
760	9	7	6
780	9	7	6
800	9	7	6

STATE OF TEXAS
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1. BASED ON 5/16" DIAMETER LAG SCREWS WITH 1-1/2" 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 2x4 OR LARGER NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
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 1/2", MINIMUM FASTENER SPACING SHALL BE 1-1/2", AND ALL 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.

Approved

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Revision P4

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	22	20	16
140	19	17	14
160	16	15	12
180	14	13	10
200	13	12	9
220	12	11	8
240	11	10	8
260	10	9	7
280	9	8	7
300	8	8	6
320	8	7	6
340	7	7	n/a
360	7	6	n/a
380	7	6	n/a
400	6	6	n/a
420	6	n/a	n/a
440	6	n/a	n/a
460	n/a	n/a	n/a
480	n/a	n/a	n/a
500	n/a	n/a	n/a
520	n/a	n/a	n/a
540	n/a	n/a	n/a
560	n/a	n/a	n/a
580	n/a	n/a	n/a
600	n/a	n/a	n/a
620	n/a	n/a	n/a
640	n/a	n/a	n/a
660	n/a	n/a	n/a
680	n/a	n/a	n/a
700	n/a	n/a	n/a
720	n/a	n/a	n/a
740	n/a	n/a	n/a
760	n/a	n/a	n/a
780	n/a	n/a	n/a
800	n/a	n/a	n/a

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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 2x4 OR LARGER NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
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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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	24
500	16	20	24
520	16	20	24
540	15	19	23
560	14	18	22
580	14	18	21
600	13	17	20
620	13	16	20
640	13	16	19
660	12	15	19
680	12	15	18
700	11	14	17
720	11	14	17
740	11	14	16
760	11	13	16
780	10	13	16
800	10	13	15

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1. BASED ON 3/8"Ø A307 HEADED OR HOOKED (1.69" MIN. HOOK LENGTH) ANCHOR BOLTS WITH A 2" 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 TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
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 P4

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	22
280	24	24	20
300	24	24	19
320	24	24	18
340	24	24	16
360	24	24	16
380	24	24	15
400	24	24	14
420	24	24	13
440	24	24	13
460	24	24	12
480	23	23	12
500	22	22	11
520	21	21	11
540	20	20	10
560	19	19	10
580	19	19	9
600	18	18	9
620	17	17	9
640	17	17	9
660	16	16	8
680	16	16	8
700	15	15	8
720	15	15	8
740	15	15	7
760	14	14	7
780	14	14	7
800	13	13	7

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1. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1-3/4" 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 1-3/4" 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 TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
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.

Approved

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SCHEDULE 5
3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR

	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	24
340	24	24	24
360	24	24	24
380	24	24	24
400	24	24	23
420	24	24	22
440	24	24	21
460	24	24	20
480	23	23	19
500	22	22	18
520	21	21	18
540	20	20	17
560	19	19	16
580	19	19	16
600	18	18	15
620	17	17	15
640	17	17	14
660	16	16	14
680	16	16	13
700	15	15	13
720	15	15	13
740	15	15	12
760	14	14	12
780	14	14	12
800	13	13	11

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1. BASED ON 3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR WITH A 1-3/4" O.D. WASHER INTO NORMAL WEIGHT CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-1/2" AND A MINIMUM EDGE DISTANCE OF 3".
2. BASED ON 3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR WITH A 1-3/4" O.D. WASHER INTO GROUT FILLED CMU WITH A MINIMUM EMBEDMENT DEPTH OF 2-1/2" AND A MINIMUM EDGE DISTANCE OF 4".
   ONLY ONE ANCHOR PER MASONARY UNIT
   CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. PROVIDE QUANTITY OF ANCHORS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) ANCHORS PER JAMB. 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 TO SUPPORT STRUCTURE.
   IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
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.

Approved

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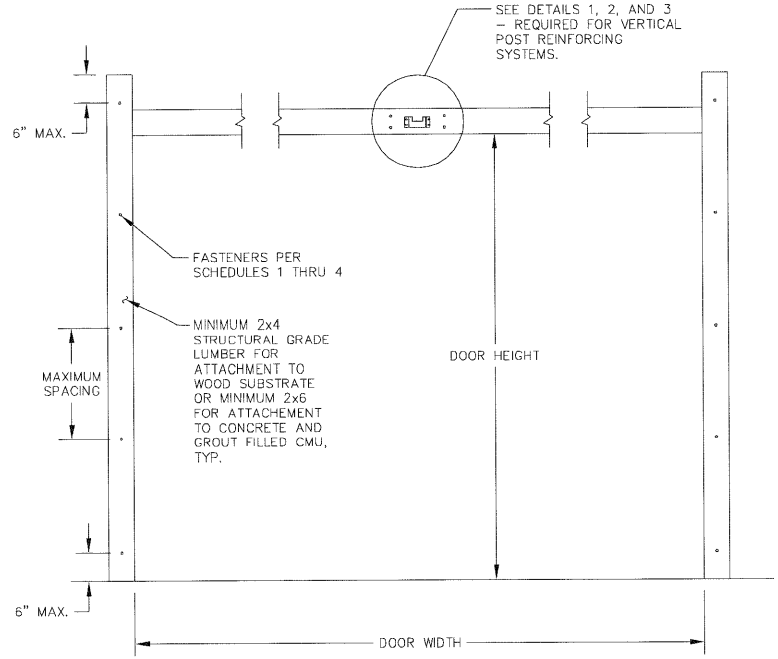
Revision P4

