

Inlet Control Charts for Culverts

CIEG 440

1. Find the capacity Q of a 5' rise by 10' wide box culvert flowing just full.

At $D = 5'$ and $HW/D = 1.0$, $Q/B = 30$. If $B = 10'$, then $Q = 300$ cfs

2. Size a box culvert flowing just full ($HW/D = 1$), for $Q_{100} = 500$ cfs
Assume $D = 6'$, then $Q/B = 45$, $B = 500/45 = 11.1'$, say 6' x 12'

3. Find the capacity Q of a 60" Reinf. Conc. Pipe (RCP) culvert flowing just full.

At $D = 60''$ and $HW/D = 1$, then $Q = 130$ cfs.

4. Size a RCP culvert flowing just full for $Q_{100} = 200$ cfs.

At $Q = 200$ cfs and $HW/D = 1$, then $D = 72''$ RCP

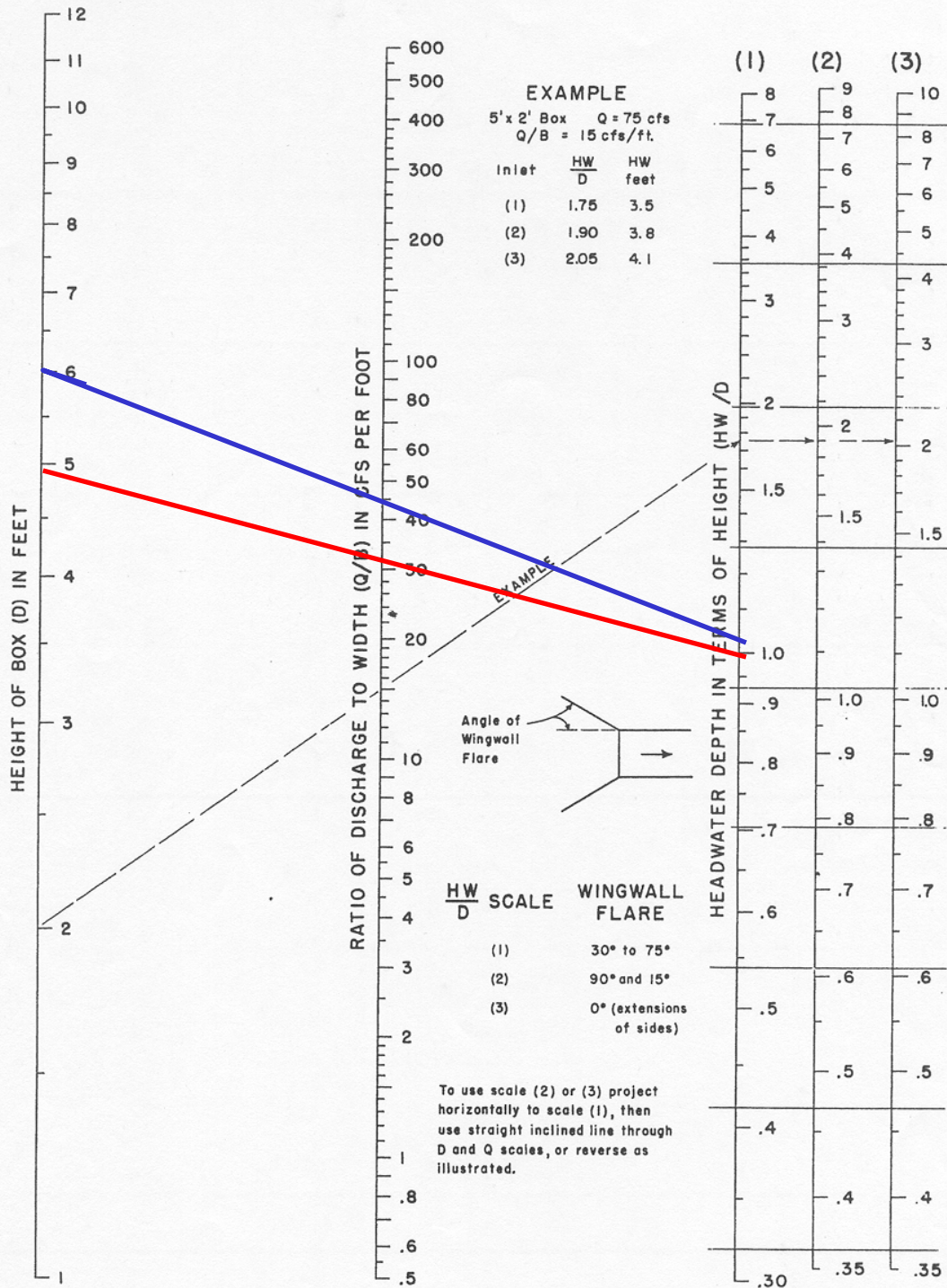
5. At what flow Q will a road at elevation 100' msl overtop with a 60" culvert at invert elev 90'.

