

Project Number 45653.1.1

TIP Number B-5699

Let Date _____

PREDESIGN-PRESURVEY REPORT

County Columbus

Bridge Number 230068

Road Number NC 214

Stream Green Swamp
Big Creek

Type Of Request: POC Force Account TIP

Date 1/5/16 Name EAKPUOGU Assigned To _____

Checked By _____

Prior Survey Date No (attach copy of prior survey)

Panel 1260

Study By Scour Section _____

Flood Zone Yes Detail Study Detailed Date 6/2/2006 (attach copy of flood map)

B.M. Info _____

Quad Map Lake Waccamaw Drainage Area 50 AC From stream stats

Q25 60 Q50 75 Q100 90 Method USGS - Rural

overflow structure

(SIR 2014-5030)

EXISTING BRIDGE INFORMATION

Location 0.7 mi E Jct SR 1757

Average Daily Traffic 2000 (2013)

Length 74 Bed- To Crown 10 Water Depth 2

Type Structure RCDG

Type Spans 3 @ 24'6"

Upstream Structure None

Location _____

Bed- To Crown _____ Prior Survey _____

Downstream Structure Confluence with Frier Swamp / Lake Waccamaw

Location _____

Bed- To Crown _____ Prior Survey _____

SCS Watershed _____

ENVIRONMENTAL

Trout Stream No Anadromous Fish No Primary Nursery Area No

High Quality Waters No Nutrient Sensitive Waters No

Near Water Supply Intake No CAMA County No

Stream Classification C, SW

DENR River Basin Info. Lumber

office estimated Min brg length = 100'



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: STRUCTURE DATA CHANGES

Structure Safety Report

Routine Element Inspection

COUNTY: COLUMBUS STRUCTURE NUMBER: 230068 FREQUENCY: 24 MONTHS
FACILITY CARRIED: NC214 MILE POST: _____
LOCATION: 0.7 MI E JCT SR 1757
FEATURE INTERSECTED: GREEN SWAMP
LATITUDE: 34° 19' 19.17" LONGITUDE: 78° 28' 9.34"
SUPERSTRUCTURE: RCDG
SUBSTRUCTURE: EBT1&IBTS:RC CAPS/TIMBER PILES(EBT2),RC ABUT
SPANS: 3@24"6
☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION
PRESENT CONDITION: Fair INSPECTION DATE: 05/06/2015
POSTED SV: Not Posted POSTED TTST: Not Posted
OTHER SIGNS PRESENT: 2 DELINEATORS



Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>NO</u>	DELINEATORS	<u>0</u>
<u>NO</u>	NARROW BRIDGE	<u>0</u>
<u>NO</u>	ONE LANE BRIDGE	<u>0</u>
<u>NO</u>	LOW CLEARANCE	<u>0</u>

LOOKING EAST (SAM POTTS HIGHWAY)

INSPECTED BY Ray L. Kisner	SIGNATURE <i>Ray L. Kisner</i>	ASSISTED BY R. D. Heath
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BRIDGE MANAGEMENT UNIT

