CATEGORICAL EXCLUSION ACTION CLASSIFICATION FORM

TIP Project No.	**B-5118**
W.B.S. No.	**42256.1.1**
Federal Project No.	**BRZ-1557(2)**

A. Project Description:

The purpose of this project is to replace Watauga County Bridge No. 55 on SR 1557 (Shulls Mill Road) over Lance Creek. Bridge No. 55 is 26 feet long and 20 feet wide. The replacement structure will be a bridge approximately 35 feet long providing a minimum 29.5 feet clear deck width. The bridge will include two 11-foot lanes and 3.75-foot offsets. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 174 feet from the west end of the new bridge and 141 feet from the east end of the new bridge. The approaches will be widened to include two 11-foot lanes, 2-foot paved shoulders and 2-foot grass shoulders (5-foot where guardrail is included. The roadway will be designed as a Rural Local Route using Sub Regional Tier Guidelines with a 40 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure 1). A temporary detour alignment will be constructed on the south side of the existing bridge for emergency vehicle use only (see Figure 2).

B. Purpose and Need:

NCDOT Bridge Management Unit records indicate Bridge No. 55 has a sufficiency rating of 12.5 out of a possible 100 for a new structure.

The bridge is considered structurally deficient with a structural evaluation of only 3 of 9 and a superstructure condition appraisal of 4 out of 9 according to Federal Highway Administration (FHWA) standards. The bridge also meets the criteria for functionally obsolete with a deck geometry appraisal of only 2 out of 9.

The superstructure and substructure of Bridge No. 55 have timber elements that are fifty-two years old. Timber components have a typical life expectancy between 40 to 50 years due to the natural deterioration rate of wood. Rehabilitation of a timber structure is generally practical only when a few elements are damaged or prematurely deteriorated. However, past a certain degree of deterioration, most timber elements become impractical to maintain and upon eligibility are programmed for replacement. Timber components of Bridge No. 55 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities. With increasing maintenance needs and a posting down to 10 tons for single vehicles and 15 tons for truck-tractor semi-trailers, the bridge is approaching the end of its useful life.

C. Proposed Improvements:

Circle one or more of the following Type II improvements which apply to the project:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).

    a. Restoring, Resurfacing, Rehabilitating, and Reconstructing pavement (3R and 4R improvements)
    b. Widening roadway and shoulders without adding through lanes
    c. Modernizing gore treatments
    d. Constructing lane improvements (merge, auxiliary, and turn lanes)
    e. Adding shoulder drains
    f. Replacing and rehabilitating culverts, inlets, and drainage pipes, including safety treatments
    g. Providing driveway pipes
    h. Performing minor bridge widening (less than one through lane)
    i. Slide Stabilization
    j. Structural BMP's for water quality improvement

2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.

    a. Installing ramp metering devices
    b. Installing lights
    c. Adding or upgrading guardrail
    d. Installing safety barriers including Jersey type barriers and pier protection
    e. Installing or replacing impact attenuators
    f. Upgrading medians including adding or upgrading median barriers
    g. Improving intersections including relocation and/or realignment
    h. Making minor roadway realignment
    i. Channelizing traffic
    j. Performing clear zone safety improvements including removing hazards and flattening slopes
    k. Implementing traffic aid systems, signals, and motorist aid
    l. Installing bridge safety hardware including bridge rail retrofit

3. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings.

    a. Rehabilitating, reconstructing, or replacing bridge approach slabs
    b. Rehabilitating or replacing bridge decks
    c. Rehabilitating bridges including painting (no red lead paint), scour repair, fender systems, and minor structural improvements
    (d.) Replacing a bridge (structure and/or fill)

4. Transportation corridor fringe parking facilities.

5. Construction of new truck weigh stations or rest areas.

6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.

7. Approvals for changes in access control.

8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.

9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.

10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.

11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.

12. Acquisition of land for hardship or protective purposes, advance land acquisition loans under section 3(b) of the UMT Act. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

13. Acquisition and construction of wetland, stream and endangered species mitigation sites.

14. Remedial activities involving the removal, treatment or monitoring of soil or groundwater contamination pursuant to state or federal remediation guidelines.

