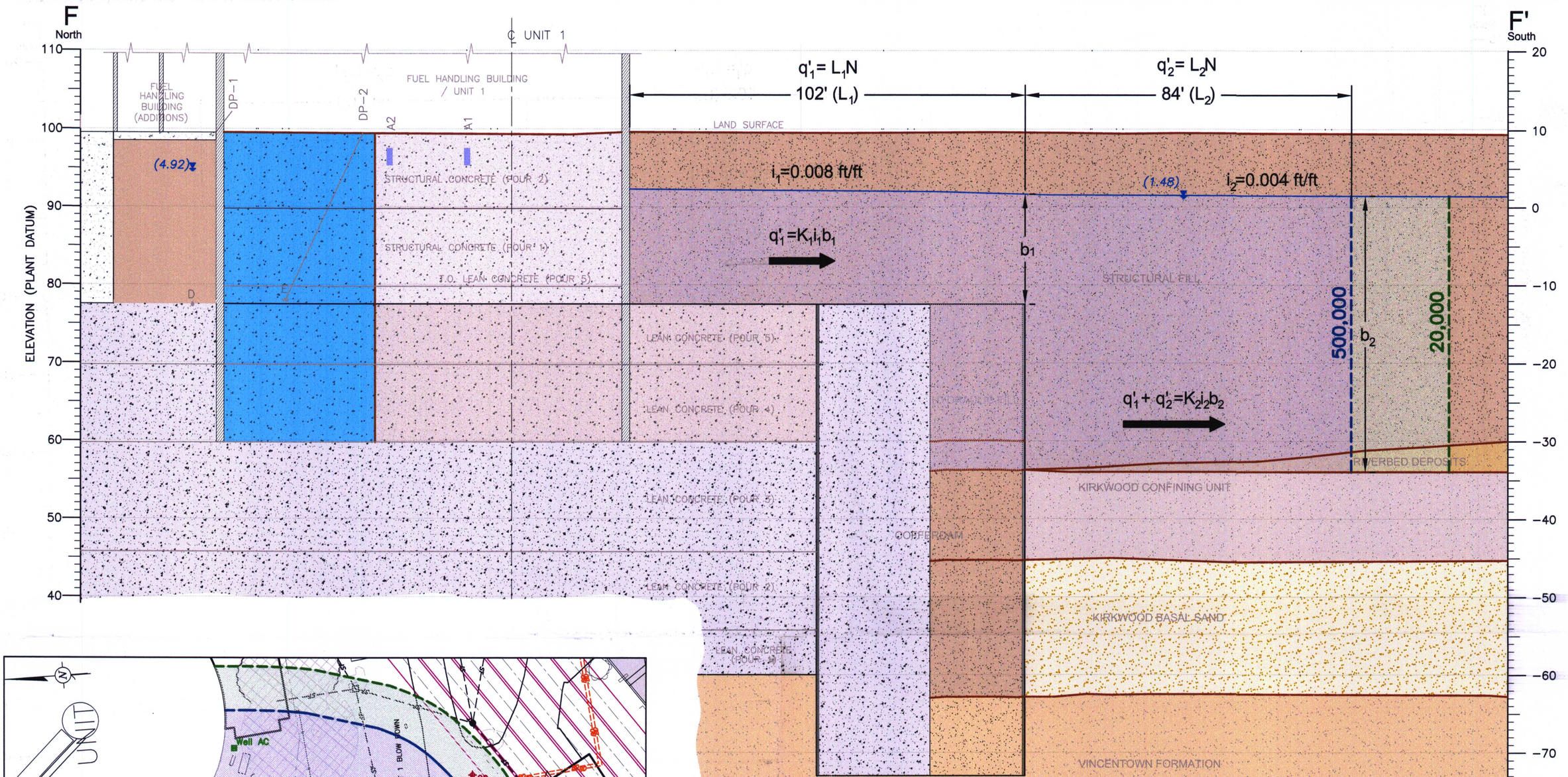


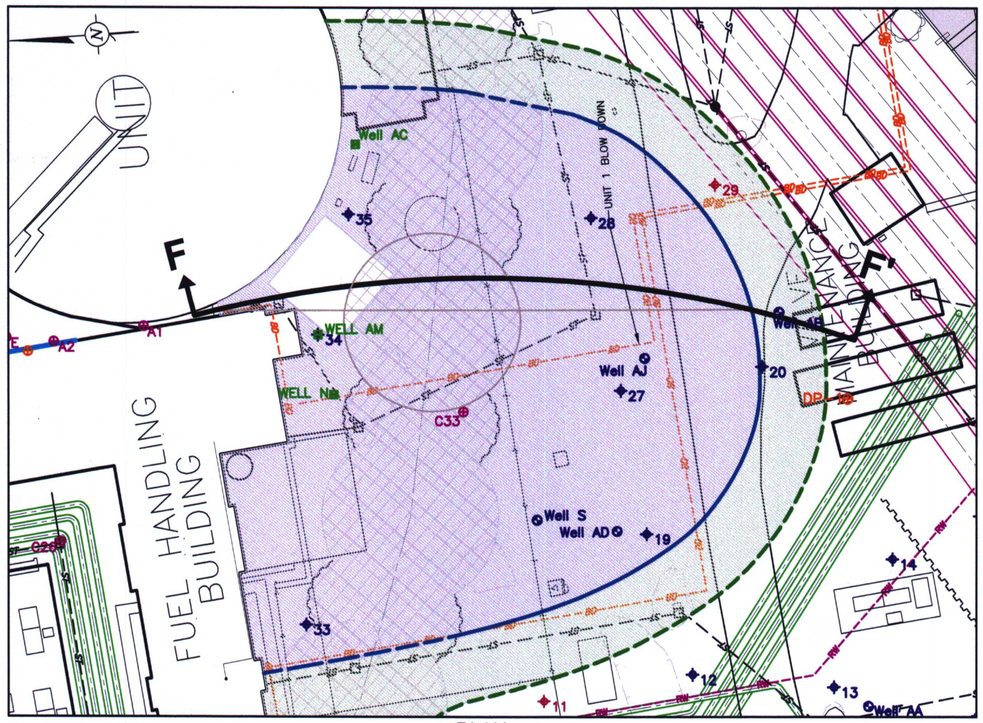


PLAN
SCALE: 1"=40'

Recharge(N) = $8^{in}$/yr

| Hydraulic Conductivity Estimate | Groundwater Velocity | Groundwater Travel Time |
|---|---|---|
| $K_1 i_1 b_1 = L_1 N$ | $V_1 = K_1 \times i_1 / \theta$ | $t_1 = \frac{L_1}{V_1}$ |
| $K_1 \times 0.008 \times 15ft = 102\ ft \times \frac{8}{12}$ ft/yr | $V_1 = 1.6\ (0.008) / 0.20$ | $t_1 = \frac{102}{23.4}$ |
| $K_1 = \frac{102 \times 0.67}{(0.008 \times 15)} = 570$ ft/yr or 1.6 ft/day | $V_1 = 23.4$ ft/yr | $t_1 = 4.36$ yr |
| $K_2 i_2 b_2 = L_1 N + L_2 N = N(L_1 + L_2)$ | $V_2 = K_2 \times i_2 / \theta$ | $t_1 = \frac{L_2}{V_2}$ |
| $K_2 \times 0.004 \times 35ft = \frac{8}{12}$ ft/yr (102ft + 84 ft) | $V_2 = 2.4\ (0.004) / 0.20$ | $t_1 = \frac{84}{17.5}$ |
| $K_1 = \frac{186 \times 0.67}{(0.004 \times 35)} = 866$ ft/yr or 2.4 ft/day | $V_2 = 17.5$ ft/yr | $t_1 = 4.80$ yr |

Total Travel Time = 4.36 + 4.80 = 9.2 yrs

SECTION
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'

D-16

G:\APROJECT\PSE&G\Salem\NP000571.0003 - Remedial Investigation\cadd\FIG-18 HYDRAULIC CONDUCTIVITY AND TRAVEL TIME CALCULATIONS.dwg, 18/ 3/2004 12:08pm

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0 10
HORIZONTAL SCALE: 1"=10'
0 20
VERTICAL SCALE: 1"=10'

| NO. | DATE | REVISION DESCRIPTION | BY CKD |
|---|---|---|---|

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ARTIFICIAL ISLAND
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| DRAWN | DATE | PROJECT MANAGER | DEPARTMENT MANAGER |
|---|---|---|---|
| M. WASILEWSKI | 3/04/04 | P. MILIONIS | D. FULTON |
| | | LEAD DESIGN PROF. S. POTTER | CHECKED B. PIERCE |

HYDRAULIC CONDUCTIVITY AND TRAVEL TIME CALCULATIONS

PROJECT NUMBER NP000571.0003

DRAWING NUMBER 18