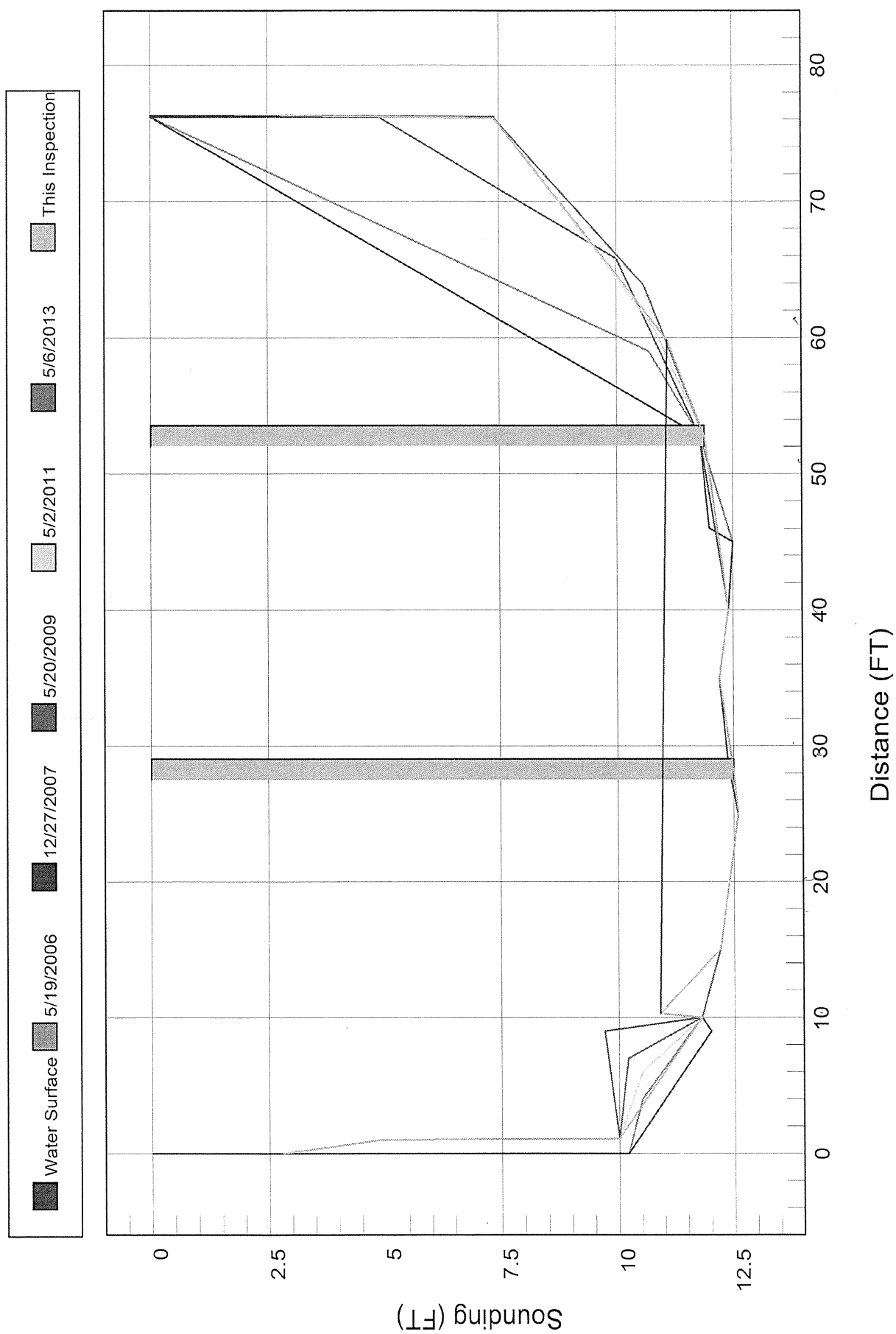
DATA ON EXISTING STRUCTURE

Update Date: 12/01/2015

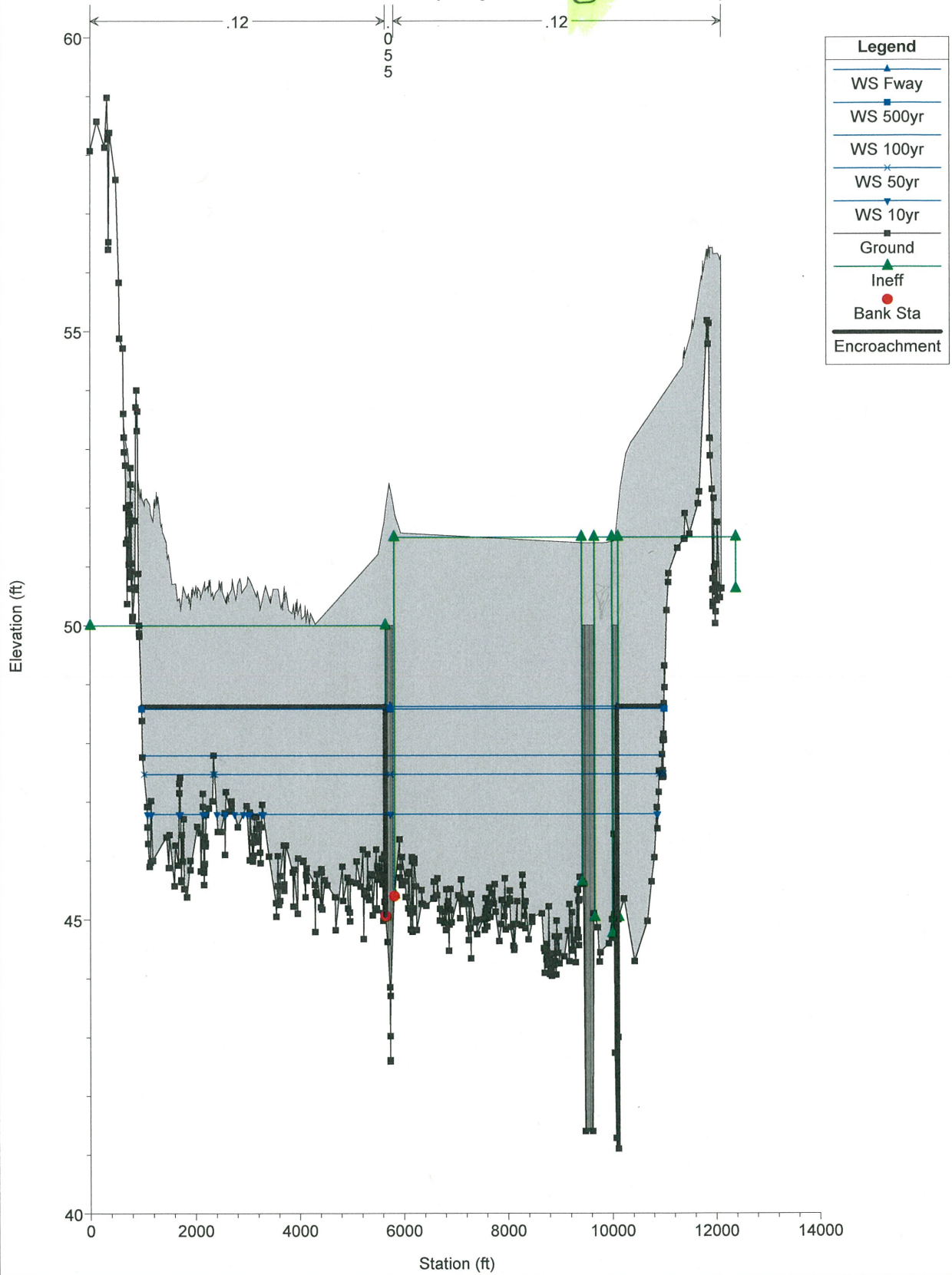
COUNTY : COLUMBUS	DIVISION : 6	DISTRICT : 3	STRUCTURE NUMBER : 230068	LENGTH : 74 FEET
ROUTE CARRIED : NC214		FEATURE INTERSECTED : GREEN SWAMP		
LOCATED : 0.7 MI E JCT SR 1757		BRIDGE NAME :		CITY :
FUNC. CLASS : 07	SYST.ON : FA	SYST.UNDER : NFA	ADT & YR : 2000 2013	RAIL TYPE : LT 141 RT 141
