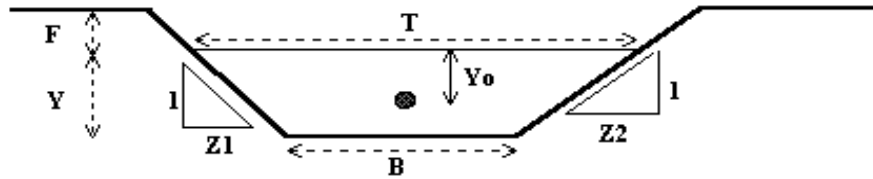


EXHIBIT F - ATTACHMENT HS-T2 - PREDICTED 100 YR STORMWATER FLOW

Normal Flow Analysis - Trapezoidal Channel

Project: **CELL 2A SWALE OUTLET CHANNEL DESIGN**
Channel ID: **FLOW ACROSS BOULDER COUNTY LAND NEAR SOUTH BOUNDARY**



Design Information (Input)

Channel Invert Slope	$S_o =$ 0.0180 ft/ft
Manning's n	$n =$ 0.030
Bottom Width	$B =$ 200.00 ft
Left Side Slope	$Z1 =$ 3.00 ft/ft
Right Side Slope	$Z2 =$ 4.00 ft/ft
Freeboard Height	$F =$ 1.00 ft
Design Water Depth	$Y =$ 0.15 ft

Normal Flow Condition (Calculated)

Discharge	$Q =$ 56.48 cfs
Froude Number	$Fr =$ 0.86
Flow Velocity	$V =$ 1.88 fps
Flow Area	$A =$ 30.08 sq ft
Top Width	$T =$ 201.05 ft
Wetted Perimeter	$P =$ 201.09 ft
Hydraulic Radius	$R =$ 0.15 ft
Hydraulic Depth	$D =$ 0.15 ft
Specific Energy	$E_s =$ 0.20 ft
Centroid of Flow Area	$Y_o =$ 0.07 ft
Specific Force	$F_s =$ 0.35 kip