Cover Page

Hydraulics Unit Pre-Design Report (Pre-Scoping) for Structure #: 540057

Date: 10/13/2016

County: Lincoln | Stream: SO.FORK CATAWBA RIVER

Road #: SR 1248 | Road Name: SOUTH FORK RD

Division: 12 | Location: .05 M E JCT SR 1252

Latitude: 35.43848 | Longitude: -81.24810 Decimal degrees, a min of 5 decimal points

Assigned to:

Prepared By: wsh/ECA

Hydro Mgr: PFF | Hydro Reviewer: PFF

Project Type:

Existing Structure

Structure Type: Bridge | Yr Built: 1958

Span Arrangement: 6 @ 55' | OAL (ft): 330.0 | Skew: 75 | Abutment Type: RC Cap on steel piles

Number of Barrels: | @ Span (ft): | x Rise (ft):

Bed to Crown (ft): 28.0 | Clear Roadway (ft): 24.0 | Water Depth (ft) 8.0 | Superstructure Depth:

ADT: 530 | Year ADT: 2012 | Scour Code (item113): 8 | Prior Survey Completed: ☑ | Survey Date: 02/01/1956

Drainage Area: 399.0 Sq. Mi. | Drainage Area Source: Sel.-Sites | Roadway Overtops at Q100: ☐

Discharge Method: USGS Regression Equations | USGS Region: 1- Piedmon | Stream Gage Number(if applicable):

Q10 (cfs): | Q25 (cfs): 17,000 | Q50 (cfs): 21,000 | Q100 (cfs): 24,000 | QBFE (cfs):

☐ Structure in Flood Hazard Zone | Panel #: 3632 | Panel Date: 08/16/2007 | Type of FIS: REDELINEATED | Date of FIS:

Enviromental

Quad Map: LINCOLNTON EAST, NC | River Basin: Catawba | Buffer Rule:

Primary Stream Classification

☐ Class B ☐ Class C ☐ SA ☐ SB

☐ SC ☐ SWL ☐ WL ☐ WS I

☐ WS II ☐ WS III ☑ WS IV ☐ WS V

Supplemental Stream Classification

☐ FWS ☐ HQW ☐ NSW ☐ ORW

☐ Sw ☐ Tr ☐ UWL ☐ w/in 0.5mi. of CA

Other Stream Classification

☐ Anadromous Fish ☐ Area of Envronmental Concern

☐ CAMA County ☐ Federal Wild & Scenic Rivers

☐ HSB Requried ☐ NC Natural & Scenic Rivers

☐ Impaired [303d] ☐ Primary Nursery Area

☐ TVA ☐ Designated Shellfish Harvesting Area

☐ Designated Public Mountain Trout Waters

Up/Down Stream Features

Upstream Feature: Bridge

Location: 0.1 M N JCT SR 1248

Structure #: 540055 | Route: SR 1252

Latitude: 35.44130 | Longitude: -81.25081

Prior Survey Completed: ☐ | Survey Date: | Bed to Crown (ft): 27.0 | Year Built: 1977

Structure Type: RC Deck/I Beams

Span Arrangement: 1@70', 1@ 110', 1@ 70' | OAL (ft): 251.0

Number of Barrels: | @ Span (ft): | x Rise (ft):

Downstream Feature: Bridge

Location: 0.1 M N JCT SR 1241

Structure #: 540053 | Route: SR 1242

Latitude: 35.41240 | Longitude: -81.24147

Prior Survey Completed: ☐ | Survey Date: | Bed to Crown (ft) 32.0 | Year Built: 1977

Structure Type: Bridge

Span Arrangement: 1@66',3@65', 1@66" | OAL (ft): 328.00

Number of Barrels: | @ Span (ft): | x Rise (ft):

Preliminary Structure Estimate [Office Estimate]

Structure Type: | Skew:

Dimensions/Spans:

Notes

Stream Assigned #: 11-129-(3.7)

OFFICE ESTIMATE: _____

Project# _____
TIP# _____
Let Date _____
WBS# _____

E-25

PREDESIGN-SCOPING REPORT

County LINCOLN (DIV. 12)

Bridge# 540057
Road# SR1248 / SOUTH FORK RD.
Stream SO. FORK CATAWBA RIVER

Type Of Request: POC Force Account TIP NCMA

Date 10/10/16 Name WSH Assigned To PFF/MTS
Checked By ECA 10/10/16
Prior Survey Date YES (attach copy of prior survey) BRN. 6@55' BK.# 6.855001 2-56 CO. FILE NONE
Study By Scour Section YES ATTACHED PDR? NO
Flood Zone AE Detail Study REDELINE (HEC-2) Date _____ Panel# 3632
B.M. Info N/A
Quad Map LINCOLNTON E Drainage Area 399 SQ. MI. From STREAM STATS
Q25 17,000 cfs Q50 21,000 cfs Q100 24,000 cfs Method NEW REG EQU.
LONG.: -81.248099
LAT.: 35.438477
RURAL REGION 1
IA = 4.69%

EXISTING BRIDGE INFORMATION

Location 0.5 M. E. JCT. SR 1252
Average Daily Traffic 530 (2012) 6% TRK YEAR BUILT: 1958
Length 330' Bed-To Crown 28' Water Depth 8'
Type Structure RC. DECK ON I BEAMS, RC CAP ON STEEL PILES RC POST & BEAMS
Type Spans 6@55'

Upstream Structure 540055 (RC DECK ON I BEAMS) YR. BUILT: 1977
Location NC 150 BYPASS / SR 1252 0.1 M N. JCT SR 1248 LONG: -81.258012 (1@70', 1@110', 1@70')
Bed-To Crown 27' (H_2O = 11' Deep) Prior Survey N/A LAT: 35.441309

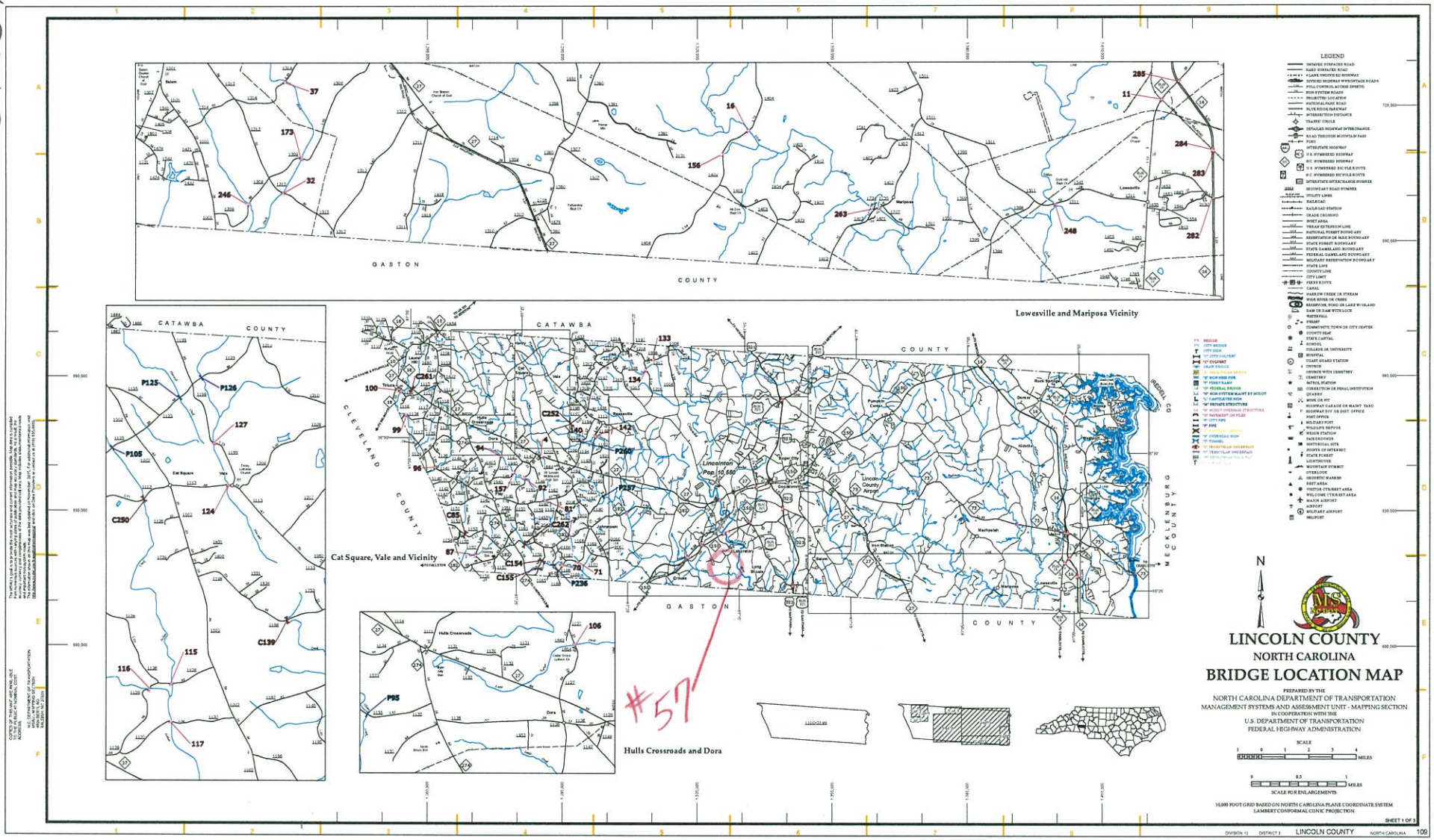
Downstream Structure 540053 YR. BUILT: 1977
Location LONG SHOALS RD. / SR1242 / 0.1M N. JCT 1241 / RC DECK ON PRECAST CONC. GIRDERS
Bed-To Crown 32' (H_2O = 4' Deep) Prior Survey N/A LONG: -81.241468 1@66', 3@65', 1@66'
LAT: 35.412399