BUILT : 1922	BY : SHPWC	PROJ : 326	FED.AID PROJ : F-170(4)	DESIGN LOAD : HS 15
REHAB : 1950	BY : DBM	PROJ : 3292	ALIGNMENT : TAN	SKEW : 90
LANES : ON 2 UNDER 0				
NAVIGATION : VC 0 FT		HC 0 FT	HT. CRN. TO BED : 10 FT	WATER DEPTH : 2 FT
SUPERSTRUCTURE : RCDG				
SUBSTRUCTURE : EBT1&IBTS:RC CAPS/TIMBER PILES(EBT2),RC ABUT				
SPANS : 3@24'6				
BEAMS OR GIRDERS : 6 LNS.RC DECK GIRDERS @ VAR.CTS.				
FLOOR : 7RC/4.5 AWS	ENCROACHMENT :		DECK (OUT TO OUT) : 38 FT	
CLEAR ROADWAY : 33.5 FT		BETWEEN RAILS : 35.83 FT		SIDEWALK OR CURB : LT 1.165 FT RT 1.165 FT
VERT.CL.OVER : 999.9 FT				
INV.RTG. : HS-22	OPE.RTG. : HS-36	CONTR.MEMBER : RCDG - Ext	POSTED : SV	TTST DATE
SYSTEM : Primary N.C. Route			GREEN LINE ROUTE : Y	
UNDER ROUTES AND CLEARANCES				

