U.S. Department
of Transportation
**Federal Highway
Administration**

Eastern Federal Lands
Highway Division

21400 Ridgetop Circle
Sterling, VA 20166-6511

APR 17 2014

APR 15 2014

In Reply Refer to: HFPP-15

FEDERAL EXPRESS
Mr. Michael Atchley
Tennessee Department of Environment
and Conservation
Attn: Water Pollution Control
3711 Middlebrook Pike
Knoxville, TN 37921

Subject: PRA-GRSM 1A28 Newfound Gap Road Rehabilitation
Great Smoky Mountains National Park
Aquatic Resource Alteration Permit Application Submittal

Dear Mr. Atchley:

The Eastern Federal Lands Highway Division, of the Federal Highway Administration (FHWA), in cooperation with the National Park Service, is proposing the subject project. The project will rehabilitate an approximately 6.3-mile length of Newfound Gap Road (from milepost 0.0 to milepost 6.3) in the Great Smoky Mountains National Park, Sevier County, Tennessee. The work will include maintenance of the existing roadway and drainage structures, repair of guardrail and guardwalls, and other required safety related improvements.

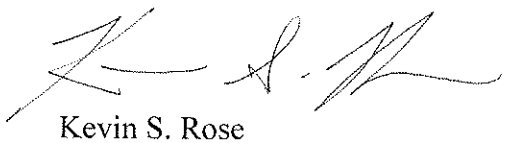
An Environmental Assessment (EA) was prepared for the project, during which public involvement was completed. Public comments were solicited during public scoping in January and February of 2008 and when the EA was made available for public review in March 2010. Informal consultation was completed with the U.S. Fish and Wildlife Service (USFWS). In a letter dated April 20, 2010, the USFWS concurred that the project was "not likely to adversely affect" any federally listed species. A copy of the EA and the concurrence letter are enclosed.

Rehabilitation of Newfound Gap Road was recently completed from milepost 6.3 to milepost 12.4 (PRA-GRSM 1A26), and was determined to the governed by the General Permit for Maintenance Activities. The proposed project, PRA-GRSM 1A28, is similar in nature and proposes repairs that would discharge fill material (riprap) into Twomile Branch, which is listed as an Exceptional Tennessee Water. The other maintenance activities (debris removal, cleaning of the culvert and grouting cracks in the headwall) would be completed in West Prong Little Pigeon River and its tributaries, which are listed as Outstanding National Resource Waters.

FHWA requests General Permit coverage for maintenance activities for the proposed project. Enclosed you will find the original signed permit application and a copy of the project plans for your review. Please provide us with your response within thirty days of the receipt of this letter.

If you have any questions, or require additional information, please contact Ms. Lisa Landers, Environmental Protection Specialist, at Lisa.Landers@dot.gov or (571) 434-1592.

Sincerely,



Kevin S. Rose
Environmental Compliance Specialist

Enclosures

cc:
Mr. Pedro Ramos, Acting Superintendent, Great Smoky Mountains National Park, National Park Service (hard copy only)
Mr. Mike Tomkosky, Project Manager, Denver Service Center, National Park Service
Mr. Kent Cochran, FLHP Coordinator, Southeast Region, National Park Service

APR 17 2014

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
APPLICATION FOR AQUATIC RESOURCE ALTERATION PERMIT (ARAP)
&
STATE §401 WATER QUALITY PERMIT

NRI403.050

Section 1: Applicant Information An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official or other duly authorized employee.

Name: Mr. Kevin Rose		**Title or Position:** Environmental Team Leader		
Company Name: Federal Highway Administration/EFLHD				
Mailing Address: 21400 Ridgetop Circle		**City:** Sterling	**State:** VA	**Zip:** 20166
Phone: (571) 434-1541	**Fax:**	**E-mail:** kevin.rose@dot.gov		

Section 2: Alternate contact within your organization (not required)

Name:		**Title or Position:**		
Mailing Address:		**City:**	**State:**	**Zip:**
Phone:	**Fax:**	**E-mail:**		

Section 3: Consultant Information (a consultant is not required)

Name:		**Title or Position:**		
Company Name:				
Mailing Address:		**City:**	**State:**	**Zip:**
Phone:	**Fax:**	**E-mail:**		

