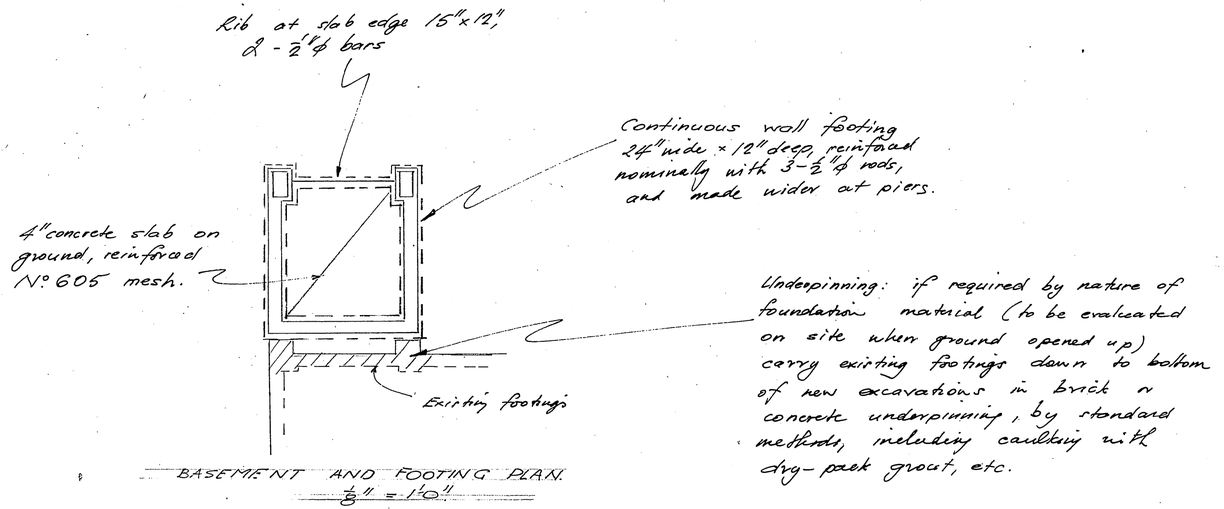
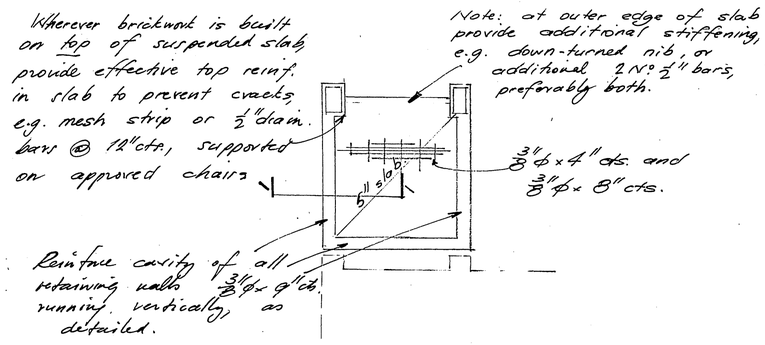


BASEMENT AND FOOTING PLAN.
⅛" = 1'0"



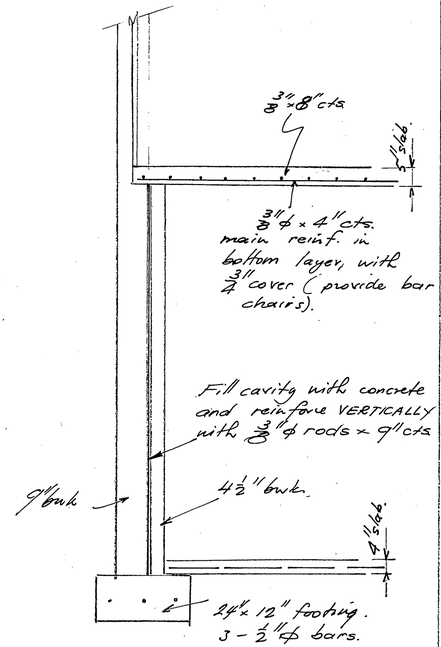
GROUND FLOOR PLAN
Showing walls under. ⅛"=1'0".

Concrete: 3,000 p.s.i. @ 28 days.

Reinf: standard mesh and structural grade rounds. (f_s = 20,000 p.s.i.).

All concrete work to be in accordance with SAA Concrete Code.

ADDITIONS To HARVEY HOUSE, HIGHTON
ALISTAIR ENOX — DESIGNER.
STRUCTURAL DETAILS — Judas Doorey B.C.E. Law 1965.



SECTION 1:1 (SIDE WALL).
½" = 1'0".

STRUCTURAL COMPUTATIONS.

1. Suspended floor slab. span 11'

L.L.	50 #/s.f.
finish	10
self	60
	120 #/s.f.

simple span $M = \frac{wL^2}{8}$

$= \frac{120 \times 11^2 \times 12}{8}$

$= 21,800$ in.lb/ft.

using structural grade rounds at f_s = 20,000 p.s.i., and 5" slab, d = 4".

$A_s = \frac{21,800}{20,000 \times .86 \times 4}$

$= 0.315$ " per ft.

5" slab, ⅜" x 4", ⅜" x 8".

2. Wall Footing.

max. loads (side walls).

roof	LL 15, DL 20, 35	8'-35	=	280 #/ft. run.
upper wall: 60#		9' x 60	=	540
susp. floor: 120#	x	5.5'	=	650
lower wall: 150#	x	9	=	1350
				2820 #/ft. run.

check pressure under footing if 24" wide:

$w = \frac{2,820}{2240} \times \frac{1}{2} = 0.66$ TON PER S. FT.

This permissible on reasonably stiff clay or on compacted sand. O.K.

3. Rear Retaining Wall.

Assuming existing foundations or underpinning take all horizontal thrust, no special provision necessary.

4. Side Retaining Wall.

Pressure is relieved by break-away of bank, but assuming a 6' wall, p_{max} = 6 x 50 = 1800 p.s.f. and B.M. in vertically spanning wall could be about equiv. of 100 p.s.f. loading over 8' span.

$\therefore M = 100 \times 8^2 \times 1.5 = 10,000$ in-lb./ft.

If cavity filled and reinforced, d = 9.5".

and assume jd = 4",

$A_s = \frac{10,000}{20,000 \times 4} = .125$" D"/ft. run,

∴ Fill cavity and provide vertical reinf. of ⅜"ϕ @ 9" cts.

Judas Doorey.