REMARKS :

Date:

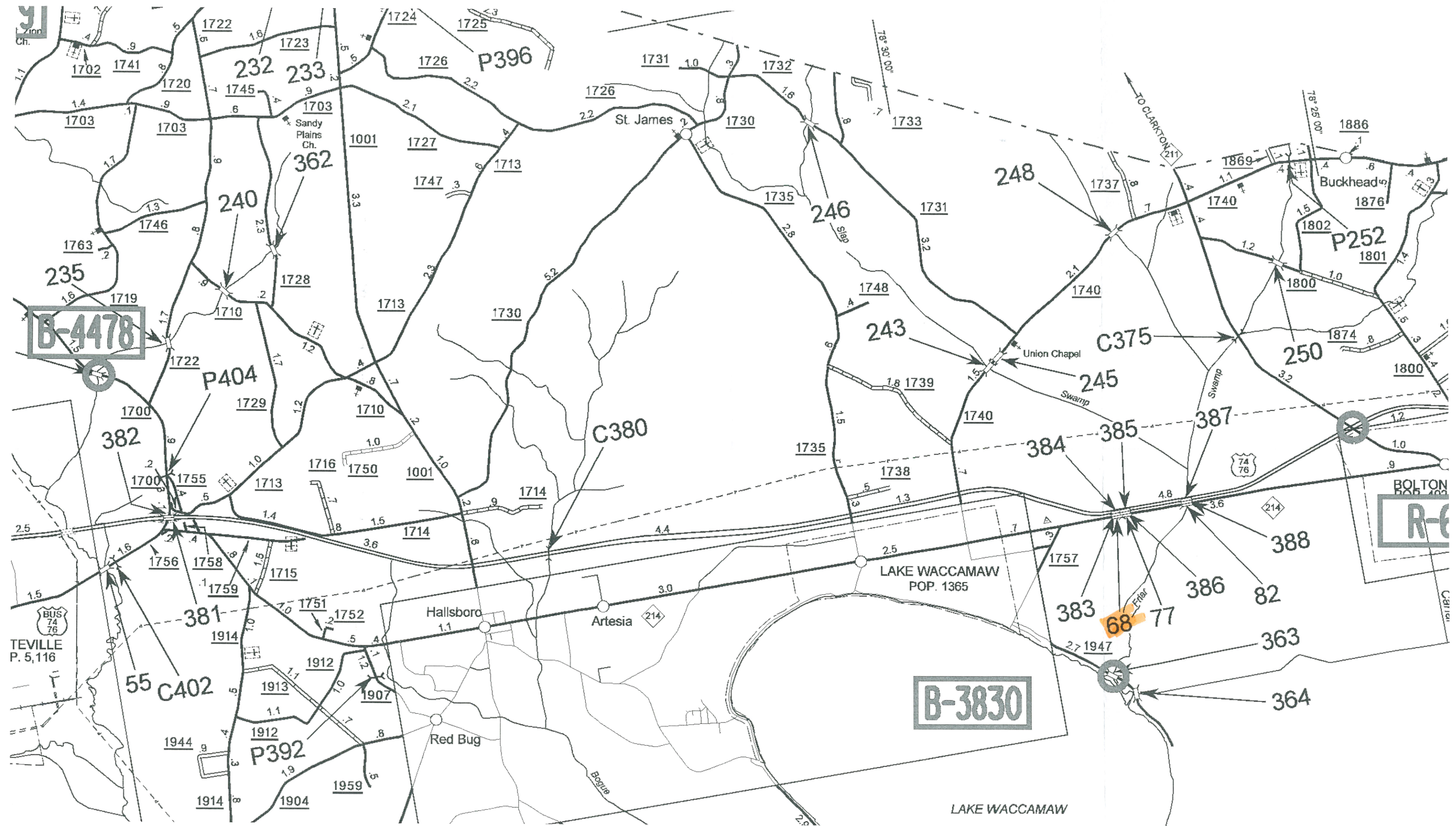


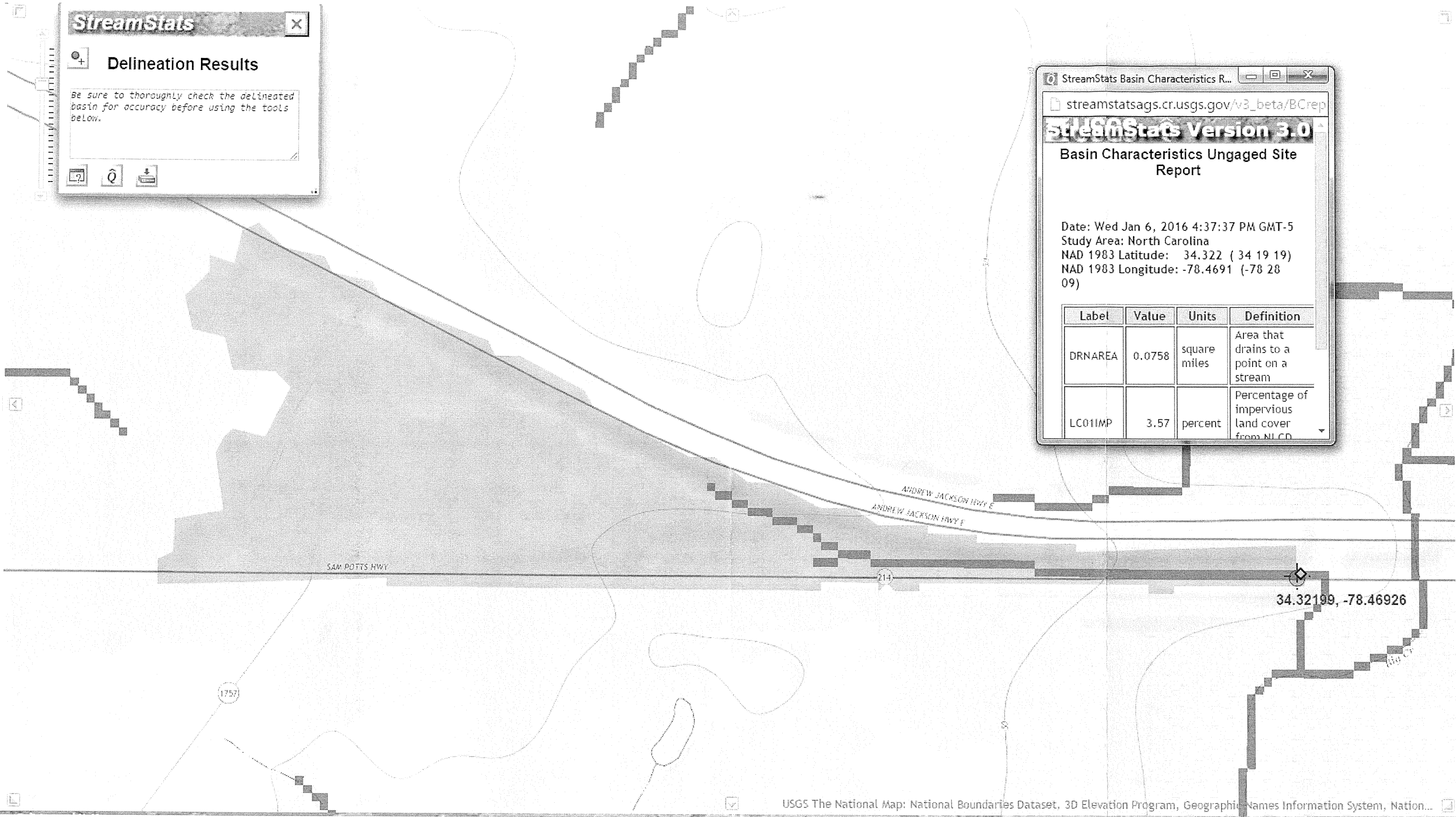
Big Creek Plan: Big Creek Plan 1/7/2016
NC 214 -- Columbus County Bridge #'s 82/77/68 -- Detailed Survey



