HYDROLOGY

G14/D31

TWO PLANS

DRAINAGE CALCULATIONS - 100 YR. STORM

FOR PRE-PAVED CONDITIONS:

AVERAGE AREA = 600' × 370' = 5.1 Ac. ±

SLOPE = $\frac{96-74}{850}$ = 0.026'/FT.

$t_c = .0078K^{.77}$ = 5.7 min.

i = 6.3

Q_1 = 5.1 × 6.3 × 0.40 = 12.9 CFS

FOR EXISTING CONDITION:

A: 5.1 Ac. ±

SLOPE = $\frac{92-72}{800}$ = 0.025'/FT.

t_c = 5.5 min.

i = 6.4

Q_2 = 5.1 × 6.4 × 0.90 = 29.4 CFS

ΔQ = 29.4 - 12.9 = 16.5 CFS

FOR 30 min. rain

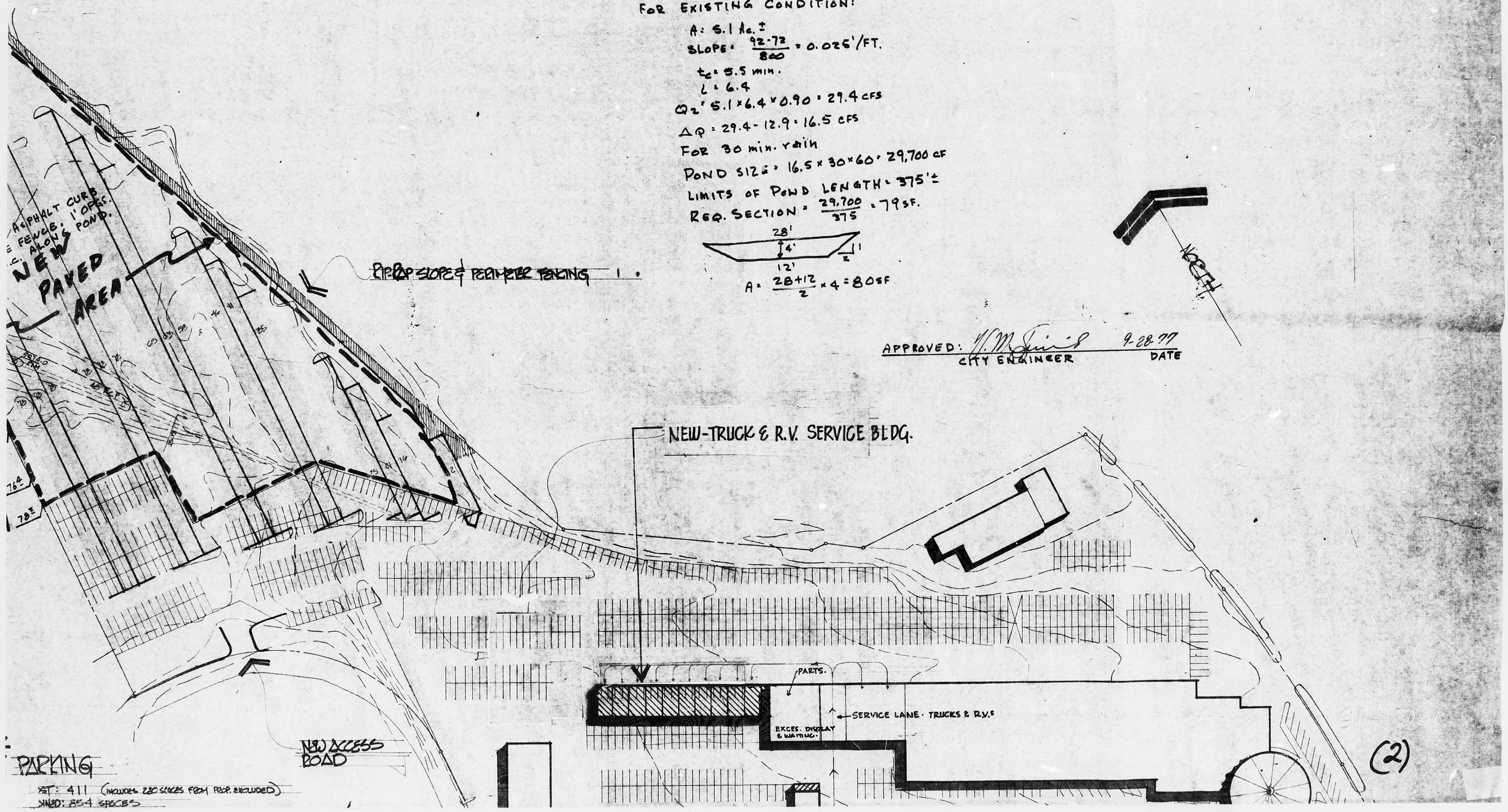
POND SIZE = 16.5 × 30 × 60 = 29,700 CF

LIMITS OF POND LENGTH = 375' ±

REQ. SECTION = $\frac{29,700}{375}$ = 79 SF.

