CODE

(M_n, P_n) Axial load, P $(\phi M_n, \phi P_n)$ Pumax P_{u3} LC3 Acceptable region LC2 P_{u2} M_{u1} M_{u3} M_{umax} Moment, M

COMMENTARY

Fig. R10.4.2.1—Critical column load combination.

10.5—Design strength

10.5.1 *General*

10.5.1.1 For each applicable factored load combination, design strength at all sections shall satisfy $\phi S_n \geq U$, including (a) through (d). Interaction between load effects shall be considered:

- (a) $\phi P_n \geq P_u$
- (b) $\phi M_n \ge M_u$
- (c) $\phi V_n \ge V_u$
- (d) $\phi T_n \geq T_u$

10.5.1.2 ϕ shall be determined in accordance with 21.2.

10.5.2 Axial force and moment

10.5.2.1 P_n and M_n shall be calculated in accordance with 22.4.

10.5.3 Shear

10.5.3.1 V_n shall be calculated in accordance with 22.5.

10.5.4 *Torsion*

10.5.4.1 If $T_u \ge \phi T_{th}$, where T_{th} is given in 22.7, torsion shall be considered in accordance with Chapter 9.

R10.5—Design strength

R10.5.1 General

PART 3: MEMBERS

R10.5.1.1 Refer to **R9.5.1.1**.

R10.5.4 Torsion

Torsion acting on columns in buildings is typically negligible and is rarely a governing factor in the design of columns.