HEC-RAS Plan: BigCreek River: Big Creek Reach: 1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	15486.11	5000.00	42.24	47.93	43.60	47.96	0.001145	1.98	4072.34	9676.61	0.18
1	15486.11	5000.00	42.24	48.67	43.61	48.70	0.000841	1.91	4116.32	4419.21	0.16
1	15486.11	2480.00	42.24	46.52	42.65	46.54	0.001095	1.39	2714.31	8880.15	0.16
1	15486.11	4130.00	42.24	47.54	43.28	47.56	0.001088	1.78	3689.75	9463.86	0.17
1	15486.11	7390.00	42.24	48.84	44.66	48.88	0.001303	2.44	4945.21	9945.10	0.20
1	15463.8	5000.00	41.39	47.75	45.39	47.89	0.002238	3.61	2255.86	10011.03	0.27
1	15463.8	5000.00	41.39	48.36	45.25	48.60	0.002673	4.19	1489.76	3874.11	0.30
1	15463.8	2480.00	41.39	46.39	43.77	46.48	0.001855	2.72	1456.85	8993.49	0.24
1	15463.8	4130.00	41.39	47.38	45.02	47.50	0.002054	3.30	2035.13	9904.87	0.26
1	15463.8	7390.00	41.39	48.59	46.02	48.79	0.002717	4.38	2752.23	10123.87	0.31
1	15448.8	5000.00	42.59	47.74	43.99	47.82	0.002806	2.91	2341.72	9989.30	0.28
1	15448.8	5000.00	42.59	48.42	44.05	48.48	0.001864	2.65	2599.53	4451.00	0.23
1	15448.8	2480.00	42.59	46.39	43.04	46.43	0.002394	1.89	1632.26	8489.65	0.24
1	15448.8	4130.00	42.59	47.37	43.66	47.43	0.002590	2.58	2145.93	9831.70	0.27
1	15448.8	7390.00	42.59	48.58	44.83	48.71	0.003381	3.71	2781.62	10029.71	0.32
1	15414.02	Mult Open									
1	15369.66	5000.00	41.36	46.58	43.95	46.70	0.004735	3.72	1972.78	8793.60	0.36
1	15369.66	5000.00	41.36	47.46	43.95	47.54	0.002422	3.08	2369.76	4451.00	0.27
1	15369.66	2480.00	41.36	45.64	42.94	45.69	0.003074	2.39	1481.53	6574.01	0.28
1	15369.66	4130.00	41.36	46.28	43.64	46.38	0.004266	3.32	1818.81	7932.07	0.34
1	15369.66	7390.00	41.36	47.30	44.44	47.50	0.005669	4.66	2353.01	9745.07	0.41
1	14902.73	5000.00	41.08	45.93	44.16	45.93	0.000741	1.77	7711.98	10422.86	0.15
1	14902.73	5000.00	41.08	46.95	44.34	46.96	0.000697	1.89	6156.37	4203.89	0.14
1	14902.73	2480.00	41.08	44.99	43.95	45.00	0.000819	1.58	4842.92	10322.79	0.15
1	14902.73	4130.00	41.08	45.62	44.11	45.63	0.000773	1.72	6768.04	10390.77	0.15
1	14902.73	7390.00	41.08	46.71	44.32	46.72	0.000665	1.87	10121.97	10504.77	0.15
1	13729.34	5000.00	40.37	45.62	43.45	45.62	0.000136	0.81	18241.20	11174.78	0.06
1	13729.34	5000.00	40.37	46.68	43.58	46.68	0.000120	0.87	15000.54	4025.04	0.06
1	13729.34	2480.00	40.37	44.63	43.28	44.63	0.000167	0.77	11075.84	10663.23	0.07
1	13729.34	4130.00	40.37	45.29	43.40	45.29	0.000146	0.81	15873.08	11133.59	0.07
1	13729.34	7390.00	40.37	46.44	43.57	46.44	0.000118	0.84	24200.08	11411.00	0.06
1	12820.04	5000.00	39.81	45.49	43.48	45.50	0.000146	0.85	17957.21	12724.42	0.07
1	12820.04	5000.00	39.81	46.58	43.69	46.58	0.000124	0.90	14821.25	4106.41	0.06
1	12820.04	2480.00	39.81	44.47	43.25	44.47	0.000208	0.86	10289.28	8308.10	0.08
1	12820.04	4130.00	39.81	45.16	43.46	45.16	0.000162	0.85	15427.32	12212.21	0.07
1	12820.04	7390.00	39.81	46.33	43.61	46.34	0.000119	0.86	24260.79	13516.28	0.06
1	11580.61	5000.00	39.06	45.33	43.19	45.33	0.000127	0.88	19476.71	16356.86	0.06
1	11580.61	5000.00	39.06	46.43	43.37	46.44	0.000114	0.93	15326.62	4147.37	0.06
1	11580.61	2480.00	39.06	44.22	43.00	44.22	0.000197	0.95	10671.03	9511.69	0.08
1	11580.61	4130.00	39.06	44.97	43.15	44.97	0.000143	0.89	16586.21	14309.62	0.07
1	11580.61	7390.00	39.06	46.20	43.35	46.20	0.000104	0.87	26754.36	18423.71	0.06
1	10296.43	5150.00	38.28	45.19	43.05	45.19	0.000093	0.72	22903.69	17059.78	0.05





