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Appendix b - experimental data

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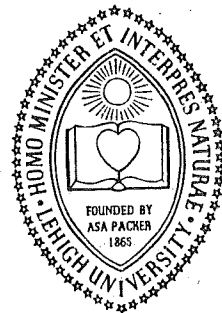
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364.3B

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HIGHWAY DRAINAGE INLET RESEARCH

DEVELOPMENT OF IMPROVED DRAINAGE INLETS:
HYDRAULIC PERFORMANCE OF PENNSYLVANIA HIGHWAY
DRAINAGE INLETS INSTALLED IN PAVED CHANNELS

(TYPE J, TYPE 4-Ft SPECIAL, AND
TYPE 6-Ft SPECIAL)

APPENDIX B - EXPERIMENTAL DATA

FRITZ ENGINEERING
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BY
PETER P. YEE
WALTER H. GRAF
ARTHUR W. BRUNE

NOVEMBER 1972

FRITZ ENGINEERING LABORATORY REPORT 364.3B

COMMONWEALTH OF PENNSYLVANIA
Department of Transportation
Bureau of Materials, Testing and Research

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PennDOT Research Project 68-31
Development of Improved Drainage Inlets

HYDRAULIC PERFORMANCE OF PENNSYLVANIA HIGHWAY
DRAINAGE INLETS INSTALLED IN PAVED CHANNELS
(Type J, Type 4-Ft Special, and Type 6-Ft Special)

APPENDIX B - EXPERIMENTAL DATA

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Office of Research
Bethlehem, Pennsylvania

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APPENDIX B - EXPERIMENTAL DATA

| Test No. | Inlet | Long. Slope | Swale Slope | Back Slope | Page |
|----------|--------------|-------------|-------------|------------|------|
| 4 | Type J | ½% | 12:1 | 3:1 | B-3 |
| 5 | " | " | 16:1 | " | B-4 |
| 6 | " | " | 24:1 | " | B-5 |
| 7 | " | " | 48:1 | " | B-6 |
| 9 | " | 2% | 12:1 | " | B-7 |
| 10 | " | " | 16:1 | " | B-8 |
| 11 | " | " | 24:1 | " | B-9 |
| 12 | " | " | 48:1 | " | B-10 |
| 14 | " | 4% | 12:1 | " | B-11 |
| 15 | " | " | 16:1 | " | B-13 |
| 16 | " | " | 24:1 | " | B-14 |
| 17 | " | " | 48:1 | " | B-15 |
| 19 | " | 8% | 12:1 | " | B-16 |
| 20 | " | " | 16:1 | " | B-18 |
| 21 | " | " | 24:1 | " | B-20 |
| 22 | " | " | 48:1 | " | B-22 |
| 26 | 4-Ft Special | " | 48:1 | 1/8:1 | B-24 |
| 27 | 6-Ft " | " | 48:1 | " | B-26 |
| 28 | 4-Ft " | " | 24:1 | " | B-29 |
| 29 | 6-Ft " | " | 24:1 | " | B-34 |
| 30 | 4-Ft " | " | 16:1 | " | B-40 |
| 31 | 6-Ft " | " | 16:1 | " | B-42 |
| 32 | 4-Ft " | " | 12:1 | " | B-45 |
| 33 | 6-Ft " | " | 12:1 | " | B-47 |
| 36 | 4-Ft " | 4% | 48:1 | " | B-49 |
| 37 | 6-Ft " | " | 48:1 | " | B-50 |
| 38 | 4-Ft " | " | 24:1 | " | B-53 |
| 39 | 6-Ft " | " | 24:1 | " | B-54 |
| 40 | 4-Ft " | " | 16:1 | " | B-55 |
| 41 | 6-Ft " | " | 16:1 | " | B-56 |
| 42 | 4-Ft " | " | 12:1 | " | B-57 |
| 43 | 6-Ft " | " | 12:1 | " | B-58 |
| 46 | 4-Ft " | 2% | 48:1 | " | B-59 |
| 47 | 6-Ft " | " | 48:1 | " | B-60 |
| 48 | 4-Ft " | " | 24:1 | " | B-61 |
| 49 | 6-Ft " | " | 24:1 | " | B-62 |
| 50 | 4-Ft " | " | 16:1 | " | B-63 |
| 51 | 6-Ft " | " | 16:1 | " | B-64 |
| 52 | 4-Ft " | " | 12:1 | " | B-65 |
| 53 | 6-Ft " | " | 12:1 | " | B-66 |
| 56 | 4-Ft " | ½% | 48:1 | " | B-67 |
| 57 | 6-Ft " | " | 48:1 | " | B-68 |
| 58 | 4-Ft " | " | 24:1 | " | B-69 |
| 59 | 6-Ft " | " | 24:1 | " | B-70 |
| 60 | 4-Ft " | " | 16:1 | " | B-71 |
| 61 | 6-Ft " | " | 16:1 | " | B-72 |
| 62 | 4-Ft " | " | 12:1 | " | B-73 |
| 63 | 6-Ft " | " | 12:1 | " | B-74 |

| Test No. | Inlet Type | Long. Slope | Swale Slope | Back Slope | Page |
|----------|--------------|-------------|-------------|------------|------|
| S1 | Type J | 0.2% | 48:1 | 3:1 | B-75 |
| S2 | " | " | 24:1 | " | B-76 |
| S3 | " | " | 16:1 | " | B-77 |
| S4 | " | " | 12:1 | " | B-78 |
| S5 | 4-Ft Special | " | 48:1 | 1/8:1 | B-79 |
| S6 | " | " | 24:1 | " | B-80 |
| S7 | " | " | 16:1 | " | B-81 |
| S8 | " | " | 12:1 | " | B-82 |
| S9 | 6-Ft Special | " | 48:1 | " | B-83 |
| S10 | " | " | 24:1 | " | B-84 |
| S11 | " | " | 16:1 | " | B-85 |
| S12 | " | " | 12:1 | " | B-86 |

Test No.: 4 Inlet: Type J Date: January 12, 72.
 Long. Slope: 1/2% Swale Slope: 12:1 Back Slope: 3:1
 Remarks: Depth taken at toe of divisor.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
 D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 5.83 | 1.00 | 34.8 | 60.7 | 0.57 | 0.43 | 57.3 | 2.75 | 0.66 | 0.221 |
| | | | | | | | 2.75 | | 0.230 |
| | | | | | | | 2.75 | | 0.227 |
| 3.36 | 0.76 | 27.8 | 60.8 | 0.46 | 0.30 | 60.1 | 2.54 | 0.60 | 0.201 |
| | | | | | | | 2.58 | | 0.208 |
| | | | | | | | 2.58 | | 0.209 |
| 2.06 | 0.59 | 23.5 | 60.7 | 0.39 | 0.20 | 65.5 | 2.29 | 0.56 | 0.188 |
| | | | | | | | 2.33 | | 0.186 |
| | | | | | | | 2.42 | | 0.196 |
| 1.04 | 0.42 | 17.8 | 60.5 | 0.29 | 0.13 | 69.8 | 1.92 | 0.48 | 0.159 |
| | | | | | | | 2.00 | | 0.165 |
| | | | | | | | 2.04 | | 0.173 |
| 0.38 | 0.25 | 12.2 | 60.5 | 0.20 | 0.05 | 80.7 | 1.58 | 0.36 | 0.129 |
| | | | | | | | 1.71 | | 0.138 |
| | | | | | | | 1.83 | | 0.144 |
| 0.10 | 0.12 | | | 0.12 | 0.00 | 100.0 | 1.17 | 0.32 | 0.106 |
| | | | | | | | 1.29 | | 0.109 |
| | | | | | | | 1.37 | | 0.117 |

Test No.: 5 Inlet: Type J Date: January 11, 1972.

Long. Slope: 1/2% Swale Slope: 16:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 ∇ : Volume of water intercepted (ft.³)
 T: Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
 B: Top width of channel (ft.)*
 D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|-----------|----------|-------|
| 5.59 | 0.98 | 28.7 | 60.6 | 0.47 | 0.51 | 48.3 | 3.25 | 0.62 | 0.207 |
| | | | | | | | 3.25 | | 0.204 |
| | | | | | | | 3.25 | | 0.211 |
| 3.40 | 0.77 | 23.5 | 60.5 | 0.39 | 0.38 | 50.5 | 3.00 | 0.54 | 0.182 |
| | | | | | | | 3.00 | | 0.197 |
| | | | | | | | 3.00 | | 0.190 |
| 2.03 | 0.59 | 20.2 | 60.5 | 0.33 | 0.26 | 56.5 | 2.71 | 0.51 | 0.170 |
| | | | | | | | 2.75 | | 0.172 |
| | | | | | | | 2.75 | | 0.173 |
| 1.14 | 0.44 | 16.8 | 60.7 | 0.28 | 0.16 | 62.9 | 2.42 | 0.44 | 0.146 |
| | | | | | | | 2.46 | | 0.158 |
| | | | | | | | 2.46 | | 0.164 |
| 0.39 | 0.26 | 11.3 | 60.5 | 0.19 | 0.07 | 71.7 | 1.88 | 0.36 | 0.121 |
| | | | | | | | 1.96 | | 0.131 |
| | | | | | | | 2.04 | | 0.134 |
| 0.058 | 0.10 | | | 0.10 | 0.00 | 100.0 | 1.25 | 0.24 | 0.079 |
| | | | | | | | 1.38 | | 0.082 |
| | | | | | | | 1.50 | | 0.093 |

Test No.: 7 Inlet: Type J Date: Jan 5, 1972.

Long. Slope: 1/2% Swale Slope: 48:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 5.40 | 0.97 | 16.0 | 60.4 | 0.27 | 0.70 | 27.3 | 5.83 | 0.41 | 0.136 |
| | | | | | | | 5.95 | | 0.142 |
| | | | | | | | 6.00 | | 0.135 |
| 2.80 | 0.70 | 11.7 | 60.3 | 0.19 | 0.51 | 27.8 | 4.91 | 0.36 | 0.120 |
| | | | | | | | 5.08 | | 0.130 |
| | | | | | | | 5.25 | | 0.133 |
| 2.22 | 0.62 | 10.7 | 60.4 | 0.18 | 0.44 | 28.6 | 4.84 | 0.34 | 0.113 |
| | | | | | | | 4.84 | | 0.122 |
| | | | | | | | 5.00 | | 0.126 |
| 1.31 | 0.48 | 9.1 | 60.5 | 0.15 | 0.33 | 31.3 | 4.58 | 0.30 | 0.099 |
| | | | | | | | 4.54 | | 0.109 |
| | | | | | | | 4.66 | | 0.118 |
| 0.93 | 0.40 | 7.8 | 60.7 | 0.13 | 0.27 | 32.1 | 4.41 | 0.28 | 0.092 |
| | | | | | | | 4.41 | | 0.103 |
| | | | | | | | 4.33 | | 0.110 |
| 0.47 | 0.28 | 6.2 | 60.5 | 0.10 | 0.18 | 36.6 | 4.04 | 0.22 | 0.077 |
| | | | | | | | 4.00 | | 0.088 |
| | | | | | | | 4.00 | | 0.095 |
| 0.13 | 0.14 | 5.3 | 60.6 | 0.09 | 0.05 | 62.4 | 3.38 | 0.18 | 0.059 |
| | | | | | | | 3.38 | | 0.068 |
| | | | | | | | 3.46 | | 0.082 |
| 0.008 | 0.04 | | | 0.04 | 0.00 | 100.0 | 2.16 | 0.11 | 0.037 |
| | | | | | | | 2.29 | | 0.041 |
| | | | | | | | 2.33 | | 0.051 |

Test No.: 9 Inlet: Type J Date: Dec 9, 1971.

Long. Slope: 2.0 % Swale Slope: 12:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 Ψ : Volume of water intercepted (ft.³)
 T : Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
 B : Top width of channel (ft.)*
 D : Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|----------------|---------------|-------|
| 5.55 | 0.98 | 32.0 | 60.5 | 0.53 | 0.45 | 53.9 | 2.33 | 0.58 | 0.193 |
| | | | | | | | 2.46 | 0.52 | 0.173 |
| | | | | | | | 2.54 | 0.54 | 0.179 |
| 3.51 | 0.78 | 28.1 | 60.2 | 0.47 | 0.31 | 59.9 | 2.00 | 0.55 | 0.183 |
| | | | | | | | 2.16 | 0.52 | 0.172 |
| | | | | | | | 2.33 | 0.50 | 0.166 |
| 1.81 | 0.56 | 20.1 | 60.3 | 0.33 | 0.23 | 59.5 | 1.67 | 0.49 | 0.163 |
| | | | | | | | 1.71 | 0.47 | 0.157 |
| | | | | | | | 1.92 | 0.47 | 0.157 |
| 0.93 | 0.40 | 14.9 | 60.0 | 0.25 | 0.15 | 63.0 | 1.50 | 0.40 | 0.132 |
| | | | | | | | 1.50 | 0.41 | 0.138 |
| | | | | | | | 1.50 | 0.42 | 0.140 |
| 0.44 | 0.27 | 12.0 | 60.4 | 0.20 | 0.07 | 73.6 | 1.37 | 0.34 | 0.112 |
| | | | | | | | 1.42 | 0.35 | 0.115 |
| | | | | | | | 1.42 | 0.32 | 0.108 |
| 0.18 | 0.17 | 8.0 | 60.5 | 0.13 | 0.04 | 77.9 | 1.08 | 0.30 | 0.099 |
| | | | | | | | 1.08 | 0.31 | 0.103 |
| | | | | | | | 1.21 | 0.30 | 0.099 |
| 0.06 | 0.10 | | | 0.10 | 0.00 | 100.0 | 0.88 | 0.24 | 0.079 |
| | | | | | | | 0.96 | 0.22 | 0.074 |
| | | | | | | | 1.00 | 0.21 | 0.071 |

Test No.: 10 Inlet: Type J Date: December 9, 71.

Long. Slope: 2.0 % Swale Slope: 16:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) ∇ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|--------------|-------------|-------|
| 5.14 | 0.94 | 25.5 | 60.6 | 0.42 | 0.52 | 44.7 | 2.66 | 0.50 | 0.166 |
| | | | | | | | 2.75 | 0.47 | 0.158 |
| | | | | | | | 2.75 | 0.49 | 0.162 |
| 3.34 | 0.76 | 22.1 | 60.5 | 0.36 | 0.40 | 48.0 | 2.50 | 0.46 | 0.154 |
| | | | | | | | 2.62 | 0.45 | 0.151 |
| | | | | | | | 2.66 | 0.45 | 0.149 |
| 1.91 | 0.57 | 19.4 | 62.9 | 0.31 | 0.26 | 54.0 | 2.00 | 0.44 | 0.145 |
| | | | | | | | 2.16 | 0.41 | 0.138 |
| | | | | | | | 2.34 | 0.41 | 0.137 |
| 1.33 | 0.48 | 16.4 | 61.3 | 0.27 | 0.21 | 55.7 | 1.83 | 0.41 | 0.138 |
| | | | | | | | 1.88 | 0.39 | 0.130 |
| | | | | | | | 2.00 | 0.39 | 0.131 |
| 0.59 | 0.32 | 11.3 | 60.1 | 0.19 | 0.13 | 59.6 | 1.67 | 0.33 | 0.111 |
| | | | | | | | 1.67 | 0.33 | 0.110 |
| | | | | | | | 1.71 | 0.33 | 0.111 |
| 0.09 | 0.13 | 5.6 | 60.4 | 0.09 | 0.04 | 74.2 | 1.17 | 0.22 | 0.073 |
| | | | | | | | 1.25 | 0.25 | 0.083 |
| | | | | | | | 1.29 | 0.23 | 0.078 |
| 0.03 | 0.08 | | | 0.08 | 0.00 | 100.0 | 0.92 | 0.19 | 0.062 |
| | | | | | | | 0.96 | 0.20 | 0.067 |
| | | | | | | | 1.00 | 0.19 | 0.063 |

Test No.: 11 Inlet: Type J Date: Dec 6, 1971.