The Genuine. The Original.

OVERHEAD DOOR

OVERHEAD DOOR CORPORATION
2501 SOUTH STATE HIGHWAY 121
SUITE 200 LEWISVILLE, TX 75067
(800) 275-3920

REVISIONS



6/26/14

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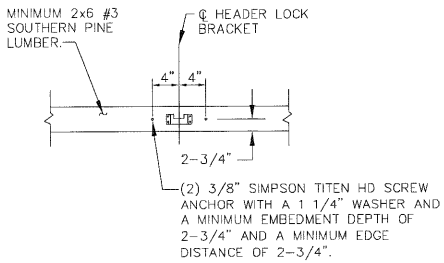
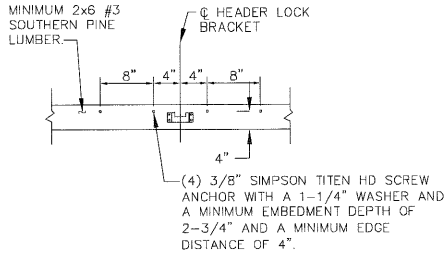
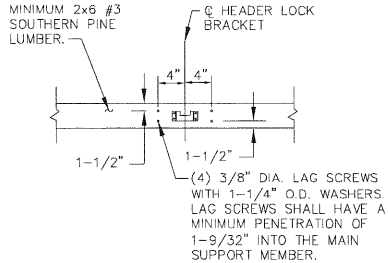


DETAIL 1
MINIMUM 2000 PSI CONCRETE
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2085 LBS.



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.

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PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WINDLOAD CONSTRUCTION DETAILS.

	DATE	NAME
DRAWN	4/19/12	GRT
CHECKED	4/19/12	GRT

SHEET 1 OF 2

JAMB CONNECTION SUPPLEMENT

DRAWING PART NO.	REV.
411241	P4

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OVERHEAD DOOR

OVERHEAD DOOR CORPORATION
2501 SOUTH STATE HIGHWAY 121
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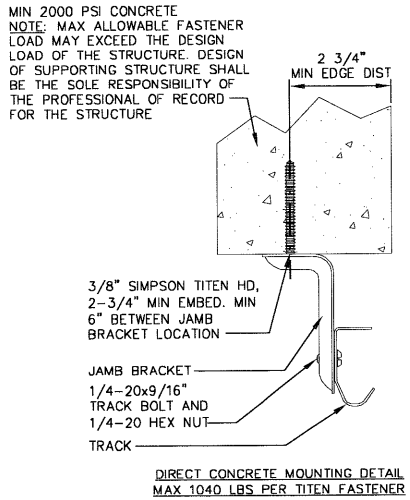
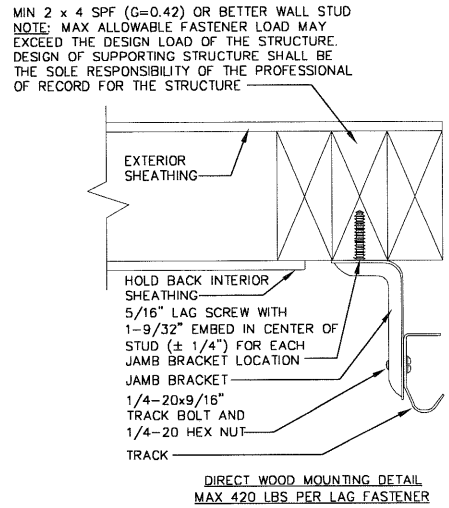
REVISIONS



DIRECT CONCRETE MOUNTING DETAIL
MAX 1040 LBS PER TITEN FASTENER



DIRECT WOOD MOUNTING DETAIL
MAX 420 LBS PER LAG FASTENER

6/26/14

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	DATE	NAME
DRAWN	4/19/12	GRT
CHECKED	4/19/12	GRT

SHEET 2 OF 2

JAMB CONNECTION SUPPLEMENT

DRAWING PART NO. 411241

REV. P4