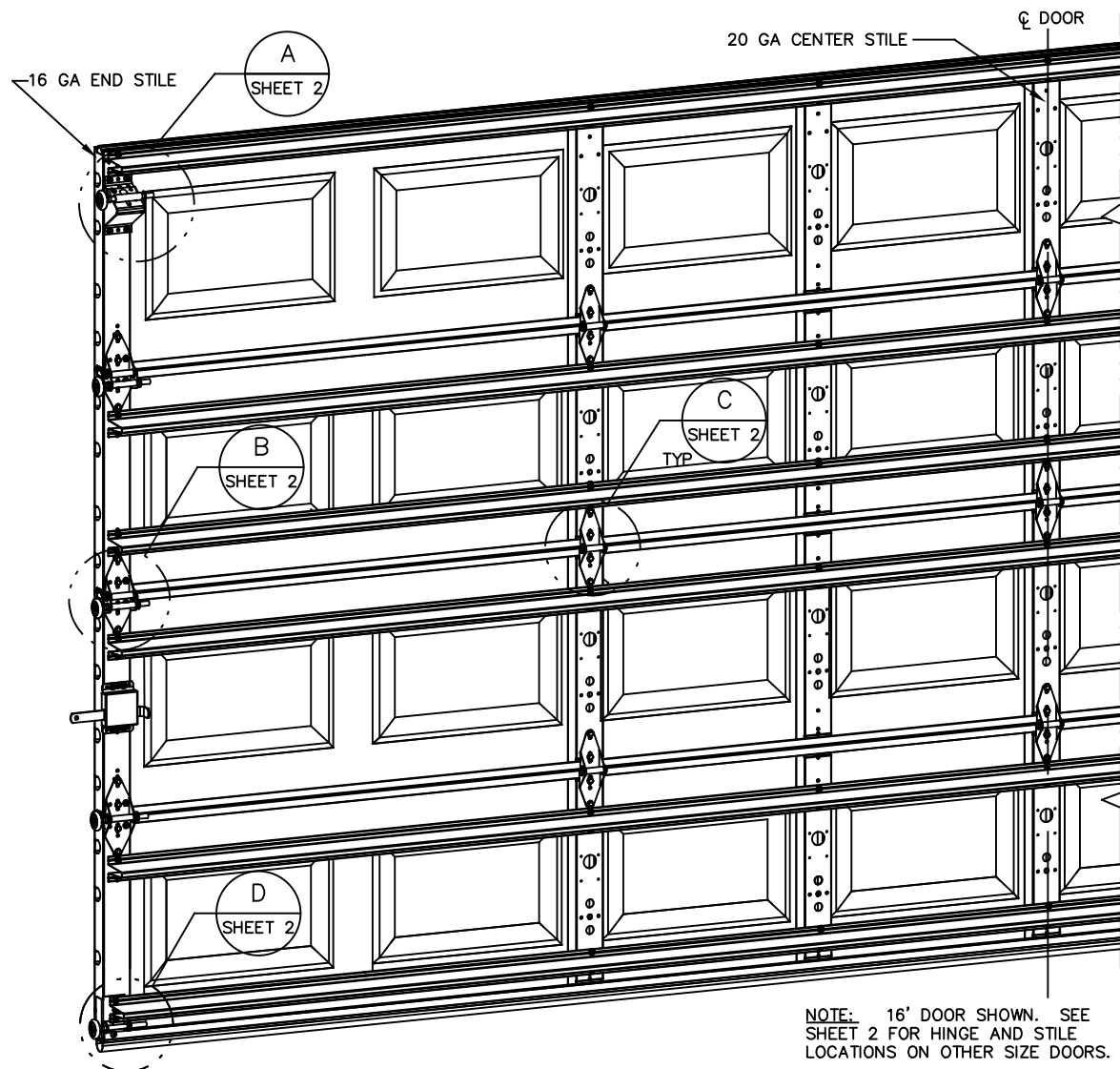


NOTES:

1. NON IMPACT GLAZING OPTIONS:
  - A. 16 X 9.75 CLEAR OPENING, (10) #8-15X.625 SCREWS (2x VERTICAL & 3x HORIZONTAL).
  - B. 36.75 X 9.75 CLEAR OPENING, (14) #8-15X.625 SCREWS (2x VERTICAL & 5x HORIZONTAL).
- ANNEALED SSB (0.090") GLAZING MINIMUM. MAY INCLUDE DECORATIVE INSERTS INSTALLED IN TOP OR INTERMEDIATE SECTION. NOT AVAILABLE IN MORE THAN ONE SECTION. DOES NOT SATISFY WINDBORNE-DEBRIS.
2. IMPACT GLAZING OPTION: 16.75 X 9.75 CLEAR OPENING, (10) #8X1" SMS (2x VERTICAL & 3x HORIZONTAL). GLAZING 1/4" GROOVED POLYCARBONATE ALUMINUM FRAMES WITH 10 SCREWS MAY INCLUDE DECORATIVE INSERTS INSTALLED IN TOP OR INTERMEDIATE SECTION. NOT AVAILABLE IN MORE THAN ONE SECTION. SEE ASSEMBLY DETAIL ON SHEET 2.
3. VINYL OR WOOD DOOR STOP NAILED A MAXIMUM OF 6" O.C. MUST OVERLAP TOP AND BOTH ENDS OF PANELS MINIMUM 7/16" TO MEET NEGATIVE PRESSURES.
4. KEY LOCK, SLIDE LOCKS, OR OPERATOR REQUIRED.
5. LOUVER OPTION - .032" MINIMUM LOUVERS IN MOLDED FRAMES SCREWED TOGETHER WITH A MINIMUM OF (10) #8X1" SCREWS INSTALLED IN THE BOTTOM SECTION. LOUVERS ARE NOT IMPACT RESISTANT AND DO NOT MEET THE REQUIREMENTS FOR WIND-BORNE DEBRIS REGIONS.
6. SECTION STEEL TO HAVE A MINIMUM 25 GA THICKNESS.
7. THE DESIGN OF THE SUPPORTING STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD FOR THE BUILDING OR STRUCTURE AND IN ACCORDANCE WITH CURRENT BUILDING CODES FOR THE LOADS LISTED ON THIS DRAWING.
8. DOOR JAMB TO BE MINIMUM 2" X 6", GRADE 2 SOUTHERN PINE. REFER TO JAMB CONNECTION SUPPLEMENT FOR ATTACHMENT TO SUPPORTING STRUCTURE.
9. FOR LOW HEAD ROOM LIFT CONDITIONS, TOP BRACKET SHALL BE A 13 GA LHR 7/4 TOP BRACKET WITH A MINIMUM OF (3) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS IN LIEU OF THE BRACKET SHOWN ON THIS DRAWING. U-BAR ON TOP SECTION SHALL BE INSTALLED ON TOP OF LHR TOP BRACKETS.

- 13 GA HORIZ ANGLE
- 13 GA FLAG ANGLE
- 16 GA MIN HORIZ TRACK
- 5/16x1-5/8" LAG SCREW (MIN 3 AS SHOWN)
- (4) 1/4-20x9/16" LARGE HEAD TRACK BOLTS OR 1/4-20 STUDS WITH 1/4-20 HEX NUTS
- 16 GA MIN VERT TRACK
- 1/4-20x9/16" TRACK BOLT AND 1/4-20 HEX NUT AT EACH JB-US JAMB BRACKET LOCATION
- 5/16x1-5/8" LAG SCREW AT EACH JAMB BRACKET
- 15 GA STIFFENED JAMB BRACKETS SEE SCHEDULE FOR QUANTITY, LOCATION, AND TYPE
- KEY LOCK OR SLIDE LOCK EACH END (NOT REQUIRED WITH OPERATOR - SEE NOTE 3). SLIDE LOCK SHOWN FOR CLARITY

NOTE: (4) SECTION SOLID DOOR SHOWN. SEE SHEET 2 FOR U-BAR LOCATIONS ON DOORS WITH OTHER SECTION QUANTITIES AND SEE NOTE 1 THIS SHEET FOR GLAZING OPTIONS.



NOTE: 16' DOOR SHOWN. SEE SHEET 2 FOR HINGE AND STILE LOCATIONS ON OTHER SIZE DOORS.