Long. Slope: 2.0 % Swale Slope: 24:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) ∇ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|-----------|----------|-------|
| 5.05 | 0.94 | 17.7 | 60.6 | 0.29 | 0.65 | 31.0 | 3.37 | 0.44 | 0.148 |
| | | | | | | | 3.33 | 0.44 | 0.145 |
| | | | | | | | 3.33 | 0.42 | 0.139 |
| 3.48 | 0.78 | 15.0 | 60.5 | 0.25 | 0.53 | 31.8 | 3.25 | 0.39 | 0.131 |
| | | | | | | | 3.25 | 0.40 | 0.133 |
| | | | | | | | 3.25 | 0.39 | 0.130 |
| 1.73 | 0.55 | 12.2 | 60.7 | 0.20 | 0.35 | 36.5 | 3.00 | 0.34 | 0.113 |
| | | | | | | | 3.00 | 0.33 | 0.110 |
| | | | | | | | 2.96 | 0.32 | 0.107 |
| 0.88 | 0.39 | 10.4 | 60.6 | 0.17 | 0.22 | 44.5 | 2.46 | 0.30 | 0.101 |
| | | | | | | | 2.54 | 0.30 | 0.101 |
| | | | | | | | 2.62 | 0.29 | 0.098 |
| 0.29 | 0.22 | 7.0 | 60.6 | 0.12 | 0.10 | 52.5 | 1.83 | 0.26 | 0.085 |
| | | | | | | | 1.83 | 0.26 | 0.085 |
| | | | | | | | 1.96 | 0.26 | 0.085 |
| 0.09 | 0.13 | 4.8 | 60.6 | 0.08 | 0.05 | 63.5 | 1.54 | 0.20 | 0.067 |
| | | | | | | | 1.54 | 0.21 | 0.071 |
| | | | | | | | 1.54 | 0.20 | 0.065 |
| 0.02 | 0.05 | | | 0.05 | 0.00 | 100.0 | 0.92 | 0.13 | 0.044 |
| | | | | | | | 0.96 | 0.14 | 0.046 |
| | | | | | | | 1.00 | 0.12 | 0.041 |

Test No.: 12 Inlet: Type J Date: Dec 6, 1971.

Long. Slope: 2.0 % Swale Slope: 48:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water)

Q_1 : Channel discharge (cfs)

Q_2 : Discharge intercepted (cfs)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

Ψ : Volume of water intercepted (ft.³)

T: Time (sec.)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|--------------|-------------|-------|
| 4.75 | 0.90 | 11.3 | 60.5 | 0.19 | 0.71 | 20.8 | 4.50 | 0.31 | 0.103 |
| | | | | | | | 4.58 | 0.31 | 0.104 |
| | | | | | | | 4.75 | 0.31 | 0.102 |
| 3.38 | 0.76 | 11.0 | 60.6 | 0.18 | 0.58 | 23.8 | 4.25 | 0.30 | 0.099 |
| | | | | | | | 4.33 | 0.29 | 0.098 |
| | | | | | | | 4.45 | 0.28 | 0.094 |
| 1.73 | 0.55 | 9.6 | 60.5 | 0.16 | 0.39 | 28.9 | 3.71 | 0.28 | 0.092 |
| | | | | | | | 3.71 | 0.27 | 0.089 |
| | | | | | | | 3.92 | 0.26 | 0.085 |
| 1.02 | 0.42 | 7.6 | 60.5 | 0.13 | 0.29 | 30.3 | 3.50 | 0.26 | 0.088 |
| | | | | | | | 3.50 | 0.26 | 0.086 |
| | | | | | | | 3.54 | 0.24 | 0.080 |
| 0.58 | 0.32 | 5.9 | 60.5 | 0.10 | 0.22 | 30.9 | 3.25 | 0.21 | 0.069 |
| | | | | | | | 3.25 | 0.24 | 0.079 |
| | | | | | | | 3.21 | 0.21 | 0.071 |
| 0.26 | 0.21 | 4.9 | 60.6 | 0.08 | 0.13 | 38.5 | 2.88 | 0.17 | 0.057 |
| | | | | | | | 2.92 | 0.20 | 0.065 |
| | | | | | | | 2.92 | 0.18 | 0.059 |
| 0.10 | 0.12 | 3.9 | 60.6 | 0.06 | 0.06 | 53.5 | 2.21 | 0.15 | 0.051 |
| | | | | | | | 2.29 | 0.16 | 0.053 |
| | | | | | | | 2.38 | 0.16 | 0.052 |
| 0.02 | 0.05 | | | 0.05 | 0.00 | 100.0 | 1.37 | 0.11 | 0.035 |
| | | | | | | | 1.37 | 0.11 | 0.038 |
| | | | | | | | 1.42 | 0.11 | 0.037 |

Test No.: 14 Inlet: Type J Date: Nov 15, 1971

Long. Slope: 4.0 % Swale Slope: 12:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 5.35 | 0.96 | 28.8 | 60.3 | 0.48 | 0.48 | 49.7 | 1.83 | 0.48 | 0.160 |
| | | | | | | | 1.83 | 0.49 | 0.164 |
| | | | | | | | 1.88 | 0.49 | 0.164 |
| 3.43 | 0.77 | 23.7 | 60.5 | 0.39 | 0.38 | 51.0 | 1.79 | 0.45 | 0.150 |
| | | | | | | | 1.79 | 0.45 | 0.151 |
| | | | | | | | 1.79 | 0.45 | 0.149 |
| 2.16 | 0.61 | 19.3 | 60.4 | 0.32 | 0.29 | 52.3 | 1.62 | 0.40 | 0.134 |
| | | | | | | | 1.71 | 0.41 | 0.135 |
| | | | | | | | 1.71 | 0.41 | 0.138 |
| 1.74 | 0.55 | 18.2 | 60.4 | 0.30 | 0.25 | 54.8 | 1.58 | 0.39 | 0.129 |
| | | | | | | | 1.67 | 0.38 | 0.127 |
| | | | | | | | 1.67 | 0.39 | 0.131 |
| 1.41 | 0.49 | 17.4 | 60.5 | 0.29 | 0.20 | 58.7 | 1.46 | 0.37 | 0.123 |
| | | | | | | | 1.58 | 0.38 | 0.127 |
| | | | | | | | 1.58 | 0.37 | 0.123 |
| 1.08 | 0.43 | 15.9 | 60.5 | 0.26 | 0.17 | 61.1 | 1.37 | 0.35 | 0.117 |
| | | | | | | | 1.50 | 0.36 | 0.121 |
| | | | | | | | 1.58 | 0.35 | 0.118 |
| 0.82 | 0.37 | 13.9 | 60.5 | 0.23 | 0.14 | 62.1 | 1.25 | 0.34 | 0.112 |
| | | | | | | | 1.37 | 0.34 | 0.114 |
| | | | | | | | 1.42 | 0.35 | 0.115 |
| 0.49 | 0.29 | 10.9 | 60.5 | 0.18 | 0.11 | 62.1 | 1.17 | 0.31 | 0.102 |
| | | | | | | | 1.17 | 0.31 | 0.103 |
| | | | | | | | 1.33 | 0.31 | 0.104 |
| 0.29 | 0.22 | 9.3 | 60.4 | 0.15 | 0.07 | 70.0 | 1.08 | 0.28 | 0.093 |
| | | | | | | | 1.04 | 0.28 | 0.093 |
| | | | | | | | 1.08 | 0.27 | 0.089 |

Test No.: 14 Cont'd Inlet: Type J Date: Nov 15, 1971

Long. Slope: 4.0 % Swale Slope: 12:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 0.16 | 0.16 | 7.2 | 60.5 | 0.12 | 0.04 | 76.0 | 0.96 | 0.24 | 0.079 |
| | | | | | | | 0.96 | 0.25 | 0.084 |
| | | | | | | | 1.00 | 0.25 | 0.082 |
| 0.04 | 0.08 | | | 0.08 | 0.00 | 100.0 | 0.71 | 0.18 | 0.059 |
| | | | | | | | 0.75 | 0.20 | 0.065 |
| | | | | | | | 0.75 | 0.19 | 0.064 |

Test No.: 15 Inlet: Type J Date: Nov 18, 71.

Long. Slope: 4.0 % Swale Slope: 16:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 ∇ : Volume of water intercepted (ft.³)
T: Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|-----------|----------|-------|
| 4.99 | 0.93 | 31.2 | 90.8 | 0.34 | 0.59 | 36.9 | 2.25 | 0.42 | 0.141 |
| | | | | | | | 2.25 | 0.42 | 0.141 |
| | | | | | | | 2.25 | 0.44 | 0.145 |
| 3.30 | 0.76 | 28.2 | 92.1 | 0.31 | 0.45 | 40.3 | 2.21 | 0.38 | 0.126 |
| | | | | | | | 2.21 | 0.38 | 0.125 |
| | | | | | | | 2.21 | 0.38 | 0.126 |
| 2.18 | 0.61 | 24.9 | 91.1 | 0.27 | 0.34 | 44.3 | 2.12 | 0.36 | 0.120 |
| | | | | | | | 2.12 | 0.34 | 0.113 |
| | | | | | | | 2.12 | 0.34 | 0.112 |
| 1.33 | 0.48 | 22.2 | 90.7 | 0.24 | 0.24 | 51.0 | 1.87 | 0.34 | 0.114 |
| | | | | | | | 1.96 | 0.32 | 0.105 |
| | | | | | | | 2.00 | 0.31 | 0.104 |
| 0.80 | 0.37 | 18.1 | 91.3 | 0.20 | 0.17 | 53.6 | 1.42 | 0.28 | 0.093 |
| | | | | | | | 1.62 | 0.31 | 0.102 |
| | | | | | | | 1.75 | 0.30 | 0.099 |
| 0.47 | 0.28 | 14.3 | 90.7 | 0.16 | 0.12 | 56.4 | 1.21 | 0.29 | 0.097 |
| | | | | | | | 1.33 | 0.29 | 0.097 |
| | | | | | | | 1.50 | 0.28 | 0.095 |
| 0.20 | 0.18 | 10.4 | 90.6 | 0.11 | 0.07 | 63.8 | 1.17 | 0.25 | 0.082 |
| | | | | | | | 1.12 | 0.25 | 0.084 |
| | | | | | | | 1.17 | 0.26 | 0.088 |
| 0.08 | 0.11 | 8.1 | 90.6 | 0.09 | 0.02 | 79.1 | 1.08 | 0.20 | 0.066 |
| | | | | | | | 1.08 | 0.22 | 0.072 |
| | | | | | | | 1.08 | 0.21 | 0.070 |
| 0.02 | 0.05 | | | 0.05 | 0.00 | 100.0 | 0.75 | 0.14 | 0.045 |
| | | | | | | | 0.79 | 0.14 | 0.048 |
| | | | | | | | 0.79 | 0.15 | 0.049 |

Test No.: 16 Inlet: Type J Date: Nov 17, 1971

Long. Slope: 4.0 % Swale Slope: 24:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 3.01 | 0.72 | 23.9 | 90.6 | 0.26 | 0.46 | 35.6 | 2.42 | 0.37 | 0.122 |
| | | | | | | | 2.42 | 0.37 | 0.123 |
| | | | | | | | 2.42 | 0.36 | 0.120 |
| 2.11 | 0.60 | 19.0 | 91.0 | 0.21 | 0.39 | 34.8 | 2.37 | 0.33 | 0.110 |
| | | | | | | | 2.37 | 0.33 | 0.110 |
| | | | | | | | 2.37 | 0.35 | 0.116 |
| 0.73 | 0.35 | 14.6 | 90.5 | 0.16 | 0.19 | 46.1 | 2.17 | 0.25 | 0.083 |
| | | | | | | | 2.17 | 0.24 | 0.081 |
| | | | | | | | 2.17 | 0.25 | 0.084 |
| 0.43 | 0.27 | 13.5 | 92.2 | 0.15 | 0.12 | 54.1 | 2.12 | 0.24 | 0.079 |
| | | | | | | | 2.12 | 0.24 | 0.080 |
| | | | | | | | 2.12 | 0.23 | 0.076 |
| 0.03 | 0.07 | | | 0.07 | 0.00 | 100.0 | 1.50 | 0.22 | 0.072 |
| | | | | | | | 1.71 | 0.22 | 0.073 |
| | | | | | | | 1.75 | 0.20 | 0.066 |

Test No.: 17 Inlet: Type J Date: Nov 16, 1971

Long. Slope: 4.0 % Swale Slope: 48:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|-------|-------|-------|--------|-----------|----------|-------|
| 1.61 | 0.53 | 9.3 | 59.8 | 0.16 | 0.37 | 29.4 | 3.42 | 0.24 | 0.081 |
| | | | | | | | 3.63 | 0.23 | 0.076 |
| | | | | | | | 3.75 | 0.21 | 0.071 |
| 1.61 | 0.53 | | | 0.15 | 0.38 | 28.7 | | | |
| 1.27 | 0.47 | 17.3 | 119.6 | 0.14 | 0.33 | 30.8 | 3.16 | 0.24 | 0.080 |
| | | | | | | | 3.42 | 0.23 | 0.076 |
| | | | | | | | 3.58 | 0.23 | 0.075 |
| 0.97 | 0.41 | 15.6 | 119.3 | 0.13 | 0.28 | 31.9 | 3.00 | 0.23 | 0.077 |
| | | | | | | | 3:25 | 0.23 | 0.075 |
| | | | | | | | 3.42 | 0.22 | 0.074 |
| 0.71 | 0.35 | 13.5 | 119.8 | 0.11 | 0.24 | 32.6 | 2.75 | 0.22 | 0.072 |
| | | | | | | | 2.83 | 0.22 | 0.073 |
| | | | | | | | 3.33 | 0.21 | 0.070 |
| 0.47 | 0.28 | 11.4 | 119.7 | 0.10 | 0.18 | 34.0 | 2.54 | 0.19 | 0.062 |
| | | | | | | | 2.54 | 0.20 | 0.068 |
| | | | | | | | 2.54 | 0.20 | 0.065 |
| 0.29 | 0.22 | 9.1 | 122.7 | 0.07 | 0.15 | 33.7 | 2.38 | 0.17 | 0.056 |
| | | | | | | | 2.38 | 0.19 | 0.063 |
| | | | | | | | 2.38 | 0.17 | 0.058 |
| 0.18 | 0.17 | 7.9 | 120.5 | 0.07 | 0.10 | 39.0 | 2.29 | 0.14 | 0.048 |
| | | | | | | | 2.29 | 0.17 | 0.056 |
| | | | | | | | 2.29 | 0.16 | 0.052 |
| 0.09 | 0.13 | 6.3 | 120.6 | 0.05 | 0.08 | 41.5 | 2.08 | 0.13 | 0.043 |
| | | | | | | | 2.12 | 0.14 | 0.045 |
| | | | | | | | 2.12 | 0.14 | 0.045 |
| 0.02 | 0.05 | | | 0.05 | 0.00 | 100.0 | 1.04 | 0.08 | 0.026 |
| | | | | | | | 1.08 | 0.09 | 0.031 |
| | | | | | | | 1.17 | 0.08 | 0.026 |