D. <u>Special Project Information:</u>

The **Estimated Costs**, based on 2012 prices, are as follows:

Structure	$ 152,000
Roadway Approaches	130,000
Structure Removal	13,000
Aesthetics (stamped concrete, rails, etc)	32,000
Temporary Detour – EMS Only	43,000
Misc. & Mob.	56,000
Eng. & Contingencies	80,000
Total Construction Cost	$ 506,000
Right-of-way Costs	116,000
Right-of-way Utility Costs	30,000
Total Project Cost	**$ 652,000**

Aesthetic Concerns:

The bridge is encompassed by Hound Ears Golf Club. The Club has taken great efforts to landscaping the area including a stacked stone wall lining the creek and manicured lawn and plantings on the approaches. To be sensitive to the context, NCDOT has coordinated with Hound Ears Golf Club to find ways to be sensitive to the setting. The proposed bridge with will have wing walls will have a stacked stone pattern stained to blend with the existing stacked stone walls lining the creek. Alaska "see through" rails will be included on the new bridge. The bridge rails along with the guardrails will be colored brown to coordinate with the surroundings. Below is a visualization of the proposed aesthetic considerations.

Estimated Traffic:

Current - 1500 vpd

Year 2030	-	2500 vpd
TTST	-	1%
Dual	-	4%

Accidents:

Traffic Engineering has evaluated a recent five year period and found two accidents occurring in the vicinity of the project. Neither were associated with the geometry of the bridge or its approach roadways.

Design Exceptions: There are no anticipated design exceptions for this project.

Pedestrian and Bicycle Accommodations:

This portion of SR 1557 is not a part of a designated bicycle route nor is it listed in the Transportation Improvement Program (TIP) as a bicycle project. Neither permanent nor temporary bicycle or pedestrian accommodations are required for this project.

Bridge Demolition:

Bridge No. 55 is constructed entirely of timber and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

No Build – The no build alternative would result in eventually closing the road which is unacceptable given the traffic served by SR 1557.

Rehabilitation – The bridge was constructed in 1962 and the timber materials within the bridge are reaching the end of their useful life. Rehabilitation would require replacing the timber components which would constitute effectively replacing the bridge.

Offsite Detour –

NCDOT has held a public workshop where the primary concern was from one of the full time residents of the Golf Course who expressed concern regarding Emergency Services. After further coordination with Emergency Services of Watauga County, it was determined that a temporary onsite detour would be constructed for the use of emergency vehicles only. The condition of all roads and bridges on the offsite detour for all other traffic are acceptable without improvement.

Therefore, Bridge No. 55 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1552 Poplar Grove Rd. and NC 105.

The majority of traffic on the road is through traffic. Total traffic on the road is 1500 vehicles per day. Approximately 1000 vehicles are through traffic. The other 500 vehicles per day are local traffic associated with the golf course

and surrounding homes. This local traffic diminishes to less than 50 vehicles per day from October through March. The project Let date is being set to take advantage of the lower traffic during the offseason. The detour for the through traffic would result in 12 minutes additional travel time (6 miles additional travel). The detour for local traffic will be 18 minutes additional travel (9 miles additional travel). Construction of the temporary detour for Emergency Vehicles only will be accomplished in October 2015. All in water work including the construction of the new bridge and removal of the detour bridge will be accomplished by December 31, 2015. Finishing work such as paving will likely not be completed till the warmer temperatures of spring.

Based on the information collected and the Guidelines, the offsite detour is acceptable.

Staged Construction – Staged construction was not considered because of the availability of an acceptable offsite detour.

New Alignment – Given that the alignment for SR 1557 is acceptable, a new alignment was not considered as an alternative.

Other Agency Comments:

Watauga County has expressed two special concerns regarding the bridge replacement project. Emergency Services concerns were addressed above. Blood Sweat and Gears is an annual bicycle race that runs across the subject bridge in the month of June. Given that the bridge will be replaced between October and March, there will be no conflict with the race.

The **N.C. Division of Water Quality** has indicated that Lance Creek is rated Class C Trout Waters. The **NC Wildlife Resources Commission** (NCWRC) has indicated that Lance Creek supports wild brown trout. Coordination with NCWRC is recorded in Section E below in the response to Question 8

The Army Corps of Engineers had no special concerns for this project.

Public Involvement:

A Citizen's Informational Workshop was held June 3, 2013. There were 45 citizens in attendance. The majority supported the alternative proposed in this document. A few had concerns regarding Emergency Services during construction. NCDOT looked further into this subject with Emergency Services of Watauga County and determined that maintaining traffic for Emergency Services is warranted. Therefore NCDOT will build a temporary onsite detour for Emergency Vehicles only prior to closure of the bridge (see Figure 2).

