

Company: Company

Project: IE HECTOR MANUEL VIDES BALLESTEROS (MÓDULO 3)

File: C:\IE REGIDOR\MOD3.rcb

Engineer: Name

5:10:09 p. m. 26/06/2025

REDUNDANCY ANALYSIS**STORY-STRENGTH REDUCTION DUE TO REMOVAL OF CRITICAL ELEMENT**

Story	E A R T H Q U A K E - X				E A R T H Q U A K E - Y			
	Vi	Vi/Vb	Crit.Element	Ve/Vi	Vi	Vi/Vb	Crit.Element	Ve/Vi
1	24.5	1.00	BEM:I (18-22)	0.21	24.5	1.00	BEM:18 (F-I)	0.25
MAXIMA				0.21				0.25

NOTE: Shear values are divided by R

Removal of any critical element on any story supporting more than 35% Vb (Base Shear) would not reduce the story strength by more than 33%. Thus SEISMIC FORCE-RESISTING SYSTEM SEEMS REDUNDANT!!
It should be investigated if removal of critical element would induce Extreme Torsional Irregularity (1bP)

Proposed Reduction Factor for Lack of Redundancy: $\phi_{rx} = 1$ $\phi_{ry} = 1$