COMPARISON OF EXIST. & PROPOSED WATERWAY OPENINGS

	RIVER BRIDGE	OVERFLOW STRUCTURE	TOTAL
EXISTING	2300 ft²	1000 ft²	3300 ft²
PROPOSED	2400 ft²	85 ft²	2485 ft²

WATERWAY OPENINGS ARE BELOW BOTH Q25 & Q100

220
22 / 5
9 | 2000
18
20

266
9 | 2400
18
60
54
60

270
30
0

2400 = 720
2400 = 720
2100 = 60

Drainage Area 520 MI.² Obtained from U.S.G.S. TOPO MAPS

Character of Drainage Area DENSELY WOODED SWAMP W/ SCATTERED FARMLAND

Highwater Mark(s)	Dates	Obtained From
MIDHEIGHT OF BEAMS EL. 36.7	ASSUMED TO BE FLOOD OF RECORD 9/25/55	LONGTIME RESIDENT

Maximum Discharge of Record 8900 * Sec. ft. Date 9/28/55

Discharge Data Obtained From U.S.G.S. GAGE # 02109500 - WACCAMAW RIVER @ FREELAND, N.C. APPROX. 6 MI. DOWNSTREAM

Period Covered by Discharge Records 1940 TO 1984

Discharge Used for Design of Waterway 8000 Sec. Ft.

Waterway Area Considered Necessary 2400 Sq. Ft.

Waterway Area Provided by Recommended Structure 2400 @ Q25 ; 2400 @ Q 100 Sq. Ft.

Data on Existing Structure STEEL FLOOR ON STEEL GIRDERS & FLOOR BEAMS ON R.C. CAPS ON TIMBER PILES - 9 SPANS ; 1@ 40'-6", 2@ 40'-0", 1@ 41'-3", 3@ 40'-0", 1@ 40'-3", 1@ 40'-6". WATERWAY OPENING = 2300 ft²

Data on other Structures Up or Down Stream N/A

Method Used in Determining Foundation Material NONE

Is Additional Foundation Investigation Considered Advisable YES

Other Information USED HEC 2 FOR BACKWATER ANALYSIS

Information to be shown on plans

	No Bridge	Existing River	Existing Overflow	Proposed River	Proposed Overflow	Backwater Increase	
Design Discharge	8300	6700	1600	8000	300	–	Frequency 25 YEARS
100 yr. Discharge	11000	9000	2000	10600	350	–	
25 yr. Backwater	–	0.15	0.15	0.15	0.15	0.0	
Design High Water Elev.	36.41	36.56	36.56	36.56	36.54		
100 yr. Backwater	–	0.17	0.17	0.26	0.26	0.09	
100 yr. High Water Elev.	37.56	37.73	37.73	37.82	37.80		

Flood of Record 9/25/55 (Date), 8900 * cfs (Discharge); 34 YEARS (Frequency)

* CONVEYED BY BOTH STRUCTURES

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Waccamaw River

SHEET 1 OF 2

HYDROGRAPHIC DEPARTMENT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N. C.

B-1144

BRIDGE SURVEY REPORT

PROJECT NO. 8.2430101 COLUMBUS COUNTY, STA. 58+79.50

BRIDGE OVER WACCAMAW RIVER # 21 Known as BR 29

On S.R. 1928 between N.C. 130 and S.R. 1930

Recommended Width of Roadway 28'-0" Skew 90°

Recommended Structure PRESTRESSED CORED SLABS - 8 SPANS @ 46'-10½"
TOTAL LENGTH FILL-FACE TO FILL-FACE = 377'-0"

Rip Rap ENTIRE NORTH SLOPE ; DISTURBED SOUTH SLOPE

Temporary Crossing IS REQUIRED 80' UPSTREAM OF EXISTING STRUCTURE

Present Structure STEEL DECK ON STEEL BEAMS - 9 SPANS - 1@ 40'-6", 2@ 40'-0", 1@ 40'-3", 3@ 40'-0", 1@ 40'-6" TO BE REMOVED

New Location is IN SAME LOCATION Up, Down Stream from Crossing on Present Road

Nearest Shipping Point WHITEVILLE, N.C. On SEABOARD COASTLINE R. R.

Distance from Shipping Point to Bridge Site is 17 miles.