Test No.: 19 Inlet: Type J Date: August 10, 1971

Long. Slope: 8.0 % Swale Slope: 12:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 V : Volume of water intercepted (ft.³)
 T : Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
 B : Top width of channel (ft.)*
 D : Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | V | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|------|------|-------|-------|--------|-----------|----------|-------|
| 14.33 | 1.59 | 21.0 | 40.4 | 0.52 | 1.07 | 32.7 | 1.88 | 0.48 | 0.159 |
| | | | | | | | 2.04 | 0.49 | 0.162 |
| | | | | | | | 2.16 | 0.49 | 0.163 |
| 12.73 | 1.49 | 19.7 | 40.3 | 0.49 | 1.00 | 32.8 | 1.84 | 0.48 | 0.160 |
| | | | | | | | 1.92 | 0.49 | 0.163 |
| | | | | | | | 2.12 | 0.48 | 0.160 |
| 9.98 | 1.32 | 18.9 | 40.5 | 0.47 | 0.85 | 35.4 | 1.83 | 0.47 | 0.155 |
| | | | | | | | 1.75 | 0.47 | 0.156 |
| | | | | | | | 1.91 | 0.44 | 0.147 |
| 6.68 | 1.08 | 16.7 | 40.2 | 0.41 | 0.67 | 38.3 | 1.67 | 0.43 | 0.143 |
| | | | | | | | 1.75 | 0.44 | 0.145 |
| | | | | | | | 1.62 | 0.44 | 0.145 |
| 3.33 | 0.76 | 13.2 | 40.5 | 0.33 | 0.43 | 43.0 | 1.54 | 0.40 | 0.132 |
| | | | | | | | 1.50 | 0.38 | 0.127 |
| | | | | | | | 1.46 | 0.38 | 0.127 |
| 2.55 | 0.66 | 11.9 | 40.5 | 0.29 | 0.37 | 44.6 | 1.50 | 0.36 | 0.121 |
| | | | | | | | 1.46 | 0.36 | 0.120 |
| | | | | | | | 1.42 | 0.37 | 0.123 |
| 1.92 | 0.57 | 10.3 | 40.4 | 0.26 | 0.31 | 44.5 | 1.46 | 0.33 | 0.110 |
| | | | | | | | 1.46 | 0.34 | 0.112 |
| | | | | | | | 1.42 | 0.34 | 0.113 |
| 1.18 | 0.45 | 12.9 | 60.3 | 0.21 | 0.24 | 47.5 | 1.33 | 0.28 | 0.094 |
| | | | | | | | 1.37 | 0.27 | 0.090 |
| | | | | | | | 1.33 | 0.28 | 0.094 |
| 0.60 | 0.32 | 10.0 | 60.6 | 0.17 | 0.15 | 51.5 | 0.88 | 0.26 | 0.086 |
| | | | | | | | 1.00 | 0.23 | 0.076 |
| | | | | | | | 1.12 | 0.23 | 0.077 |

Test No.: 19(Cont'd) Inlet: Type J Date: August 10, 1971.

Long. Slope: 8 % Swale Slope: 12:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water)

Q_1 : Channel discharge (cfs)

Q_2 : Discharge intercepted (cfs)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

V : Volume of water intercepted (ft.³)

T: Time (sec.)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | V | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----|---|-------|-------|--------|--------------|-------------|-------|
| 0.33 | 0.24 | | | 0.24 | 0.00 | 100.0 | 0.54 | 0.12 | 0.040 |
| | | | | | | | 0.54 | 0.13 | 0.044 |
| | | | | | | | 0.50 | 0.14 | 0.047 |

Test No.: 20 Inlet: Type J Date: August 23, 1971.

Long. Slope: 8 % Swale Slope: 16:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|-------|-------|-------|--------|-----------|----------|-------|
| 14.50 | 1.60 | 28.5 | 60.5 | 0.47 | 1.13 | 29.4 | 2.75 | 0.48 | 0.159 |
| | | | | | | | 2.87 | 0.48 | 0.160 |
| | | | | | | | 2.96 | 0.46 | 0.152 |
| 12.70 | 1.50 | 28.8 | 60.6 | 0.48 | 1.02 | 31.6 | 2.67 | 0.47 | 0.157 |
| | | | | | | | 2.75 | 0.48 | 0.159 |
| | | | | | | | 2.88 | 0.45 | 0.148 |
| 10.20 | 1.33 | 26.8 | 60.5 | 0.44 | 0.89 | 33.3 | 2.42 | 0.46 | 0.152 |
| | | | | | | | 2.54 | 0.47 | 0.156 |
| | | | | | | | 2.63 | 0.44 | 0.148 |
| 6.88 | 1.10 | 22.9 | 60.6 | 0.38 | 0.72 | 34.3 | 2.00 | 0.43 | 0.142 |
| | | | | | | | 2.12 | 0.43 | 0.144 |
| | | | | | | | 2.29 | 0.43 | 0.144 |
| 3.40 | 0.77 | 19.4 | 60.6 | 0.32 | 0.45 | 41.5 | 1.50 | 0.38 | 0.126 |
| | | | | | | | 1.58 | 0.38 | 0.125 |
| | | | | | | | 1.71 | 0.38 | 0.125 |
| 1.59 | 0.52 | 13.9 | 60.4 | 0.23 | 0.29 | 44.3 | 1.42 | 0.33 | 0.110 |
| | | | | | | | 1.42 | 0.33 | 0.109 |
| | | | | | | | 1.33 | 0.32 | 0.108 |
| 1.09 | 0.44 | 11.1 | 60.4 | 0.18 | 0.26 | 42.5 | 1.42 | 0.33 | 0.099 |
| | | | | | | | 1.42 | 0.33 | 0.099 |
| | | | | | | | 1.38 | 0.33 | 0.099 |
| 0.53 | 0.30 | 8.9 | 60.6 | 0.15 | 0.15 | 49.0 | 1.37 | 0.23 | 0.077 |
| | | | | | | | 1.37 | 0.23 | 0.076 |
| | | | | | | | 1.37 | 0.23 | 0.075 |
| 0.38 | 0.26 | 14.3 | 100.3 | 0.14 | 0.12 | 56.0 | | | |
| 0.26 | 0.21 | 8.7 | 60.3 | 0.14 | 0.07 | 69.4 | 1.17 | 0.21 | 0.070 |
| | | | | | | | 1.29 | 0.20 | 0.068 |
| | | | | | | | 1.33 | 0.19 | 0.062 |

Test No.: 20 (Cont'd) Inlet: Type J Date: August 23, 1971.

Long. Slope: 8.0 % Swale Slope: 16:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- ∇ : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|-------|-------|-------|--------|--------------|-------------|-------|
| 0.24 | 0.20 | 14.1 | 100.3 | 0.14 | 0.06 | 70.0 | | | |
| 0.05 | 0.09 | 4.2 | 60.4 | 0.07 | 0.02 | 74.8 | 0.71 | 0.15 | 0.051 |
| | | | | | | | 0.71 | 0.17 | 0.058 |
| | | | | | | | 0.75 | 0.17 | 0.058 |
| 0.02 | 0.06 | | | 0.06 | 0.00 | 100.0 | 0.54 | 0.12 | 0.039 |
| | | | | | | | 0.54 | 0.13 | 0.044 |
| | | | | | | | 0.54 | 0.12 | 0.039 |

Test No.: 21 Inlet: Type J Date: August 12, 1971.

Long. Slope: 8% Swale Slope: 24:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- Ψ : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

BAD DATA

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|-------|-------|-------|--------|-----------|----------|-------|
| 14.40 | 1.60 | 22.0 | 60.6 | 0.36 | 1.24 | 22.7 | 3.21 | 0.38 | 0.127 |
| | | | | | | | 3.42 | 0.38 | 0.126 |
| | | | | | | | 3.50 | 0.39 | 0.131 |
| 13.40 | 1.53 | 21.6 | 60.3 | 0.36 | 1.17 | 23.4 | 3.16 | 0.38 | 0.128 |
| | | | | | | | 3.42 | 0.38 | 0.125 |
| | | | | | | | 3.50 | 0.38 | 0.128 |
| 6.85 | 1.10 | 20.3 | 60.6 | 0.34 | 0.76 | 30.5 | 2.46 | 0.37 | 0.124 |
| | | | | | | | 2.50 | 0.37 | 0.122 |
| | | | | | | | 2.54 | 0.36 | 0.120 |
| 3.40 | 0.77 | 16.4 | 60.4 | 0.27 | 0.50 | 35.4 | 1.83 | 0.35 | 0.115 |
| | | | | | | | 1.92 | 0.36 | 0.121 |
| | | | | | | | 2.00 | 0.35 | 0.117 |
| 1.77 | 0.55 | 11.6 | 60.5 | 0.19 | 0.36 | 34.8 | 1.79 | 0.30 | 0.100 |
| | | | | | | | 1.67 | 0.32 | 0.107 |
| | | | | | | | 1.58 | 0.32 | 0.107 |
| 0.26 | 0.21 | 5.7 | 60.6 | 0.09 | 0.12 | 45.2 | 1.50 | 0.15 | 0.049 |
| | | | | | | | 1.50 | 0.16 | 0.053 |
| | | | | | | | 1.54 | 0.14 | 0.048 |
| 0.23 | 0.20 | 9.1 | 100.4 | 0.09 | 0.11 | 45.3 | 1.50 | 0.17 | 0.057 |
| | | | | | | | 1.50 | 0.20 | 0.064 |
| | | | | | | | 1.46 | 0.18 | 0.060 |
| 0.08 | 0.11 | 7.9 | 101.4 | 0.08 | 0.03 | 69.1 | 1.25 | 0.14 | 0.048 |
| | | | | | | | 1.33 | 0.15 | 0.050 |
| | | | | | | | 1.33 | 0.13 | 0.042 |
| 0.13 | 0.15 | 8.5 | 100.3 | 0.08 | 0.07 | 56.5 | 1.42 | 0.15 | 0.049 |
| | | | | | | | 1.46 | 0.16 | 0.054 |
| | | | | | | | 1.46 | 0.15 | 0.050 |

Test No.: 21 (Cont'd) Inlet: Type J Date: August 12, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 \forall : Volume of water intercepted (ft.³)
T: Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|---|-------|-------|--------|----------------------|-------------|---|
| 0.06 | 0.10 | | | 0.10 | 0.00 | 100.0 | 0.54 0.54 0.54 | | |

Test No.: 22 Inlet: Type J Date: August 13, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 14.00 | 1.58 | 12.4 | 60.4 | 0.21 | 1.37 | 13.0 | 4.95 | 0.29 | 0.096 |
| | | | | | | | 5.04 | 0.29 | 0.096 |
| | | | | | | | 5.08 | 0.29 | 0.096 |
| 11.20 | 1.40 | 11.7 | 60.3 | 0.19 | 1.21 | 13.9 | 4.66 | 0.28 | 0.094 |
| | | | | | | | 4.70 | 0.29 | 0.096 |
| | | | | | | | 4.80 | 0.29 | 0.095 |
| 6.88 | 1.10 | 10.8 | 60.5 | 0.18 | 0.92 | 16.2 | 4.20 | 0.27 | 0.090 |
| | | | | | | | 4.25 | 0.27 | 0.090 |
| | | | | | | | 4.37 | 0.26 | 0.087 |
| 3.48 | 0.78 | 9.8 | 60.5 | 0.16 | 0.62 | 20.8 | 3.75 | 0.26 | 0.085 |
| | | | | | | | 3.79 | 0.25 | 0.082 |
| | | | | | | | 3.88 | 0.24 | 0.080 |
| 1.72 | 0.55 | 8.8 | 60.4 | 0.15 | 0.40 | 26.6 | 3.04 | 0.22 | 0.074 |
| | | | | | | | 3.21 | 0.22 | 0.073 |
| | | | | | | | 3.42 | 0.21 | 0.071 |
| 1.23 | 0.47 | 9.8 | 74.9 | 0.13 | 0.34 | 28.2 | | | 0.073 |
| | | | | | | | | | 0.073 |
| | | | | | | | | | 0.068 |
| 0.78 | 0.36 | 6.4 | 60.6 | 0.11 | 0.25 | 29.2 | 2.50 | 0.20 | 0.068 |
| | | | | | | | 2.58 | 0.21 | 0.070 |
| | | | | | | | 2.58 | 0.20 | 0.065 |
| 0.43 | 0.27 | 5.6 | 60.5 | 0.09 | 0.18 | 34.3 | 1.96 | 0.17 | 0.057 |
| | | | | | | | 2.00 | 0.19 | 0.062 |
| | | | | | | | 2.21 | 0.17 | 0.058 |
| 0.09 | 0.13 | 4.1 | 90.4 | 0.05 | 0.08 | 36.3 | 1.67 | 0.12 | 0.039 |
| | | | | | | | 1.63 | 0.13 | 0.043 |
| | | | | | | | 1.54 | 0.11 | 0.038 |

Test No.: 22 (Cont'd) Inlet: Type J Date: August 13, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 3:1

Remarks: Depth taken at toe of divisor.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water)

Q_1 : Channel discharge (cfs)

Q_2 : Discharge intercepted (cfs)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

\forall : Volume of water intercepted (ft.³)

T: Time (sec.)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|---|-------|-------|--------|--------------|-------------|-------|
| 0.008 | 0.04 | | | 0.04 | 0.00 | 100.0 | 0.75 | 0.06 | 0.022 |
| | | | | | | | 0.79 | 0.07 | 0.024 |
| | | | | | | | 0.83 | 0.06 | 0.021 |

Test No.: 26 Inlet: 4-Ft Special Date: Sept 9, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 13.64 | 1.55 | 24.8 | 40.5 | 0.61 | 0.94 | 39.5 | 4.91 | 0.0 | 0.094 |
| | | | | | | | 5.00 | | 0.094 |
| | | | | | | | 5.04 | | 0.096 |
| 12.10 | 1.47 | 24.8 | 40.4 | 0.62 | 0.85 | 41.8 | 4.75 | 0.0 | 0.089 |
| | | | | | | | 4.80 | | 0.090 |
| | | | | | | | 4.87 | | 0.094 |
| 10.20 | 1.33 | 22.7 | 40.2 | 0.57 | 0.76 | 42.5 | 4.80 | 0.0 | 0.084 |
| | | | | | | | 4.83 | | 0.089 |
| | | | | | | | 4.87 | | 0.092 |
| 8.41 | 1.22 | 21.7 | 40.3 | 0.54 | 0.68 | 44.0 | 4.66 | 0.0 | 0.083 |
| | | | | | | | 4.75 | | 0.089 |
| | | | | | | | 4.83 | | 0.090 |
| 6.85 | 1.10 | 21.1 | 40.5 | 0.52 | 0.58 | 47.5 | 4.41 | 0.0 | 0.080 |
| | | | | | | | 4.45 | | 0.085 |
| | | | | | | | 4.58 | | 0.086 |
| 3.44 | 0.78 | 18.9 | 41.3 | 0.46 | 0.32 | 59.0 | 4.12 | 0.0 | 0.075 |
| | | | | | | | 4.16 | | 0.076 |
| | | | | | | | 4.29 | | 0.075 |
| 1.38 | 0.49 | 21.9 | 60.4 | 0.36 | 0.13 | 74.0 | 3.71 | 0.0 | 0.067 |
| | | | | | | | 3.79 | | 0.070 |
| | | | | | | | 3.96 | | 0.066 |
| 0.58 | 0.31 | 16.2 | 60.4 | 0.27 | 0.04 | 85.8 | 3.00 | 0.0 | 0.060 |
| | | | | | | | 3.16 | | 0.061 |
| | | | | | | | 3.25 | | 0.056 |
| 0.26 | 0.21 | 12.0 | 60.4 | 0.20 | 0.01 | 95.5 | 2.29 | 0.0 | 0.054 |
| | | | | | | | 2.42 | | 0.053 |
| | | | | | | | 2.58 | | 0.050 |