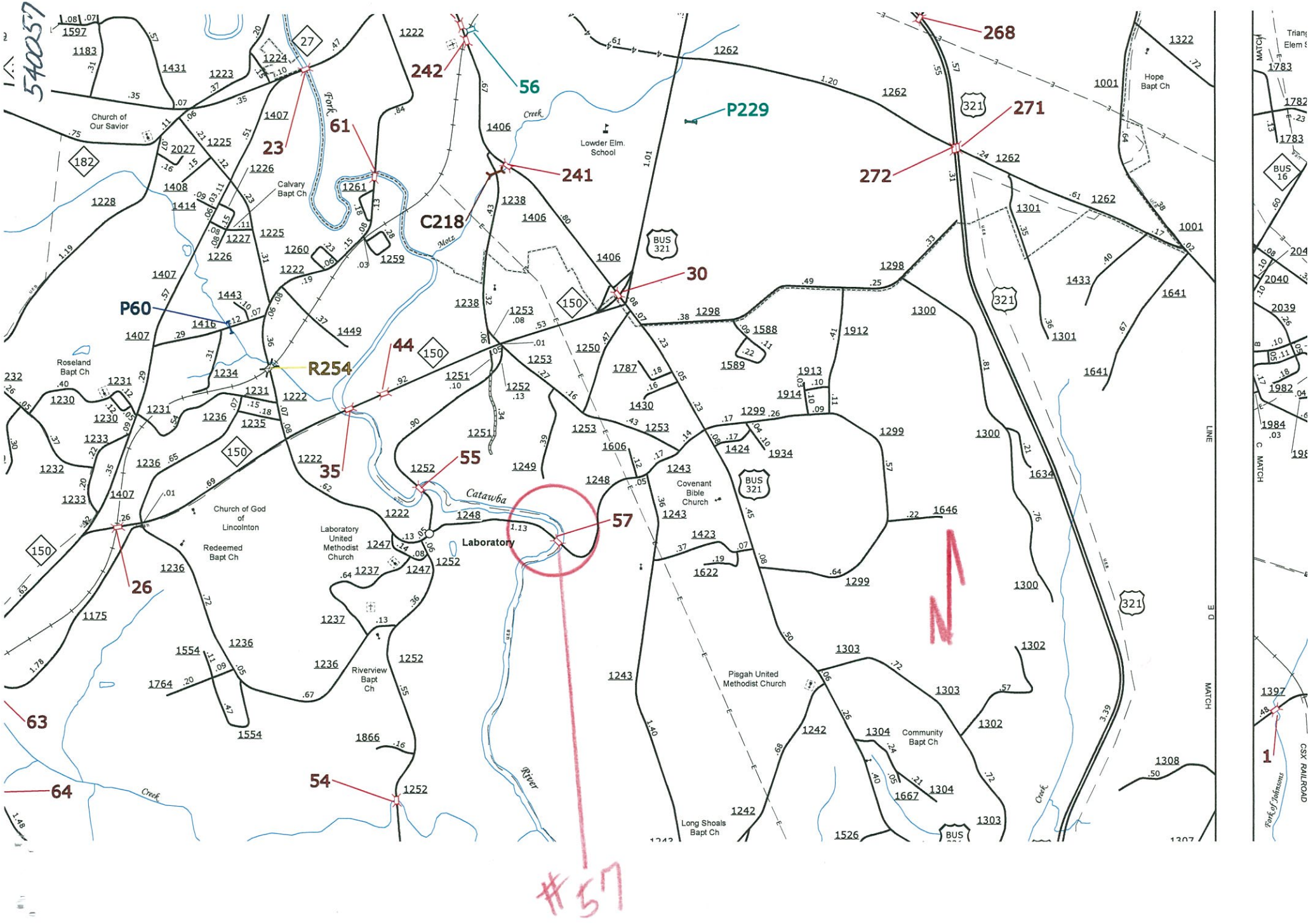
ENVIRONMENTAL TVA: NO ✓

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 WS-IV ✓ STREAM #: 11-129-(3.7) ✓
DENR River Basin Info. CATAWBA ✓

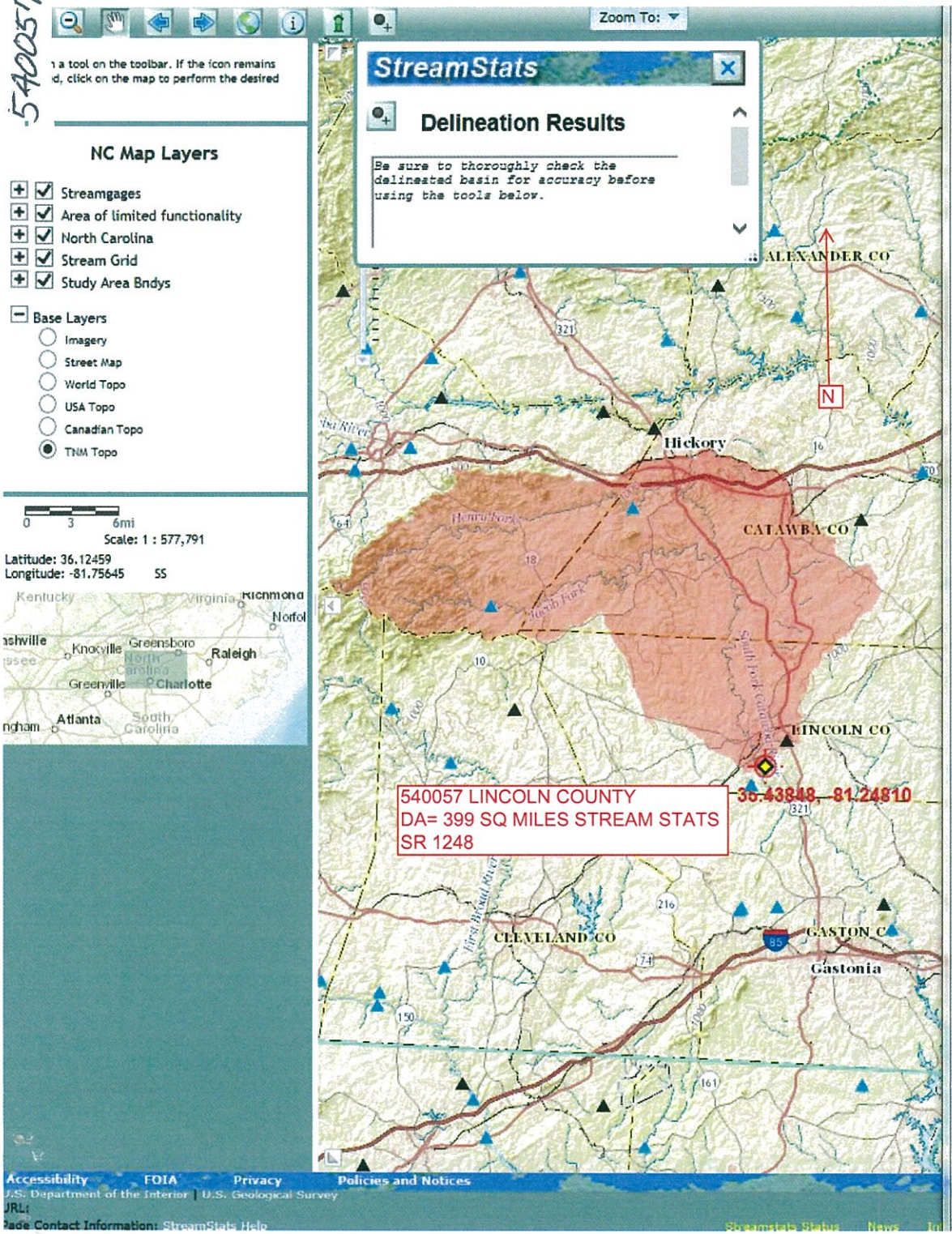
1, 70, 72, 107, 110
u/s 56 d/s 44
DSR 10/12 (DOT Fielding Driver)

