BUILDING DATA

Calif. Polytechnic State University Building 40, Engineering South-
Original Construction 1954

Construction Type: II-B [(E) Condition per current code]
  Non Combustible Exterior Walls: (E) Concrete Complies
  Non-Combustible Exterior Walls [Per Table 601]: (E) Concrete Complies
  Interior Walls and Partitions- Non-combustible (Sec. 602.2); Non-Rated (Table 601)
  (E) Metal Stud Interior Non-Bearing Walls

Occupancy Type: B, F-1 and S-2 Occ. (Per CBC Sec. 304.1) nonseparated

Occupancy Separations: None

Partially sprinklered (F-2 area) considered non-Sprinklered

No. of Stories: 1, with mezzanine – OK per Table 503, 2 stories Allowed

(E) Building Height- 26.5’

Actual Building Area-

  B Occ: 6,828 sq. ft.
  F1 Occ.: 9,199 sq. ft. – New Addt’n.- 93.5 sq. ft. – Total- 9,292.5 sq. ft.
  S-2 Occ: 1,814 sq. ft.

Total: 17,934.5 sq. ft.

Allowable Area Calculation – Nonseparated per 508.3

A Occ. Base Allowable- 23,000 sq. ft. - OK
S-2 Occ. Base Allowable- 26,000 sq. ft.- OK
F-1 Occ. Base Allowable- 15,500 sq. ft.- See Area Calc. below

Aa = [At+[At x Lf] + [At x Ls]] (Per 506.1)
Lf = [F/P-0.25]*W/30 (Per 506.2)

P = 677 ft. (Total Perimeter)
F = 590 sq. ft. (yards > 20’)

Weighted Average W (per Sec. 506.2.1)

W = (L1 x w1 + L2 x w2 + L3 x w3.....) / F
One wall at 18’, one wall greater than 20’ but less than 30’ (See Site Plan); all other areas greater than 30’ separation.

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W = \frac{(103' \times 20' + 487' \times 30')}{590'}
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W = \frac{(2060 + 14610)}{590} = 28.25
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If = \left[\frac{F}{P} - 0.25\right] \times \frac{W}{30}
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If = \left[\frac{590}{677} - 0.25\right] \times \frac{28.25}{30}
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If = .58
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Is = 0 (non sprkld)

At = 15,500 sq. ft. (Per Table 503, F-1)

Aa = \{15,500 + \left[15,500 \times .58\right] + \left[19,000 \times 0\right]\}

Aa = 15,500 + 8,990 = 24,490 sq. ft. per Floor

Total Area- 17,934.5 sq. ft. < 24,490 sq. ft. Allowable, OK

DSA number - none

Fire Sprinkler Info-
Power Plant side, east side wing, F-1 area
Viking Pendants, Alpha Fire

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