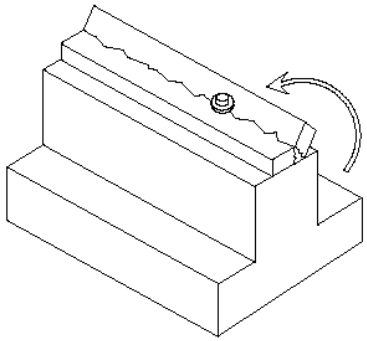
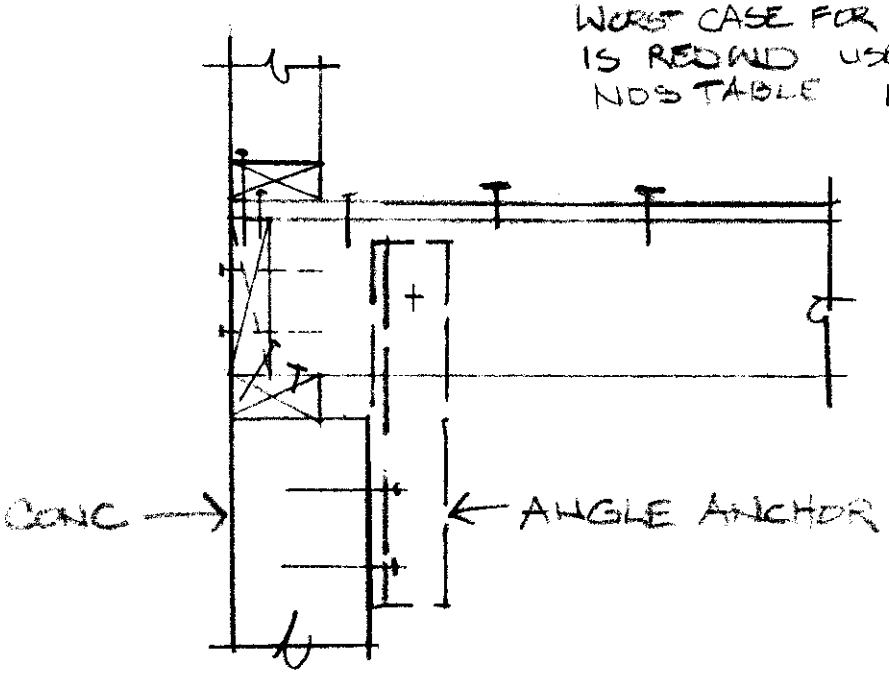


Cross-grain bending

KEC | 1/12/05

FOUNDATION ANGLE ANCHOR W/RIM OR BLKG

WORST CASE FOR FASTENERS IS REDWD USE S-P-F NDS TABLE 11N



HORIZONTAL FORCE TRANSFER

ALT 1

2-16d RIM TO JST (END GRAIN) SINKER

Z = 100 #
C_M = 0.67
C_D = 1.33
= 2(100).67(1.33) = 178 #

TOP OF JST 2-8d Box
3/4 side
Z = 57 #
= 2(57) 1.33 = 151 #

BOT OF JST 3-8db toe
Z = 57
C_M = 0.83
= 3(57)(.83) 1.33 = 188 #

ALT 2

4-8d TOE RIM TO JST Box

Z = 61 #
C_M = 0.83
C_D = 1.33
4 (61)(.83)(1.33) = 269 #

TOP OF JST 2-8d Box
151 #

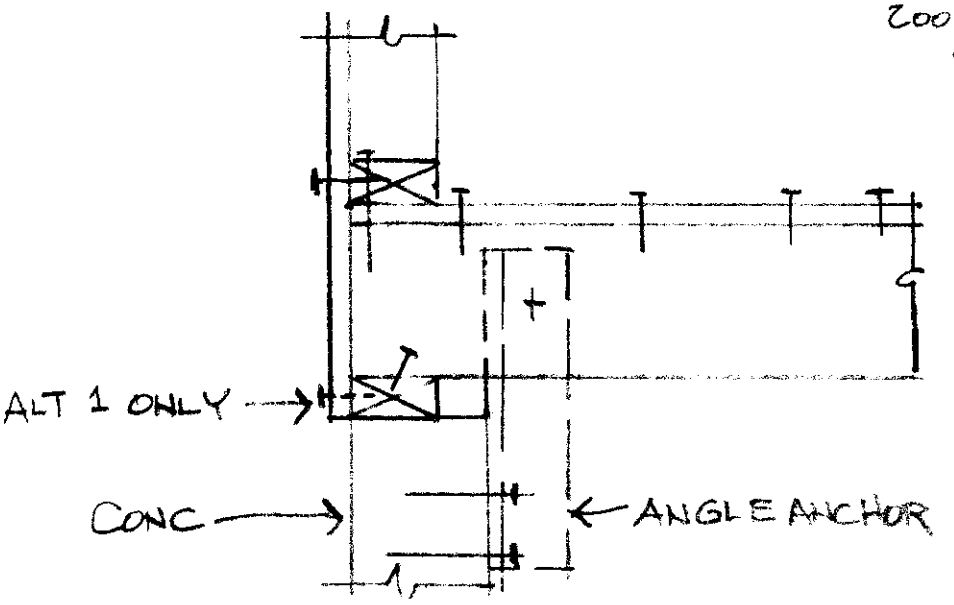
BOT OF JST
188 #

	ALT 1	ALT 2
SUM FOR RIM:	178 + 151 + 188 = 517 #/JST	WEAK DIR 609
	178 + 188 = 366	STRONG DIR 457

KEC | 1/14/05

FOUNDATION ANGLE ANCHOR W/O RIM OR BLKG

2001 NDS TABLE 11N S-P-F VALUES



ALT 1 · EXT SHEATHING TRANSFERS LOAD TO SILL PLATE

TOP OF JST 5-8d box ½" side

Z = 57 #
C_D = 133

= 5(57)133 = 379 #

BOTT OF JST 3-8d box toe

Z = 61 #
C_{tn} = 0.83
C_D = 133

= 3(61)0.83(133) = 202 #

SUM 581 #

ALT 2 · EXT SHEATHING DOES NOT

TOP OF JST

379 #

SUM 379 #

WEDGE ANCHOR CAPACITY

$SA = 160\# \left(\frac{6}{18.75}\right) = 513\#$

(ECCENTRICITY INCREASED) SEE 11-12-04 CALC

NOTE: IN WEAK DIRECTION, CROSS-GRAIN TENSION FAILURE OF JST IS LIKELY - TOP OF JST NAILS WILL PULL JST TOP. ECCENTRICITY WILL BE TO BOLT AT MID-HT SAW JST FAILURE IN FICADENTI TESTS.

STAEDTLER No. 357 011E Engineer's Computation Pad