Test No.: 26(Cont'd) Inlet: 4-Ft Special Date: Sept 9, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- Ψ : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|---|-------|-------|--------|----------------------|-------------|-------------------------|
| 0.042 | 0.08 | | | 0.08 | 0.00 | 100.0 | 1.46 1.58 1.67 | 0.0 | 0.039 0.038 0.034 |

Test No.: 27 Inlet: 6-Ft Special Date: Sept 8, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|--------------|-------------|-------|
| 13.78 | 1.56 | 26.0 | 40.3 | 0.65 | 0.91 | 41.3 | 4.95 | 0.0 | 0.089 |
| | | | | | | | 5.04 | | 0.085 |
| | | | | | | | 5.08 | | 0.092 |
| 11.90 | 1.45 | 25.1 | 40.4 | 0.62 | 0.83 | 42.9 | 4.87 | 0.0 | 0.083 |
| | | | | | | | 4.91 | | 0.081 |
| | | | | | | | 5.04 | | 0.089 |
| 10.12 | 1.33 | 25.2 | 40.6 | 0.62 | 0.71 | 46.5 | 4.79 | 0.0 | 0.085 |
| | | | | | | | 4.83 | | 0.085 |
| | | | | | | | 4.91 | | 0.088 |
| 8.48 | 1.22 | 24.2 | 40.4 | 0.60 | 0.62 | 49.2 | 4.75 | 0.0 | 0.084 |
| | | | | | | | 4.84 | | 0.084 |
| | | | | | | | 4.87 | | 0.086 |
| 6.89 | 1.10 | 22.5 | 41.4 | 0.55 | 0.55 | 49.5 | 4.50 | 0.0 | 0.082 |
| | | | | | | | 4.54 | | 0.085 |
| | | | | | | | 4.58 | | 0.085 |
| 5.30 | 0.96 | 21.2 | 40.7 | 0.52 | 0.44 | 54.2 | 4.33 | 0.0 | 0.079 |
| | | | | | | | 4.41 | | 0.078 |
| | | | | | | | 4.50 | | 0.079 |
| 3.46 | 0.78 | 19.3 | 40.3 | 0.48 | 0.30 | 61.5 | 4.12 | 0.0 | 0.066 |
| | | | | | | | 4.16 | | 0.073 |
| | | | | | | | 4.25 | | 0.070 |
| 1.76 | 0.55 | 16.2 | 40.4 | 0.40 | 0.15 | 73.0 | 3.92 | 0.0 | 0.068 |
| | | | | | | | 4.00 | | 0.068 |
| | | | | | | | 4.00 | | 0.065 |
| 1.30 | 0.48 | 23.0 | 61.6 | 0.37 | 0.11 | 77.7 | 3.79 | 0.0 | 0.067 |
| | | | | | | | 3.88 | | 0.066 |
| | | | | | | | 3.92 | | 0.065 |
| 0.99 | 0.42 | 20.5 | 60.5 | 0.34 | 0.08 | 81.8 | 3.66 | 0.0 | 0.065 |

Test No: 27(Cont'd) Inlet: 6-Ft Special Date: Sept 8, 1971.

Long. Slope: 8 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 V : Volume of water intercepted (ft.³)
 T : Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
 B : Top width of channel (ft.)*
 D : Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | V | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|------|------|-------|-------|--------|-----------|----------|-------|
| 0.63 | 0.33 | 18.0 | 60.4 | 0.30 | 0.03 | 90.4 | 3.79 | 0.0 | 0.065 |
| | | | | | | | 3.83 | | 0.060 |
| | | | | | | | 3.08 | | 0.059 |
| 0.08 | 0.11 | | | 0.11 | 0.00 | 100.0 | 3.16 | 0.0 | 0.059 |
| | | | | | | | 3.25 | | 0.059 |
| | | | | | | | 1.46 | | 0.041 |
| | | | | | | | 1.67 | | 0.041 |
| | | | | | | | 1.71 | | 0.036 |

Test No.: 27 A Inlet: 6-Ft Special Date: Oct 18, 1971

Long. Slope: 8.0 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

*Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|-------|-------|-------|--------|-----------|----------|-------|
| 3.70 | 0.80 | 31.0 | 60.6 | 0.51 | 0.29 | 63.8 | 3.75 | 0.0 | 0.073 |
| | | | | | | | 3.83 | | 0.072 |
| | | | | | | | 3.96 | | 0.075 |
| 1.78 | 0.55 | 26.1 | 60.9 | 0.43 | 0.12 | 78.0 | 3.21 | 0.0 | 0.070 |
| | | | | | | | 3.25 | | 0.069 |
| | | | | | | | 3.25 | | 0.076 |
| 1.32 | 0.48 | 23.4 | 61.0 | 0.38 | 0.10 | 80.6 | 3.08 | 0.0 | 0.066 |
| | | | | | | | 3.08 | | 0.068 |
| | | | | | | | 3.08 | | 0.066 |
| 1.04 | 0.42 | 21.4 | 60.5 | 0.35 | 0.07 | 84.2 | 2.88 | 0.0 | 0.066 |
| | | | | | | | 2.92 | | 0.066 |
| | | | | | | | 2.96 | | 0.065 |
| 0.78 | 0.36 | 19.1 | 60.3 | 0.32 | 0.04 | 87.5 | 2.63 | 0.0 | 0.062 |
| | | | | | | | 2.67 | | 0.062 |
| | | | | | | | 2.75 | | 0.065 |
| 0.52 | 0.30 | 15.9 | 60.1 | 0.27 | 0.03 | 89.6 | 2.38 | 0.0 | 0.057 |
| | | | | | | | 2.46 | | 0.058 |
| | | | | | | | 2.50 | | 0.059 |
| 0.35 | 0.24 | 13.0 | 60.4 | 0.22 | 0.02 | 89.0 | 2.12 | 0.0 | 0.054 |
| | | | | | | | 2.29 | | 0.055 |
| | | | | | | | 2.38 | | 0.055 |
| 0.15 | 0.15 | 15.0 | 100.4 | 0.15 | 0.00 | 100.0 | 1.88 | 0.0 | 0.045 |
| | | | | | | | 1.88 | | 0.045 |
| | | | | | | | 1.92 | | 0.045 |

Test No.: 28 Inlet: 4-Ft Special Date: August 25, 1971.

Long. Slope: 8% Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- Ψ : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 13.95 | 1.57 | 54.6 | 60.4 | 0.91 | 0.66 | 57.5 | 3.08 | 0.0 | 0.132 |
| | | | | | | | 3.29 | | 0.132 |
| | | | | | | | 3.42 | | 0.132 |
| 12.25 | 1.48 | 51.4 | 60.4 | 0.85 | 0.63 | 57.5 | 3.08 | 0.0 | 0.129 |
| | | | | | | | 3.16 | | 0.130 |
| | | | | | | | 3.25 | | 0.131 |
| 10.16 | 1.33 | 33.1 | 40.1 | 0.83 | 0.50 | 62.0 | 2.88 | 0.0 | 0.130 |
| | | | | | | | 3.00 | | 0.127 |
| | | | | | | | 3.21 | | 0.126 |
| 8.60 | 1.23 | 33.3 | 40.5 | 0.83 | 0.40 | 67.0 | 2.75 | 0.0 | 0.132 |
| | | | | | | | 2.83 | | 0.126 |
| | | | | | | | 3.04 | | 0.124 |
| 6.85 | 1.10 | 32.2 | 40.5 | 0.80 | 0.30 | 72.1 | 2.29 | 0.0 | 0.129 |
| | | | | | | | 2.42 | | 0.126 |
| | | | | | | | 2.58 | | 0.121 |
| 5.15 | 0.95 | 29.7 | 40.5 | 0.74 | 0.21 | 77.4 | 2.25 | 0.0 | 0.129 |
| | | | | | | | 2.33 | | 0.126 |
| | | | | | | | 2.54 | | 0.120 |
| 3.41 | 0.77 | 25.6 | 40.4 | 0.63 | 0.14 | 82.2 | 2.08 | 0.0 | 0.115 |
| | | | | | | | 2.04 | | 0.110 |
| | | | | | | | 2.25 | | 0.113 |
| 2.47 | 0.65 | 23.3 | 40.6 | 0.57 | 0.08 | 88.2 | 1.92 | 0.0 | 0.104 |
| | | | | | | | 1.92 | | 0.104 |
| | | | | | | | 1.96 | | 0.105 |
| 1.77 | 0.55 | 19.9 | 40.3 | 0.50 | 0.05 | 89.9 | 1.79 | 0.0 | 0.099 |
| | | | | | | | 1.79 | | 0.099 |
| | | | | | | | 1.83 | | 0.097 |

Test No. 28(Cont'd) Inlet: 4-Ft Special Date: August 25, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|---|-------|-------|--------|--------------|-------------|-------|
| 0.27 | 0.21 | | | 0.21 | 0.00 | 100.0 | 1.42 | 0.0 | 0.054 |
| | | | | | | | 1.42 | | 0.056 |
| | | | | | | | 1.38 | | 0.056 |

Test No.: 28 A Inlet: 4-Ft Special Date: Oct 11, 1971

Long. Slope: 8.0 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) ∇ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|--------------|-------------|-------|
| 4.03 | 0.83 | 41.6 | 60.4 | 0.69 | 0.14 | 83.2 | 2.16 | 0.0 | 0.118 |
| | | | | | | | 2.21 | | 0.117 |
| | | | | | | | 2.29 | | 0.113 |
| 3.28 | 0.75 | 38.3 | 60.4 | 0.64 | 0.11 | 84.6 | 2.13 | 0.0 | 0.115 |
| | | | | | | | 2.13 | | 0.113 |
| | | | | | | | 2.16 | | 0.113 |
| 2.62 | 0.67 | 36.3 | 60.6 | 0.60 | 0.07 | 89.3 | 2.00 | 0.0 | 0.107 |
| | | | | | | | 2.00 | | 0.106 |
| | | | | | | | 1.96 | | 0.112 |
| 2.08 | 0.60 | 32.2 | 60.5 | 0.53 | 0.07 | 88.9 | 1.92 | 0.0 | 0.104 |
| | | | | | | | 1.92 | | 0.102 |
| | | | | | | | 1.92 | | 0.105 |
| 1.66 | 0.53 | 28.3 | 60.5 | 0.47 | 0.06 | 88.5 | 1.87 | 0.0 | 0.096 |
| | | | | | | | 1.87 | | 0.099 |
| | | | | | | | 1.87 | | 0.102 |
| 1.40 | 0.49 | 26.4 | 60.4 | 0.44 | 0.05 | 89.2 | 1.83 | 0.0 | 0.091 |
| | | | | | | | 1.83 | | 0.095 |
| | | | | | | | 1.79 | | 0.097 |
| 0.99 | 0.41 | 22.7 | 60.4 | 0.38 | 0.03 | 91.7 | 1.79 | 0.0 | 0.081 |
| | | | | | | | 1.79 | | 0.085 |
| | | | | | | | 1.75 | | 0.089 |
| 0.58 | 0.32 | 17.9 | 60.4 | 0.30 | 0.02 | 94.1 | 1.75 | 0.0 | 0.068 |
| | | | | | | | 1.75 | | 0.071 |
| | | | | | | | 1.71 | | 0.075 |
| 0.28 | 0.22 | 13.1 | 60.4 | 0.22 | 0.00 | 100.0 | 1.58 | 0.0 | 0.055 |
| | | | | | | | 1.63 | | 0.056 |
| | | | | | | | 1.58 | | 0.059 |

Test No: 28 B Inlet: 4-Ft Special Date: Oct 15, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 11.70 | 1.42 | 49.7 | 60.8 | 0.82 | 0.60 | 57.5 | 3.08 | 0.0 | 0.119 |
| | | | | | | | 3.12 | | 0.125 |
| | | | | | | | 3.12 | | 0.123 |
| 10.09 | 1.38 | 48.7 | 60.7 | 0.80 | 0.58 | 58.1 | 2.96 | 0.0 | 0.121 |
| | | | | | | | 3.00 | | 0.123 |
| | | | | | | | 3.04 | | 0.117 |
| 8.48 | 1.21 | 47.4 | 60.8 | 0.78 | 0.43 | 64.3 | 2.75 | 0.0 | 0.119 |
| | | | | | | | 2.83 | | 0.124 |
| | | | | | | | 2.91 | | 0.115 |
| 7.12 | 1.11 | 46.0 | 60.4 | 0.76 | 0.35 | 68.5 | 2.58 | 0.0 | 0.119 |
| | | | | | | | 2.75 | | 0.123 |
| | | | | | | | 2.83 | | 0.114 |
| 5.10 | 0.94 | 43.0 | 60.9 | 0.71 | 0.23 | 75.1 | 2.33 | 0.0 | 0.118 |
| | | | | | | | 2.42 | | 0.115 |
| | | | | | | | 2.58 | | 0.113 |
| 3.52 | 0.78 | 39.3 | 60.3 | 0.65 | 0.13 | 83.5 | 2.08 | 0.0 | 0.114 |
| | | | | | | | 2.17 | | 0.113 |
| | | | | | | | 2.25 | | 0.112 |
| 2.76 | 0.69 | 36.2 | 60.7 | 0.60 | 0.09 | 86.4 | 2.00 | 0.0 | 0.108 |
| | | | | | | | 2.04 | | 0.109 |
| | | | | | | | 2.08 | | 0.110 |
| 1.97 | 0.58 | 31.9 | 60.3 | 0.53 | 0.05 | 91.2 | 1.83 | 0.0 | 0.101 |
| | | | | | | | 1.83 | | 0.102 |
| | | | | | | | 1.83 | | 0.107 |
| 1.59 | 0.52 | 28.2 | 60.4 | 0.47 | 0.05 | 89.9 | 1.79 | 0.0 | 0.095 |
| | | | | | | | 1.79 | | 0.099 |
| | | | | | | | 1.75 | | 0.100 |

Test No: 28 B Cont' Inlet: 4-Ft Special Date: Oct 15, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05ft.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 1.34 | 0.48 | 25.6 | 60.6 | 0.42 | 0.06 | 87.8 | 1.71 | 0.0 | 0.089 |
| | | | | | | | 1.71 | | 0.094 |
| | | | | | | | 1.67 | | 0.097 |
| 0.88 | 0.39 | 21.2 | 60.2 | 0.35 | 0.04 | 91.5 | 1.71 | 0.0 | 0.077 |
| | | | | | | | 1.67 | | 0.082 |
| | | | | | | | 1.62 | | 0.086 |
| 0.55 | 0.31 | 17.1 | 61.0 | 0.28 | 0.03 | 91.8 | 1.71 | 0.0 | 0.064 |
| | | | | | | | 1.67 | | 0.070 |
| | | | | | | | 1.67 | | 0.073 |

Test No.: 29(Cont'd) Inlet: 6-Ft Special Date: August 26, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of divisor. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) ∇ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|--------------|-------------|-------|
| 0.27 | 0.21 | | | 0.21 | 0.00 | 100.0 | 1.42 | 0.0 | 0.054 |
| | | | | | | | 1.42 | | 0.057 |
| | | | | | | | 1.42 | | 0.060 |
| 1.42 | 0.50 | 27.4 | 60.4 | 0.46 | 0.04 | 91.1 | 1.71 | 0.0 | 0.095 |
| | | | | | | | 1.67 | | 0.096 |
| | | | | | | | 1.63 | | 0.100 |
| 0.68 | 0.34 | 19.3 | 60.4 | 0.32 | 0.02 | 93.7 | 1.63 | 0.0 | 0.076 |
| | | | | | | | 1.63 | | 0.076 |
| | | | | | | | 1.58 | | 0.078 |

Test No. 29 A Cont'dnlet: 6-Ft Special Date: August 26, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 1.27 | 0.47 | 26.0 | 60.4 | 0.43 | 0.04 | 91.7 | 1.75 | 0.0 | 0.093 |
| | | | | | | | 1.75 | | 0.094 |
| | | | | | | | 1.75 | | 0.096 |
| 0.62 | 0.32 | 18.6 | 60.5 | 0.31 | 0.01 | 95.4 | 1.67 | 0.0 | 0.073 |
| | | | | | | | 1.63 | | 0.076 |
| | | | | | | | 1.63 | | 0.078 |
| 0.23 | 0.20 | | | 0.20 | 0.00 | 100.0 | 1.50 | 0.0 | 0.057 |
| | | | | | | | 1.50 | | 0.062 |
| | | | | | | | 1.46 | | 0.063 |

Test No.: 29 B Inlet: 6-Ft Special Date: Oct 4, 1971.

