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Project Northwest Village

Item Grate opening Area

$$Q = 0.6 a \sqrt{2gh} \quad (\text{Braker + King Handbook})$$

h - maximum storage elevation minus top of gate elev
 a - area of gate opening

$$a = Q / 0.6 \sqrt{2gh} \quad h = 1349.93 \text{ (TOC)} - 1348.82 = 1.11'$$

$$a = 95 / 0.6 \cdot \sqrt{64.4(1.11)}$$

$$a = 18.7 \text{ sq ft.}$$

Minimum gate opening area 18.7 sq ft.



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Project Northwest Village

Item 5 yr Frequency - Light Commercial

Hydrology for Commercial Area

NO. ?
 300.
 COR? 0.8
 AREA? 9.6 ACRE
 SLSB? 0.8 %
 LSB? FEET
 FREQ? 5. YEAR
 15.93 TDC
 5.1 INT
 39.14 Q5

NO. ?
 200.
 COR? 0.8
 AREA? 5.3 ACRE
 SLSB? 1.1 %
 LSB? FEET
 FREQ? 5. YEAR
 13.84 TDC
 5.38 INT
 22.82 Q5

15.
 5.22 TDC
 22.12 INT
 Q5