

Mon OK.

GOOD CANDIDATE.

PREDESIGN-PRESURVEY REPORT

County Alexander

Project# _____
TIP# _____
Let Date _____
WBS# 17BP.12.R.17

Bridge# 010092
Road# SR 1315
Name _____
Stream Lambert Creek

Type Of Request: POC Force Account TIP NCMA
Date 8/1/2011 Name Sungate Design Assigned To _____
Checked By WHW
Prior Survey Date None (attach copy of prior survey)
Study By Scour Section No
Flood Zone Yes Detail Study Limited Date 12/18/07 Panel# 3820
B.M. Info N/A

Quad Map Ellendale Drainage Area 8.6 Sq Miles From USGS Quad Map
Q25 1890 cfs Q50 2240 cfs Q100 2670 cfs Method Rural Regression Eqs

EXISTING BRIDGE INFORMATION

Location 0.5 miles north of junction with SR 1316

Average Daily Traffic 240

Length 70'-10" Bed- To Crown 11' Water Depth 1'

Type Structure Timber deck on I-beams on timber caps and piles

Type Spans 1 @ 35'-6", 1 @ 35'-4"

Upstream Structure 2 @ 41'-0"

Location SR 1307

Bed- To Crown 10' Prior Survey _____

Downstream Structure 1 @ 25'-7", 1 @ 24'-6"