REVISIONS				
ER	REV	DESCRIPTION	DATE	APPROVAL
31052	E	REV PER ER	12/7/18	ESC
31052	F	UPDATE NOTES ADD LHR DETAIL	2/13/19	ESC
	G	ADDED IRC/IBC NOTE FOR TDI	4/12/21	TLC
32769	H	REV PER ER	2/10/22	SW

SUPERIMPOSED DESIGN PRESSURE LOADS ON SUPPORTING STRUCTURE

DOOR WIDTH	DOOR HEIGHT	UNIFORM LOAD EACH JAMB (PLF)
10'-0"	ALL	+115.0/-125.0
12'-0"	ALL	+138.0/-150.0
14'-0"	ALL	+161.0/-175.0
15'-0"	ALL	+172.5/-187.5
16'-0"	ALL	+184.0/-200.0

JAMB BRACKET SCHEDULE				
DOOR HEIGHT	NO. OF SECTIONS	NO. OF JAMB BRACKETS (EACH JAMB)	TRACK TYPE	LOCATION OF CENTERLINE OF JAMB BRACKETS MEASURED FROM BOTTOM OF TRACK (ALL DIMENSIONS ± 2")
6'-6"	4	4	QI	14" (QI), 34" (JB-US), 44" (QI), 56" (JB-US)
6'-6"	4	4	FAT	10" (JB-US), 25-3/4" (JB-US), 39" (JB-US), 57-1/4" (JB-US)
7'-0"	4	5	QI	2" (JB-US), 14" (QI), 29-1/2" (JB-US), 44" (QI), 63-1/4" (JB-US)
7'-0"	4	5	FAT	2" (JB-US), 10" (JB-US), 29-3/4" (JB-US), 42" (JB-US), 63-1/4" (JB-US)
7'-6"	5	6	QI	2" (JB-US), 14" (QI), 28-1/2" (JB-US), 43" (QI), 62-1/2" (QI), 72" (JB-US)
7'-6"	5	6	FAT	2" (JB-US), 10" (JB-US), 26-3/4" (JB-US), 45" (JB-US), 63" (JB-US), 74-1/2" (JB-US)
8'-0"	5	6	QI	2" (JB-US), 14" (QI), 34" (JB-US), 46" (QI), 58" (JB-US), 66-1/2" (QI)
8'-0"	5	6	FAT	2" (JB-US), 10" (JB-US), 29-3/4" (JB-US), 48" (JB-US), 57-1/2" (JB-US), 77-1/2" (JB-US)
> 8'-0"				SEE NOTE BELOW

NOTE: (JB-US) FOLLOWING DIMENSION DENOTES SLOTTED JAMB BRACKET ATTACHED TO TRACK WITH 1/4-20x9/16" TRACK BOLT AND NUT. (QI) FOLLOWING DIMENSION DENOTES QUICK INSTALL JAMB BRACKET INSTALLED IN BUTTERFLY SLOT. NO ADDITIONAL HARDWARE NEEDED TO ATTACH TO TRACK. ALL DOORS GREATER THAN 8' IN HEIGHT REQUIRE USE OF CONTINUOUS WALL ANGLE. SEE SUPPLEMENT TRACK CHART FOR DETAILS.

SERIES 170-177, 180-187, 1400, 1440, 1500, 1540

COMPLIES WITH THE REQUIREMENTS OF IBC/IRC 2018.

STATIC PRESSURE RATINGS	APPROVED SIZES
DESIGN PRESSURE(PSF): +23.0/-25.0	MAX WIDTH: 16'
IMPACT/CYCLIC RATED: YES	MAX HEIGHT: 14'
	MAX SECTION HEIGHT: 21"

JOHN E. SCATES, PE  
2560 KING ARTHUR BLVD #124-54  
LEWISVILLE, TX 75056  
FL PE 51737  
TX PE 56308/F2203

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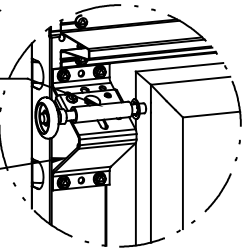
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REF DWG	USED ON	TOLERANCES UNLESS OTHERWISE SPECIFIED	FINISH	THE GENUINE. THE ORIGINAL.	NAME	DATE	DRAWING TITLE:
		HOLE DIAMETER	N/A	OVERHEAD DOOR	G. TAYLOR	10/15/10	SERIES 170, 180WL
		UNDER .251 +.004/-0.003			M. SAWICKI	10/25/10	WS4, 16' MAX WIDE
		.251 TO .500 +.006/-0.003	WHOLE NUMBERS: ± .25				DRAWING NUMBER
		OVER .500 +.008/-0.003	.X ± .1				D-411046
		FRACTIONS	.XX ± .03				SCALE: N.T.S.
		± 1/16	.XXX ± .010				SHEET 1 OF 2
			ANGLES: ± .5°				