→ Place a * next to the individual's name listed above that should be the primary contact during the application process ←

Section 4: Fee (check appropriate box and submit appropriate fee with application)

Amount of fee:

☐ **$50.00** ☐ **$1,000.00** ☐ **$2,500.00** ☒ **no fee required**

Requests for General Permit coverage require no fee. Requests for Individual Permit alterations on private farms and residences require a $50.00 application fee. Requests for Individual Permit alterations less than 1,000 feet of stream or less than 10 acres of wetland require a $1,000.00 application fee. Requests for alterations over 1,000 feet of stream and greater than 10 acres of wetlands require a $2,500.00 application fee. (Checks payable to Treasurer, State of Tennessee.)

Section 5: Project Details (fill in information and check appropriate boxes)

Project / Site Name:
Newfound Gap Road Improvements, Project Number PRA-GRSM 1A28, GRSM National Park

Nearest City, Town or Major Landmark: Gatlinburg, TN	**County:** Sevier

Resource Proposed for Alteration:
☒ **Stream** ☐ **Wetland** ☐ **Reservoir**

Name of Resource:

Latitude: (decimal degrees, NAD83):
35.7064 N
Longitude: (decimal degrees, NAD83):
83.5216 W

Type of proposed alteration(s):

☐ **Road Crossing**
☐ **Utility Line**
☐ **Intake/Outfall Structure**
☐ **Stream or Wetland Restoration**
☐ **Wetland Fill/Excavation**
☐ **Other:**
☐ **Dredging**
☐ **Launching Ramp**
☐ **Bank Stabilization**
☒ **Maintenance Activities**
☐ **Water Withdrawal**

Site ID 58668

Brief Project Description (a more detailed description is requested in Section 8):
The rehabilitation includes the removal of deteriorated pavement surface from the existing two-lane roadway; placement of a new asphalt overlay, including reconstruction of structurally deficient pavement sections; paving pullouts. The road surface and pullouts will be replaced with a new asphalt surface. Work within culverts will be limited to the repair or replacement of the existing structure. Two areas of roadway subsidence will be stabilized with permanent ground anchor walls.

Do any other alterations require approval from any other state, federal, or local government agency associated with the project site? If yes, provide brief description and status of approval.
The proposed work requires approval from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. The application has been submitted and is being reviewed concurrently with this application.

Section 6: Directions to Project Site

The project is located along Newfound Gap Road, south of Gatlinburg, Tennessee. The project limits are from TN Milepost 0.0 to TN Milepost 6.3, in the Great Smoky Mountains National Park, Sevier County, Tennessee.

Section 7: Project Schedule (fill in information and check appropriate boxes).

How long will it take to perform the proposed activity?
Approximately 2 years

Is any portion of the activity complete now? ☐ **Yes** ☒ **No**
If yes, describe the extent of the completed portion below:

The required information in sections 8 - 12 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented. If you believe that a certain request does not pertain to your project, explain the reason.

Section 8: Project Description

8.1 A narrative description of the scope of the project
8.2 USGS topographic map indicating the exact location of the project (can be photographic copy)
8.3 Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map)
8.4 A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation
8.5 A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation
8.6 In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points

Section 9: Purpose and Justification

9. Describe the purpose for the proposed activity and overall project

Section 10: Alternatives

10. Describe all practicable alternatives considered, including what has been done to avoid or minimize impacts to streams or wetlands. For activities not covered by General Permit, each alternative must include the following: (1) feasibility, (2) environmental consequences and (3) social and economic benefits of each alternative.

Section 11: Mitigation

11.1 A detailed discussion of the proposed mitigation, if required
11.2 If you believe mitigation is not required, state the reason or cite the regulation to support this position
11.3 A detailed discussion of why you believe the mitigation would result in no net loss of resource value
11.4 A detailed description of the proposed monitoring plan for the mitigation site
11.5 A discussion of long term protection measures for the mitigation site

Section 12: Technical Information

12.1 Detailed plans, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans need to include dimensions of the existing and proposed stream or wetland such as depth, length, average width, substrate and riparian vegetation.