Long. Slope: 8 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 14.60 | 1.60 | 64.0 | 61.2 | 1.05 | 0.55 | 65.4 | 3.50 | 0.0 | 0.128 |
| | | | | | | | 3.58 | | 0.126 |
| | | | | | | | 3.66 | | 0.131 |
| 11.70 | 1.43 | 60.9 | 60.4 | 1.01 | 0.42 | 70.5 | 3.16 | 0.0 | 0.125 |
| | | | | | | | 3.33 | | 0.125 |
| | | | | | | | 3.42 | | 0.125 |
| 10.05 | 1.32 | 57.4 | 60.2 | 0.95 | 0.37 | 72.1 | 2.96 | 0.0 | 0.124 |
| | | | | | | | 3.00 | | 0.124 |
| | | | | | | | 3.12 | | 0.120 |
| 8.25 | 1.21 | 56.7 | 60.7 | 0.93 | 0.28 | 77.1 | 2.75 | 0.0 | 0.122 |
| | | | | | | | 2.87 | | 0.123 |
| | | | | | | | 2.92 | | 0.118 |
| 6.90 | 1.10 | 53.6 | 60.3 | 0.89 | 0.21 | 81.0 | 2.42 | 0.0 | 0.119 |
| | | | | | | | 2.54 | | 0.121 |
| | | | | | | | 2.66 | | 0.118 |
| 4.97 | 0.93 | 47.5 | 61.0 | 0.78 | 0.15 | 83.5 | 2.25 | 0.0 | 0.120 |
| | | | | | | | 2.37 | | 0.118 |
| | | | | | | | 2.54 | | 0.114 |
| 3.41 | 0.77 | 40.5 | 60.7 | 0.67 | 0.10 | 86.5 | 2.13 | 0.0 | 0.116 |
| | | | | | | | 2.13 | | 0.116 |
| | | | | | | | 2.25 | | 0.113 |
| 1.71 | 0.54 | 29.0 | 60.8 | 0.48 | 0.06 | 88.4 | 1.83 | 0.0 | 0.099 |
| | | | | | | | 1.83 | | 0.100 |
| | | | | | | | 1.75 | | 0.105 |
| 1.07 | 0.43 | 23.4 | 60.7 | 0.39 | 0.04 | 89.6 | 1.79 | 0.0 | 0.085 |
| | | | | | | | 1.75 | | 0.089 |
| | | | | | | | 1.71 | | 0.092 |
| 0.20 | 0.18 | | | 0.18 | 0.00 | 100.0 | 1.54 | 0.0 | 0.051 |
| | | | | | | | 1.54 | | 0.054 |
| | | | | | | | 1.54 | | 0.053 |

Test No.: 29 C Inlet: 6-Ft Special Date: Oct 11, 1971

Long. Slope: 8.0 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 3.54 | 0.78 | 42.0 | 60.4 | 0.70 | 0.08 | 89.4 | 2.00 | 0.0 | 0.115 |
| | | | | | | | 2.04 | | 0.115 |
| | | | | | | | 2.12 | | 0.113 |
| 2.78 | 0.69 | 35.2 | 60.5 | 0.58 | 0.11 | 84.5 | 2.00 | 0.0 | 0.110 |
| | | | | | | | 2.00 | | 0.110 |
| | | | | | | | 2.08 | | 0.111 |
| 2.00 | 0.59 | 32.8 | 60.3 | 0.55 | 0.04 | 92.3 | 1.87 | 0.0 | 0.103 |
| | | | | | | | 1.87 | | 0.103 |
| | | | | | | | 1.87 | | 0.108 |
| 1.76 | 0.55 | 30.2 | 60.4 | 0.50 | 0.05 | 91.0 | 1.83 | 0.0 | 0.098 |
| | | | | | | | 1.83 | | 0.100 |
| | | | | | | | 1.79 | | 0.103 |
| 1.44 | 0.50 | 27.5 | 60.2 | 0.46 | 0.04 | 91.4 | 1.83 | 0.0 | 0.091 |
| | | | | | | | 1.79 | | 0.096 |
| | | | | | | | 1.75 | | 0.097 |
| 1.02 | 0.42 | 22.9 | 60.4 | 0.38 | 0.04 | 91.1 | 1.75 | 0.0 | 0.082 |
| | | | | | | | 1.75 | | 0.086 |
| | | | | | | | 1.75 | | 0.090 |
| 0.68 | 0.34 | 19.2 | 60.2 | 0.32 | 0.02 | 93.8 | 1.71 | 0.0 | 0.071 |
| | | | | | | | 1.71 | | 0.076 |
| | | | | | | | 1.67 | | 0.078 |
| 0.47 | 0.28 | 16.7 | 60.3 | 0.28 | 0.00 | 98.9 | 1.67 | 0.0 | 0.064 |
| | | | | | | | 1.67 | | 0.065 |
| | | | | | | | 1.67 | | 0.070 |
| 0.15 | 0.15 | | | 0.15 | 0.00 | 100.0 | 1.50 | 0.0 | 0.050 |
| | | | | | | | 1.54 | | 0.052 |
| | | | | | | | 1.54 | | 0.050 |

Test No.: 30 A Inlet: 4-Ft Special Date: Oct 12, 1971

Long. Slope: 8.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
 Q_1 : Channel discharge (cfs)
 Q_2 : Discharge intercepted (cfs)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs)
 \forall : Volume of water intercepted (ft.³)
T: Time (sec.)
 η : Efficiency ($Q_2/Q_1 \times 100\%$)
B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 4.75 | 0.91 | 45.7 | 60.3 | 0.76 | 0.15 | 83.2 | 1.96 | 0.0 | 0.138 |
| | | | | | | | 1.96 | | 0.140 |
| | | | | | | | 1.96 | | 0.137 |
| 3.40 | 0.76 | 39.6 | 60.9 | 0.65 | 0.11 | 85.6 | 1.87 | 0.0 | 0.124 |
| | | | | | | | 1.87 | | 0.130 |
| | | | | | | | 1.87 | | 0.128 |
| 2.75 | 0.69 | 36.5 | 60.2 | 0.61 | 0.08 | 87.8 | 1.83 | 0.0 | 0.119 |
| | | | | | | | 1.83 | | 0.121 |
| | | | | | | | 1.79 | | 0.124 |
| 1.99 | 0.58 | 31.5 | 61.2 | 0.52 | 0.06 | 88.7 | 1.75 | 0.0 | 0.104 |
| | | | | | | | 1.75 | | 0.109 |
| | | | | | | | 1.75 | | 0.114 |
| 1.63 | 0.53 | 30.0 | 61.2 | 0.49 | 0.04 | 92.4 | 1.71 | 0.0 | 0.096 |
| | | | | | | | 1.71 | | 0.102 |
| | | | | | | | 1.66 | | 0.106 |
| 1.30 | 0.47 | 27.4 | 60.7 | 0.45 | 0.02 | 96.0 | 1.71 | 0.0 | 0.089 |
| | | | | | | | 1.71 | | 0.093 |
| | | | | | | | 1.66 | | 0.099 |
| 1.05 | 0.42 | 24.6 | 61.2 | 0.40 | 0.02 | 95.8 | 1.71 | 0.0 | 0.080 |
| | | | | | | | 1.71 | | 0.085 |
| | | | | | | | 1.66 | | 0.091 |
| 0.67 | 0.34 | 20.4 | 61.0 | 0.33 | 0.01 | 99.6 | 1.62 | 0.0 | 0.072 |
| | | | | | | | 1.66 | | 0.074 |
| | | | | | | | 1.62 | | 0.076 |
| 0.20 | 0.18 | | | 0.18 | 0.00 | 100.0 | 1.33 | 0.0 | 0.069 |
| | | | | | | | 1.42 | | 0.064 |
| | | | | | | | 1.42 | | 0.059 |

Test No.: 31 Inlet: 6-Ft Special Date: Sept 16, 1971

Long. Slope: 8.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 14.37 | 1.60 | 49.8 | 41.3 | 1.21 | 0.39 | 75.4 | 2.33 | 0.0 | 0.186 |
| | | | | | | | 2.33 | | 0.174 |
| | | | | | | | 2.46 | | 0.164 |
| 12.08 | 1.46 | 45.8 | 40.4 | 1.14 | 0.32 | 77.9 | 2.21 | 0.0 | 0.188 |
| | | | | | | | 2.21 | | 0.176 |
| | | | | | | | 2.25 | | 0.159 |
| 10.28 | 1.34 | 41.8 | 40.4 | 1.04 | 0.30 | 77.3 | 2.16 | 0.0 | 0.179 |
| | | | | | | | 2.16 | | 0.180 |
| | | | | | | | 2.13 | | 0.160 |
| 8.53 | 1.22 | 40.0 | 41.3 | 0.97 | 0.25 | 79.5 | 2.08 | 0.0 | 0.171 |
| | | | | | | | 2.08 | | 0.182 |
| | | | | | | | 2.08 | | 0.164 |
| 6.80 | 1.10 | 36.4 | 40.5 | 0.90 | 0.20 | 81.5 | 2.04 | 0.0 | 0.159 |
| | | | | | | | 2.00 | | 0.170 |
| | | | | | | | 1.96 | | 0.166 |
| 4.85 | 0.92 | 33.5 | 41.3 | 0.81 | 0.11 | 88.1 | 1.96 | 0.0 | 0.143 |
| | | | | | | | 1.92 | | 0.150 |
| | | | | | | | 1.92 | | 0.158 |
| 3.49 | 0.78 | 27.1 | 40.4 | 0.67 | 0.11 | 86.1 | 1.92 | 0.0 | 0.126 |
| | | | | | | | 1.87 | | 0.135 |
| | | | | | | | 1.83 | | 0.139 |
| 1.73 | 0.55 | 30.5 | 60.5 | 0.51 | 0.04 | 91.7 | 1.79 | 0.0 | 0.095 |
| | | | | | | | 1.79 | | 0.102 |
| | | | | | | | 1.71 | | 0.107 |
| 1.42 | 0.50 | 27.2 | 60.4 | 0.45 | 0.05 | 91.0 | 1.79 | 0.0 | 0.088 |
| | | | | | | | 1.79 | | 0.094 |
| | | | | | | | 1.75 | | 0.099 |

Test No.: 31 Cont'd Inlet: 6-Ft Special Date: Sept 16, 1971

Long. Slope: 8.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|---|-------|-------|--------|----------------------|-------------|-------------------------|
| 0.52 | 0.30 | | | 0.30 | 0.00 | 100.0 | 1.62 1.62 1.62 | 0.0 | 0.069 0.070 0.069 |

Test No.: 31 A Inlet: 6-Ft Special Date: Oct 13, 1971

Long. Slope: 8.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|-------|-------|-------|--------|-----------|----------|-------|
| 4.83 | 0.92 | 49.1 | 60.5 | 0.81 | 0.11 | 88.2 | 1.96 | 0.0 | 0.136 |
| | | | | | | | 1.96 | | 0.137 |
| | | | | | | | 1.96 | | 0.140 |
| 3.51 | 0.78 | 42.0 | 60.4 | 0.70 | 0.08 | 89.2 | 1.83 | 0.0 | 0.127 |
| | | | | | | | 1.83 | | 0.132 |
| | | | | | | | 1.83 | | 0.130 |
| 2.73 | 0.69 | 37.4 | 60.4 | 0.62 | 0.07 | 90.4 | 1.79 | 0.0 | 0.119 |
| | | | | | | | 1.79 | | 0.121 |
| | | | | | | | 1.79 | | 0.124 |
| 1.95 | 0.58 | 31.4 | 60.5 | 0.52 | 0.06 | 89.5 | 1.75 | 0.0 | 0.103 |
| | | | | | | | 1.75 | | 0.111 |
| | | | | | | | 1.75 | | 0.115 |
| 1.59 | 0.52 | 29.5 | 60.5 | 0.49 | 0.03 | 93.7 | 1.75 | 0.0 | 0.096 |
| | | | | | | | 1.75 | | 0.103 |
| | | | | | | | 1.71 | | 0.106 |
| 1.33 | 0.48 | 27.6 | 60.5 | 0.46 | 0.02 | 96.0 | 1.75 | 0.0 | 0.090 |
| | | | | | | | 1.75 | | 0.093 |
| | | | | | | | 1.71 | | 0.098 |
| 1.02 | 0.42 | 24.5 | 60.5 | 0.41 | 0.01 | 97.2 | 1.71 | 0.0 | 0.079 |
| | | | | | | | 1.71 | | 0.084 |
| | | | | | | | 1.66 | | 0.090 |
| 0.70 | 0.34 | 35.2 | 100.4 | 0.34 | 0.00 | 100.0 | 1.66 | 0.0 | 0.073 |
| | | | | | | | 1.66 | | 0.075 |
| | | | | | | | 1.62 | | 0.077 |

Test No.: 32 Inlet: 4-Ft Special Date: Sept 27, 1971

Long. Slope: 8.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 13.62 | 1.56 | 40.4 | 40.5 | 1.00 | 0.56 | 63.9 | 2.08 | 0.0 | 0.197 |
| | | | | | | | 2.08 | | 0.206 |
| | | | | | | | 2.12 | | 0.193 |
| 11.76 | 1.44 | 39.2 | 40.4 | 0.97 | 0.47 | 67.5 | 2.04 | 0.0 | 0.188 |
| | | | | | | | 2.04 | | 0.197 |
| | | | | | | | 2.04 | | 0.194 |
| 10.25 | 1.34 | 35.8 | 40.4 | 0.89 | 0.45 | 66.1 | 2.00 | 0.0 | 0.181 |
| | | | | | | | 2.00 | | 0.187 |
| | | | | | | | 2.00 | | 0.193 |
| 8.51 | 1.22 | 34.4 | 40.5 | 0.85 | 0.37 | 69.7 | 1.92 | 0.0 | 0.172 |
| | | | | | | | 1.92 | | 0.180 |
| | | | | | | | 1.92 | | 0.182 |
| 6.75 | 1.09 | 32.0 | 40.3 | 0.79 | 0.30 | 72.8 | 1.87 | 0.0 | 0.155 |
| | | | | | | | 1.87 | | 0.165 |
| | | | | | | | 1.87 | | 0.173 |
| 4.88 | 0.92 | 29.3 | 40.4 | 0.73 | 0.19 | 79.0 | 1.83 | 0.0 | 0.136 |
| | | | | | | | 1.79 | | 0.145 |
| | | | | | | | 1.79 | | 0.155 |
| 3.50 | 0.78 | 27.0 | 40.6 | 0.67 | 0.11 | 85.2 | 1.79 | 0.0 | 0.120 |
| | | | | | | | 1.79 | | 0.124 |
| | | | | | | | 1.75 | | 0.133 |
| 1.88 | 0.57 | 32.9 | 60.4 | 0.55 | 0.02 | 95.7 | 1.71 | 0.0 | 0.098 |
| | | | | | | | 1.71 | | 0.101 |
| | | | | | | | 1.71 | | 0.104 |
| 0.99 | 0.42 | | | 0.42 | 0.00 | 100.0 | 1.50 | 0.0 | 0.102 |
| | | | | | | | 1.54 | | 0.092 |
| | | | | | | | 1.54 | | 0.087 |