12 GA ROLLER SLIDE ATTACHED TO BRACKET WITH 5/16-18 BOLT & NUT IN CENTER SLOT AND 1/4-20x9/16" TRACK BOLT & 1/4-20 HEX NUT THROUGH ANY TWO ALIGNING HOLES

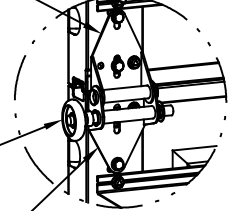
12 GA COMMERCIAL 'A' FRAME TOP BRACKET ATTACHED WITH (4) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS

ADD (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS (INSIDE OF EACH END HINGE)



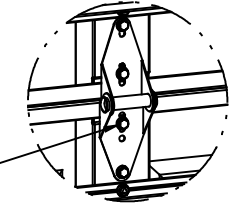
DETAIL A

2" NYLON STORMGARD ROLLER WITH 4-1/2" STEM EACH ROLLER LOCATION. OPTIONAL- 11 BALL BEARING NYLON ROLLER. 7/16" PUSHNUT AT EACH ROLLER LOCATION. 1/4" MAX BETWEEN PUSHNUT AND BRACKET OR HINGE



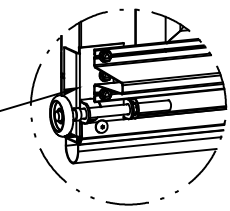
DETAIL B

#1 HINGE IS 14 GA  
#2 HINGE IS 13 GA  
#3 HINGE (AND ALL ABOVE) ARE 13 GA WIDE BODY END HINGE ATTACHED WITH (4) 1/4-14x5/8" SELF TAPPING SCREWS



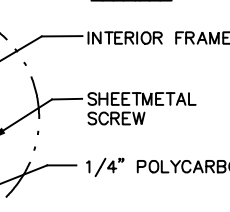
DETAIL C

18 GA NARROW BODY INTERMEDIATE HINGE ATTACHED WITH (4) 1/4-14x5/8" SELF TAPPING SCREWS



DETAIL D

14 GA BOTTOM BRACKET ATTACHED WITH (4) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS (2) OF WHICH IS THROUGH STRUT AND (1) 1/4-14x5/8" SELF DRILLING RED SCREW



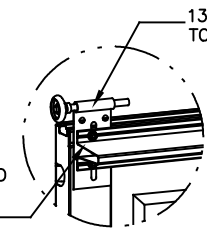
DETAIL E

INTERIOR FRAME  
SHEETMETAL SCREW  
1/4" POLYCARBONATE  
EXTERIOR FRAME

IMPACT WINDOW / ALUMINUM FRAME WITH GROOVED POLYCARBONATE

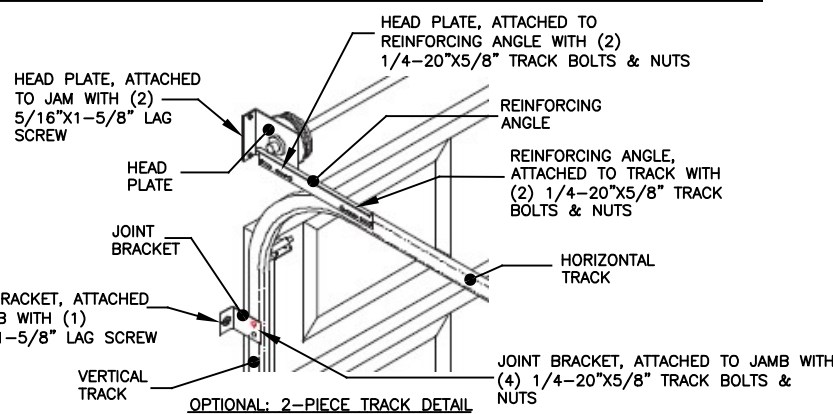
DETAIL E

PLACE 3" U-BAR OVER LOW HEADROOM BRACKET ATTACH THRU END STILE AT EACH END WITH (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS.