12.2 If mitigation is proposed, submit detailed plans, blueprints, or legible sketches of the proposed mitigation

12.3 For both the proposed activity and mitigation, provide a discussion regarding the sequencing of events

12.4 Location and type of erosion prevention and sediment control measures for the proposed alterations

12.5 A discussion on how the proposed activity will be performed (construction methods)

12.6 A copy of all hydrologic or jurisdictional determination documents issued for the water resources on the project site.

Section 13: Certification and Signature:

I certify under penalty of law that this document and all attachments were prepared at my request or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name	Official Title	Signature	Date
Kevin S. Rose	Env. Team Lead	K. S. R.	4/14/14

Section 14: Where do I send my application?

For General Permit coverage, submit the original completed and signed application to the local Environmental Field Office (EFO) for the county of your activity. Addresses of the EFOs are listed below. Mark the application ATTN: Water Pollution Control. Submit all applications for Individual ARAPs to the Natural Resources Section at the following address, and send a copy to the appropriate EFO.

Tennessee Department of Environment and Conservation
Water Pollution Control
Natural Resources Section
7th Floor L&C Annex
401 Church Street
Nashville, TN 37243

Jackson EFO	Nashville EFO	Cookeville EFO	Johnson City EFO
1625 Hollywood Drive 38305 Phone: 731-512-1300 Counties: Benton, Carroll, Chester, Crockett, Decatur, Dyer, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley	711 R. S. Gass Boulevard 37243 Phone: 615-687-7000 Counties: Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson	1221 South Willow Ave. 38506 Phone: 931-432-4015 Counties: Cannon, Clay, Cumberland, Dekalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, White	2305 Silverdale Road 37601 Phone: 423-854-5400 Counties: Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington
Memphis EFO	**Columbia EFO**	**Chattanooga EFO**	**Knoxville EFO**
8383 Wolf Lake Drive Bartlett, Tennessee 38133 Phone: (901) 371-3000 Counties: Fayette, Shelby, Tipton	1421 Hampshire Pike Columbia, TN 38401 Phone: 931-380-3371 Counties: Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne	540 McCallie Avenue STE 550 State Office Building 37402 Phone: 432-634-5745 Counties: Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie	3711 Middlebrook Pike 37921 Phone: 865-594-6035 Counties: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union

Section 15: Administrative Information (Official Use Only).

Date Received:	File# assigned:	Fee paid: ☐ Yes ☐ No ☐ N/A Ck #	Application administratively complete: ☐ Yes ☐ No	Complete Application date:

Section 8: Project Description

8.1 A narrative description of the scope of the project.
8.2 USGS topographic map indicating the exact location of the project (can be photographic copy).
8.3 Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map).
8.4 A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation.
8.5 A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation.
8.6 In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points.

8.1 – Narrative Project Description

The project (PRA-GRSM 1A28) includes the rehabilitation of the Newfound Gap Road (US 441). This includes the maintenance of the existing roadway and drainage structures, which are required due to the age of the road and/or safety related improvements. The project limits are from TN Milepost 0.0 to TN Milepost 6.3 in the Great Smoky Mountains National Park, Sevier County, Tennessee. The total length of the project is 33,200 linear feet (approximately 6.3 miles).

The rehabilitation includes the removal of the deteriorated pavement surface from the existing two-lane roadway; placement of new asphalt overlay, including reconstruction of structurally deficient pavement sections; paving pullouts. The road surface and pullouts will be replaced with a new asphalt surface. Work within the culverts will be limited to the repair or replacement of the existing structures. Two areas of roadway subsidence will be stabilized with permanent ground anchor walls.

8.2 – USGS Topographic Map

The USGS Topographic Map (Gatlinburg and Mt. Le Conte Quadrangle) is included as Figure 1. Specific impact sites referenced in this project description are identified on the map.

8.3 through 8.6 – Photographs, narrative descriptions (existing and proposed), and wetland information.