Test No.: 32 A Inlet: 4-Ft Special Date: Oct 14, 1971

Long. Slope: 8.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|--------------|-------------|-------|
| 5.85 | 1.00 | 47.0 | 60.7 | 0.78 | 0.22 | 77.5 | 1.83 | 0.0 | 0.145 |
| | | | | | | | 1.83 | | 0.159 |
| | | | | | | | 1.83 | | 0.165 |
| 4.45 | 0.88 | 43.1 | 60.8 | 0.71 | 0.17 | 81.0 | 1.83 | 0.0 | 0.131 |
| | | | | | | | 1.83 | | 0.139 |
| | | | | | | | 1.79 | | 0.150 |
| 3.39 | 0.76 | 40.0 | 60.1 | 0.67 | 0.09 | 87.5 | 1.83 | 0.0 | 0.123 |
| | | | | | | | 1.83 | | 0.122 |
| | | | | | | | 1.79 | | 0.137 |
| 2.57 | 0.66 | 35.9 | 60.5 | 0.60 | 0.06 | 90.0 | 1.79 | 0.0 | 0.108 |
| | | | | | | | 1.79 | | 0.112 |
| | | | | | | | 1.79 | | 0.119 |
| 2.05 | 0.59 | 33.9 | 60.4 | 0.56 | 0.03 | 95.1 | 1.79 | 0.0 | 0.103 |
| | | | | | | | 1.79 | | 0.105 |
| | | | | | | | 1.75 | | 0.109 |
| 1.71 | 0.54 | 31.9 | 60.4 | 0.53 | 0.01 | 98.0 | 1.75 | 0.0 | 0.101 |
| | | | | | | | 1.75 | | 0.099 |
| | | | | | | | 1.75 | | 0.103 |
| 1.43 | 0.50 | 29.6 | 60.8 | 0.49 | 0.01 | 98.5 | | | |

Test No.: 33 Inlet: 6-Ft Special Date: Sept 28, 1971

Long. Slope: 8.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 13.75 | 1.56 | 72.8 | 60.6 | 1.20 | 0.36 | 77.0 | 2.08 | 0.0 | 0.199 |
| | | | | | | | 2.08 | | 0.208 |
| | | | | | | | 2.13 | | 0.194 |
| 11.70 | 1.43 | 67.5 | 60.5 | 1.11 | 0.32 | 77.9 | 2.08 | 0.0 | 0.189 |
| | | | | | | | 2.13 | | 0.195 |
| | | | | | | | 2.13 | | 0.195 |
| 10.19 | 1.33 | 64.9 | 60.3 | 1.08 | 0.25 | 80.8 | 2.00 | 0.0 | 0.183 |
| | | | | | | | 2.04 | | 0.188 |
| | | | | | | | 2.04 | | 0.192 |
| 8.49 | 1.22 | 61.8 | 60.4 | 1.02 | 0.20 | 84.0 | 1.92 | 0.0 | 0.172 |
| | | | | | | | 1.96 | | 0.178 |
| | | | | | | | 1.96 | | 0.187 |
| 6.82 | 1.10 | 56.7 | 60.5 | 0.94 | 0.16 | 85.3 | 1.92 | 0.0 | 0.158 |
| | | | | | | | 1.92 | | 0.165 |
| | | | | | | | 1.92 | | 0.177 |
| 4.95 | 0.93 | 50.7 | 60.5 | 0.84 | 0.09 | 90.2 | 1.83 | 0.0 | 0.136 |
| | | | | | | | 1.83 | | 0.146 |
| | | | | | | | 1.83 | | 0.154 |
| 3.47 | 0.78 | 42.1 | 60.3 | 0.70 | 0.08 | 89.7 | 1.79 | 0.0 | 0.120 |
| | | | | | | | 1.79 | | 0.127 |
| | | | | | | | 1.75 | | 0.136 |
| 1.84 | 0.56 | 32.9 | 60.5 | 0.55 | 0.01 | 97.4 | 1.67 | 0.0 | 0.102 |
| | | | | | | | 1.71 | | 0.101 |
| | | | | | | | 1.71 | | 0.103 |
| 1.25 | 0.47 | | | 0.47 | 0.00 | 100.0 | 1.54 | 0.0 | 0.099 |
| | | | | | | | 1.58 | | 0.095 |
| | | | | | | | 1.58 | | 0.093 |

Test No.: 36 Inlet: 4-Ft Special Date: Nov 3, 1971

Long. Slope: 4.0 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 13.45 | 1.54 | 43.0 | 61.0 | 0.70 | 0.84 | 45.7 | 5.12 | 0.0 | 0.118 |
| | | | | | | | 5.25 | | 0.117 |
| | | | | | | | 5.33 | | 0.114 |
| 9.96 | 1.31 | 38.1 | 60.3 | 0.63 | 0.68 | 48.2 | 4.96 | 0.0 | 0.113 |
| | | | | | | | 5.12 | | 0.109 |
| | | | | | | | 5.25 | | 0.109 |
| 6.76 | 1.08 | 36.5 | 60.4 | 0.61 | 0.47 | 56.0 | 4.50 | 0.0 | 0.105 |
| | | | | | | | 4.70 | | 0.108 |
| | | | | | | | 4.88 | | 0.102 |
| 3.60 | 0.79 | 30.9 | 60.1 | 0.51 | 0.28 | 65.0 | 3.96 | 0.0 | 0.095 |
| | | | | | | | 4.16 | | 0.097 |
| | | | | | | | 4.33 | | 0.093 |
| 2.70 | 0.68 | 27.5 | 60.2 | 0.46 | 0.22 | 67.1 | 3.71 | 0.0 | 0.094 |
| | | | | | | | 3.92 | | 0.092 |
| | | | | | | | 4.00 | | 0.095 |
| 2.10 | 0.60 | 25.1 | 59.9 | 0.42 | 0.18 | 69.9 | 3.54 | 0.0 | 0.089 |
| | | | | | | | 3.75 | | 0.090 |
| | | | | | | | 3.87 | | 0.090 |
| 1.37 | 0.49 | 21.7 | 60.1 | 0.36 | 0.13 | 74.4 | 2.83 | 0.0 | 0.087 |
| | | | | | | | 3.16 | | 0.084 |
| | | | | | | | 3.42 | | 0.084 |
| 0.55 | 0.30 | 14.9 | 59.9 | 0.25 | 0.07 | 83.0 | 2.75 | 0.0 | 0.064 |
| | | | | | | | 2.83 | | 0.060 |
| | | | | | | | 2.91 | | 0.058 |
| 0.03 | 0.08 | | | 0.08 | 0.00 | 100.0 | 1.83 | 0.0 | 0.037 |
| | | | | | | | 1.92 | | 0.040 |
| | | | | | | | 2.00 | | 0.035 |

Test No.: 37 Inlet: 6-Ft Special Date: Nov 3, 1971

Long. Slope: 4.0 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water)

Q_1 : Channel discharge (cfs)

Q_2 : Discharge intercepted (cfs)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

∇ : Volume of water intercepted (ft.³)

T: Time (sec.)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|------|-------|-------|--------|--------------|-------------|-------|
| 13.22 | 1.52 | 44.7 | 60.3 | 0.74 | 0.78 | 48.7 | 4.80 | 0.0 | 0.119 |
| | | | | | | | 4.91 | | 0.122 |
| | | | | | | | 5.09 | | 0.113 |
| 10.02 | 1.32 | 41.7 | 60.7 | 0.69 | 0.63 | 52.0 | 4.71 | 0.0 | 0.111 |
| | | | | | | | 4.83 | | 0.112 |
| | | | | | | | 5.00 | | 0.105 |
| 6.58 | 1.07 | 37.0 | 60.6 | 0.61 | 0.46 | 57.0 | 4.33 | 0.0 | 0.102 |
| | | | | | | | 4.50 | | 0.103 |
| | | | | | | | 4.66 | | 0.092 |
| 4.90 | 0.92 | 33.6 | 60.5 | 0.56 | 0.36 | 60.5 | 4.08 | 0.0 | 0.097 |
| | | | | | | | 4.25 | | 0.096 |
| | | | | | | | 4.37 | | 0.088 |
| 3.64 | 0.79 | 31.1 | 60.5 | 0.52 | 0.27 | 65.2 | 3.88 | 0.0 | 0.095 |
| | | | | | | | 4.04 | | 0.095 |
| | | | | | | | 4.12 | | 0.089 |
| 2.73 | 0.69 | 29.4 | 60.6 | 0.48 | 0.21 | 70.1 | 3.71 | 0.0 | 0.089 |
| | | | | | | | 3.84 | | 0.090 |
| | | | | | | | 3.96 | | 0.085 |
| 1.96 | 0.58 | 25.9 | 60.5 | 0.43 | 0.15 | 74.0 | 3.38 | 0.0 | 0.085 |
| | | | | | | | 3.67 | | 0.088 |
| | | | | | | | 3.83 | | 0.081 |
| 1.42 | 0.49 | 22.2 | 60.5 | 0.37 | 0.12 | 75.0 | 3.04 | 0.0 | 0.082 |
| | | | | | | | 3.04 | | 0.080 |
| | | | | | | | 3.16 | | 0.082 |
| 0.71 | 0.35 | 15.6 | 60.5 | 0.26 | 0.09 | 74.8 | 2.75 | 0.0 | 0.062 |
| | | | | | | | 2.75 | | 0.059 |
| | | | | | | | 2.84 | | 0.058 |

Test No. 37 Cont'd Inlet: 6-Ft Special Date: Nov 3, 1971

Long. Slope: 4.0 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|--------------|-------------|-------|
| 0.32 | 0.23 | 11.3 | 60.5 | 0.19 | 0.04 | 81.4 | 2.58 | 0.0 | 0.054 |
| | | | | | | | 2.54 | | 0.051 |
| | | | | | | | 2.54 | | 0.050 |
| 0.08 | 0.12 | | | 0.12 | 0.00 | 100.0 | 2.04 | 0.0 | 0.042 |
| | | | | | | | 2.08 | | 0.040 |
| | | | | | | | 2.08 | | 0.036 |

Test No.: 37 A Inlet: 6-Ft Special Date: Nov 5, 1971

Long. Slope: 4.0 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 1.03 | 0.43 | 19.9 | 60.5 | 0.33 | 0.10 | 76.3 | 2.75 | 0.0 | 0.080 |
| | | | | | | | 2.75 | | 0.080 |
| | | | | | | | 2.75 | | 0.081 |
| 0.63 | 0.33 | 16.4 | 60.4 | 0.27 | 0.06 | 82.4 | 2.63 | 0.0 | 0.074 |
| | | | | | | | 2.58 | | 0.072 |
| | | | | | | | 2.54 | | 0.072 |
| 0.37 | 0.25 | 12.9 | 60.5 | 0.21 | 0.04 | 85.3 | 2.58 | 0.0 | 0.061 |
| | | | | | | | 2.54 | | 0.062 |
| | | | | | | | 2.46 | | 0.062 |

Test No.: 38 Inlet: 4-Ft Special Date: Nov 8, 1971

Long. Slope: 4.0 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 13.96 | 1.56 | 62.3 | 61.0 | 1.02 | 0.54 | 65.5 | 3.66 | 0.0 | 0.163 |
| | | | | | | | 3.75 | | 0.156 |
| | | | | | | | 3.81 | | 0.146 |
| 4.71 | 0.90 | 42.7 | 60.5 | 0.71 | 0.19 | 78.5 | 2.83 | 0.0 | 0.146 |
| | | | | | | | 2.83 | | 0.142 |
| | | | | | | | 2.83 | | 0.148 |
| 3.44 | 0.77 | 37.6 | 61.1 | 0.62 | 0.15 | 79.8 | 2.75 | 0.0 | 0.129 |
| | | | | | | | 2.75 | | 0.134 |
| | | | | | | | 2.71 | | 0.133 |
| 2.67 | 0.68 | 31.8 | 60.7 | 0.52 | 0.16 | 77.0 | 2.67 | 0.0 | 0.111 |
| | | | | | | | 2.62 | | 0.122 |
| | | | | | | | 2.62 | | 0.125 |
| 2.11 | 0.60 | 29.2 | 60.5 | 0.48 | 0.12 | 80.5 | 2.62 | 0.0 | 0.104 |
| | | | | | | | 2.58 | | 0.111 |
| | | | | | | | 2.58 | | 0.112 |
| 1.39 | 0.49 | 25.0 | 60.9 | 0.41 | 0.08 | 84.6 | 2.50 | 0.0 | 0.092 |
| | | | | | | | 2.50 | | 0.091 |
| | | | | | | | 2.50 | | 0.094 |
| 0.86 | 0.38 | 21.2 | 60.3 | 0.35 | 0.03 | 92.5 | 2.38 | 0.0 | 0.079 |
| | | | | | | | 2.38 | | 0.079 |
| | | | | | | | 2.42 | | 0.080 |
| 0.57 | 0.31 | 18.3 | 60.6 | 0.30 | 0.01 | 97.4 | 2.21 | 0.0 | 0.079 |
| | | | | | | | 2.25 | | 0.072 |
| | | | | | | | 2.25 | | 0.071 |
| 0.26 | 0.21 | | | 0.21 | 0.00 | 100.0 | 1.79 | 0.0 | 0.077 |
| | | | | | | | 1.92 | | 0.074 |
| | | | | | | | 1.96 | | 0.067 |

Test No.: 40 Inlet: 4-Ft Special Date: Nov 9, 1971

Long. Slope: 4.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|--------------|-------------|-------|
| 13.78 | 1.55 | 68.1 | 60.6 | 1.12 | 0.43 | 72.5 | 3.17 | 0.0 | 0.182 |
| | | | | | | | 3.42 | | 0.184 |
| | | | | | | | 3.63 | | 0.179 |
| 4.81 | 0.91 | 48.8 | 60.4 | 0.81 | 0.10 | 88.7 | 2.25 | 0.0 | 0.154 |
| | | | | | | | 2.25 | | 0.153 |
| | | | | | | | 2.33 | | 0.149 |
| 3.51 | 0.78 | 41.2 | 60.5 | 0.68 | 0.10 | 87.2 | 2.25 | 0.0 | 0.154 |
| | | | | | | | 2.25 | | 0.141 |
| | | | | | | | 2.17 | | 0.136 |
| 2.84 | 0.70 | 39.1 | 60.5 | 0.64 | 0.06 | 92.0 | 2.17 | 0.0 | 0.142 |
| | | | | | | | 2.25 | | 0.145 |
| | | | | | | | 2.21 | | 0.133 |
| 2.33 | 0.63 | 36.8 | 60.5 | 0.61 | 0.02 | 96.2 | 2.13 | 0.0 | 0.136 |
| | | | | | | | 2.21 | | 0.140 |
| | | | | | | | 2.21 | | 0.130 |
| 1.83 | 0.56 | 33.2 | 60.5 | 0.55 | 0.01 | 98.2 | 2.00 | 0.0 | 0.124 |
| | | | | | | | 2.13 | | 0.131 |
| | | | | | | | 2.17 | | 0.128 |
| 1.38 | 0.49 | 29.7 | 60.5 | 0.49 | 0.00 | 100.0 | 1.96 | 0.0 | 0.117 |
| | | | | | | | 2.13 | | 0.117 |
| | | | | | | | 2.13 | | 0.113 |
| 1.01 | 0.42 | | | 0.42 | 0.00 | 100.0 | 1.79 | 0.0 | 0.111 |
| | | | | | | | 1.92 | | 0.111 |
| | | | | | | | 2.08 | | 0.108 |

Test No.: 41 Inlet: 6-Ft Special Date: Nov 10, 1971

Long. Slope: 4.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 13.50 | 1.53 | 80.2 | 62.8 | 1.28 | 0.25 | 83.6 | 2.96 | 0.0 | 0.193 |
| | | | | | | | 3.12 | | 0.189 |
| | | | | | | | 3.25 | | 0.174 |
| 5.26 | 0.96 | 53.1 | 61.4 | 0.87 | 0.09 | 90.5 | 2.38 | 0.0 | 0.157 |
| | | | | | | | 2.46 | | 0.163 |
| | | | | | | | 2.46 | | 0.165 |
| 3.48 | 0.78 | 42.7 | 60.8 | 0.70 | 0.08 | 90.0 | 2.25 | 0.0 | 0.138 |
| | | | | | | | 2.29 | | 0.139 |
| | | | | | | | 2.29 | | 0.144 |
| 2.87 | 0.70 | 39.9 | 61.2 | 0.65 | 0.05 | 93.0 | 2.17 | 0.0 | 0.132 |
| | | | | | | | 2.25 | | 0.134 |
| | | | | | | | 2.25 | | 0.134 |
| 2.34 | 0.63 | 37.6 | 61.2 | 0.61 | 0.02 | 97.4 | 2.13 | 0.0 | 0.117 |
| | | | | | | | 2.21 | | 0.122 |
| | | | | | | | 2.21 | | 0.127 |
| 1.68 | 0.54 | 33.0 | 61.3 | 0.54 | 0.00 | 99.6 | 2.04 | 0.0 | 0.120 |
| | | | | | | | 2.17 | | 0.115 |
| | | | | | | | 2.17 | | 0.113 |
| 1.34 | 0.48 | | | 0.48 | 0.00 | 100.0 | 1.92 | 0.0 | 0.118 |
| | | | | | | | 2.04 | | 0.113 |
| | | | | | | | 2.13 | | 0.110 |

Test No.: 43 Inlet: 6-Ft Special Date: Nov 11, 1971

Long. Slope: 4.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water)

\forall : Volume of water intercepted (ft.³)

Q_1 : Channel discharge (cfs)

T: Time (sec.)