Location SR 1317

Bed- To Crown 18' 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

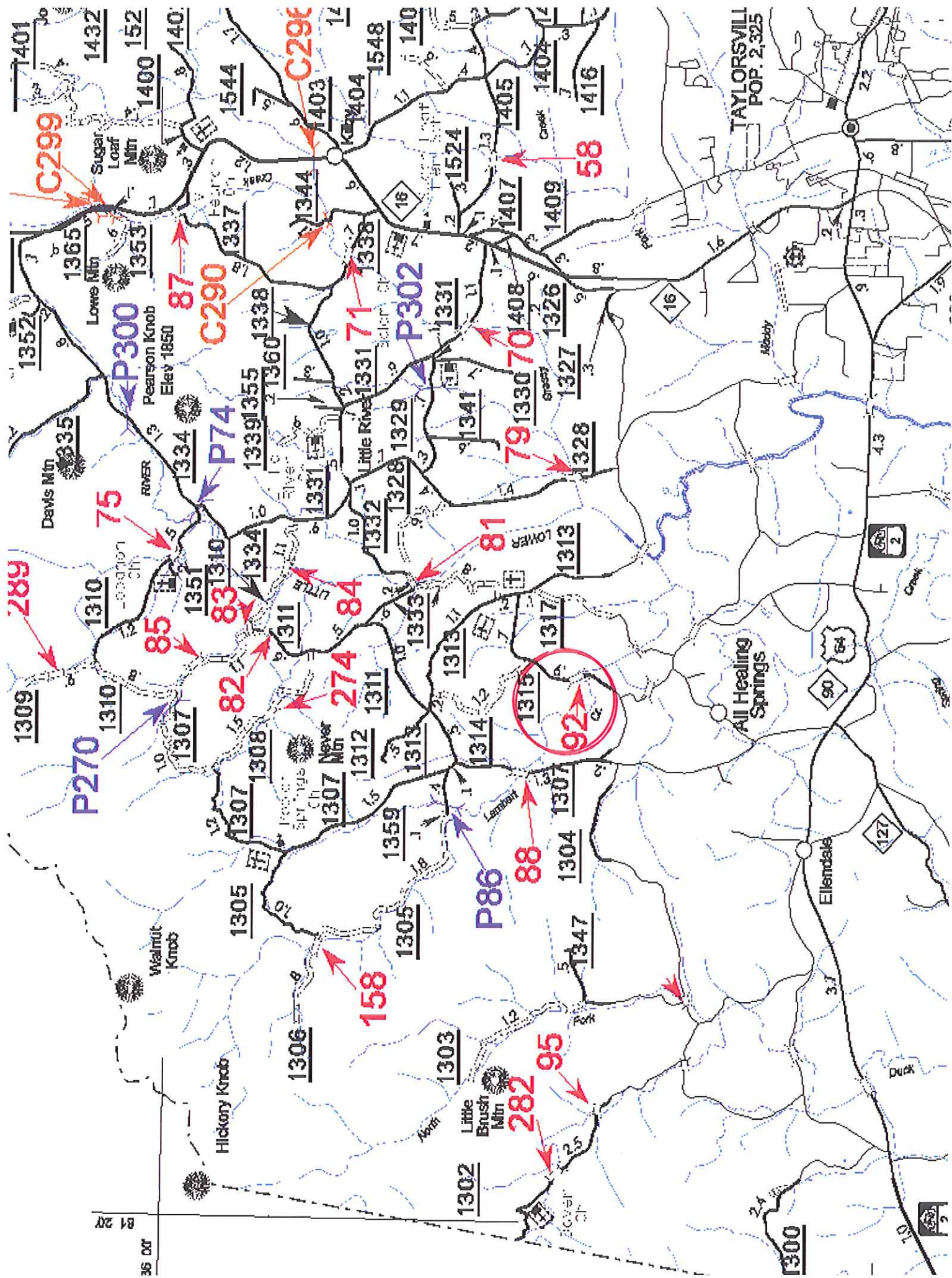
Stream Classification Class C

DENR River Basin Info. Catawba

State Stormwater Permit Not Required

Estimated Min. Bridge Length = 125'

$$71' + 20' + 3(11') = 124' \sim 125'$$





NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION TEMPORARY REPAIRS (LONGITUDINAL BEAMS)

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ALEXANDER BRIDGE NUMBER 010092 INSPECTION CYCLE 2 YRS
ROUTE SR1315 ACROSS LAMBERT CREEK M.P. 0

LOCATION 0.5 MI. N. JCT. SR1316

SUPERSTRUCTURE TIMBER DECK ON I-BEAMS

SUBSTRUCTURE END&INT.BTS:TIMBER CAPS&PILES,CONC.ENCASED,TIMBER BULKHEADS

SPANS 1@35'6, 1@35'4

LONGITUDE 81° 15' 21.0"

LATITUDE 35° 57' 10.6"

PRESENT CONDITION FAIR

INVENTORY RATING HS 88 01

INSPECTION DATE 10/04/2010

OPERATING RATING HS 147

PRESENT POSTING SV 17 TTST 22

PROPOSED POSTING SV: 17, TTST: 22

COMPUTER UPDATE 11-24-10

ANALYSIS DATE 11-2-10

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT 4 DELINEATORS



SOUTH TO NORTH

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

No WEIGHT LIMIT

No DELINEATORS

No NARROW BRIDGE

No ONE LANE BRIDGE

No LOW CLEARANCE

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

Run Date: 11/24/2010

COUNTY : ALEXANDER	DIV : 12	DIST : 2	STRUCTURE NUMBER : 010092	LENGTH : 71 FEET
ROUTE CARRIED : SR1315		FEATURE INTERSECTED : LAMBERT CREEK		
LOCATED : 0.5 MI. N. JCT. SR1316		BRIDGE NAME :		CITY :
FUNC. CLASS : 09	SYST.ON : NFA	SYST.UNDER : NFA	ADT & YR : 240 2009	RAIL TYPE : LT 227 RT 227
BUILT : 1963	BY : BMU	PROJ :	FED.AID PROJ :	DESIGN LOAD : Other or Unknown
REHAB :	BY :	PROJ :	ALIGNMENT : TAN	SKEW : 90
			LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT		HT. CRN. TO BED : 11 FT		WATER DEPTH : 1 FT
SUPERSTRUCTURE : TIMBER DECK ON I-BEAMS				
SUBSTRUCTURE : END&INT.BTS:TIMBER CAPS&PILES,CONC.ENCASED,TIMBER BULKHEADS				
SPANS : 1@35'6, 1@35'4				
BEAMS OR GIRDERS : 8 LINES OF W16X40 I-BEAMS @ 2'7 CENTERS				
FLOOR : 4X8 TIM,3 AWS	ENCROACHMENT :		DECK (OUT TO OUT) : 20.2 FT	
CLEAR ROADWAY : 19.2 FT	BETWEEN RAILS : 19.8 FT		SIDEWALK OR CURB : LT 0.3 FT RT 0.3 FT	
VERT.CL.OVER : 99 FT 99 IN	VERT.CL.UNDER : 00 FT 00 IN		HOR.CL.UNDER : 0.0 FT	
INV.RTG. : HS-1	OPE.RTG. : HS-1	CONTR.MEMBER : in bm	POSTED : SV 17 TTST 22 DATE 10/27/2008	
SYSTEM : Secondary S.R. Route			GREEN LINE ROUTE : N	
2ND OPENING :		3RD OPENING :		4TH OPENING : 5TH OPENING :
REMARKS :				

