

- NOTES
- DESIGNED AND TESTED IN ACCORDANCE WITH WIND LOAD PROVISIONS OF THE FLORIDA BUILDING CODE AND INTERNATIONAL BUILDING CODE. PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WIND LOAD CONSTRUCTION DETAILS.
 - PRESSURES LISTED AS POSITIVE/NEGATIVE (DESIGN).
 - SECTION HEIGHTS MAY VARY TO CREATE VARIOUS DOOR HEIGHTS, 24" MAXIMUM SECTION HEIGHT.
 - LIFT CLEARANCE OR FULL VERTICAL TRACK MAY ALSO BE USED. LOW HEADROOM TRACK MAY BE USED WITH EITHER DRAWBAR OPERATOR OR LOCK.
 - FASTENING METHODS (TRACK TO WALL), SPACING BASED ON BRACKET SPACING (SEE CHART BELOW):

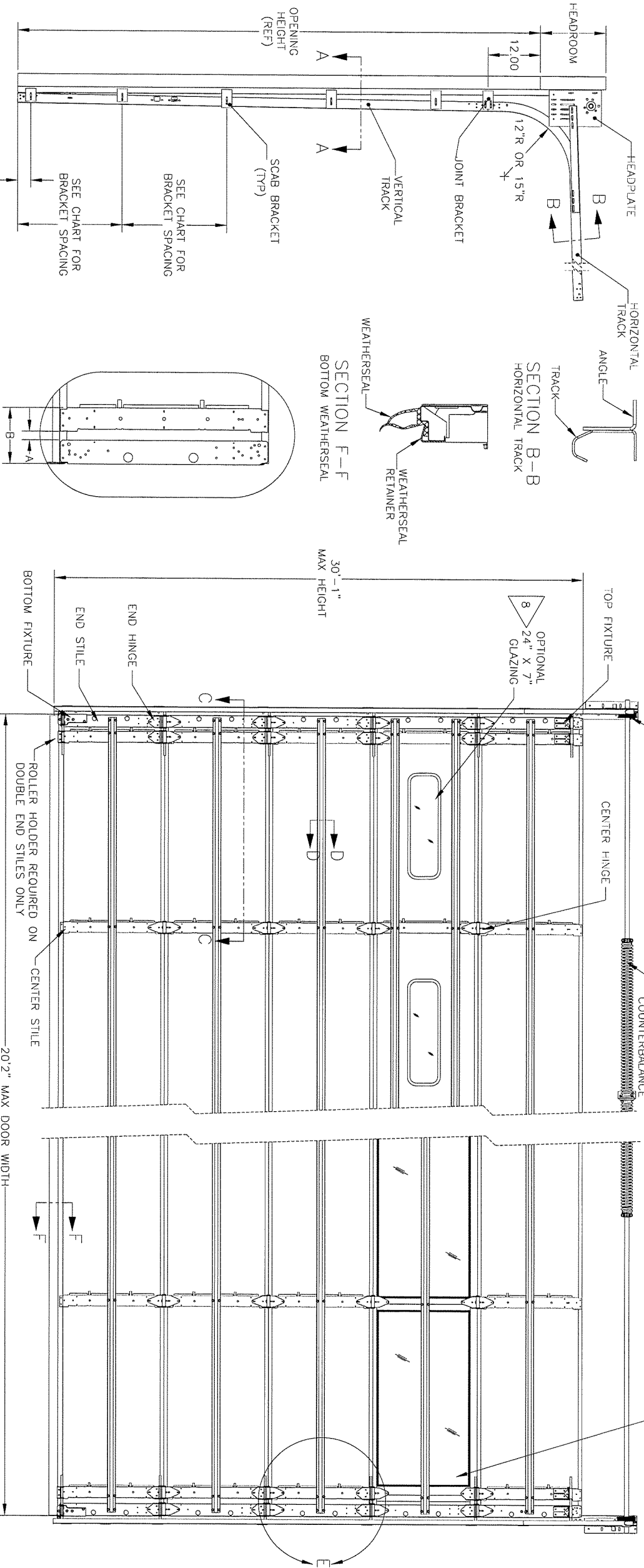
- JAMB BRACKETS (TYP WOOD JAMBS) STYLE TRACK-- 5/16" x 1 3/4" LAG BOLT, OR EQUIVALENT.
- ALTERNATE ANGLE MOUNT--SEE SHEET 2
- FOR COMMERCIAL HARDWARE DETAILS SEE DRAWING 408717.
- STRUTS TO BE ATTACHED ± 3" FROM CENTER LINE OF SECTION.
- MULTIPLE ALUMINUM FULL VIEW OR GLAZED SECTIONS MAY REPLACE ANY SECTION EXCEPT TOP AND BOTTOM SECTIONS.
- ALUMINUM FULL VIEW SECTIONS TO BE INSTALLED WITH MIN 1/8" DSB GLAZING AND ALUMINUM RETAINERS TO MEET THE LISTED STATIC DESIGN PRESSURES.
- MAX WIDTH 16 FT. FOR ALUMINUM FULL VIEW SECTIONS AT THE LISTED DESIGN PRESSURES.
- GLAZING FRAME OPTION-1/8" MIN DSB GLAZING MEETS UNIFORM STATIC DESIGN PRESSURES LISTED ON