A = $\frac{28+12}{2}$ × 4 = 80 SF

APPROVED: W. M. Smith 9-28-77
CITY ENGINEER DATE



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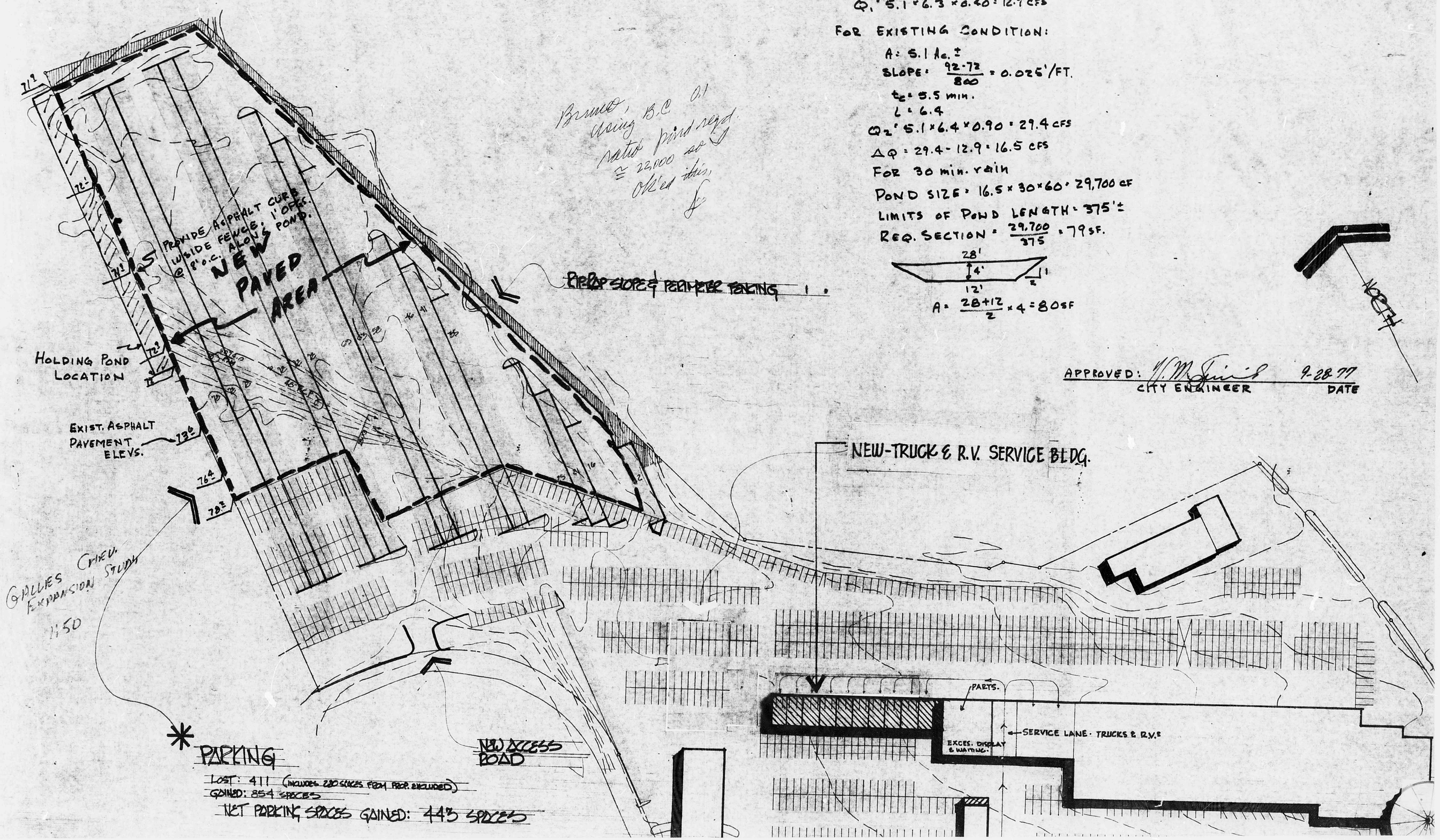
Bruce, using B.C. 0.1 water pond reqd ≅ 22,000 so OK'ed this, J.



* PARKING

LOST: 411 (INCLUDES 280 SPACES FROM PROP. INCLUDED)

GAINED: 854 SPACES

NET PARKING SPACES GAINED: 443 SPACES