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 010092 County: ALEXANDER Date: 10/04/2010 By: MF

Record sounding from top of rail. Other location if needed:

Distance from Highwater Mark to top of rail: Location of Highwater Mark:

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	3	TOP OF FILLFACE			
0.28	3	TOP OF FILLFACE			
0.29	5	TOP OF CAP			
0.3	11.5	FACE OF ABUT	0.3	10.3	FACE OF ABUT
5	12.5	WSWE			
17	13.5	BED			
30	12.5	WSWE			
35.5	11	PIER	35.5	10	PIER
68	10.5	FACE OF CONC	68	11	FACE OF CONC
68.01	9.3	TOP OF CONC			
70.5	9.3	TOP OF CONC			
70.51	5	TOP OF CAP			
70.52	3	TOP OF FILLFACE			
70.8	3	TOP OF FILLFACE			

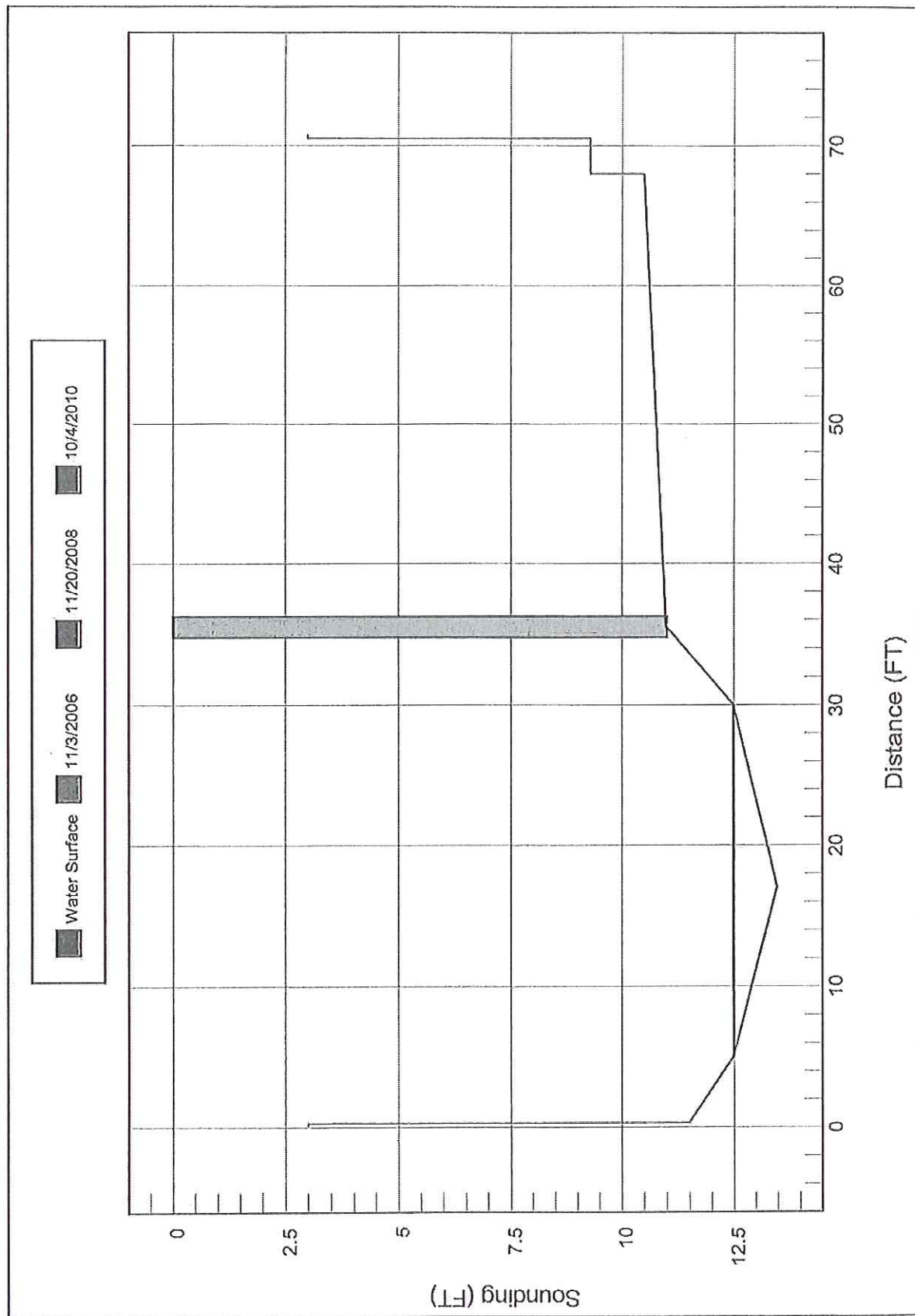
Bridge: 010092

County ALEXANDER

Date: 10/04/2010

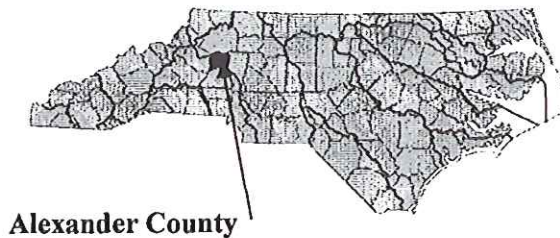
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



FLOOD INSURANCE STUDY

A Report of Flood Hazards in
**ALEXANDER COUNTY,
NORTH CAROLINA**
AND INCORPORATED AREAS



Community Name	Community Number	River Basin
Alexander County (Unincorporated Areas)	370398	Catawba/Yadkin
Taylorsville, Town of	370479	Catawba/Yadkin



December 18, 2007

**Federal Emergency Management Agency
State of North Carolina**

**Flood Insurance Study Number
37003CV000A**

www.fema.gov and www.ncfloodmaps.com



Section 4.0 – Area Studied

**Table 5—Flooding Sources Studied by
Detailed Methods: Limited Detailed**

Source	Riverine Sources		Affected Communities
	From	To	
Greasy Creek	The confluence with Wallace Creek	Approximately 0.4 mile upstream of Carson Chapel Road (SR 1418)	Alexander County (Unincorporated Areas)
Greasy Creek Tributary 1	The confluence with Greasy Creek	Approximately 0.4 mile upstream of Hammer Road	Alexander County (Unincorporated Areas) Taylorsville, Town of