- THIS DRAWING, GLAZING FRAME SHALL HAVE MAX HEIGHT OF 7" AND MAX LENGTH OF 24".
- GLAZING OPTIONS ARE NOT IMPACT RESISTANT AND DO NOT MEET THE REQUIREMENTS FOR WIND BORNE DEBRIS REGIONS.
 - STRUTS ON FULL VIEW OF GLAZED SECTION(S) TO MATCH THE STRUTS ON THE ADJACENT STEEL SECTIONS.
- STRUT OR Z STRUT INSTALLATION:
 - FOR STRUTS ONLY-- USE ONE SCREW (P/N 605879-0002) ON BOTH SIDES OF STRUT AT EACH END STILE AND CENTER STILE.
 - FOR Z STRUT (P/N 407756-XXXX) OR 6" C-CHANNEL (410819-XXXXXX).

- USE 1 SCREW (P/N 605879-0002) AT EACH END STILE AND CENTER STILE TO ATTACH.
 - ATTACH A STRUT STRAP AT EVERY HINGE.
 - USE ONE SCREW AT THE TOP AND BOTTOM RAIL OF THE SECTION AND ONE SCREW THROUGH Z STRUT (ATTACH 6" TALL C-CHANNEL TO STRAP WITH 2X SCREWS PER STRAP LOCATION).
- REFERENCE WINDLOAD SPECIFICATION CHART FOR END STILE REQUIREMENTS (SEE DETAIL E).
 - WHEN STANDARD SECTION WITH DOUBLE END STILE, - A = 1.00" AND B = 6.5" - WHEN FULL VISION WITH DOUBLE END STILE, - A = 1.00" AND B = 6.5"

REVISIONS			
NO	REV	DESCRIPTION	DATE
501337	D	REVISED PER ER	10/12/11
32499	E	ADDED SECOND PAGE	10/6/20
32933	G	ADDED 2 & 3" 20GA STRUTS	05/09/20
TLC			

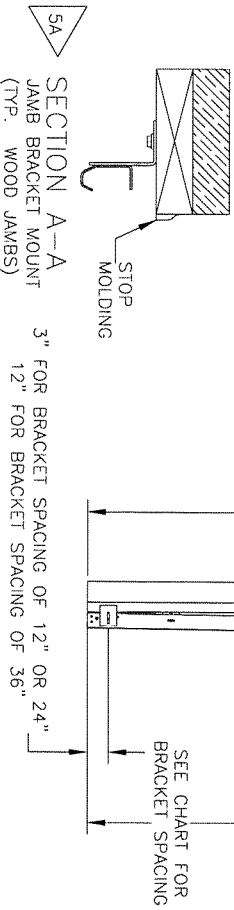
11.	THE 6" TALL 16GA Z(407756-0001) OR (2) HS-3 MAY BE SUBSTITUTED FOR 6" 16GA (410819).
12.	2" 20GA STEEL STRUTS (412619-XXXX2) MAY BE SUBSTITUTED FOR HS-1 (400650-0001).
13.	3" 20GA STEEL STRUTS (411186-XXXX) MAY BE SUBSTITUTED FOR HS-2 STRUTS (400650-0002).



