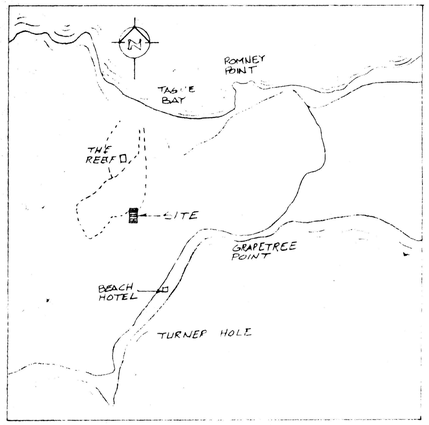


CISTERN O/F RUNOFF

1 UNITS 5-14 INCL. TO EASTERN BUILDING SWALE → DISIPATOR BOX 1
2 UNITS 15-23 & 25-42 TO CENTRAL SWALE → DISIPATOR BOX 2
DISIPATOR BOX 1 & 2 TO SEDIMENT POND - O/F & CROSS S. BUILDING

SIZING

ASSUMPTIONS: a) 100 YEAR RAIN - S. FLA 1 HR INTENSITY = 4.75", ST. X 6"/HR.
b) CONCRETE LINED SWALES
c) 1/2 UNITS IN OVERFLOW CONDITION
d) RATIONAL FORMULA - (LOGICAL APPROACH)

$Q = ACI$
Q = RUNOFF: PEAK DISCHARGE OF WATERSHED IN CUBIC FEET/SEC. CFS. DUE TO MAXIMUM STORM ASSUMED
A = WATERSHED IN ACRES
C = COEFFICIENT OF RUNOFF
I = INTENSITY OF RAINFALL IN INCHES/HOUR BASED ON CONCENTRATION TIME

1 HOUR INTENSITY EXPECTED TO BE 6" ONCE IN 100 YEARS.
LENGTH OF CENTRAL STRIP (WORST CONDITION) - 12 UNITS DISCHARGE
RUNNING ± 70' 10' 90' AT - 11% SLOPE.

1 UNIT AREA (ROOF) = 25'x35' + 23'x18' = 1214 SQ. FT. x12 = 14568
AREA OF INFLUENCE (WORST CASE) 43,560 ÷ = 0.33 AC. L = 70

CHARACTER OF CONDUIT = PAVED
SLOPE = 11% ∴ CONCENTRATION TIME = 2 MINS & I = 6"

A = 0.33 AC.
C = .90 TO 1.00 - SAY 0.95
I = 6"

$Q = .33 \times .95 \times 6" = 1.88$ C.F.S.

V = VELOCITY (DESIGN MAXIMUM 25 F.P.S)
a = X SECTION AREA OF CHANNEL

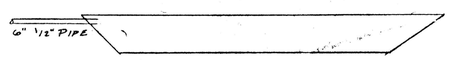
$Q = Va$ & $a = \frac{Q}{V} = \frac{1.88}{25} = .075$ SQ.FT. = $\underline{10.83}$ IN²

ASSUMING 1/2 PIPE Ø RUNNING FULL. AREA $O = \pi r^2$

PIPE RADIUS $r = \sqrt{\frac{10.83 \times 2}{\pi}} = 2.6258"$

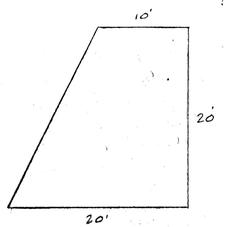
DIAMETER = 2.6258 x 2 = 5.25"
∴ 1/2 - 6" PIPE WILL SUFFICE.

CHECK 6" PIPE AREA = $(\frac{6}{2})^2 \pi = 28.2743$ IN²
1/2 PIPE = 14.14 IN²

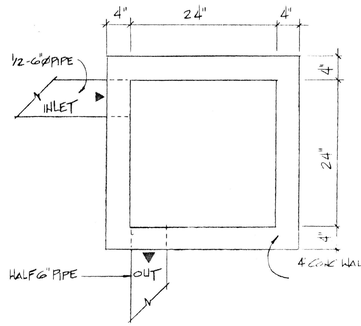


SEDIMENT POND SECTION

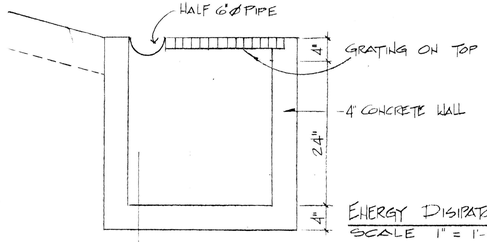
AVG. 15' x 20' x 2' DEEP WITH 2-6" HALF PIPE
4,500 GALONS CAPACITY (INCL. SEDIMENT)



SEDIMENT POND PLAN



ENERGY DISIPATOR BOX DESIGN: VOLUME OF BOX = 4 SECONDS H 20
= 1.88x4 = 7.5 GAL.
PLAN SCALE 1" = 1'-0"



ENERGY DISIPATOR BOX SECTION
SCALE 1" = 1'-0"

PLOT NO. 19E

PART 1 OF PHASE 1
SEE SHEET A.2

PART 2 OF PHASE 1

WASTE WATER SCHEMATIC FLOW DIAGRAM

N.T.S.

PLUMBING

MASTER SITE PLAN

PLOT NO. 19A 6.501 AC.
ESTATE TENGUE BAY
EAST END QUARTER "B"

CARIBBEAN CONSTRUCTION SERVICES AND ASSOCIATES

1" = 40'		MAL
6/7/88		13, 28, 88

VILLA MADELEINE

JOB NO 1232, 1235 P_1