Guys Branch	The confluence with Elk Shoals Creek	Approximately 0.5 mile upstream of the confluence with Elk Shoals Creek	Alexander County (Unincorporated Areas)
Isaac Creek	The confluence with Upper Little River	Approximately 0.7 mile upstream of SR 1143	Alexander County (Unincorporated Areas)
Island Creek	The confluence with Catawba River	Approximately 0.4 mile upstream of SR 1621	Alexander County (Unincorporated Areas)
Jumping Run	The confluence with Rock Creek	Approximately 500 feet upstream of NC 127	Alexander County (Unincorporated Areas)
Lambert Creek	The confluence with Lower Little River	Approximately 0.8 mile upstream of SR 1307	Alexander County (Unincorporated Areas)
Lambert Creek Tributary 1	The confluence with Lambert Creek	Approximately 800 feet upstream of SR 1307	Alexander County (Unincorporated Areas)
Lower Little River	The confluence with Catawba River	Approximately 0.9 mile upstream of SR 1332	Alexander County (Unincorporated Areas)
Lower Little River Tributary 1	The confluence with Lower Little River	Approximately 1.9 miles upstream of the confluence with Lower Little River	Alexander County (Unincorporated Areas)
Lower Little River Tributary 2	The confluence with Lower Little River	Approximately 1,600 feet upstream of SR 1124	Alexander County (Unincorporated Areas)
Lower Little River Tributary 2A	The confluence with Lower Little River Tributary 2	Approximately 1,600 feet upstream of confluence with Lower Little River Tributary 2	Alexander County (Unincorporated Areas)
Lower Little River Tributary 3	The confluence with Lower Little River	Approximately 1.4 miles upstream of SR 1110	Alexander County (Unincorporated Areas)