540057


Lowesville and Mariposa Vicinity
Cat Square, Vale and Vicinity
Hulls Crossroads and Dora
#57
LEGEND
LINCOLN COUNTY
NORTH CAROLINA
BRIDGE LOCATION MAP
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
MANAGEMENT SYSTEMS AND ASSESSMENT UNIT - MAPPING SECTION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
SCALE
SCALE FOR ENLARGEMENTS
10,000 FOOT GRID BASED ON NORTH CAROLINA PLANE COORDINATE SYSTEM
LAMBERT CONFORMAL CONIC PROJECTION
SHEET 1 OF 3
GASTON COUNTY
CATAWBA COUNTY
CLEVELAND COUNTY
MECKLENBURG COUNTY
IREDELL CO
Lincolnton Pop. 10,680
Lincoln County Airport


#57
Catawba
Laboratory
Fork
Creek
Motz
Creek
River
Creek
Church of Our Savior
Calvary Bapt Ch
Lowder Elm. School
Hope Bapt Ch
Roseland Bapt Ch
Church of God of Lincolnton
Redeemed Bapt Ch
Laboratory United Methodist Church
Riverview Bapt Ch
Covenant Bible Church
Pisgah United Methodist Church
Community Bapt Ch
Long Shoals Bapt Ch
CSX RAILROAD
Fork of Johnsons
MATCH LINE
MATCH LINE
BUS 321
BUS 16
321
150
182
27
242
56
268
271
272
P229
61
23
241
C218
30
P60
R254
44
35
55
57
26
63
64
54

5400257



Date: Mon Oct 10, 2016 2:14:14 PM GMT-4
Study Area: North Carolina
NAD 1983 Latitude: 35.4384 (35 26 18)
NAD 1983 Longitude: -81.2478 (-81 14 52)
Drainage Area: 399 mi2

Peak Flows Region Grid Basin Characteristics

100% Peak Southeast US over 1 sqmi 2009 5158 (399 mi2)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	399	1	9000
Percent Area in Region 1 (percent)	81.643	0	100
Percent Area in Region 2 (percent)	18.357	0	100
Percent Area in Region 3 (percent)	0.000	0	100
Percent Area in Region 4 (percent)	0.000	0	100
Percent Area in Region 5 (percent)	0.000	0	100

Urban Flows Region Grid Basin Characteristics

Area in square miles=399

Percent imperviousness of basin area 2006 NLCD=4.54

Percentage of impervious area determined from NLCD 2011 impervious dataset=4.69

82% Region 1 Urban over 3 sqmi 2014 5030 (326 mi2)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	399	3	436
Percent Impervious NLCD2006 (percent)	4.54	0	47.9

18% Region 2 Urban Blue Ridge FS007-00 (73.2 mi2)

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	399 (above max value 41)	0.04	41
Percent Impervious NLCD2011 (percent)	4.69	2	54.6

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flows Region Grid Statistics

Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	8330	ft3/s	35		4810	14400
PK5	13500	ft3/s	34		7880	23300
PK10	17200	ft3/s	35		9860	30100
PK25	21800	ft3/s	38		12100	39400
PK50	25800	ft3/s	40		13800	48100
PK100	29400	ft3/s	42		15200	56700
PK200	32800	ft3/s	44		16400	65500

540057

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SNOOPER USED , PRIORITY MAINT ITEMS ISSUED ON BEAMS

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: LINCOLN **STRUCTURE NUMBER:** 540057 **FREQUENCY:** 24 MONTHS

FACILITY CARRIED: SR1248 **MILE POST:**

LOCATION: 0.5 MI. E. JCT. SR1252

FEATURE INTERSECTED: RIVER

LATITUDE: 35° 26' 18.45" **LONGITUDE:** 81° 14' 53.03"

SUPERSTRUCTURE: REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE: END BENTS:RC CAP ON STEEL PILES,INT.BENTS:RC POST & BEAM

SPANS: 6@55'0

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Poor **INSPECTION DATE:** 03/07/2016

POSTED SV: 34 **POSTED TTST:** 38

OTHER SIGNS PRESENT: 4 DELINEATORS



LOOKING EAST

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

INSPECTED BY	SIGNATURE	ASSISTED BY
RD WILLIAMS	RD Williams	CARLTON ADAMS

540057

Structure: 540057 County: LINCOLN Date: 03/07/2016 Structure Photos



SUPER STRUCTURE



BENT 2 WITH BENT 1, 3, 4 AND 5 ARE SIMILAR.

540057

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE Run Date: 07/12/2016

COUNTY :	DIVISION :	DISTRICT:	STRUCTURE NUMBER :	LENGTH :
LINCOLN	12	3	540057	330 FEET

ROUTE CARRIED : SR1248

FEATURE INTERSECTED : SOUTH FORK CATAWBA RIVER

LOCATED : 0.5 MI. E. JCT. SR1252

BRIDGE NAME :

CITY :

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	530 2012	LT 141 RT 141

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1958	SHC	6.835001		H 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN	75	ON 2 UNDER 0

NAVIGATION :				HT. CRN. TO BED :		WATER DEPTH :	
VC	0	FT	HC 0	FT	28	FT	8 FT

SUPERSTRUCTURE : REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE : END BENTS:RC CAP ON STEEL PILES,INT.BENTS:RC POST & BEAM

SPANS : 6@55'0

BEAMS OR GIRDERS : 4 LINES OF W33X141 I-BEAMS @ 7'0 CENTERS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
7 RC SLAB	UTILITY CONDUIT	26.417 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :			
24 FT	26.667 FT	LT	1.3335 FT	RT	1.3335 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :				
HS-13	HS-23	Ext Bm	SV 34	TTST	38	DATE	09/30/2008