Q_2 : Discharge intercepted (cfs)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 13.60 | 1.53 | 80.3 | 60.6 | 1.32 | 0.21 | 86.6 | 2.50 | 0.0 | 0.198 |
| | | | | | | | 2.54 | | 0.208 |
| | | | | | | | 2.58 | | 0.211 |
| 10.30 | 1.34 | 71.8 | 60.5 | 1.19 | 0.15 | 88.7 | 2.41 | 0.0 | 0.193 |
| | | | | | | | 2.46 | | 0.190 |
| | | | | | | | 2.54 | | 0.192 |
| 5.16 | 0.95 | 53.5 | 60.6 | 0.88 | 0.07 | 92.8 | 2.13 | 0.0 | 0.169 |
| | | | | | | | 2.25 | | 0.167 |
| | | | | | | | 2.25 | | 0.160 |
| 4.04 | 0.84 | 50.1 | 60.5 | 0.83 | 0.01 | 98.7 | 2.08 | 0.0 | 0.156 |
| | | | | | | | 2.17 | | 0.161 |
| | | | | | | | 2.21 | | 0.158 |
| 3.47 | 0.78 | 46.8 | 60.5 | 0.78 | 0.00 | 99.4 | 2.04 | 0.0 | 0.153 |
| | | | | | | | 2.13 | | 0.153 |
| | | | | | | | 2.13 | | 0.157 |
| 3.00 | 0.72 | | | 0.72 | 0.00 | 100.0 | 1.92 | 0.0 | 0.152 |
| | | | | | | | 2.04 | | 0.150 |
| | | | | | | | 2.17 | | 0.150 |

Test No.: 46 Inlet: 4-Ft Special Date: Dec 17, 1971.

Long. Slope: 2 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 10.44 | 1.34 | 34.8 | 60.5 | 0.58 | 0.76 | 43.0 | 5.46 | 0.0 | 0.112 |
| | | | | | | | 5.50 | | 0.118 |
| | | | | | | | 5.50 | | 0.115 |
| 3.83 | 0.82 | 29.0 | 60.6 | 0.48 | 0.34 | 58.3 | 4.58 | 0.0 | 0.094 |
| | | | | | | | 4.58 | | 0.100 |
| | | | | | | | 4.70 | | 0.098 |
| 1.87 | 0.56 | 24.1 | 60.4 | 0.40 | 0.16 | 71.3 | 4.00 | 0.0 | 0.090 |
| | | | | | | | 4.00 | | 0.094 |
| | | | | | | | 4.00 | | 0.087 |
| 1.04 | 0.42 | 19.6 | 60.7 | 0.32 | 0.10 | 76.8 | 3.75 | 0.0 | 0.081 |
| | | | | | | | 3.75 | | 0.085 |
| | | | | | | | 3.70 | | 0.080 |
| 0.44 | 0.27 | 14.0 | 60.1 | 0.23 | 0.04 | 86.1 | 3.33 | 0.0 | 0.063 |
| | | | | | | | 3.42 | | 0.066 |
| | | | | | | | 3.42 | | 0.067 |
| 0.16 | 0.16 | 9.3 | 60.1 | 0.15 | 0.01 | 96.8 | 2.96 | 0.0 | 0.052 |
| | | | | | | | 3.08 | | 0.054 |
| | | | | | | | 3.08 | | 0.050 |
| 0.067 | 0.11 | | | 0.11 | 0.00 | 100.0 | 2.25 | 0.0 | 0.047 |
| | | | | | | | 2.46 | | 0.049 |
| | | | | | | | 2.50 | | 0.043 |

Test No: 48 Inlet: 4-Ft Special Date: Dec 16, 1971.

Long. Slope: 2% Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft, 2 ft. and 3 ft upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 10.45 | 1.34 | 54.8 | 62.9 | 0.87 | 0.47 | 65.0 | 4.00 | 0.0 | 0.169 |
| | | | | | | | 4.00 | | 0.172 |
| | | | | | | | 4.00 | | 0.163 |
| 6.65 | 1.08 | 45.0 | 61.3 | 0.73 | 0.35 | 68.0 | 5.71 | 0.0 | 0.146 |
| | | | | | | | 3.75 | | 0.162 |
| | | | | | | | 3.79 | | 0.161 |
| 3.52 | 0.78 | 35.7 | 61.0 | 0.59 | 0.19 | 75.1 | 3.33 | 0.0 | 0.117 |
| | | | | | | | 3.42 | | 0.130 |
| | | | | | | | 3.42 | | 0.134 |
| 2.06 | 0.59 | 30.5 | 61.4 | 0.50 | 0.09 | 84.3 | 3.04 | 0.0 | 0.107 |
| | | | | | | | 3.12 | | 0.113 |
| | | | | | | | 3.16 | | 0.107 |
| 1.32 | 0.48 | 27.0 | 60.8 | 0.44 | 0.04 | 92.5 | 2.75 | 0.0 | 0.101 |
| | | | | | | | 2.88 | | 0.110 |
| | | | | | | | 2.96 | | 0.097 |
| 0.58 | 0.32 | | | 0.32 | 0.00 | 100.0 | 2.12 | 0.0 | 0.096 |
| | | | | | | | 2.33 | | 0.100 |
| | | | | | | | 2.50 | | 0.095 |

Test No.: 49 Inlet: 6-Ft Special Date: Dec 16, 1971.

Long. Slope: 2 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 10.64 | 1.35 | 58.1 | 61.9 | 0.94 | 0.41 | 69.6 | 4.00 | 0.0 | 0.170 |
| | | | | | | | 4.00 | | 0.175 |
| | | | | | | | 4.00 | | 0.165 |
| 6.65 | 1.08 | 48.8 | 60.6 | 0.81 | 0.27 | 74.5 | 3.71 | 0.0 | 0.147 |
| | | | | | | | 3.71 | | 0.164 |
| | | | | | | | 3.71 | | 0.161 |
| 3.51 | 0.78 | 38.0 | 61.0 | 0.62 | 0.16 | 79.8 | 3.33 | 0.0 | 0.118 |
| | | | | | | | 3.37 | | 0.130 |
| | | | | | | | 3.37 | | 0.132 |
| 2.10 | 0.60 | 33.2 | 61.2 | 0.54 | 0.06 | 90.4 | 3.02 | 0.0 | 0.110 |
| | | | | | | | 3.12 | | 0.113 |
| | | | | | | | 3.16 | | 0.109 |
| 1.00 | 0.42 | 25.7 | 61.4 | 0.42 | 0.00 | 100.0 | 2.58 | 0.0 | 0.098 |
| | | | | | | | 2.75 | | 0.109 |
| | | | | | | | 2.91 | | 0.093 |

Test No.: 51 Inlet: 6-Ft Special Date: Dec 14, 1971.

Long. Slope: 2.0 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 10.09 | 1.31 | 64.0 | 60.8 | 1.05 | 0.26 | 80.3 | 2.96 | 0.0 | 0.184 |
| | | | | | | | 2.96 | | 0.197 |
| | | | | | | | 2.96 | | 0.211 |
| 6.69 | 1.08 | 53.7 | 60.1 | 0.89 | 0.19 | 82.7 | 2.87 | 0.0 | 0.168 |
| | | | | | | | 2.92 | | 0.177 |
| | | | | | | | 2.92 | | 0.179 |
| 3.59 | 0.79 | 46.0 | 59.9 | 0.77 | 0.02 | 92.2 | 2.66 | 0.0 | 0.144 |
| | | | | | | | 2.71 | | 0.158 |
| | | | | | | | 2.75 | | 0.153 |
| 2.41 | 0.65 | 38.7 | 60.2 | 0.64 | 0.01 | 98.9 | 2.42 | 0.0 | 0.136 |
| | | | | | | | 2.50 | | 0.144 |
| | | | | | | | 2.63 | | 0.142 |
| 2.49 | 0.65 | | | 0.65 | 0.00 | 100.0 | 2.42 | 0.0 | 0.137 |
| | | | | | | | 2.54 | | 0.145 |
| | | | | | | | 2.63 | | 0.142 |

Test No.: 52 Inlet: 4-Ft Special Date: Dec 14, 1971.

Long. Slope: 2.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 10.57 | 1.35 | 65.5 | 60.9 | 1.08 | 0.27 | 79.7 | 2.79 | 0.0 | 0.220 |
| | | | | | | | 2.83 | | 0.225 |
| | | | | | | | 2.92 | | 0.222 |
| 6.87 | 1.10 | 58.2 | 60.5 | 0.96 | 0.14 | 87.2 | 2.54 | 0.0 | 0.199 |
| | | | | | | | 2.62 | | 0.199 |
| | | | | | | | 2.71 | | 0.203 |
| 3.51 | 0.78 | 43.8 | 60.6 | 0.72 | 0.06 | 92.5 | 1.96 | 0.0 | 0.187 |
| | | | | | | | 2.16 | | 0.183 |
| | | | | | | | 2.33 | | 0.180 |
| 2.68 | 0.68 | 40.1 | 60.7 | 0.66 | 0.02 | 97.3 | 1.83 | 0.0 | 0.177 |
| | | | | | | | 2.00 | | 0.178 |
| | | | | | | | 2.21 | | 0.177 |
| 1.44 | 0.49 | | | 0.49 | 0.00 | 100.0 | 1.67 | 0.0 | 0.155 |
| | | | | | | | 1.67 | | 0.163 |
| | | | | | | | 1.79 | | 0.159 |

Test No.: 53 Inlet: 6-Ft Special Date: Dec 13, 1971.

Long. Slope: 2.0 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1ft., 2ft. and 3ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 10.34 | 1.33 | 70.5 | 59.9 | 1.18 | 0.15 | 88.5 | 2.75 | 0.0 | 0.218 |
| | | | | | | | 2.79 | | 0.228 |
| | | | | | | | 2.79 | | 0.218 |
| 6.55 | 1.07 | 60.0 | 60.3 | 1.00 | 0.07 | 93.0 | 2.54 | 0.0 | 0.195 |
| | | | | | | | 2.67 | | 0.199 |
| | | | | | | | 2.71 | | 0.201 |
| 5.25 | 0.96 | 55.2 | 60.2 | 0.92 | 0.04 | 95.5 | 2.33 | 0.0 | 0.188 |
| | | | | | | | 2.50 | | 0.195 |
| | | | | | | | 2.54 | | 0.192 |
| 4.63 | 0.90 | 53.2 | 59.6 | 0.89 | 0.01 | 99.0 | 2.17 | 0.0 | 0.184 |
| | | | | | | | 2.42 | | 0.192 |
| | | | | | | | 2.50 | | 0.185 |
| 4.24 | 0.86 | 50.8 | 60.0 | 0.85 | 0.01 | 98.2 | 2.08 | 0.0 | 0.186 |
| | | | | | | | 2.29 | | 0.190 |
| | | | | | | | 2.42 | | 0.183 |
| 2.89 | 0.71 | | | 0.71 | 0.00 | 100.0 | 1.88 | 0.0 | 0.178 |
| | | | | | | | 2.00 | | 0.178 |
| | | | | | | | 2.21 | | 0.178 |

Test No.: 56 Inlet: 4-Ft Special Date: July 15, 1971.

Long. Slope: 1/2 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) Ψ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 6.88 | 1.10 | 20.4 | 40.4 | 0.51 | 0.59 | 45.9 | 6.00 | 0.0 | 0.152 |
| 5.03 | 0.94 | 19.1 | 41.3 | 0.46 | 0.48 | 49.1 | 5.71 | 0.0 | 0.152 |
| 3.30 | 0.76 | 16.6 | 41.6 | 0.40 | 0.36 | 52.4 | 5.33 | 0.0 | 0.150 |
| 2.63 | 0.67 | 14.2 | 40.6 | 0.35 | 0.32 | 52.3 | 5.16 | 0.0 | 0.158 |
| 2.00 | 0.59 | 12.7 | 40.5 | 0.31 | 0.28 | 53.7 | 5.00 | 0.0 | 0.149 |
| 1.32 | 0.48 | 11.2 | 40.9 | 0.27 | 0.21 | 57.0 | 4.79 | 0.0 | 0.136 |
| 0.32 | 0.23 | 6.7 | 40.3 | 0.17 | 0.06 | 72.3 | 4.00 | 0.0 | 0.110 |
| 0.004 | 0.03 | | | 0.03 | 0.00 | 100.0 | 1.17 | 0.0 | 0.038 |

Test No.: 57 Inlet: 6-Ft Special Date: July 15, 1971.

Long. Slope: 1/2 % Swale Slope: 48:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

ΔH : Pressure-head drop across
the orifice (ft. of water)

\forall : Volume of water intercepted (ft.³)

Q_1 : Channel discharge (cfs)

T: Time (sec.)