Section 5.0 – Engineering Methods

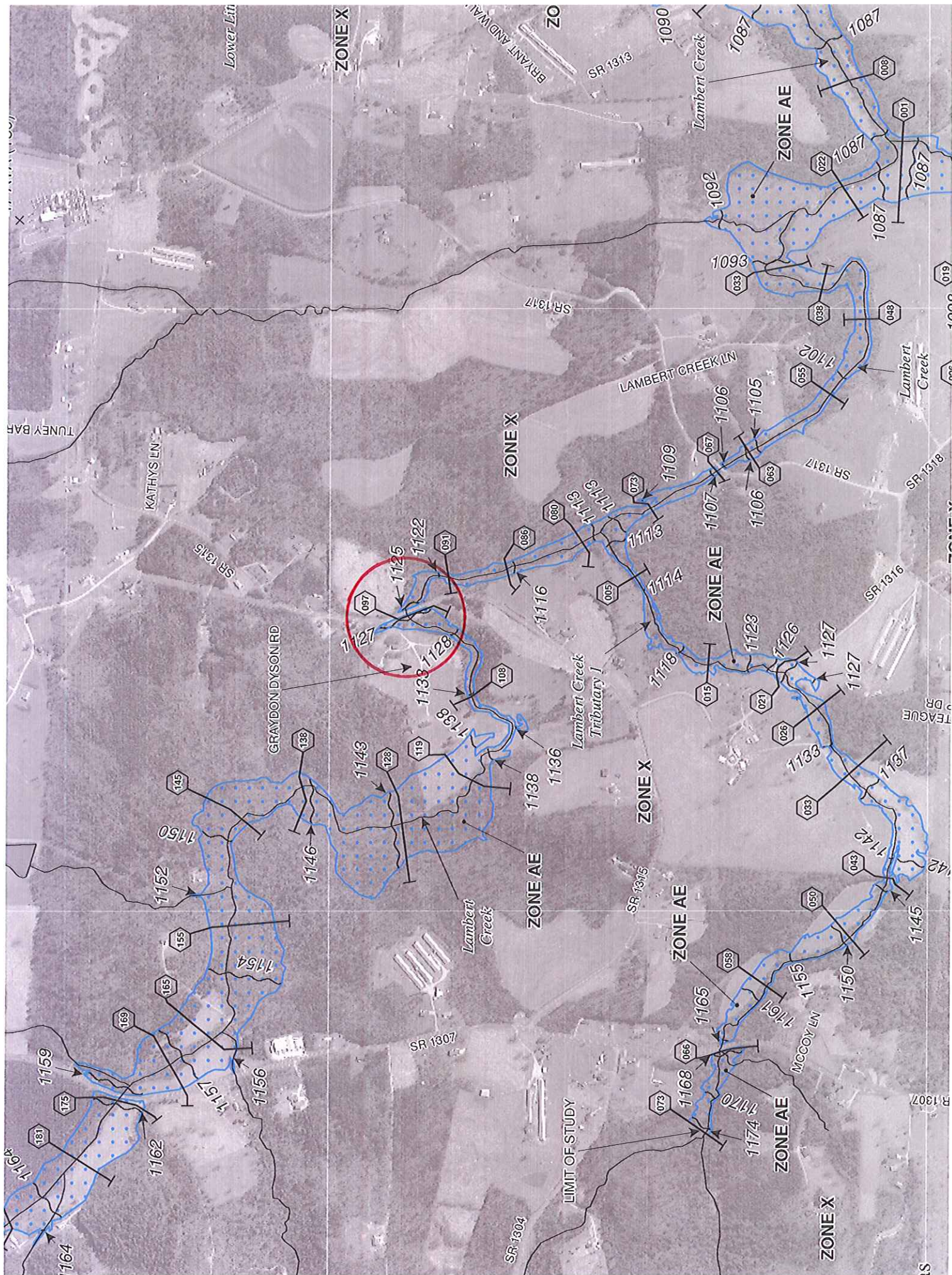
Table 7—Summary of Discharges

Flooding Source	Location	Drainage Area (square miles)	Discharges (cfs)			
			10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Jumping Run (continued)	Approximately 0.3 mile downstream of NC-127	0.6	*	*	818	*
	Approximately 530 feet downstream of NC-127	0.4	*	*	708	*
Lambert Creek	Approximately 850 feet upstream of confluence with Lower Little River	14.5	*	*	4,800	*
	Approximately 650 feet upstream of SR 1317	14.5	*	*	4,150	*
	Approximately 500 feet downstream of SR 1307	10.5	*	*	3,510	*
	Approximately 1,160 feet downstream of Natures Walk Lane	7.7	*	*	3,040	*
Lambert Creek Tributary 1	Approximately at 1,950 feet upstream of SR 1316	1.6	*	*	1,220	*
	Approximately 1,050 feet downstream of SR 1307	1.4	*	*	1,100	*
	Approximately 830 feet upstream of SR 1307	1.2	*	*	1,000	*
Lower Little River	Just upstream of confluence of Glade Creek	96.8	*	*	15,700	*
	Just upstream of confluence of Stirewalt Creek	79.4	*	*	13,900	*
	Just upstream of confluence of Muddy Fork Creek	66.0	*	*	12,400	*
	Just upstream of confluence of Lambert Creek	45.2	*	*	9,750	*
	Just upstream of confluence of Grassy Creek	27.9	*	*	7,870	*
	Approximately 400 feet upstream of SR 1331	15.9	*	*	5,140	*
	Approximately 1,100 feet downstream of SR 1310	13.8	*	*	4,640	*

Section 5.0 – Engineering Methods

Table 9—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) ³