StreamStats

Delineation Results

Be sure to thoroughly check the delineated basin for accuracy before using the tools below.

StreamStats Basin Characteristics R...

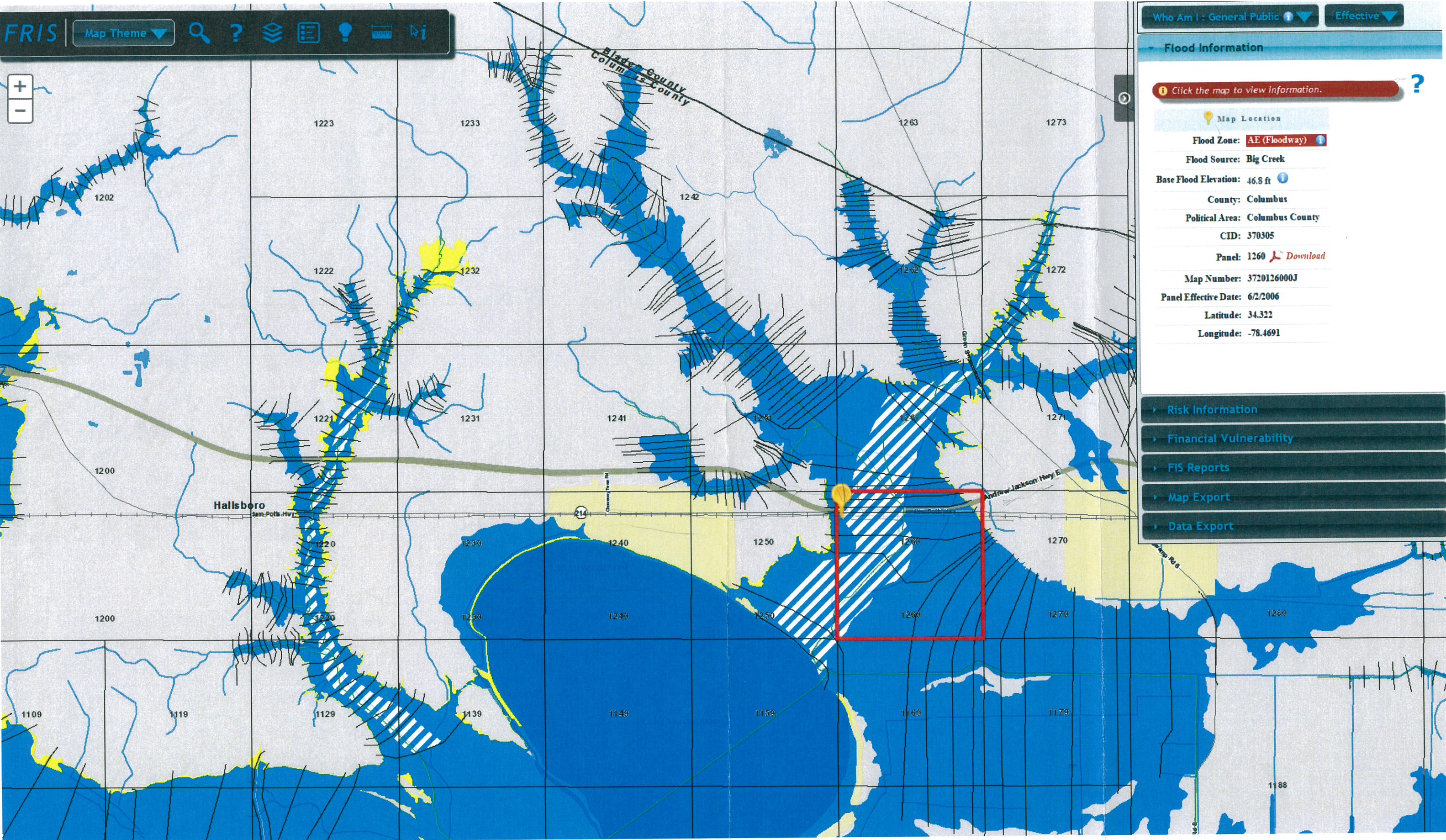
streamstatsags.cr.usgs.gov/v3_beta/BCrep

StreamStats Version 3.0

Basin Characteristics Ungaged Site Report

Date: Wed Jan 6, 2016 4:37:37 PM GMT-5
Study Area: North Carolina
NAD 1983 Latitude: 34.322 (34 19 19)
NAD 1983 Longitude: -78.4691 (-78 28 09)

Label	Value	Units	Definition
DRNAREA	0.0758	square miles	Area that drains to a point on a stream
LC01IMP	3.57	percent	Percentage of impervious land cover from NLCD



Columbus # 68



Who Am I : Advanced ⓘ Effective

Flood Information

Risk Information

Financial Vulnerability

FIS Reports

Flood Risk Management Plan

Engineering Models

ⓘ Click a stream to view models. ?

Model Information

Stream: Big Creek

Model: Big Creek

Study: Detailed Study

Start: At the confluence with Lake Waccamaw

End: Approximately 850 feet upstream of Old Lake Road

[Download Model](#)

Map Export

Data Export