

Second Presbyterian Church [J14/D34]

Recommended plan modification/inclusions:

- 1) PCC channel from 12" sidewalk culvert to exist. wall openings must have same capacity as sidewalk culvert [12" wide x 6" deep rectangular sect.
Please provide documentation of the capacity of the P.C.C. channel to sidewalk culvert and documentation of the wall openings.
- 2) Wall notch detail for discharge to 24" sidewalk culvert is not satisfactory. See attached detail, suggested.
- 3) Vinyl liner swale ok. Cover rock to be 3" min layer of 2" round rock.

Provide openings in exist wall, at discharge end of channel, to pass max. anticipated flow. (12" x 6" total opening area.)

Slope lined swale 1% minimum.

Swale liner to be PVC, 30 mil, or equiv.

9-1-89

S.O. 19

Remove option note on plan regarding pipe construction. Construction is required of the S.D. system.

Certification

2nd Presb. Church.

J14 - D84

~~Handwritten~~
Misc CALCULATIONS

45,980 sf
~~39,180.~~

NEW AREA TOTAL

$$88 \times 84 = 7392$$

$$60 \times 160 = 9600$$

$$103 \times 7 = 721$$

$$48 \times 55 = 2640$$

Tract C

$$86 \times 100 = \underline{8600}$$

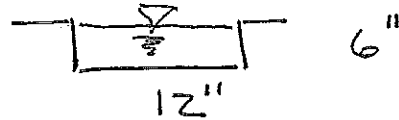
28953 SF roof + paved.
 $C = \underline{0.925}$ 0.925

16627 SF unpaved $C = 0.40$

$$\begin{aligned} C_{\text{comb.}} &= \underline{0.733} \\ i &= 4.95 \text{ in/hr. (from report calc's.)} \\ Q &= C i A = \underline{0.733} (4.95) (1.05 \text{ ac}) \\ &= 3.81 \text{ cfs. (prop'd 3.80 cfs)} \\ &\quad \text{ok. v} \end{aligned}$$

Flow in Sidewalk Culverts

12" wide



assume

$$n = 0.015, S = 1.0\%$$

$$V = \frac{1.49}{0.015} (0.25)^{4.49} (0.01)^{0.5}$$

$$R = \frac{0.5(1)}{2} = 0.25$$

$$= 3.94 \text{ fps}$$

$$(4.77 \text{ fps}, 24")$$

$$Q = VA = 3.94 (0.5) \approx 2 \text{ cfs} \quad (4.8 \text{ cfs}, 24")$$

SUB Area C, $Q = 0.69 \text{ cfs}$,

SUB Area D, $Q = 1.78 \text{ cfs}$

min slope = 1%.

min. slope on linear V-ditch should also be 1%.



Item # 4 has not been taken
care of.