LAMBERT CREEK				
080	7,961	3,510	1,113.6	34 / 34
086	8,641	3,510	1,116.2	48 / 57
091	9,142	3,510	1,118.1	35 / 54
097	9,660	3,510	1,125.1	44 / 43
097	9,723	3,510	1,126.8	55 / 55
101	10,129	3,510	1,127.9	22 / 23
108	10,799	3,510	1,133.3	26 / 29
119	11,919	3,510	1,140.7	210 / 57
128	12,750	3,510	1,142.8	108 / 175
138	13,844	3,510	1,146.3	33 / 128
145	14,465	3,510	1,149.0	159 / 34
149	14,890	3,510	1,151.0	42 / 38
155	15,451	3,510	1,153.0	44 / 201
165	16,515	3,510	1,155.7	169 / 89
169	16,930	3,510	1,157.5	308 / 216
174	17,368	3,040	1,159.2	175 / 138
175	17,469	3,040	1,162.1	211 / 233
181	18,072	3,040	1,162.7	36 / 108
188	18,836	3,040	1,165.1	36 / 36
194	19,371	3,040	1,170.1	46 / 30
201	20,064	3,040	1,172.5	187 / 53
210	20,963	3,040	1,174.6	31 / 49
212	21,161	3,040	1,176.3	35 / 82
218	21,849	3,040	1,180.1	31 / 54
LAMBERT CREEK TRIBUTARY 1				
001	142	1,220	1,112.6 ⁴	16 / 13
005	482	1,220	1,112.6 ⁴	18 / 17
008	800	1,220	1,114.9	22 / 23
011	1,086	1,220	1,116.7	16 / 18
013	1,299	1,220	1,118.5	16 / 28
015	1,512	1,220	1,120.0	14 / 24
017	1,710	1,220	1,121.5	21 / 37
020	1,968	1,220	1,123.7	16 / 34
021	2,081	1,220	1,125.5	58 / 46
021	2,145	1,220	1,127.2	29 / 83
022	2,248	1,220	1,127.4	44 / 44
024	2,422	1,220	1,127.4	14 / 29
026	2,637	1,220	1,129.8	46 / 29
030	3,008	1,220	1,133.5	17 / 17
033	3,263	1,220	1,136.1	52 / 78
036	3,639	1,220	1,137.7	18 / 101



LambertCreek Plan: Approximate Study - 100 YR 1/28/2008
 Chapman Mill Road, SR 1315; Bridge : 37033-0013