E. Threshold Criteria

The following evaluation of threshold criteria must be completed for Type II actions

ECOLOGICAL		YES	NO
(1)	Will the project have a substantial impact on any unique or important natural resource?		X
(2)	Does the project involve habitat where federally listed endangered or threatened species may occur?	X	
(3)	Will the project affect anadramous fish?		X
(4)	If the project involves wetlands, is the amount of permanent and/or temporary wetland taking less than one-tenth (1/10) of an acre and have all practicable measures to avoid and minimize wetland takings been evaluated?	N/A	
(5)	Will the project require the use of U. S. Forest Service lands?		X
(6)	Will the quality of adjacent water resources be adversely impacted by proposed construction activities?		X
(7)	Does the project involve waters classified as Outstanding Resources Waters (ORW) and/or High Quality Waters (HQW)?		X*
(8)	Will the project require fill in waters of the United States in any of the designated mountain trout counties?	X	
(9)	Does the project involve any known underground storage tanks (UST's) or hazardous materials sites?		X

PERMITS AND COORDINATION		YES	NO
(10)	If the project is located within a CAMA county, will the project significantly affect the coastal zone and/or any "Area of Environmental Concern" (AEC)?		X
(11)	Does the project involve Coastal Barrier Resources Act resources?		X
(12)	Will a U. S. Coast Guard permit be required?		X
(13)	Could the project result in the modification of any existing regulatory floodway?		X
(14)	Will the project require any stream relocations or channel		

	changes?		X

SOCIAL, ECONOMIC, AND CULTURAL RESOURCES		YES	NO
(15)	Will the project induce substantial impacts to planned growth or land use for the area?		X
(16)	Will the project require the relocation of any family or business?		X
(17)	Will the project have a disproportionately high and adverse human health and environmental effect on any minority or low-income population?		X
(18)	If the project involves the acquisition of right of way, is the amount of right of way acquisition considered minor?	X	
(19)	Will the project involve any changes in access control?		X
(20)	Will the project substantially alter the usefulness and/or land use of adjacent property?		X
(21)	Will the project have an adverse effect on permanent local traffic patterns or community cohesiveness?		X
(22)	Is the project included in an approved thoroughfare plan and/or Transportation Improvement Program (and is, therefore, in conformance with the Clean Air Act of 1990)?	X	
(23)	Is the project anticipated to cause an increase in traffic volumes?		X
(24)	Will traffic be maintained during construction using existing roads, staged construction, or on-site detours?	X	
(25)	If the project is a bridge replacement project, will the bridge be replaced at its existing location (along the existing facility) and will all construction proposed in association with the bridge replacement project be contained on the existing facility?	X	
(26)	Is there substantial controversy on social, economic, or environmental grounds concerning the project?		X
(27)	Is the project consistent with all Federal, State, and local laws relating to the environmental aspects of the project?	X	
(28)	Will the project have an "effect" on structures/properties eligible for or listed on the National Register of Historic Places?		X
(29)	Will the project affect any archaeological remains which are		

	important to history or pre-history?		X
(30)	Will the project require the use of Section 4(f) resources (public parks, recreation lands, wildlife and waterfowl refuges, historic sites, or historic bridges, as defined in Section 4(f) of the U. S. Department of Transportation Act of 1966)?		X
(31)	Will the project result in any conversion of assisted public recreation sites or facilities to non-recreation uses, as defined by Section 6(f) of the Land and Water Conservation Act of 1965, as amended?		X
(32)	Will the project involve construction in, across, or adjacent to a river designated as a component of or proposed for inclusion in the National System of Wild and Scenic Rivers?		X

F. Additional Documentation Required for Unfavorable Responses in Part E

Question 2: A US Fish and Wildlife Service proposal for listing the Northern Long-eared Bat (Myotis septentrionalis) as an endangered species was published in the Federal Register in October 2013. The listed may become effective as soon as October 2014. NCDOT is working closely with the USFWS to understand how this proposed listing may impact NCDOT projects. NCDOT will continue to coordinate appropriately wit6h USFWS to determine if this project will incur potential effects to the Northern Long-eared bat and how to address these potential effects if necessary.

