FOOTING DESIGN CALCULATION SUMMARY FOR BEAM HD-2

PERMIT NUMBER: SFD2504-0023

PROJECT: CL3034 SINGLE-FAMILY DWELLING

DATE: APRIL 21, 2025

PREPARED BY: TODD TUCKER, AIBD, CPBD & XAI

LOAD AND SOIL BEARING CAPACITY

PROJECT DATA

BEAM: HD-2

LOAD PER FOOTING: 6577 LBS (COMBINED LIVE AND DEAD LOAD)

FOOTING SIZE: 30" X 30" X 12" DEEP

CONCRETE STRENGTH: 3000 PSI

SOIL BEARING CAPACITY: 1500 PSF (ASSUMED)

COLUMN SIZE: 3.5" X 6" (GANGED SPF #2 LUMBER, CENTERED)

CODE: ACI 318-19

STEP I: SOIL BEARING CAPACITY CHECK

FOOTING AREA:

(30 / I2) X (30 / I2) = 2.5 FT X 2.5 FT = 6.25 SQ.FT

ALLOWABLE LOAD:

1500 PSF X 6.25 SQ.FT = 9375 LBS

APPLIED LOAD: 6577 LBS

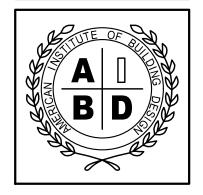
6577 LBS < 9375 LBS (SATISFACTORY)

SOIL PRESSURE FOR DESIGN:

 $Q = 6577 / 6.25 \sim 1052.3 PSF$







HD-2: 1 OF 3