SYSTEM : Secondary S.R. Route

GREEN LINE ROUTE : N

UNDER ROUTES AND CLEARANCES

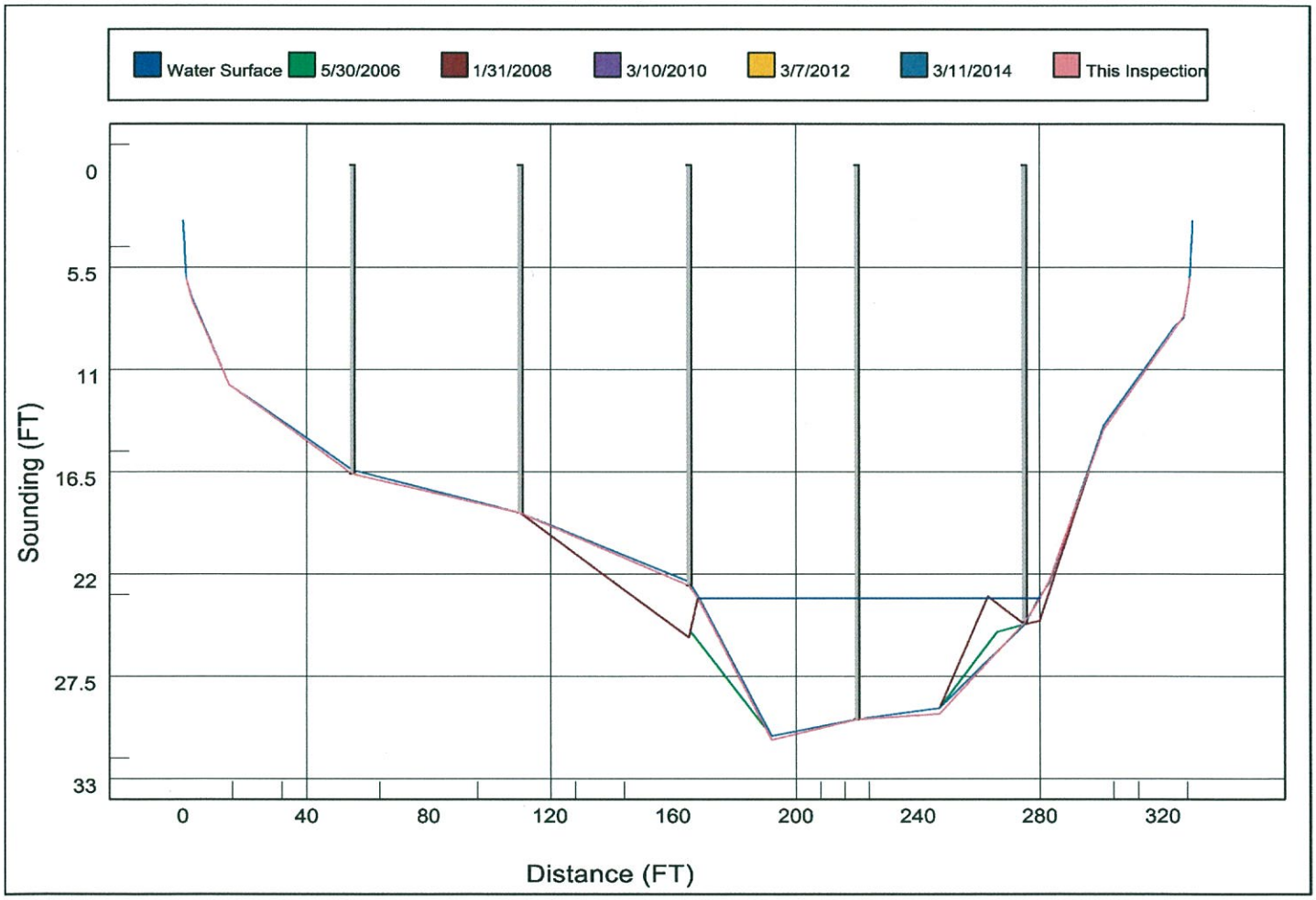
REMARKS :

540 057

Bridge: 540057 County LINCOLN Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