DETAIL E
DOUBLE END STILE

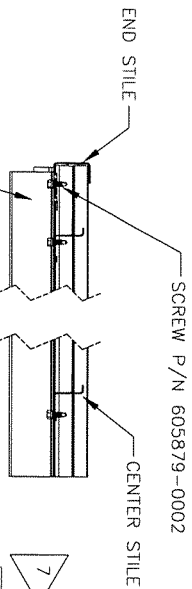
INTERIOR DOOR ELEVATION

SIDE ELEVATION OF TYPICAL COMMERCIAL TRACK

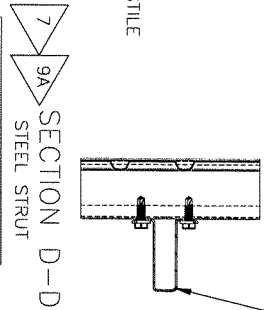


SECTION A-A
JAMB BRACKET MOUNT
(TYP. WOOD JAMBS)

3" FOR BRACKET SPACING OF 12" OR 24"
12" FOR BRACKET SPACING OF 36"

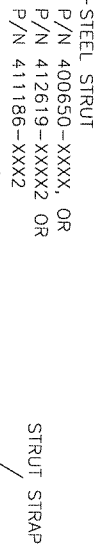


SECTION C-C
STEEL STRUT
OR Z STRUT



SECTION D-D
STEEL STRUT

STRUT	THICK	HEIGHT
HS-0	0.020	2.25
HS-1	0.030	2.25
HS-2	0.052	2.25
HS-3	0.055	3.50
2" 20GA	0.034	2.00
