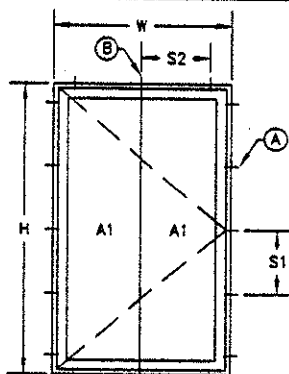


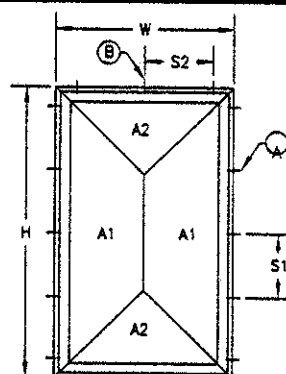
HUNG WINDOW

ANCHOR "A":
 $R = \text{PRESSURE} \times (A2 \text{ OR } A3)/2$
 ANCHOR "B":
 $R = \text{PRESSURE} \times (((A1 \times 2) + (A3 \times 2))/2)/2$ ANCHORS
 (NOTE THAT LOAD IS CARRIED BY 2 ANCHORS IN THIS EXAMPLE)



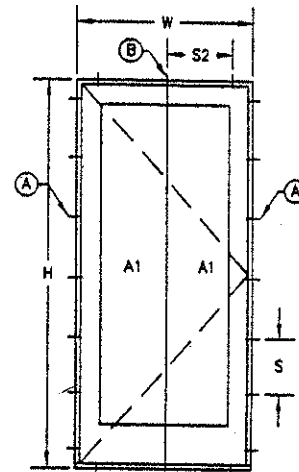
CASEMENT/AWNING WINDOW

ANCHOR "A": $R = \text{PRESSURE} \times W/2 \times S1$
 ANCHOR "B": $R = \text{PRESSURE} \times W/2 \times S2$ (CONSERVATIVE)



FIXED WINDOW

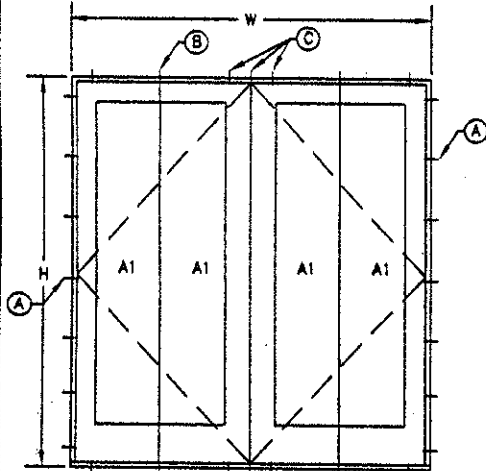
ANCHOR "A": $R = \text{PRESSURE} \times W/2 \times S1$
 ANCHOR "B": $R = \text{PRESSURE} \times W/2 \times S2$



SINGLE DOOR

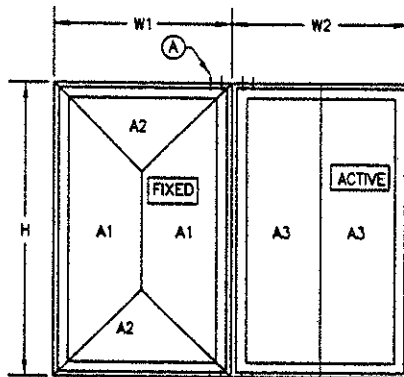
ANCHOR "A": $R = \text{PRESSURE} \times W/2 \times S1$
 ANCHOR "B": $R = \text{PRESSURE} \times W/2 \times S2$ (CONSERVATIVE)

NOTE: IF HINGE SCREWS PENETRATE THE SUPPORTING SUBSTRATE, THEY ARE CONSIDERED TO SUPPORT THE DOOR BASED ON THE EFFECTIVE LOAD AREA OF THE HINGE. IN THIS CASE, FRAME SCREWS MAY NOT BE REQUIRED (SEE DRAWINGS FOR REQUIREMENTS)



DOUBLE DOOR/WINDOW

ANCHOR "A": $R = \text{PRESSURE} \times W/2 \times S1$
 ANCHOR "B": $R = \text{PRESSURE} \times W/2 \times S2$ (CONSERVATIVE)
 ANCHOR "C": $R = \text{PRESSURE} \times (W/2 \times L/2)/3$ ANCHORS
 (NOTE THAT LOAD IS CARRIED BY 3 ANCHORS IN THIS EXAMPLE)



MULLED UNIT

ANCHOR "A": $R = (\text{PRESSURE} \times (A1 + A3))/2/4$ ANCHORS
 1. AREAS ARE DETERMINED PER THE INDIVIDUAL ELEVATIONS
 2. LOAD IS CARRIED BY 4 ANCHORS IN THIS EXAMPLE.

NOTES:

1. THESE FORMULAS ARE USED WHEN DETERMINING ANCHOR LOADS FOR ALL APPLICABLE WINDOW & DOOR PRODUCTS AND SHALL BE APPLICABLE TO ALL WINDOW/DOOR DRAWINGS PRODUCED BY W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
2. ALLOWABLE ANCHOR LOADS FOR CONCRETE SCREWS ARE BASED OFF ANCHOR MANUFACTURER'S PUBLISHED LOAD DATA SHEETS WITH ULTIMATE LOADS REDUCED PER SPECIFICATION REQUIREMENTS.
3. ALLOWABLE ANCHOR LOADS FOR WOOD SCREWS ARE PER M.D.S. SPECIFICATIONS.
4. ALL ANCHOR ALLOWABLE LOADS CONSIDER ALL FACTORS SUCH AS EMBEDMENT, EDGE DISTANCE, MAIN MEMBER TYPE, GRADE AND THICKNESS AND SIDE MEMBER TYPE, GRADE AND THICKNESS.
5. THE ABOVE EXAMPLES ARE SPECIFIC TO THE CONDITIONS SHOWN. WINDOW SIZE AND/OR PRESSURE DETERMINES THE POSITION AND QUANTITY OF ANCHORS. ALL ANCHORS ARE ANALYZED CONSIDERING THE LOAD TRANSFERRED TO THE INDIVIDUAL ANCHOR FROM THE SECTIONED AREAS SHOWN IN THE ELEVATIONS. WHEN AN EQUAL DISTRIBUTION OF ANCHORS IS USED, THE WORSE CASE ANCHOR IS CONSIDERED WITH ALL OTHERS BEING DUPLICATES.

SLIDING DOORS ARE THE SAME AS THE HUNG WINDOWS TURNED 90 DEGREES.

SLIDING DOORS/WINDOWS

DRINK BY:	W.S.S.	CHECKED BY:	W.S.S.
PLD:	1-24	DATE:	07/11/02
DATE:		BY:	
REVISION DESCRIPTION:			
NO.			

FRAME ANCHOR CALCULATION FORMULAS

MANUFACTURER

APPLICABLE WITH ALL PRODUCT DRAWINGS PRODUCED BY W. W. SCHAEFER ENGINEERING & CONSULTING.

CONSULTANTS

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CERTIFICATION

AUG 02 2007
 WARREN P. SCHAEFER, P.E.
 W. W. SCHAEFER, P.A.
 NO. 44113

DRAWING NO.:	REV.:
1135	
SHEET NO.:	1 OF 1