U/S STR. FOR 540057

Structure: 540055 County: LINCOLN Date: 02/16/2016 Structure Photos



downstream profile, looking west



bent 2

D/S STR FOR 540057

Structure: 540053 County: LINCOLN Date: 03/02/2016 Structure Photos

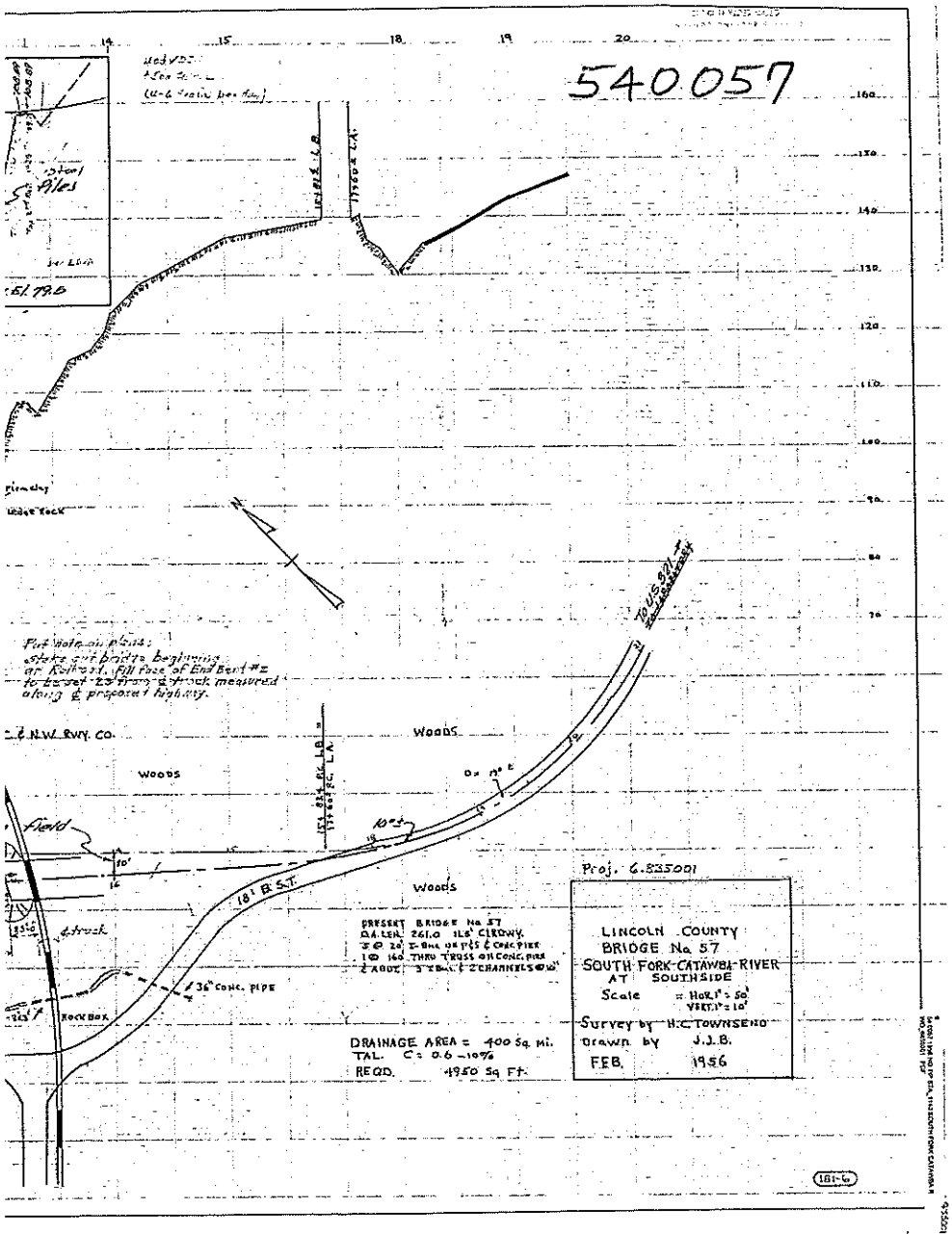


END BENT 1

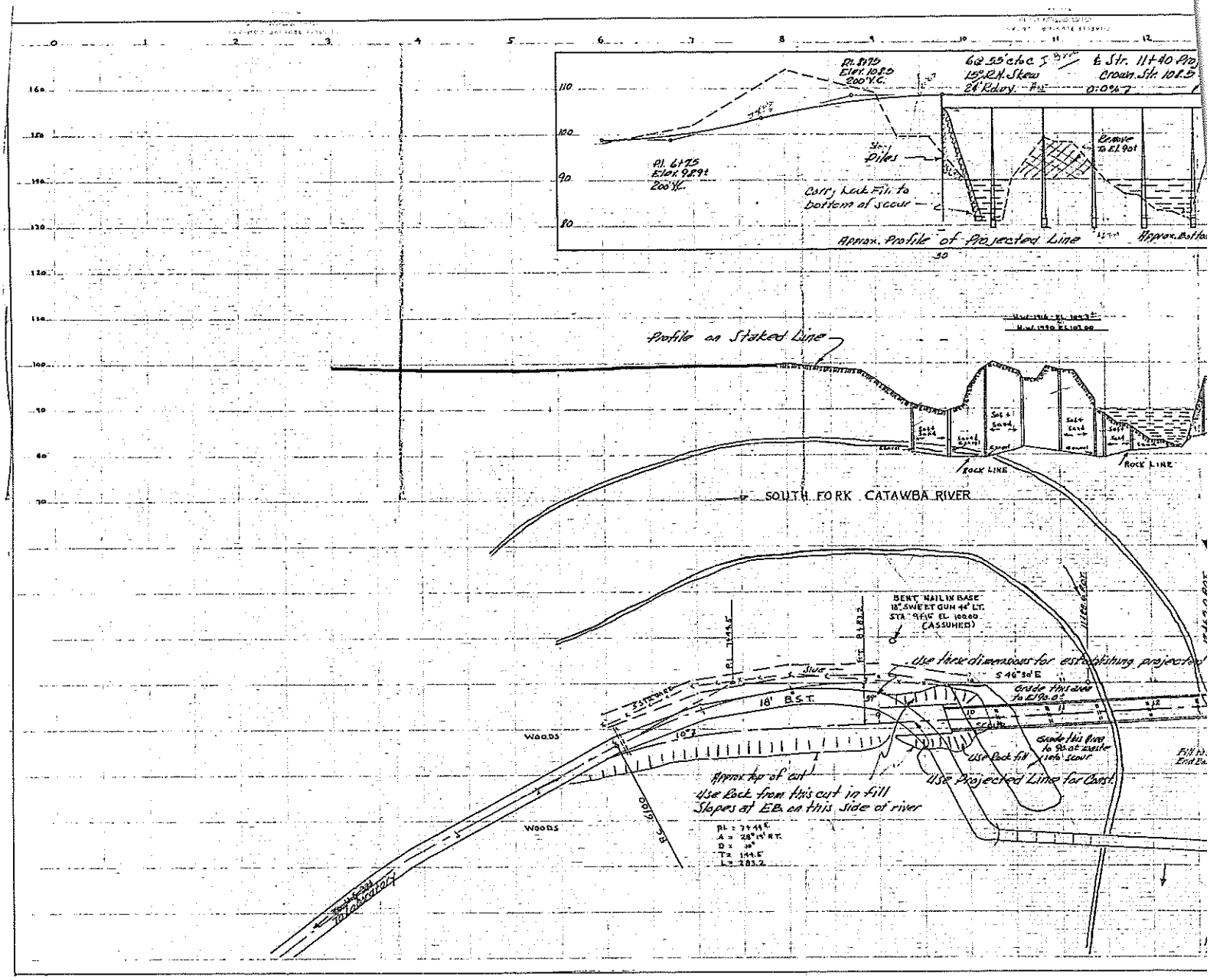


BENT 1 WITH BENT 2, 3 AND 4 SIMILAR

540057
1 of 2


540057
Woods
Woods
Woods
Field
Rock Box
36" Conc. Pipe
18' B.S.T.
Proj. 6.835001
LINCOLN COUNTY
BRIDGE No. 57
SOUTH FORK CATAWBA RIVER
AT SOUTHSIDE
Scale 1" = Hor. 1" = 50'
Vert. 1" = 10'
Survey by H.C. TOWNSEND
Drawn by J.J.B.
FEB. 1956
PRESENT BRIDGE No. 57
DRAINAGE AREA = 400 Sq. mi.
TAL. C = 0.6 - 10%
REQD. 4950 Sq Ft.

540057
(2 of 2)


Pl. 8+70
Elev. 108.0
200' V.C.
62.55' c to c I Brgs
19° R.H. Skew
24' Rdwy. Fig.
E Str. 11+40 Ahd
Crown Slp. 10:1.5
0:0%7
Pl. 6+75
Elev. 98.9
200' V.C.
Dikes
Carry Lock Fill to bottom of scour
Excavate to El. 90.0
Approx. Profile of Projected Line
Profile as Staked Line
H.W. 1950 El. 101.00
ROCK LINE
ROCK LINE
SOUTH FORK CATAWBA RIVER
BENT NAIL IN BASE
18" SWEET GUM 44° LT.
STA. 9+16 EL. 100.00
(ASSUMED)
use these dimensions for establishing projection
S 46° 30' E
Grade this area to El. 90.0
18' B.S.T.
Grade this area to 90.0 at swale
10' scour
Use Lock Fill
Use Projected Line for Const.
Approx top of cut
Use Lock from this cut in Fill Slopes at EB on this side of river
WOODS
WOODS
Pl = 7+44.5
A = 28° 19' RT.
D = 10°
T = 144.5'
L = 283.2

9-92 R

540057

BRIDGE SCOUR EVALUATION ASSESSMENT AND DATA SUMMARY REPORT

ASSESSED 12-17-92
BY: Doug Nichols
CODE 3 8 W 8
CLASSIFIED Scour Crit.

SITE IDENTIFICATION:

COUNTY Lincoln ✓ CITY/TOWN Laboratory ✓ BRIDGE NO. 57
ROUTE SR 1248 STREAM S. Fork Catawba River ROAD MILE
DUAL BRIDGE NO. ___ IS US/DS
ORIG. PROJECT NO. 6.835001 ✓ YEAR BUILT 1958 ✓
REHAB. PROJECT NO. ___ YEAR REHAB. ___

* Full Scour Report Available In Hydraulics Unit Scour Files 10-13-16

INFORMATION RESOURCES AVAILABLE:

HYDRAULIC STUDY REPORT (DATE)	2-56 ✓
AS-BUILT CONSTRUCTION PLANS (DATE)	May 57 ✓
FOUNDATION REPORT (DATE)	
OTHER AGENCY STUDIES (DATE)	FEMA, 6-1-81 ✓
(FEMA, CORPS, T.V.A., SCS)	Lincoln Co. ✓
QUAD MAPS (NAME & DATE)	Lincolnton East 1970 ✓
AERIAL PHOTOGRAPHY (DATE)	
GAGE DATA (TYPE, NO., DRAINAGE AREA)	02 02143340 398 sq mi ✓
DISTANCE TO SITE (UP/DN STREAM)	6000'± us stream
BRIDGE INSPECTION REPORT (DATE)	10-8-91 ✓
UNDERWATER INSPECTION REPORT (DATE)	1-3-89 ✓
STRUCTURE DATA FILE (DATE)	10-8-91 ✓

HYDRAULIC DATA:

403
400
DRAINAGE AREA 398 SQ. MI. SOURCE BSR FEMA Gage
FEMA = (2.5 mi from station)
100 YR. WATERWAY OPENING (NORMAL TO FLOW) 5010 SQ. FT.

HISTORICAL FLOODS

DATE	ELEV. (FT.)	APPROX. FREQ. (YRS.)	APPROX. DISCH.	ADJUSTED TO SITE

DA. 402.98 From FEMA - Contributing DA to Indian Cr

FLOOD FREQUENCY (YRS.)	Q 10	Q 50	Q 100	Q 500
~~ELEVATION~~ (FT.) Depth of Flow			25'	
DISCHARGE (CFS)	15,207	23,617	27,845	39,505
AVG. VELOCITY (Q/A)			5.6	

SOURCE: Fema

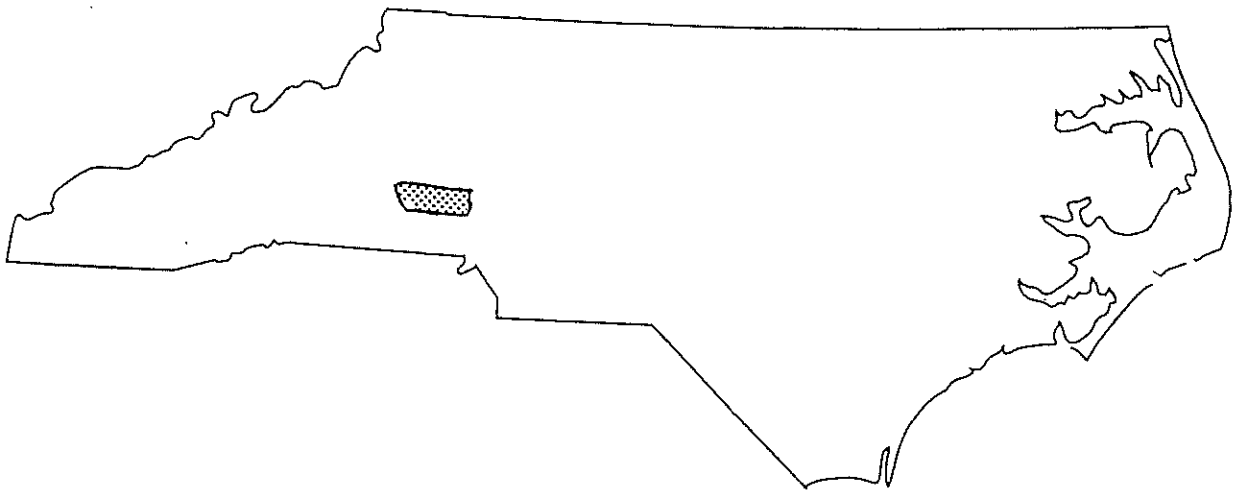
COMMENTS: FEMA Qs and DA are at the confluence with Indian Creek on Dutch Fork

