| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-3615B | NS-3 |
| R/W SHEET NO. | |

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 012575 ENGINEER Paul F. Fisher
1/6/2015
DocuSigned by: Paul Fisher

# MORPHOLOGICAL MEASUREMENT TABLE- APPENDIX B

| | VARIABLE | UNITS | REACH #1 | REACH #2 | REFERENCE REACH |
|---|---|---|---|---|---|
| 1 | STREAM TYPE | - | B4c/1 | B4c/1 | B4c/1 |
| 2 | DRAINAGE AREA | sq. mi. | 0.41 | 0.58 | 3.3 |
| 3 | BANKFULL WIDTH | ft. | 12.3 | 13.4 | 25.6 |
| 4 | BANKFULL MEAN DEPTH | ft. | 0.97 | 1.07 | 1.7 |
| 5 | WIDTH/DEPTH RATIO | - | 12.7 | 12.5 | 15.1 |
| 6 | BANKFULL X-SECTIONAL AREA | s.f. | 11.9 | 14.4 | 43.3 |
| 7 | BANKFULL MEAN VELOCITY | fps | 2.5 | 2.7 | 4.6 |
| 8 | BANKFULL DISCHARGE | cfs | 30 | 39 | 199 |
| 9 | BANKFULL MAX. DEPTH | ft. | 1.2 | 1.35 | 3.0 |
| 10 | WIDTH of FLOODPRONE AREA | ft. | 24.3 | 26.9 | 36.6 |
| 11 | ENTRENCHMENT RATIO | - | 2.0 | 2.0 | 1.4 |
| 12 | MEANDER LENGTH | ft. | 105 | 174 | 170 |
| 13 | RATIO of MEANDER LENGTH to BANKFULL WIDTH | - | 8.5 | 13.0 | 6.6 |
| 14 | RADIUS of CURVATURE (MIN. C/L) | ft. | 35 | 40 | 41 |
| 15 | RATIO of RADIUS of CURVATURE to BANKFULL WIDTH | - | 2.8 | 3.0 | 1.6 |
| 16 | BELT WIDTH (AVG) | ft. | 36.5 | 47.5 | 43.7 |
| 17 | MEANDER WIDTH RATIO | - | 3.0 | 3.5 | 1.7 |
| 18 | SINUOSITY | - | 1.02 | 1.03 | 1.07 |
| 19 | VALLEY (WS) SLOPE | ft./ft. | 0.0057 | 0.0053 | 0.0088 |
| 20 | AVERAGE (WS) SLOPE | ft./ft. | 0.0056 | 0.0051 | 0.0082 |
| 21 | POOL (WS) SLOPE | ft./ft. | 0.0003 | 0.0003 | 0.0004 |
| 22 | RATIO of POOL SLOPE to AVERAGE SLOPE | - | 0.05 | 0.06 | 0.05 |
| 23 | MAXIMUM POOL DEPTH | ft. | 2.5 | 2.8 | 4.5 |
| 24 | RATIO of MAX. POOL DEPTH to AVERAGE BANKFULL DEPTH | - | 2.58 | 2.62 | 2.65 |
| 25 | AVERAGE POOL WIDTH (at BANKFULL HEIGHT) | ft. | 12.5 | 14.0 | 25.9 |
| 26 | RATIO of POOL WIDTH to BANKFULL WIDTH | - | 1.02 | 1.04 | 1.01 |
| 27 | POOL-to-POOL SPACING | ft. | 58.7 | 86.4 | 62.4 |
| 28 | RATIO of POOL-to-POOL SPACING to BANKFULL WIDTH | - | 4.8 | 6.4 | 2.4 |
| 29 | RATIO of LOWEST BANK HEIGHT to BANKFULL HEIGHT | - | 1.0 | 1.0 | 2.1 |
| | | | | | |
| a | STREAM LENGTH | ft. | 295 | 465 | 348 |
| b | VALLEY LENGTH | ft. | 290 | 450 | 325 |
| c | LOWEST BANK HEIGHT | ft. | 1.0 | 1.1 | 3.6 |

NATURAL STREAM DESIGN
APPENDIX B

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