Question 7&8: Watauga County is a designated mountain trout county and Lance Creek is classified as trout waters (C;Tr) and in a High Quality Water Zone (within 1 mile of Watauga River). Design Standards in Sensitive Watershed s will be implemented for the project. The NC Wildlife Resources Commission (NCWRC) originally requested a moratorium on in-water work from October 15th to April 15th. In consideration of the function of the golf course and local needs, NCWRC is willing to waive the early part of the moratorium but in anticipation that Design Standards for Sensitive Watersheds will be well maintained during construction. The moratorium on in-water work will be from Jan 1st to April 15th.

G. CE Approval

TIP Project No.	**B-5118**
W.B.S. No.	**42256.1.1**
Federal Project No.	**BRZ-1557(2)**

Project Description:

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The approach roadway will extend approximately 174 feet from the west end of the new bridge and 141 feet from the east end of the new bridge. The approaches will be widened to include two 11-foot lanes, 2-foot paved shoulders and 2-foot grass shoulders (5-foot where guardrail is included. The roadway will be designed as a Rural Local Route using Sub Regional Tier Guidelines with a 40 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure 1). A temporary detour alignment will be constructed on the south side of the existing bridge for emergency vehicle use only (see Figure 2).

Categorical Exclusion Action Classification:

_____ TYPE II(A)
__X__ TYPE II(B)

Approved:

6/25/14 — Date
William T. Herrin
Bridge Project Development Engineer
Project Development & Environmental Analysis Unit

6-25-14 — Date
John F. Williams
Project Engineer
Project Development & Environmental Analysis Unit

For Type II(B) projects only:

6-27-14 — Date
John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

PROJECT COMMITMENTS:

Watauga County
Bridge No. 55 on SR 1557
Over Lance Creek
Federal Aid Project No. BRZ-1557(2)
W.B.S. No. 42256.1.1
T.I.P. No. B-5118

Division Eleven Construction, Resident Engineer's Office – Emergency Services Onsite Detour

Prior to the beginning of construction, the contractor and the Division will meet with Watauga County Emergency Services and with Foscoe Volunteer Fire Department regarding the temporary onsite detour for their use.

Division Eleven Construction, Resident Engineer's Office – Schools Offsite Detour

Prior to the beginning of construction the Division will provide at least 30 days' notice to Watauga County Schools Transportation.

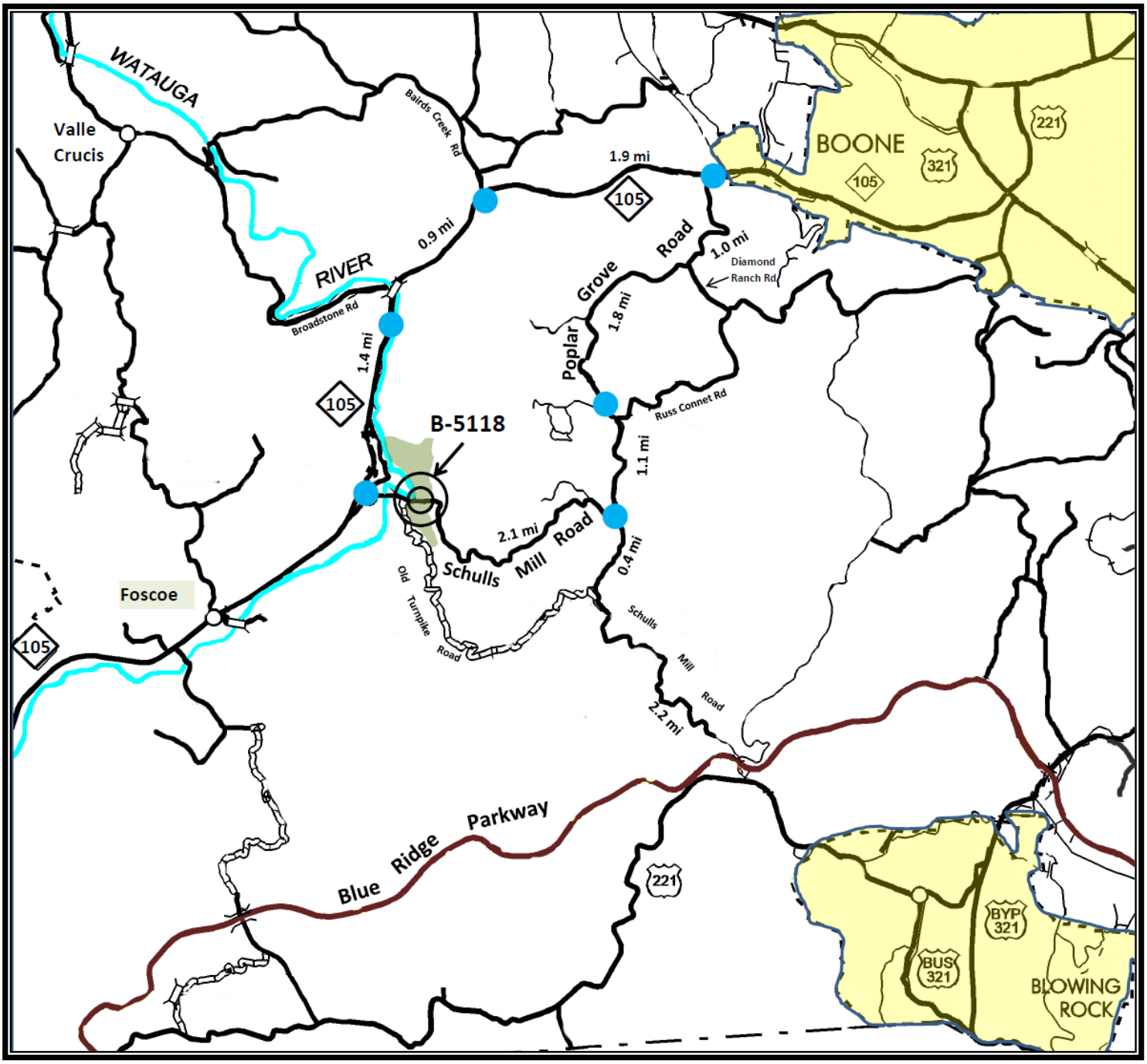
Roadside Environmental Unit, Division Resident Engineer –
High Quality Waters, Trout Waters