340057

FLOOD INSURANCE STUDY



LINCOLN COUNTY, NORTH CAROLINA
UNINCORPORATED AREAS



JUNE 1, 1981

federal emergency management agency

COMMUNITY NUMBER -370146


100-YEAR FLOOD CONTAINED IN CULVERT
RM4
RM5
AA
Z
Y
X
W
V
U
T
S
R
Q
AB
AC
FORK
RAILWAY
CATAWBA
1248
Dam
UNNAMED ROAD
RM 6
RIVER
1243
Dam
RM7

5400 57

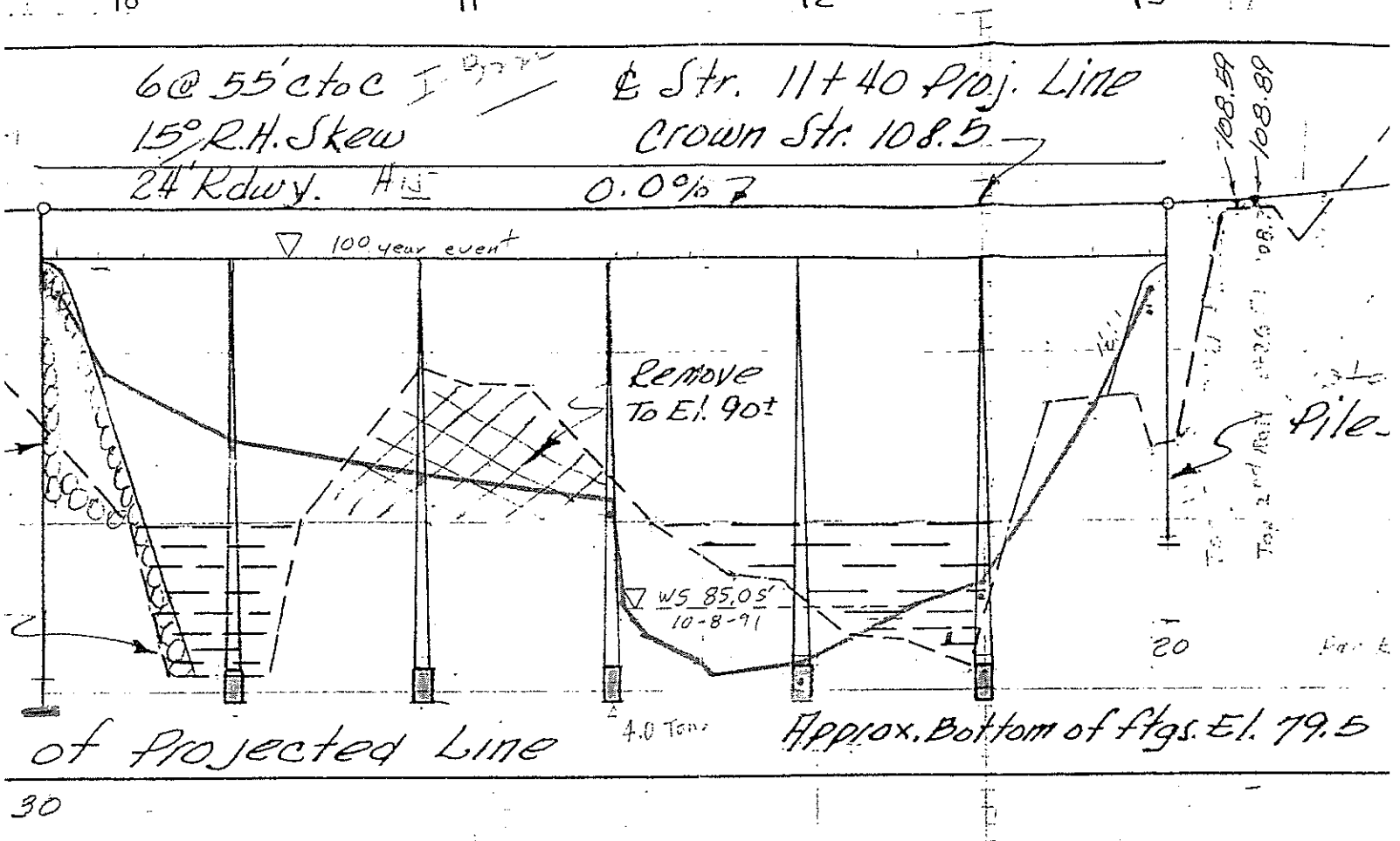
Hydrological data for Indian Creek was developed by means of a gage transfer technique utilizing data from a USGS gage on the stream (Section 2.3).

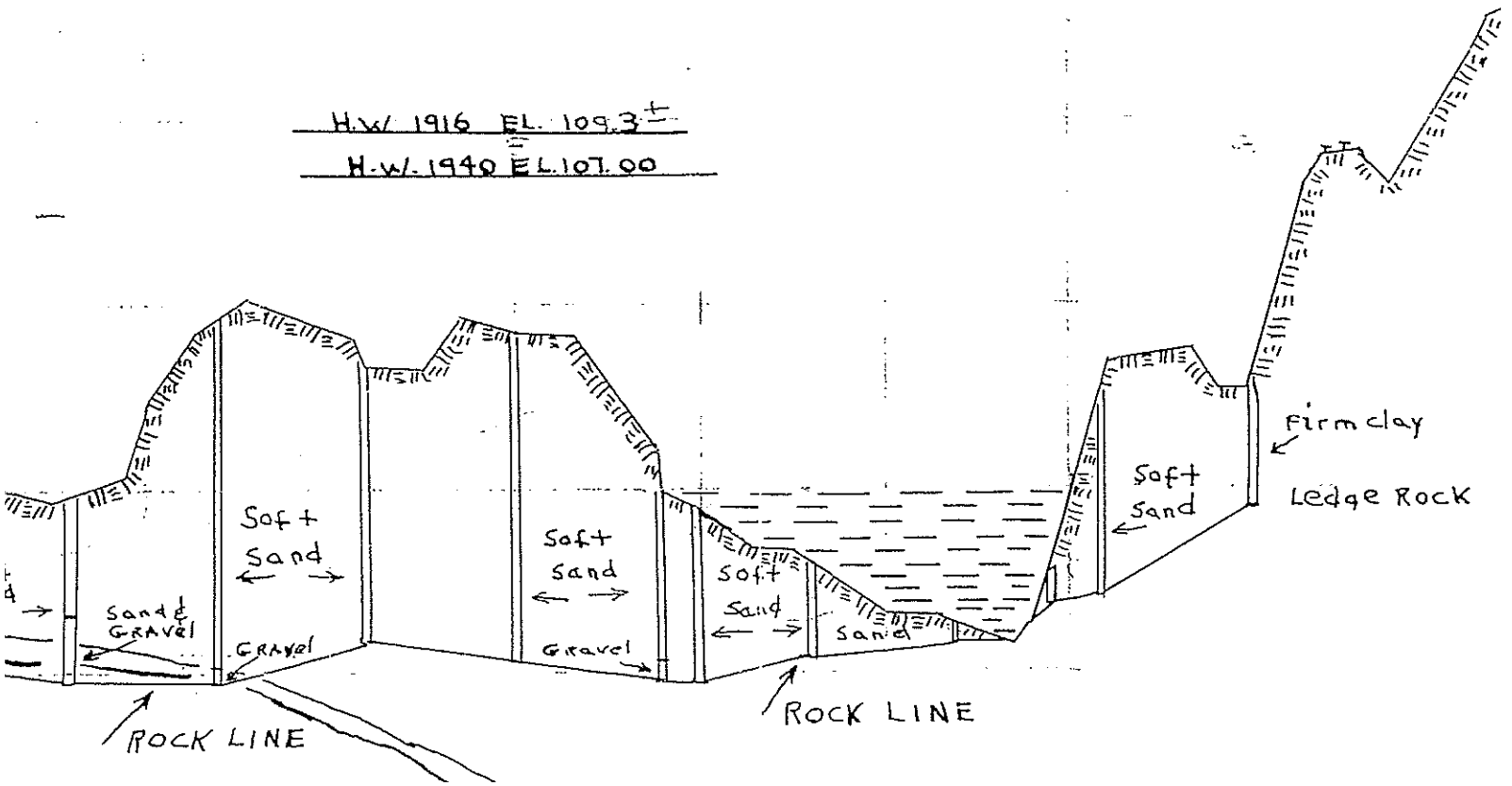
The methodology for determining the hydrology for this study was approved by FEMA and the results are presented in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
LITHIA INN BRANCH					
Confluence with South Fork Catawba River	4.54	1,700	3,520	4,580	7,940
WALKER BRANCH					
Confluence with Clark Creek	4.34	1,660	3,440	4,480	7,760
CLARK CREEK					
Confluence with South Fork Catawba River	90.64	6,500	10,340	12,380	18,130
Confluence with Walker Branch	85.54	6,250	9,960	11,930	17,500
Confluence with Carpenter Creek	80.20	5,980	9,550	11,450	16,830
INDIAN CREEK					
Confluence with South Fork Catawba River	69.27	5,380	9,640	11,860	18,480
Confluence with Leonard's Fork	51.12	4,380	7,910	9,770	15,350
SOUTH FORK CATAWBA RIVER					
Lincoln County - Gaston County line	473.35	15,640	24,360	28,690	40,750
Confluence with Indian Creek	402.98	15,207	23,617	27,845	39,505
Confluence with Lithia Inn Branch	392.81	15,146	23,511	27,725	39,328
Confluence with Clark Creek	301.02	14,580	22,540	26,620	37,700
Confluence with Howard's Creek	265.12	13,380	20,750	24,550	34,890

