

PROJECT: 32589.1.1 ID: B-1303 COUNTY: Northampton

DESCRIPTION(1): Bridge No. 76 over the Roanoke River Overflow on US 258 SW of Rich Square at -L- Station 18+81.0

**INFORMATION ON EXISTING BRIDGE**

Information obtained from:  field inspection  
 microfilm (Reel: \_\_\_\_\_ Pos: \_\_\_\_\_)  
 other: \_\_\_\_\_

BR. NO.: 76 BR. LENGTH: 100 NO. BENTS: 6 NO. BENTS IN: CHANNEL: 4 FLOODPLAIN: 2

FOUNDATION TYPE: Concrete Piles

**EVIDENCE OF SCOUR(2):**

ABUTMENTS OR END BENT SLOPES: None noted

INTERIOR BENTS: None noted

CHANNEL BED: None noted

CHANNEL BANKS: None noted

**EXISTING SCOUR PROTECTION:**

TYPE(3): Concrete end walls and wing walls

EXTENT(4): Approximately 20' outside of existing edge of bridge

EFFECTIVENESS(5): Appear satisfactory

OBSTRUCTIONS(6) (DAMS, DEBRIS, ETC.): None noted

**DESIGN INFORMATION**

CHANNEL BED MATERIAL(7): Soft silty and sandy clay (SS-12, SS-21)

CHANNEL BANK MATERIAL(8): Medium stiff clayey silt (SS-4) and silty sandy clay (SS-26)

CHANNEL BANK COVER(9): Grasses, shrubs and trees

FLOOD PLAIN WIDTH(10): From north end of bridge south approximately 3.5 miles to the Roanoke River

FLOOD PLAIN COVER(11): Mostly hardwoods

**DESIGN INFORMATION CONT.**

STREAM IS: \_\_\_\_\_ DEGRADING  AGGRADING (12)

OTHER OBSERVATIONS AND COMMENTS: \_\_\_\_\_

CHANNEL MIGRATION TENDENCY (13): Mirgration tendency is highly unlikely

**GEOTECHNICALLY ADJUSTED SCOUR ELEVATIONS(14):**

This is not an active channel and does not appear to have received any significant flow over the past 25 to 50 years based on the size of trees adjacent to and in the area of the channel. No significant scour is anticipated at this site.

REPORTED BY: Kevin B. Miller DATE: 9/9/04  
 Kevin B. Miller

**INSTRUCTIONS**

- (1) GIVE THE DESCRIPTION OF THE SPECIFIC SITE, INCLUDING ROUTE NUMBER AND BODY OF WATER CROSSED.
- (2) NOTE ANY EVIDENCE OF SCOUR AT THE EXISTING END BENTS OR ABUTMENTS (UNDERMINING, SLOUGHING, SCOUR LOCATIONS, DEGRADATIONS, ETC.)
- (3) NOTE ANY EXISTING SCOUR PROTECTION (RIP RAP, ETC.)
- (4) DESCRIBE THE EXTENT OF ANY EXISTING SCOUR PROTECTION.
- (5) DESCRIBE WHETHER OR NOT THE SCOUR PROTECTION APPEARS TO BE WORKING.
- (6) NOTE ANY DAMS, FALLEN TREES, DEBRIS AT BENTS, ETC.
- (7) DESCRIBE THE CHANNEL BED MATERIAL BASED ON OBSERVATION AND/OR SAMPLES.
- (8) DESCRIBE THE CHANNEL BANK MATERIAL BASED ON OBSERVATION AND/OR SAMPLES.
- (9) DESCRIBE THE BANK COVERING (GRASS, TREES, RIP RAP, NONE, ETC.)
- (10) GIVE THE APPROXIMATE FLOOD PLAIN WIDTH (ESTIMATE).
- (11) DESCRIBE THE FLOOD PLAIN COVERING (GRASS, TREES, CROPS, ETC.)
- (12) CHECK THE APPROPRIATE SPACE AS TO WHETHER THE STREAM IS DEGRADING OR AGGRADING.
- (13) DESCRIBE THE POTENTIAL OF THE BODY OF WATER TO MIGRATE Laterally DURING THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS).
- (14) GIVE THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION EXPECTED OVER THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS). THIS CAN BE GIVEN AS AN ELEVATION RANGE ACROSS THE SITE, OR ON A BENT BY BENT BASIS WHERE VARIATIONS EXIST. DISCUSS THE RELATIONSHIP BETWEEN THE HYDRAULICS THEORETICAL SCOUR AND THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION. IF THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS DEPENDENT ON SCOUR COUNTER MEASURES, EXPLAIN. (RIPRAP ARMORING ON SLOPES, ETC.) THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS BASED ON THE ERODABILITY OF MATERIALS WITH CONSIDERATION FOR JOINTING, FOLIATION, BEDDING ORIENTATION AND FREQUENCY, CORE RECOVERY PERCENTAGE, PERCENTAGE RQD, DIFFERENTIAL WEATHERING, SHEAR STRENGTH, OBSERVATIONS AT EXISTING STRUCTURES, OTHER TESTS DEEMED APPROPRIATE, AND OVERALL GEOLOGIC CONDITIONS AT THE SITE.