

PROJECT NUMBER	SHEET 1 OF 4
PROJECT	
BY	DATE
SUBJECT	

Connect-EZ Anchor Check- SDC "A"-"F"

Input values in yellow cells. P_n [k] 10,000.00 req'd nominal tensile strength (ACI 318-08 & -11, 16.5.1.3(b); ACI 318-14, 16.2.4.3(b)) Plate Data (see attached diagram) t [in] 0.75 plate thickness b [in] 5.00 plate width (transverse) L[in]10.00 plate length (longitudinal) 0.94 d hole [in] diameter of anchor bolt hole θ [deg] 6.00 inclination of plate (from horizontal) x_b [in] 3.00 distance from plate edge to bars (along x-axis) x_a [in] 3.875 distance from plate edge to anchor bolt (along x-axis) $d_b[in]$ 0.50 diameter of deformed bars 6.00 s [in] spacing of deformed bars (along z-axis) **Material Properties** f'_{c} [psi] 3,500.00 compressive strength of tilt-up panel concrete f_{y_plate} [psi] 50.00 yield strength of plate $f_{y, bars}$ [psi] 70.00 yield strength of deformed bars x_c [in] 0.340 length of concrete compression stress block P_c [lb] 3,031.04 reaction from concrete panel $P_b \cos \theta$ [lb] 13,031.04 reaction from deformed bars Check Plate in Bending M_{u_zz} [lb-in] 8,750.00 factored bending moment about z-z (longit.) axis ϕM_{n_zz} [lb-in] 63,281.25 OK design bending moment about z-z axis $M_{u \times x}$ [lb-in] 19,546.56 factored bending moment about x-x (trans.) axis $\phi M_{n_{-xx}}$ [lb-in] 25,708.01 OK design bending moment about x-x axis biaxial bending 0.90 OK interaction equation Check Bars in Tension A b provided [in²] 0.39 area of deformed bars provided $A_{b_reg'd}$ [in²] 0.14 OK area of deformed bars required



Sol	ving	for	X	,

Α	(2,975.00)
В	26,775.00
С	(8,750.00)
sqrt(B ² -4AC)	24,754.31
x_{c_1} [in]	0.34
$x_{c_{2}}$ [in]	8.66



PROJECT NUMBER	SHEET 2 OF 4
PROJECT	
BY	DATE
SUBJECT	

Check Development Length of Bars

SDC	F
Ψ_t	1.00
Ψ_e	1.00
λ	1.00
/ _d [in]	24.00
I'_d [in]	9.00
/ _d [in]	24.00
min. clear spacing [in]	1.00
min. clear cover [in]	0.50

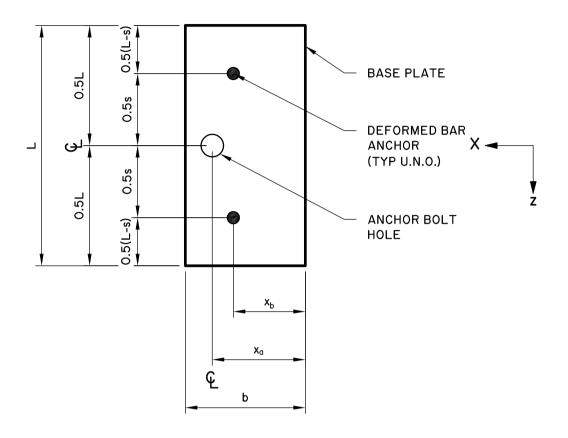
seismic design category (A,B,C,D,E, or F)
(ACI 318-08, 12.2.4(a))
(ACI 318-08, 12.2.4(b))
(ACI 318-08, 12.2.4(d))
development length to yield (ACI 318-08, 12.2.2, no stirrups or ties)
development length when yielding not req'd (ACI 318-08, 12.2.5)
minimum req'd development length of deformed bars
(ACI 318-08, 12.2.2)
(ACI 318-08, 12.2.2)

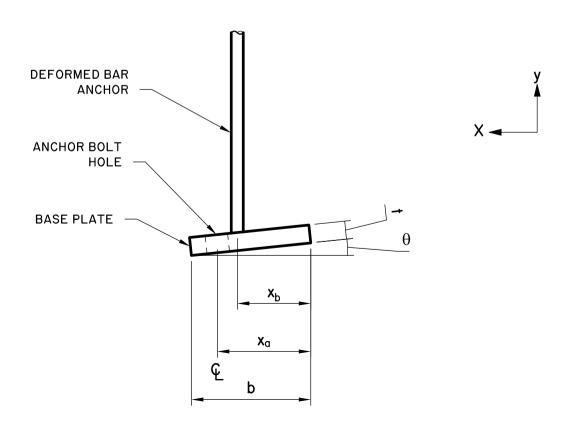
Results:

Steel Base F	Plate:	Deformed Bo	rs:
	50 ksi		70.0 ksi
fy		fy	
t	0.750 in	d _b	0.5 in
b	5 in	n	2.0 bars
L	10 in	S	6.0 in
		I _d	24.0 in
		min. clear spacing	1.0 in
		min. clear cover	0.5 in



PROJECT NUMBER	SHEET 3 OF 4
PROJECT	
BY	DATE
SUBJECT	







PROJECT NUMBER	SHEET 4 OF 4
PROJECT	
BY	DATE
SUBJECT	