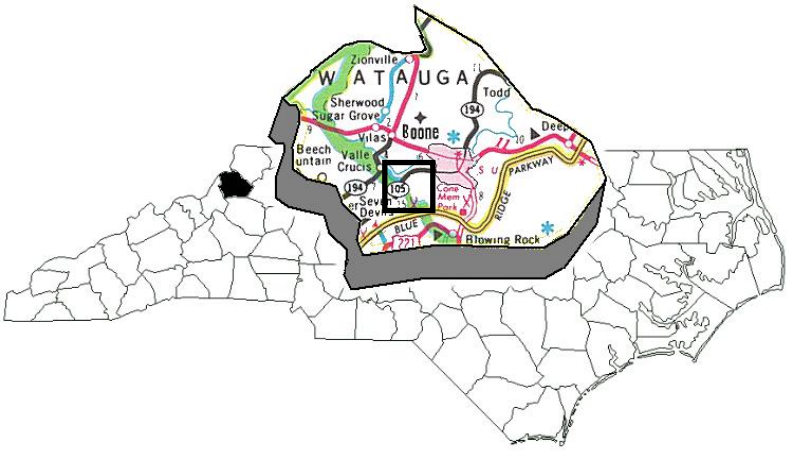
Lance Creek is designated as both High Quality Waters and Trout Waters and will be subject to Design Standards for Sensitive Watersheds.

Structure Design Unit – Aesthetics

This project will incorporate the following aesthetic measures:

1. Alaska Rail
2. Stamped concrete on wing walls and abutments to blend with existing stacked stone along creek.
3. Bridge rail and guardrail will be anodized brown.





NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

WATAUGA COUNTY
REPLACE BRIDGE NO. 55 ON SR 1557
OVER LANCE CREEK
B-5118

Figure 1


North
Replace Bridge
On Existing
Location
Schulls Mill Rd
Temporary Detour
for Emergency
Vehcicles Only
Hound Ears Club

Figure 2

Bridge Construction CFY 2013-2014

SHPO Number	TIP	Project	County	Division	Project Engineer	Archaeological Survey	Architectural Survey
ER 08-2648	B-4836	Bridge 59 on SR 1331 over South Fork New River	Watauga	11	P. Williams	Yes	No
ER 08-2651	B-5118	Bridge 55 on SR 1557 over Creek	Watauga	11	P. Williams	No	No

A- B-4836; 2 unevaluated sites in close proximity. (31WT167 and 31WT168) Survey & evaluation recommended.

B-5118; Cleared, LGH/BJS 1-13-09

S - (NC) 11/7/08 CRS

Due 12/31/08

Peter B Sandbeck 1/27/09

NOV 18 2008