U.S. Dept. of Agriculture AL-ENG-21
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DESIGN OF UNDERGROUND OUTLET

(NOTE: References to tables and exhibits are found in the Alabama Engineering Field Design Manual, Chapter 8.)

LAND SLOPE = _____ % AVG TERR SPACING = _____ FT.

TERR FRONT SLOPE = _____ FT. TYPE CHANNEL _____

D.A. = $\frac{\text{TER SP} \quad \text{FT. X CHAN LGTH} \quad \text{FT.}}{43560}$ = _____ AC.

REQ STORAGE(RS) = _____ IN. (From Table 8-2)

VOL STO REQ(VSR) = _____ IN. X D.A. _____ AC. =_____ AC. IN.

AVAIL STO(AS) = $\frac{\text{FT}^3\text{/FT. X} \quad \text{STA FT.}}{3630}$ = _____ AC. IN.

BYPASS: ALONG CHAN _____ OVER TERRACE _____

% STOR = AS _____ AC. IN. ÷ VSR _____ AC. IN. = _____ %

BYPASS EL = HI _____ - WL _____ = _____

RIDGE EL = BYPASS EL _____ + F'BRD _____ = _____

PIPE CAP = RS _____ IN. X _____ FACTOR = _____ IN.
["FACTOR" from Table 8-4 for unstable bypass or % storage (expressed as decimal) for channel bypass.]

PIPE SIZE (Exhib. 8-2) = _____ IN. MIN. NO. 1IN. HOL/FT =

$\frac{\text{D.A.} \quad \text{AC. X} \quad \text{PIPE CAP} \quad \text{IN.}}{0.67}$ = _____ USE _____

(Exhib. 8-1) H = _____FT., Q _____ CFS, ORIF DIA = _____ IN.

DESIGNED BY _____ CHECKED BY _____