Bridge #57


10
11
12
13
6@ 55'ctoc
15° R.H. Skew
24' Rdwy.
℄ Str. 11+40 Proj. Line
Crown Str. 108.5
0.0%
108.89
108.89
100 year event
Remove
To El. 90±
Pile
WS 85.05'
10-8-91
20
4.0 Typ.
of Projected Line
Approx. Bottom of ftgs. El. 79.5
30


H.W. 1916 EL. 109.3±
H.W. 1940 EL. 107.00
Soft Sand
Sand & Gravel
Gravel
Soft Sand
Gravel
Soft Sand
Sand
Soft Sand
Firm clay
Ledge Rock
ROCK LINE
ROCK LINE

FLOOD PROFILES

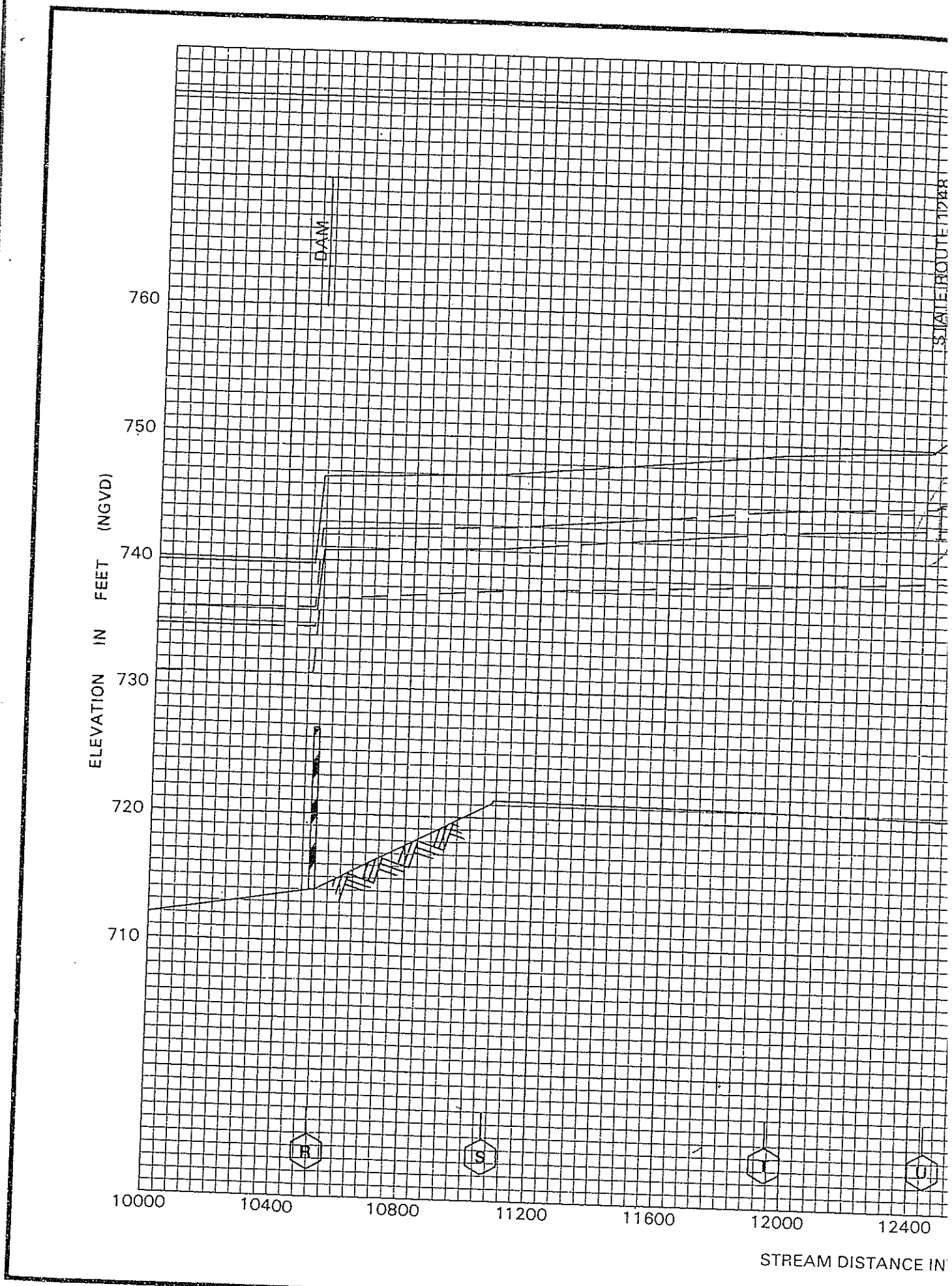
SOUTH FORK CATAWBA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LINCOLN COUNTY, NC

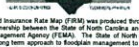
(UNINCORPORATED AREAS)

03P


DAM
STATE ROUTE 1212
760
750
740
730
720
710
ELEVATION IN FEET (NGVD)
R
S
T
U
10000
10400
10800
11200
11600
12000
12400
STREAM DISTANCE IN

540057





This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map flood hazard areas at the local level. As a part of this effort, the State of North Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTP://FRIS.NC.GOV/FRIS

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with Average Depth Less Than One Foot or With Drainage Areas of Less Than One Square Mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*

OTHER AREAS
- Areas Determined to be Outside the 0.2% Annual Chance Floodplain *Zone X*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Accredited or Provisionally Accredited Levee, Dike, or Floodwall
- Non-accredited Levee, Dike, or Floodwall
- BM5510 North Carolina Geodetic Survey bench mark
- BM5510 National Geodetic Survey bench mark
- BM5510 Contractor Est. NCFMP Survey bench mark
- 012 18.2 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
- 8 Coastal Transect
- Coastal Transect Baseline

OTHER FEATURES
- Profile Baseline
- Hydrographic Feature
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at http://www.ncfloodmaps.com or contact the FEMA Map Service Center.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the North Carolina Floodplain Mapping Program (NCFMP). The source of this information can be determined from the metadata available in the digital FLOOD database and in the Technical Support Data Notebook (TSDN).