LOW HEADROOM TRACK  
DETAIL F

13 GA ADJUSTABLE TOP FIXTURE



HEAD PLATE, ATTACHED TO JAMB WITH (2) 5/16"x1-5/8" LAG SCREW

HEAD PLATE, ATTACHED TO REINFORCING ANGLE WITH (2) 1/4-20"x5/8" TRACK BOLTS & NUTS

REINFORCING ANGLE

REINFORCING ANGLE, ATTACHED TO TRACK WITH (2) 1/4-20"x5/8" TRACK BOLTS & NUTS

JOINT BRACKET

HORIZONTAL TRACK

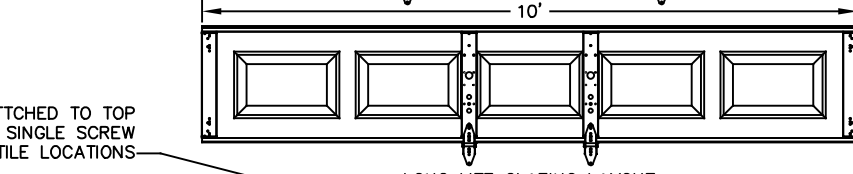
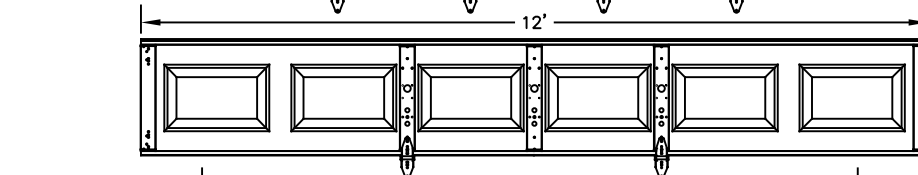
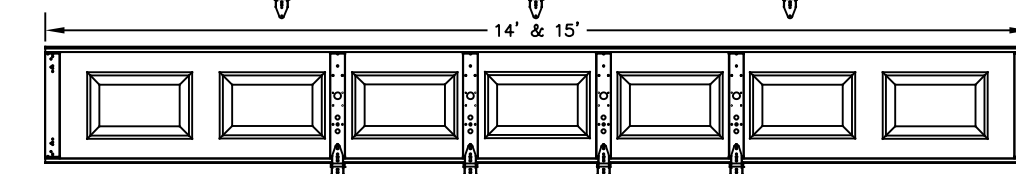
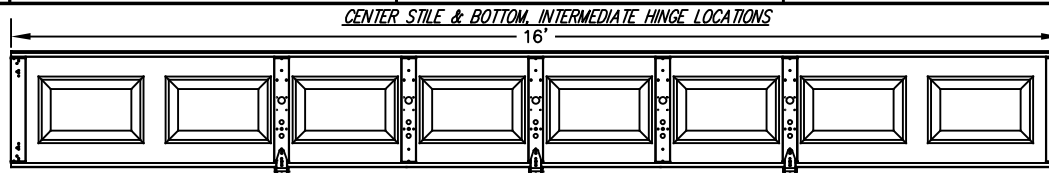
JOINT BRACKET, ATTACHED TO JAMB WITH (1) 5/16"x1-5/8" LAG SCREW

JOINT BRACKET, ATTACHED TO JAMB WITH (4) 1/4-20"x5/8" TRACK BOLTS & NUTS

OPTIONAL: 2-PIECE TRACK DETAIL

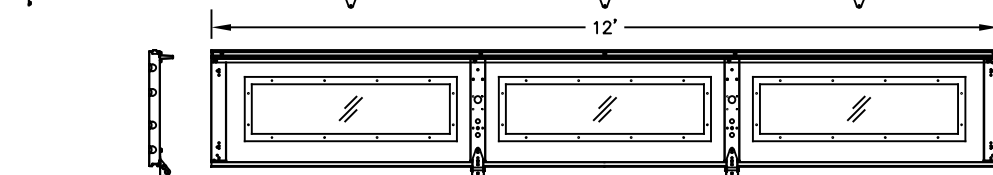
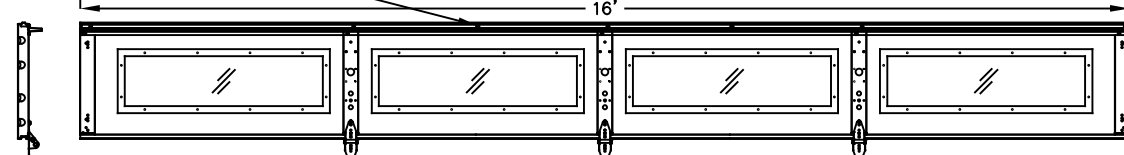
ATTACH U-BAR WITH (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS AT EACH STILE LOCATION, TYP.