Elevations From B. M. N.C. GEODETIC MONUMENT # W 226 - LOCATED IN FRONT STEPS OF SCHOOL ON N.C. 130 IN OLD DOCK, N.C. Elev. 45.974 Datum: MSL

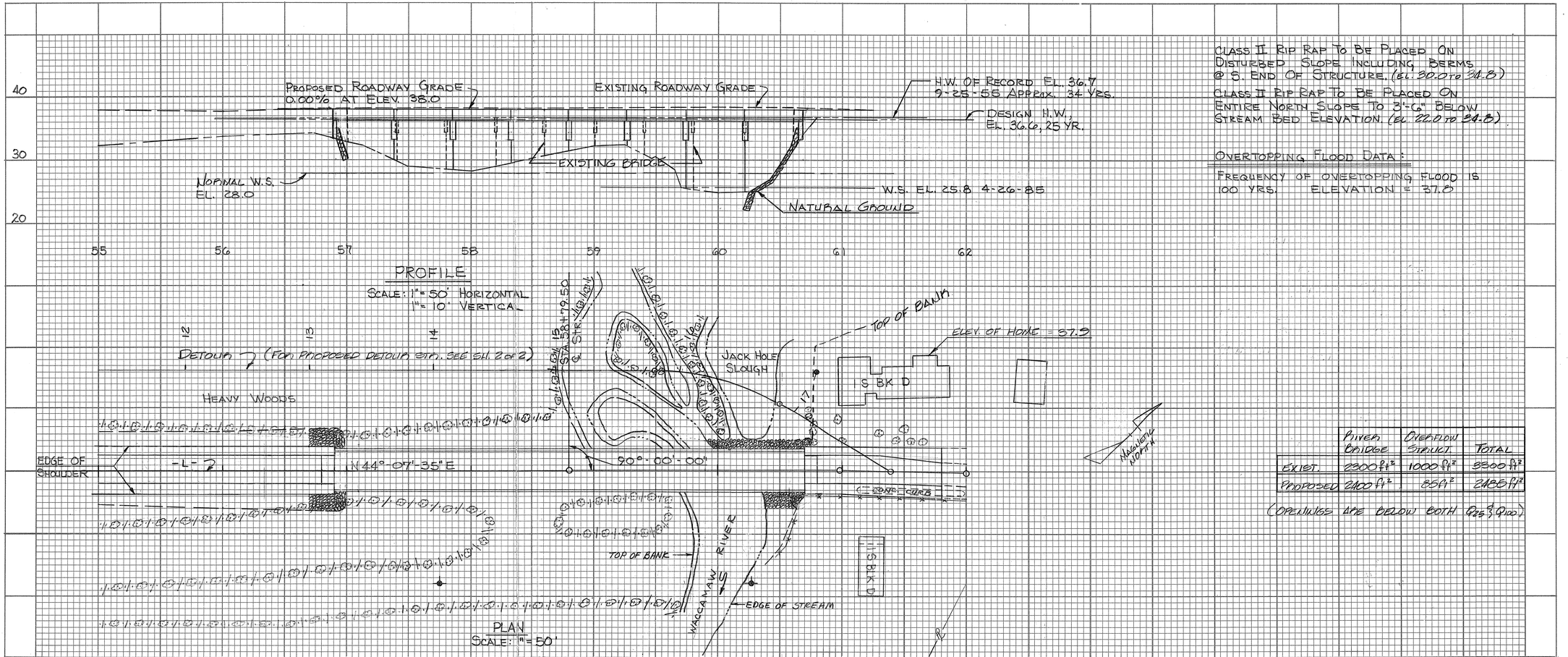


Surveyed by RUMMEL, KLEPPER & KAHL Assisted by W. P. BLANCHARD, JR. Date 4/26/85
W.R. BUTLER

NPS7088

168-19

REVISED 7/16/85
REVISED 8/20/85
REVISED 10/3/85



CLASS II RIP RAP TO BE PLACED ON DISTURBED SLOPE INCLUDING BERMS @ S. END OF STRUCTURE. (EL. 30.0 TO 34.8)

CLASS II RIP RAP TO BE PLACED ON ENTIRE NORTH SLOPE TO 3'-6" BELOW STREAM BED ELEVATION. (EL. 22.0 TO 24.8)

OVERTOPPING FLOOD DATA:

FREQUENCY OF OVERTOPPING FLOOD IS 100 YRS. ELEVATION = 37.8

	RIVER BRIDGE	OVERFLOW STRUCT.	TOTAL
EXIST.	2300 ft²	1000 ft²	3300 ft²
PROPOSED	2400 ft²	859 ft²	2408 ft²

(OPENINGS ARE BELOW BOTH Q_{25} & Q_{100})