Q_2 : Discharge intercepted (cfs)

η : Efficiency ($Q_2/Q_1 \times 100\%$)

$Q_3 = Q_1 - Q_2$: Carryover (cfs)

B: Top width of channel (ft.)*

D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|--------------|-------------|-------|
| 6.86 | 1.10 | 23.0 | 40.7 | 0.57 | 0.53 | 51.4 | 5.91 | 0.0 | 0.161 |
| 5.10 | 0.94 | 21.6 | 40.6 | 0.53 | 0.41 | 56.5 | 5.70 | 0.0 | 0.161 |
| 3.38 | 0.76 | 18.5 | 40.6 | 0.46 | 0.30 | 59.9 | 5.37 | 0.0 | 0.153 |
| 2.63 | 0.67 | 16.8 | 40.4 | 0.42 | 0.25 | 62.1 | 5.25 | 0.0 | 0.158 |
| 1.98 | 0.58 | 14.8 | 41.1 | 0.36 | 0.22 | 62.0 | 5.00 | 0.0 | 0.147 |
| 1.69 | 0.54 | 14.0 | 40.7 | 0.34 | 0.20 | 63.8 | 4.95 | 0.0 | 0.138 |
| 1.28 | 0.47 | 12.9 | 40.4 | 0.32 | 0.15 | 68.0 | 4.70 | 0.0 | 0.131 |
| 0.98 | 0.41 | 11.3 | 40.5 | 0.28 | 0.13 | 68.1 | 4.58 | 0.0 | 0.129 |
| 0.37 | 0.25 | 12.1 | 60.9 | 0.20 | 0.05 | 79.5 | 4.04 | 0.0 | 0.107 |
| 0.008 | 0.04 | | | 0.04 | 0.00 | 100.0 | 1.67 | 0.0 | 0.046 |

Test No.: 58 Inlet: 4-Ft Special Date: July 15, 1971

Long. Slope: 1/2 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 10.75 | 1.37 | 29.6 | 40.7 | 0.73 | 0.64 | 53.0 | 4.91 | 0.0 | 0.205 |
| 9.40 | 1.28 | 28.2 | 40.4 | 0.70 | 0.58 | 54.5 | 4.91 | 0.0 | 0.200 |
| 8.10 | 1.20 | 26.1 | 40.4 | 0.64 | 0.56 | 53.8 | 4.83 | 0.0 | 0.194 |
| 6.76 | 1.08 | 25.1 | 40.5 | 0.62 | 0.46 | 57.5 | 4.75 | 0.0 | 0.187 |
| 5.18 | 0.95 | 23.2 | 40.7 | 0.57 | 0.38 | 60.0 | 4.50 | 0.0 | 0.176 |
| 4.03 | 0.84 | 20.4 | 40.3 | 0.51 | 0.33 | 60.6 | 4.25 | 0.0 | 0.169 |
| 2.74 | 0.69 | 17.6 | 40.4 | 0.44 | 0.25 | 63.2 | 3.91 | 0.0 | 0.158 |
| 1.45 | 0.50 | 14.3 | 40.4 | 0.36 | 0.14 | 71.0 | 3.58 | 0.0 | 0.158 |
| 0.60 | 0.32 | 10.4 | 40.3 | 0.26 | 0.06 | 80.4 | 3.16 | 0.0 | 0.143 |
| 0.18 | 0.17 | 6.2 | 40.3 | 0.15 | 0.02 | 90.4 | 2.54 | 0.0 | 0.113 |
| 0.017 | 0.05 | | | 0.05 | 0.00 | 100.0 | 1.67 | 0.0 | 0.074 |

Test No.: 59 Inlet: 6-Ft Special Date: July 15, 1971

Long. Slope: 1/2 % Swale Slope: 24:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 8.01 | 1.20 | 30.6 | 40.8 | 0.75 | 0.45 | 62.5 | 4.79 | 0.0 | 0.192 |
| 6.76 | 1.09 | 28.3 | 40.0 | 0.71 | 0.38 | 64.8 | 4.70 | 0.0 | 0.190 |
| 5.35 | 0.96 | 26.9 | 41.3 | 0.65 | 0.31 | 67.8 | 4.50 | 0.0 | 0.178 |
| 4.06 | 0.84 | 24.0 | 40.6 | 0.59 | 0.25 | 70.3 | 4.25 | 0.0 | 0.175 |
| 2.68 | 0.68 | 20.2 | 40.6 | 0.50 | 0.18 | 73.0 | 3.96 | 0.0 | 0.167 |
| 1.42 | 0.50 | 17.0 | 43.8 | 0.39 | 0.11 | 77.5 | 3.67 | 0.0 | 0.166 |
| 0.81 | 0.37 | 9.7 | 40.6 | 0.24 | 0.13 | 64.5 | 3.33 | 0.0 | 0.146 |
| 0.50 | 0.29 | 17.3 | 60.3 | 0.29 | 0.00 | 99.0 | 3.00 | 0.0 | 0.124 |
| 0.17 | 0.17 | | | 0.17 | 0.00 | 100.0 | 2.04 | 0.0 | 0.087 |

Test No.: 60 Inlet: 4-Ft Special Date: July 8, 1971.

Long. Slope: 1/2 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- \forall : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 14.58 | 1.60 | 44.8 | 40.8 | 1.10 | 0.50 | 68.6 | 3.87 | 0.0 | 0.258 |
| 13.32 | 1.52 | 42.8 | 40.9 | 1.05 | 0.47 | 69.0 | 3.83 | 0.0 | 0.256 |
| 12.04 | 1.46 | 41.4 | 41.3 | 1.00 | 0.46 | 68.6 | 3.75 | 0.0 | 0.250 |
| 10.57 | 1.36 | 38.0 | 40.6 | 0.94 | 0.42 | 69.0 | 3.71 | 0.0 | 0.241 |
| 9.30 | 1.28 | 36.8 | 41.1 | 0.90 | 0.38 | 70.0 | 3.63 | 0.0 | 0.233 |
| 7.96 | 1.19 | 35.7 | 41.2 | 0.87 | 0.32 | 72.7 | 3.54 | 0.0 | 0.224 |
| 6.68 | 1.08 | 33.8 | 40.9 | 0.83 | 0.25 | 76.5 | 3.42 | 0.0 | 0.213 |
| 5.25 | 0.96 | 30.0 | 40.6 | 0.74 | 0.22 | 76.9 | 3.25 | 0.0 | 0.209 |
| 4.01 | 0.84 | 27.0 | 41.5 | 0.65 | 0.19 | 77.3 | 3.08 | 0.0 | 0.205 |
| 2.65 | 0.67 | 22.9 | 40.8 | 0.56 | 0.11 | 83.7 | 2.87 | 0.0 | 0.196 |
| 1.40 | 0.49 | 17.8 | 40.7 | 0.44 | 0.05 | 89.1 | 2.54 | 0.0 | 0.178 |
| 0.41 | 0.26 | | | 0.26 | 0.00 | 100.0 | 2.12 | 0.0 | 0.150 |

Test No.: 61 Inlet: 6-Ft Special Date: July 8, 1971.

Long. Slope: 1/2 % Swale Slope: 16:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water)
- Q_1 : Channel discharge (cfs)
- Q_2 : Discharge intercepted (cfs)
- $Q_3 = Q_1 - Q_2$: Carryover (cfs)
- Ψ : Volume of water intercepted (ft.³)
- T: Time (sec.)
- η : Efficiency ($Q_2/Q_1 \times 100\%$)
- B: Top width of channel (ft.)*
- D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | Ψ | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|--------|------|-------|-------|--------|-----------|----------|-------|
| 15.06 | 1.62 | 50.7 | 41.3 | 1.23 | 0.39 | 75.8 | 3.83 | 0.0 | 0.253 |
| 13.30 | 1.52 | 48.0 | 41.0 | 1.17 | 0.35 | 77.0 | 3.79 | 0.0 | 0.248 |
| 11.98 | 1.45 | 45.4 | 41.3 | 1.10 | 0.35 | 75.7 | 3.75 | 0.0 | 0.240 |
| 10.60 | 1.36 | 43.7 | 41.4 | 1.06 | 0.30 | 77.7 | 3.71 | 0.0 | 0.235 |
| 9.31 | 1.28 | 41.4 | 40.7 | 1.02 | 0.26 | 79.4 | 3.63 | 0.0 | 0.229 |
| 7.91 | 1.18 | 39.8 | 41.1 | 0.97 | 0.21 | 82.1 | 3.50 | 0.0 | 0.219 |
| 6.72 | 1.08 | 37.0 | 41.4 | 0.90 | 0.18 | 82.8 | 3.41 | 0.0 | 0.209 |
| 5.43 | 0.98 | 34.0 | 40.6 | 0.84 | 0.14 | 85.4 | 3.29 | 0.0 | 0.204 |
| 3.98 | 0.83 | 29.0 | 41.3 | 0.70 | 0.13 | 84.5 | 3.08 | 0.0 | 0.201 |
| 2.60 | 0.67 | 25.0 | 41.3 | 0.61 | 0.06 | 90.3 | 2.83 | 0.0 | 0.195 |
| 1.30 | 0.48 | 19.0 | 41.7 | 0.46 | 0.02 | 96.0 | 2.54 | 0.0 | 0.183 |
| 0.39 | 0.26 | | | 0.26 | 0.00 | 100.0 | 2.13 | 0.0 | 0.155 |

Test No.: 62 Inlet: 4-Ft Special Date: July 7, 1971.

Long. Slope: 1/2 % Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Depth taken at toe of curb. Spread onto back slope
less than 0.05 ft.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 $Q_3 = Q_1 - Q_2$: Carryover (cfs) B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at station 2 feet 9 inches upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_3 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|------|-------|-------|--------|-----------|----------|-------|
| 14.67 | 1.60 | 49.5 | 41.8 | 1.18 | 0.42 | 74.0 | 3.37 | 0.0 | 0.276 |
| 13.34 | 1.54 | 46.8 | 40.9 | 1.14 | 0.40 | 74.3 | 3.29 | 0.0 | 0.270 |
| 11.98 | 1.45 | 44.4 | 41.5 | 1.07 | 0.38 | 73.6 | 3.21 | 0.0 | 0.264 |
| 10.75 | 1.37 | 43.5 | 41.3 | 1.05 | 0.32 | 76.9 | 3.12 | 0.0 | 0.252 |
| 9.31 | 1.28 | 41.4 | 41.3 | 1.00 | 0.28 | 78.3 | 3.04 | 0.0 | 0.242 |
| 8.01 | 1.19 | 38.8 | 41.3 | 0.94 | 0.25 | 78.8 | 2.96 | 0.0 | 0.242 |
| 6.65 | 1.08 | 35.7 | 41.4 | 0.86 | 0.22 | 79.8 | 2.83 | 0.0 | 0.239 |
| 5.25 | 0.95 | 31.7 | 41.1 | 0.77 | 0.18 | 81.1 | 2.67 | 0.0 | 0.229 |
| 3.95 | 0.83 | 28.6 | 40.9 | 0.70 | 0.13 | 84.2 | 2.58 | 0.0 | 0.228 |
| 2.70 | 0.68 | 25.4 | 41.3 | 0.62 | 0.06 | 90.5 | 2.46 | 0.0 | 0.214 |
| 1.32 | 0.48 | 18.9 | 41.5 | 0.46 | 0.02 | 95.1 | 2.16 | 0.0 | 0.193 |
| 0.36 | 0.25 | | | 0.25 | 0.00 | 100.0 | 1.75 | 0.0 | 0.166 |

Test No.: S3 Inlet: J Date: 1/25/72

Long. Slope: 0.2% Swale Slope: 16:1 Back Slope: 3:1

Remarks: Sump effect. Barrier installed.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) ∇ : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 Q_4 : Spillage over the divisor B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | ∇ | T | Q_2 | Q_4 | η | B (Swale) | B (Back) | D |
|------------|-------|----------|-------|-------|-------|--------|-----------|----------|-------|
| 5.60 | 0.98 | 51.5 | 60.56 | 0.84 | 0.14 | | 4.54 | 0.00 | 0.282 |
| | | | | | | | 4.45 | | 0.272 |
| | | | | | | | 4.45 | | 0.274 |
| 3.38 | 0.76 | 44.9 | 60.61 | 0.74 | 0.02 | | 4.29 | 0.00 | 0.263 |
| | | | | | | | 4.25 | | 0.259 |
| | | | | | | | 4.20 | | 0.257 |
| 2.66 | 0.68 | 40.4 | 60.52 | 0.67 | 0.01 | | 4.16 | 0.00 | 0.255 |
| | | | | | | | 4.08 | | 0.245 |
| | | | | | | | 4.04 | | 0.250 |
| 2.29 | 0.63 | | | 0.63 | 0.00 | | 4.00 | 0.00 | 0.249 |
| | | | | | | | 4.00 | | 0.240 |
| | | | | | | | 4.00 | | 0.241 |
| 1.44 | 0.50 | | | 0.50 | 0.00 | | 3.46 | 0.00 | 0.224 |
| | | | | | | | 3.46 | | 0.215 |
| | | | | | | | 3.46 | | 0.213 |
| 0.65 | 0.33 | | | 0.33 | 0.00 | | 2.79 | 0.00 | 0.183 |
| | | | | | | | 2.75 | | 0.160 |
| | | | | | | | 2.75 | | 0.163 |
| 0.167 | 0.16 | | | 0.16 | 0.00 | | 1.88 | 0.00 | 0.126 |
| | | | | | | | 1.96 | | 0.108 |
| | | | | | | | 2.13 | | 0.132 |

Test No.: S4 Inlet: J Date: 1/25/72
 Long. Slope: 0.2% Swale Slope: 12:1 Back Slope: 3:1
 Remarks: Sump effect. Barrier installed.

SYMBOLS

ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 Q_4 : Spillage over the divisor B: Top width of channel (ft.)*
 D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_4 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|-------|-------|-------|--------|-----------|----------|-------|
| 5.60 | 0.98 | 51.1 | 60.59 | 0.84 | 0.14 | | 3.34 | 0.00 | 0.277 |
| | | | | | | | 3.34 | | 0.262 |
| | | | | | | | 3.25 | | 0.265 |
| 3.54 | 0.79 | 45.0 | 60.57 | 0.74 | 0.05 | | 3.16 | 0.00 | 0.260 |
| | | | | | | | 3.12 | | 0.245 |
| | | | | | | | 3.12 | | 0.255 |
| 1.94 | 0.58 | | | 0.58 | 0.00 | | 2.92 | 0.00 | 0.237 |
| | | | | | | | 2.87 | | 0.220 |
| | | | | | | | 2.83 | | 0.224 |
| 1.32 | 0.48 | | | 0.48 | 0.00 | | 2.58 | 0.00 | 0.214 |
| | | | | | | | 2.54 | | 0.181 |
| | | | | | | | 2.50 | | 0.195 |
| 0.60 | 0.32 | | | 0.32 | 0.00 | | 2.12 | 0.00 | 0.156 |
| | | | | | | | 2.16 | | 0.154 |
| | | | | | | | 2.25 | | 0.172 |
| 0.25 | 0.20 | | | 0.20 | 0.00 | | 1.67 | 0.00 | 0.120 |
| | | | | | | | 1.75 | | 0.133 |
| | | | | | | | 1.87 | | 0.157 |

Test No.: S12 Inlet: Type 6-Ft Special Date: 2/4/72

Long. Slope: 0.2% Swale Slope: 12:1 Back Slope: 1/8:1

Remarks: Sump effect. Barrier installed.

SYMBOLS

- ΔH : Pressure-head drop across the orifice (ft. of water) \forall : Volume of water intercepted (ft.³)
 Q_1 : Channel discharge (cfs) T: Time (sec.)
 Q_2 : Discharge intercepted (cfs) η : Efficiency ($Q_2/Q_1 \times 100\%$)
 Q_4 : Spillage over the divisor B: Top width of channel (ft.)*
D: Depth of channel (ft.)*

* Measurements taken at stations 1 ft., 2 ft. and 3 ft. upstream from the start of the inlet grating.

| ΔH | Q_1 | \forall | T | Q_2 | Q_4 | η | B (Swale) | B (Back) | D |
|------------|-------|-----------|---|-------|-------|--------|--------------|-------------|-------|
| 11.32 | 1.40 | | | 1.40 | 0.00 | | 4.0 | 0.0 | 0.336 |
| | | | | | | | 4.0 | | 0.303 |
| | | | | | | | 3.9 | | 0.324 |
| 4.17 | 0.83 | | | 0.83 | 0.00 | | 2.9 | 0.0 | 0.262 |
| | | | | | | | 3.0 | | 0.237 |
| | | | | | | | 3.0 | | 0.258 |