

TRACT "A"
 HYMEL FAMILY
 (LA. HWY. 641 SIDE)

401.2 ft.

- LEGEND
- SS — SEWER MANHOLE, SA
 - WA — WATER MANHOLE, WA
 - GA — GAS MANHOLE, GA
 - TEL — TELE. MANHOLE, TEL
 - DR — DRAIN MANHOLE, DR
 - DR — DRAIN INLET, DR

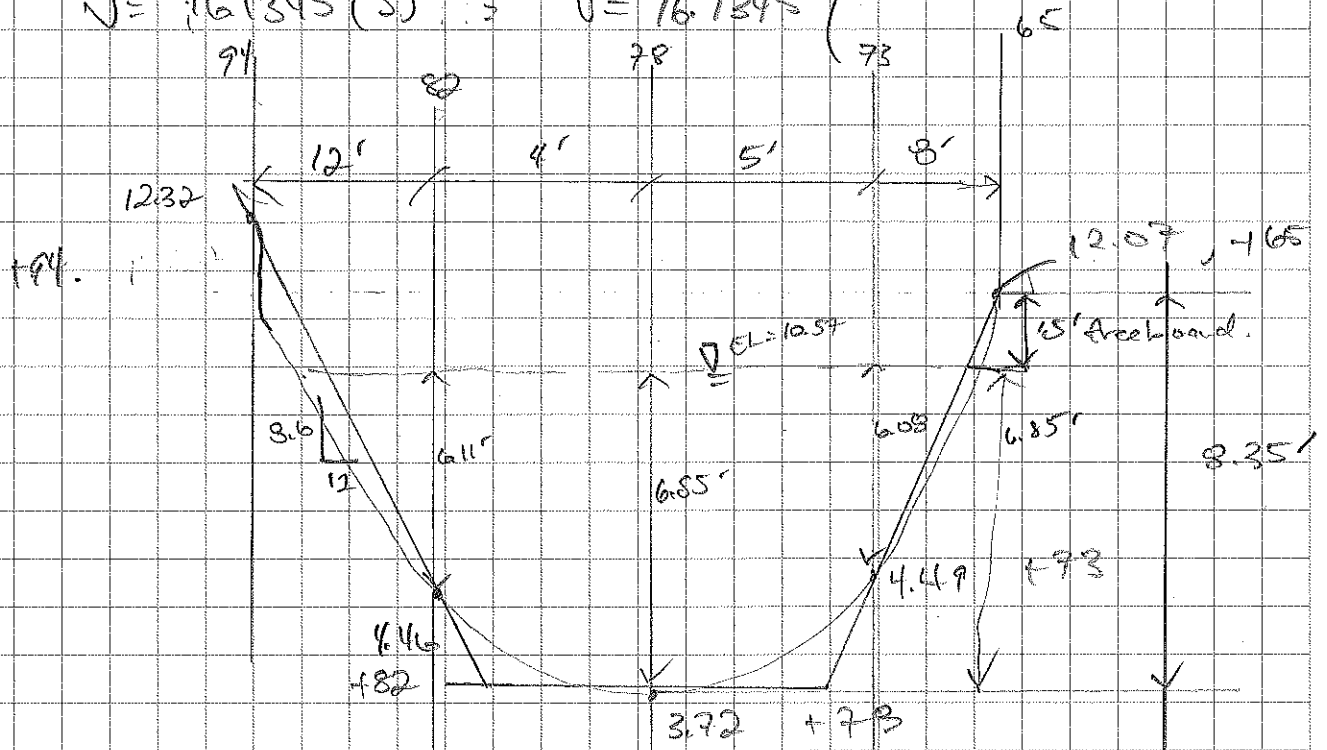


PDH Engineer Packet.

Description: Central Canal

V for shallow flow:

$$V = 16.1345 (S)^{0.5} \Rightarrow V = 16.1345$$



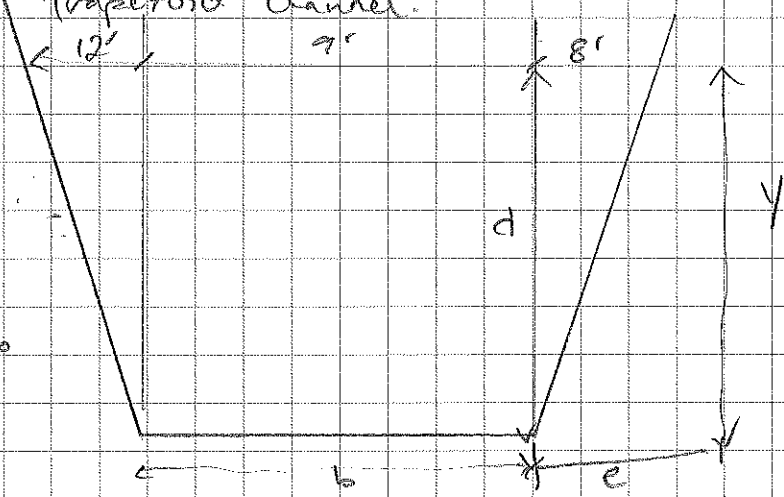
As Treat as Trapezoid channel.

~~Area = (b + c) * h / 2~~

~~P = b + 2 * y * sqrt(1 + z^2)~~

$$A = bd + z^2 d^2$$

$$z = \frac{e}{d} = \text{slope} = 0.96$$



9/18/12

$$L = 1593.6 \text{ ft.}$$

$$S = 13.5 - 11' = \frac{2.5 \text{ ft.}}{1593.6 \text{ ft}} = 0.00157 \text{ ft/ft}$$

Travel time shallow concentrated flow:

$$V = 16.1345 (S)^{0.5} = 16.1345 (0.00157)^{0.5} = 0.639 \text{ ft/sec.}$$

$$t_t = \frac{L}{60 \times V_{\text{ft/sec}}} = \frac{1593.6}{60 (0.639)} = \frac{1593.6}{38.343} = 41.56 \text{ sec}$$

Travel time for channel flow:

$$L = 375'$$

$$R = K/P = 3.98'$$

$$S = 0.00025 \text{ ft/ft}$$

$$n = 0.24$$

$$V = \frac{1.49}{n} R^{0.67} S^{0.5}$$

$$V = \frac{1.49}{0.24} (3.98)^{0.67} (0.00025)^{0.5}$$

$$V = 6.208 (2.523) (0.0158)$$

$$V = 0.2477 \text{ ft/sec}$$

$$t_{\text{channel}} = \frac{L}{60 \times V} = \frac{375}{60 (0.2477)} = 25.2 \text{ min}$$

$$\text{Total Travel time: } 41.56 + 25.2 = 66.76 \text{ min} = 1.1 \text{ hr.}$$

$$i = 4.016 (1.1 + 0.349)^{0.226} = \underline{2.94 \text{ in/hr.}}$$

$$Q = 0.5 (2.94) (35 \text{ ac}) = 51.45 \text{ cfs.}$$