3" 20GA	0.034	3.00



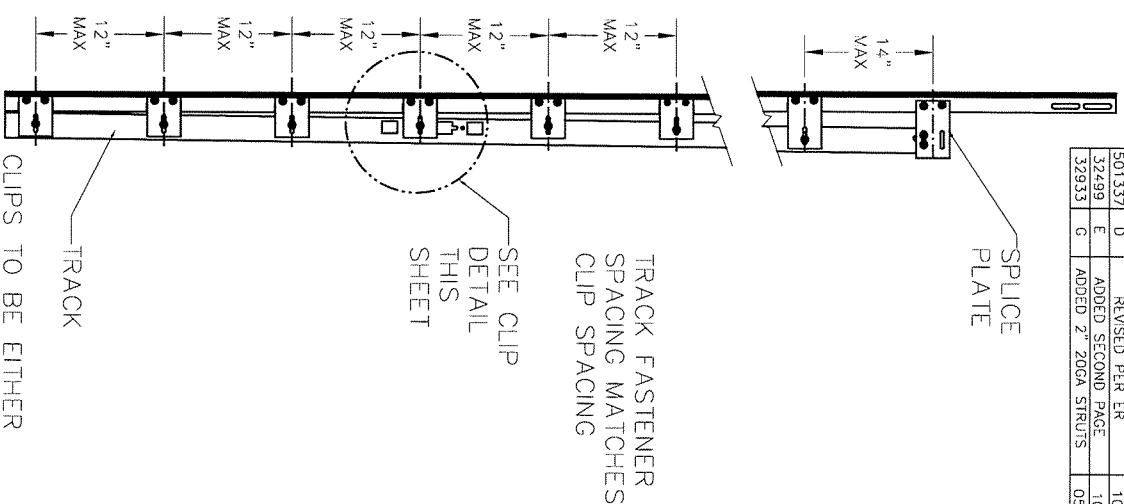
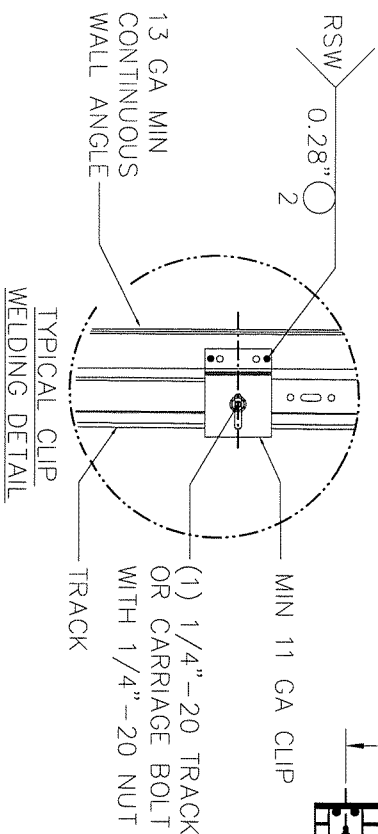
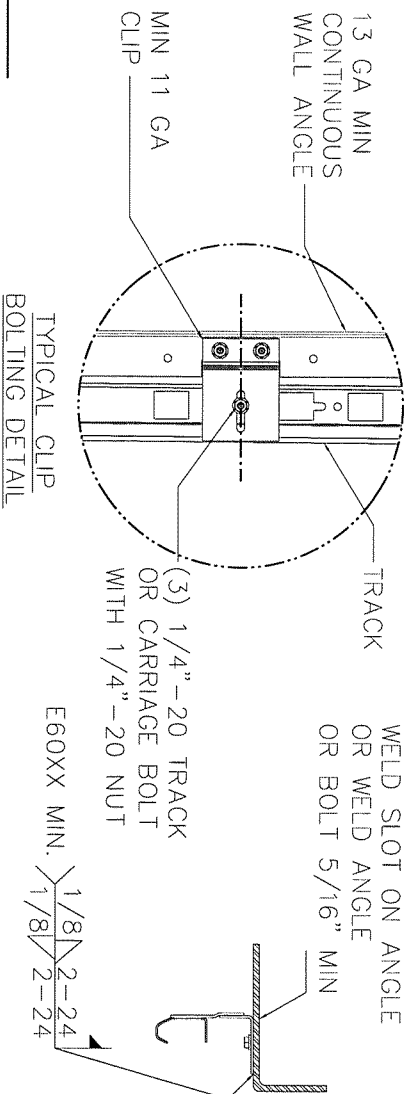
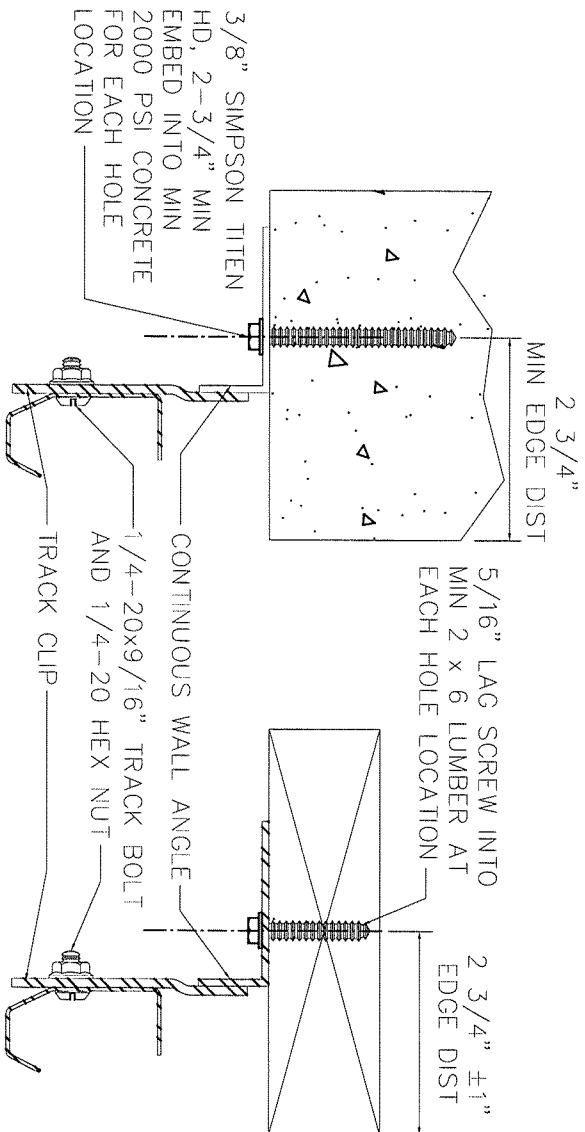
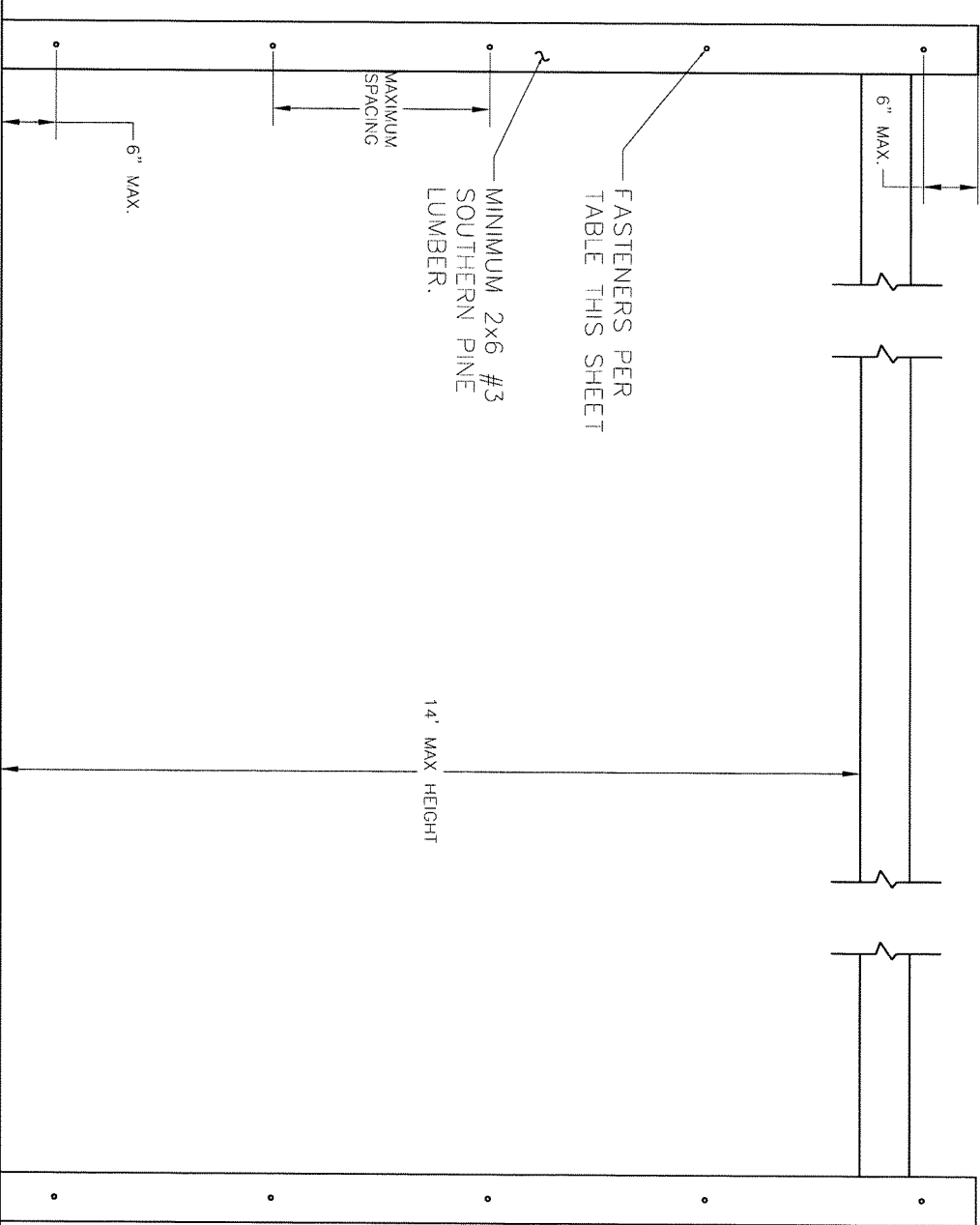
SECTION D-D
FULL SECTION
Z STRUT