ACCREDITED LEVEE NOTES TO USERS: If an accredited levee note appears on this panel check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: If a Provisionally Accredited Levee (PAL) note appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LIMWA). The LIMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LIMWA (or between the shoreline and the LIMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Limit of Moderate Wave Action (LIMWA)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE

This map may include approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see http://www.fws.gov/habitatconservation/coastal_barrier.html, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

CBRS Area | Otherwise Protected Area

SCALE

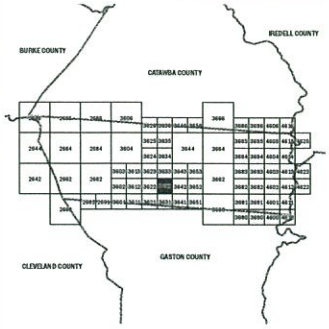
Map Projection:
North Carolina State Plane Projection Feet (Zone 3200)
Datum: NAD 1983 (Horizontal), NAVD 1988 (Vertical)

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 3632

FEMA

Panel Contains:

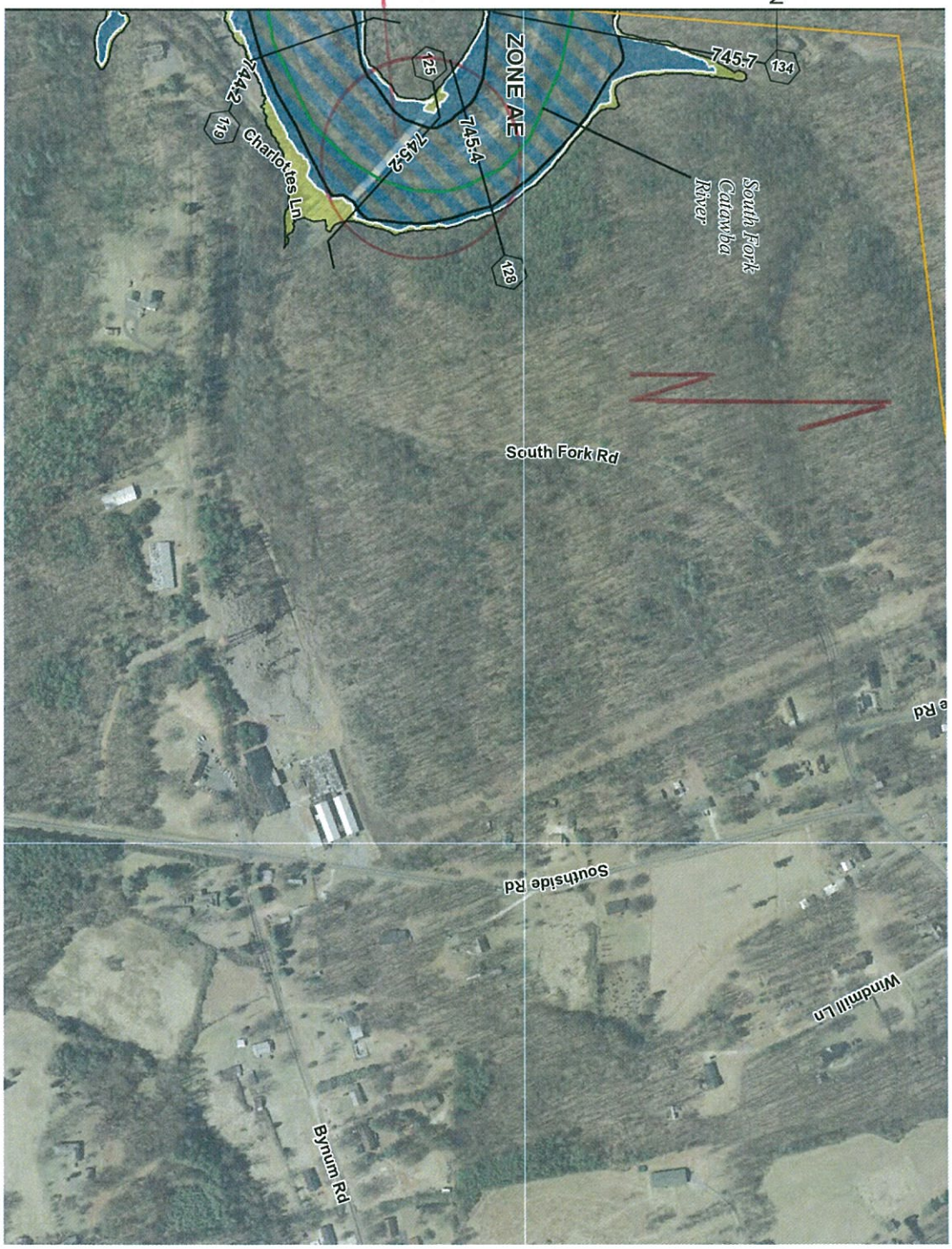
COMMUNITY	CID	PANEL	SUFFIX
LINCOLN COUNTY	370146	3632	J
LINCOLNTON, CITY OF	370147	3632	J

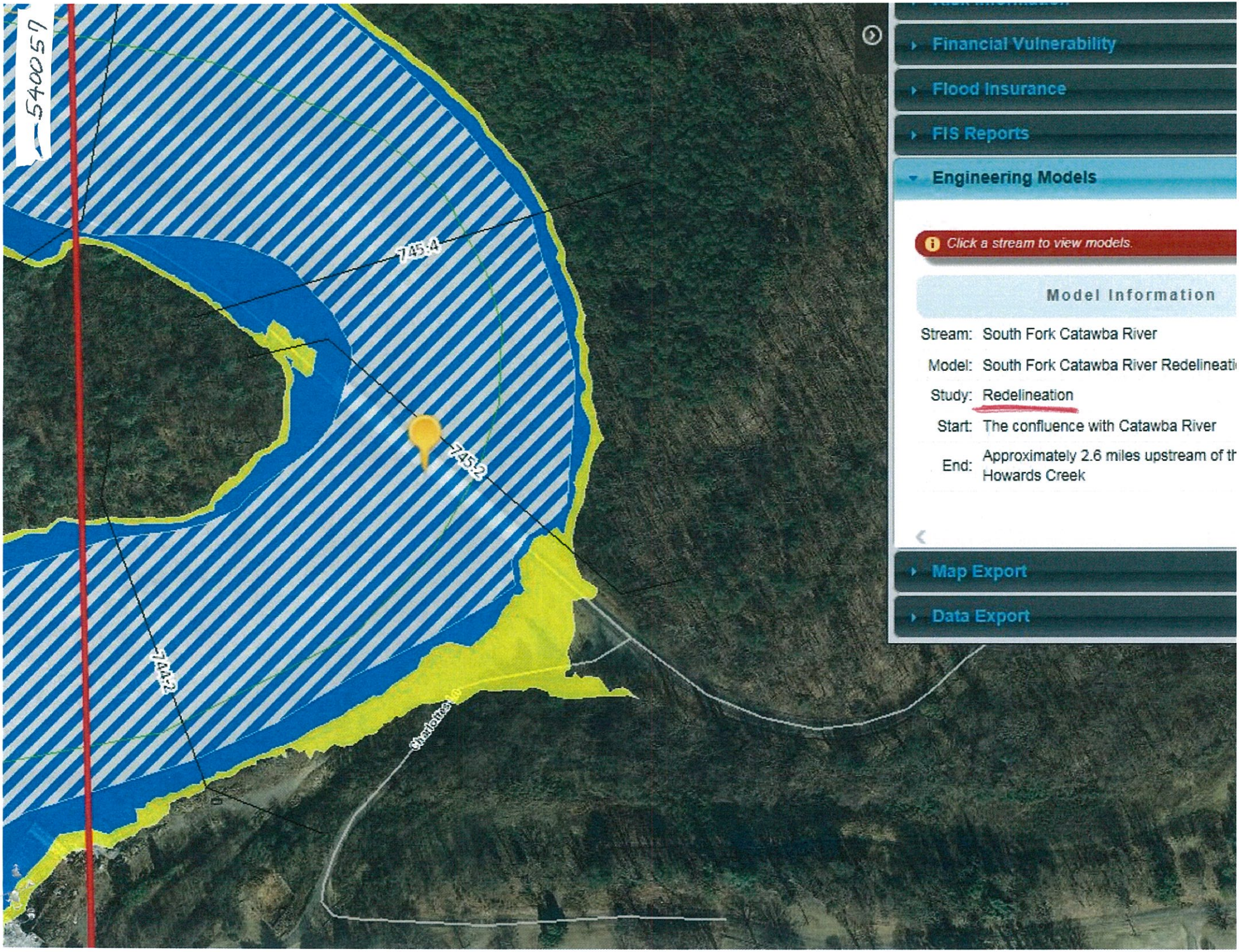
MAP NUMBER
3710363200J

MAP REVISED
8/16/2007

540057

#57


35°26'30"N
ZONE AE
745.7
134
125
744.2
119
Charlottes Ln
745.2
745.4
123
South Fork
Catawba
River
South Fork Rd
Southside Rd
Windmill Ln
Bynum Rd


540057
745.4
745.2
744.2
Financial Vulnerability
Flood Insurance
FIS Reports
Engineering Models
Click a stream to view models.
Model Information
Stream: South Fork Catawba River
Model: South Fork Catawba River Redelineati
Study: Redelineation
Start: The confluence with Catawba River
End: Approximately 2.6 miles upstream of th
Howards Creek
Map Export
Data Export