The roof of the culvert is at elevation 95'. $HW/D = 10/5 = 2$.

The road will overtop at $Q = 260$ cfs.

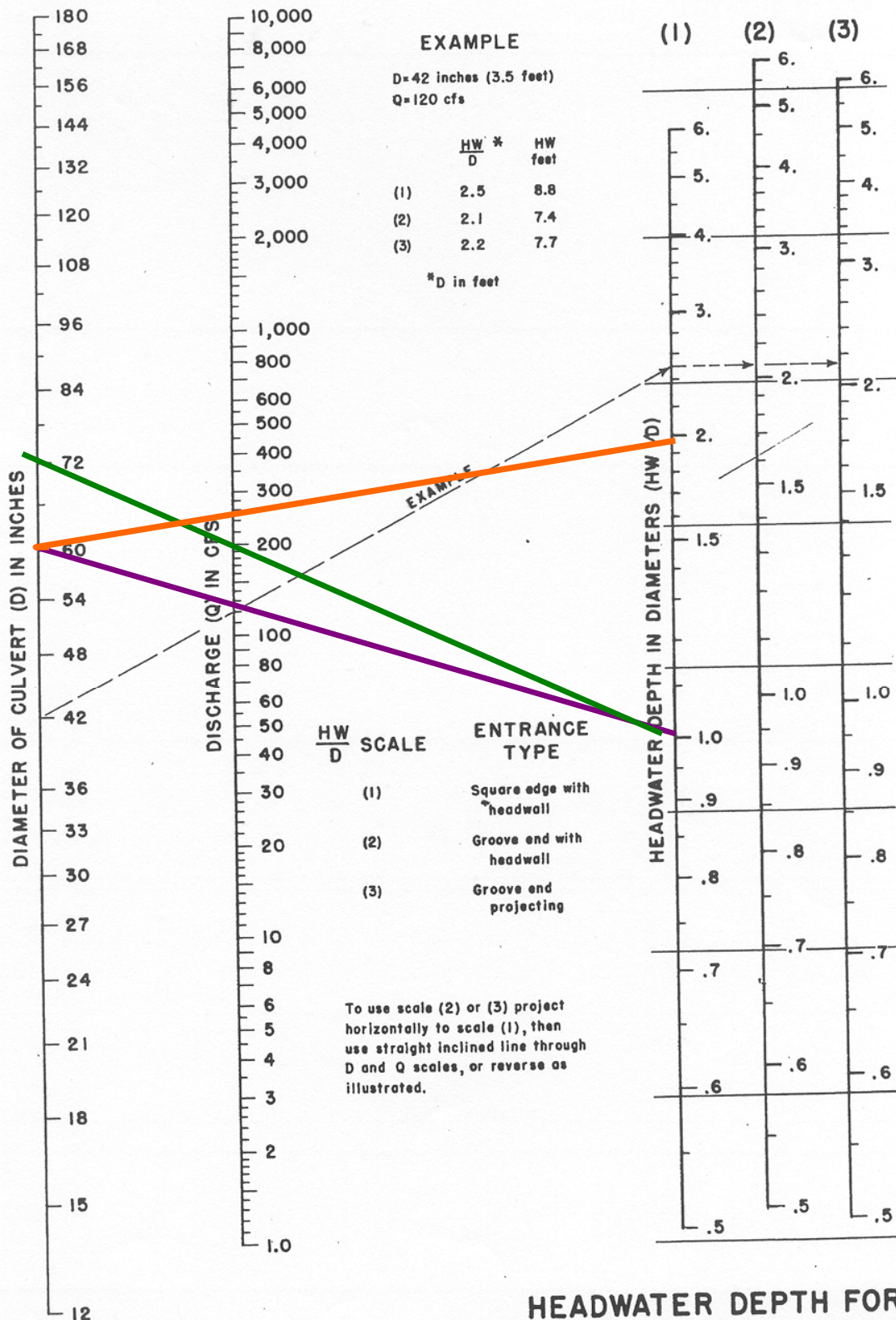


CHART 8



HEADWATER DEPTH
FOR BOX CULVERTS
WITH INLET CONTROL

CHART 1



HEADWATER DEPTH FOR CONCRETE PIPE CULVERTS WITH INLET CONTROL

HEADWATER SCALES 2 & 3
 REVISED MAY 1964

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