SERIES 420/422: 31/-31 PSF WINDLOAD									
DOOR	END	CENTER	STRUT	ROLLER	TRACK	JAMB			
WIDTH	STILE	STILE				LOAD			
UP TO	QTY	QTY	TYPE	TIRE DIA.	STEM DIA.	BRACKET VERTICAL GAGE (HEIGHT)			
8'2"	SINGLE	1	HS-1	2"	7/16"	24"	0.049"	127	STANDARD
10'2"	DOUBLE	2	HS-2	2"	7/16"	12"	0.068"	158	STANDARD
12'2"	DOUBLE	2	HS-3	2"	7/16"	12"	0.068"	189	STANDARD
14'2"	DOUBLE	5	HS-3	2"	7/16"	12"	0.068"	220	STANDARD
16'2"	DOUBLE	4	HS-3	2"	7/16"	12"	0.068"	251	STANDARD
18'2"	DOUBLE	6	HS-3	2"	7/16"	12"	0.068"	282	STANDARD
20'2"	DOUBLE	7	HS-3	2"	7/16"	12"	0.068"	313	STANDARD

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TOLERANCES UNLESS OTHERWISE SPECIFIED				HARDWARE			FINISH		
HARDWARE				HARDWARE			HARDWARE		
HARDWARE				HARDWARE			HARDWARE		
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NOTES



1. BASED ON 3/8" SIMPSON TITEN HEAVY DUTY SCREW ANCHOR WITH A 1" O.D. WASHER INTO CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 2-3/4".
2. BASED ON 3/8" SIMPSON TITEN HEAVY DUTY 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".
3. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. BASED ON 3/8" DIAMETER x 3" LONG LAG SCREWS WITH 1" O.D. WASHERS WITH A 1-9/32" THREAD PENETRATION INTO SEASONED DRY WOOD SUPPORTING STRUCTURE.
4. PROVIDE QUANTITY OF SCREW ANCHORS OR LAG SCREWS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) SCREW ANCHORS OR LAG SCREWS PER JAMB. SCREW ANCHORS OR LAG SCREWS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
5. LOAD PER JAMB CALCULATED TO BE A MAXIMUM OF +/-312.6 LBS PER FOOT.
6. CHART INCLUDES A SAFETY FACTOR OF 4.
7. DOOR JAMB TO BE MINIMUM 2x6 NO. 3 SOUTHERN PINE LUMBER (MIN) MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
8. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE LOADS LISTED IN NOTE 5.
9. SCREW ANCHORS OR LAG SCREWS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

MAX SPACING OF ANCHORS/SCREWS PER JAMB (IN)		
3/8" SIMPSON TITEN HD SCREW ANCHOR TO MINIMUM 2000 PSI CONCRETE ^{NOTE 1}	3/8" SIMPSON TITEN HD SCREW ANCHOR TO MINIMUM 2000 PSI GROUT FILLED CMU ^{NOTE 2}	3/8" x 3" LONG LAG SCREW ^{NOTE 3}
24	16	24

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REV	REV	DESCRIPTION	DATE	APPROV
501337	D	REVISED PER ERF	10/12/11	SFT
32499	E	ADDED SECOND PAGE	10/6/20	TJC
32933	G	ADDED 2" 200A STRUTS	05/05/25	W.DAN

SCALE: N/A	SHEET 2 OF 2
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DRAWING TITLE: WINDLOAD, 420/422, 31/-31 PSF, 20'-2" MAX

DRAWING NUMBER: D-410161

APPROVED BY: L KRUPKE

CHECKED BY: T CLARK

DRAWN BY: J OLAN

DATE: 3/27/20

10/12/20

STATE OF FLORIDA

PROFESSIONAL ENGINEER

GORDON D. THOMAS

No. 46718

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