CENTER STILE & BOTTOM INTERMEDIATE HINGE LOCATIONS

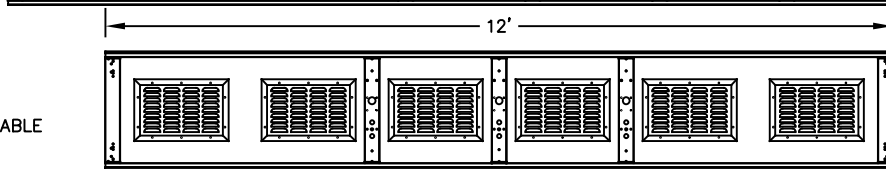
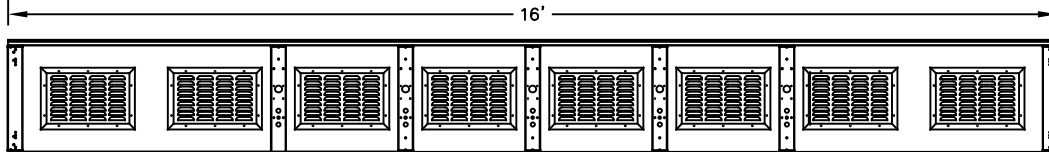


STRUT IS ATTACHED TO TOP RAIL WITH A SINGLE SCREW AT CENTER STILE LOCATIONS

LONG LITE GLAZING LAYOUT



LOUVER - OPTIONAL IN BOTTOM SECTION



U-BAR LOCATIONS

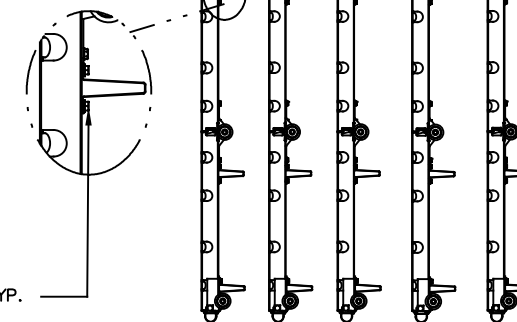
(8) SECTION DOORS WITH (12) 3" 20 GA 80 KSI U-BARS LOCATED AS SHOWN

(7) SECTION DOORS WITH (11) 3" 20 GA 80 KSI U-BARS LOCATED AS SHOWN

(6) SECTION DOORS WITH (9) 3" 20 GA 80 KSI U-BARS LOCATED AS SHOWN

(5) SECTION DOORS WITH (8) 3" 20 GA 80 KSI U-BARS LOCATED AS SHOWN

(4) SECTION DOORS WITH (6) 3" 20 GA 80 KSI U-BARS LOCATED AS SHOWN



STATIC PRESSURE RATINGS	APPROVED SIZES
DESIGN PRESSURE(PSF): +23.0/-25.0	MAX WIDTH: 16'
	MAX HEIGHT: 14'
IMPACT/CYCLIC RATED: YES	MAX SECTION HEIGHT: 21"

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	TOLERANCES UNLESS OTHERWISE SPECIFIED		FINISH	The Genuine. The Original. <b>OVERHEAD DOOR</b> LEWISVILLE, TEXAS	NAME	DATE	DRAWING TITLE: SERIES 170, 180WL WS4, 16' MAX WIDE
	HOLE DIAMETER	WHOLE NUMBERS:	N/A		CHECKED BY:		
	UNDER .251 +.004/-0.003	.XX ± .1	UNIT OF MEASURE EACH	MATERIAL: NONE	APPROVED BY:		DRAWING NUMBER D-411046
	.251 TO .500 +.006/-0.003	.XXX ± .010			T. CLARK	4/12/21	SCALE: N.T.S.
	OVER .500 +.008/-0.003	ANGLES: ± .5°					
REF DWG	USED ON						

JOHN E. SCATES, PE  
2560 KING ARTHUR BLVD #124-54  
LEWISVILLE, TX 75056  
FL PE 51737  
TX PE 56308/F2203

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