The project includes a total of eight blue line stream crossings. Information about each blue line stream, including photographs and narrative descriptions (existing and proposed) is provided below. The sites are listed in order of occurrence as shown on the attached USGS map (Figure 1). Additionally, plan sheets for each site are included in Section 12. **No wetlands are located within the project area.**

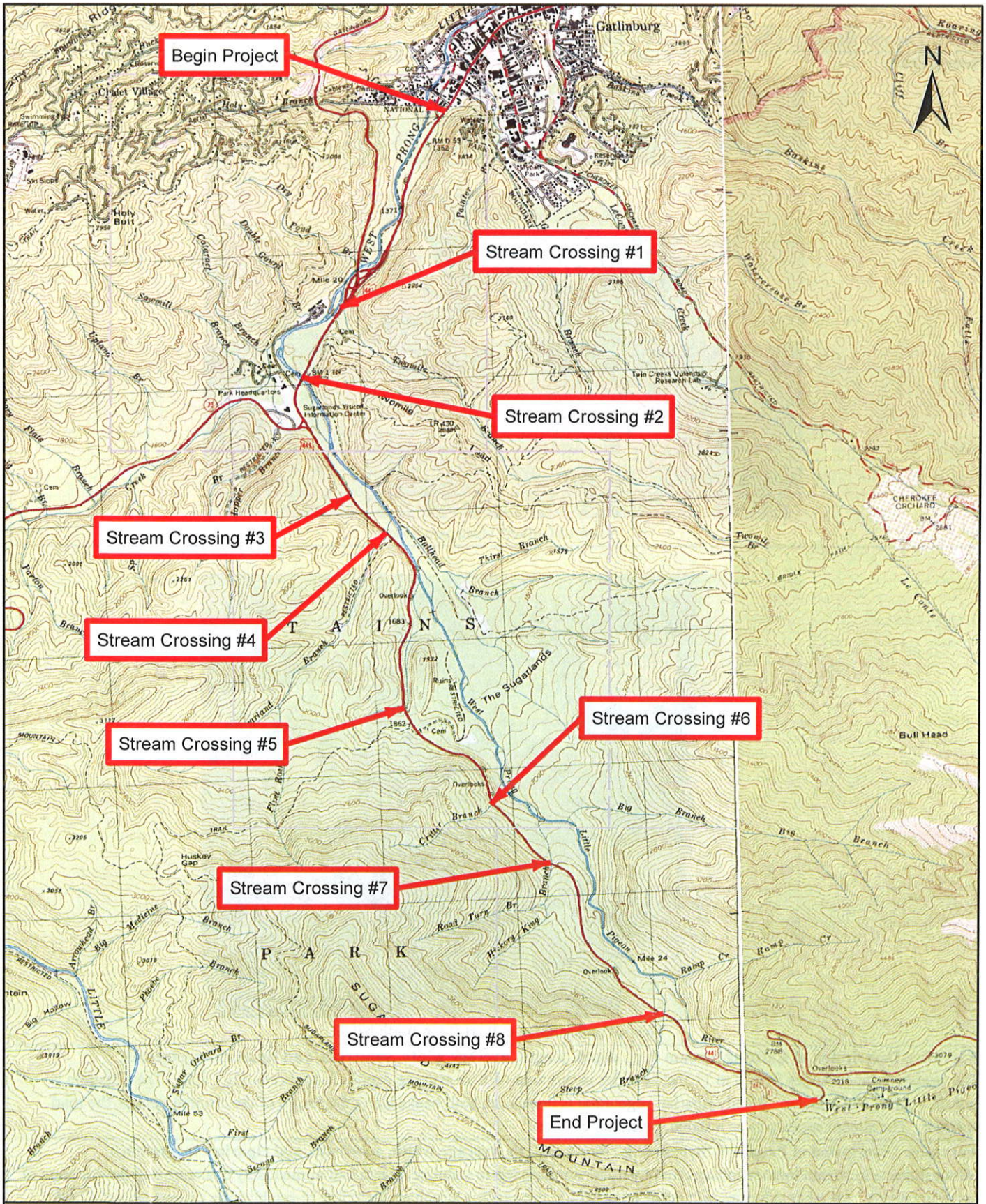


Figure 1: USGS Topographic Map, Gatlinburg and Mt. Le Conte Quadrangles

Project: National Park Service -- Project No. PRA-GRSM 1A28

Kimley-Horn and Associates, Inc.

Site #1: Twomile Branch (LON: 83.5308 LAT: 35.6927)

Photographs:

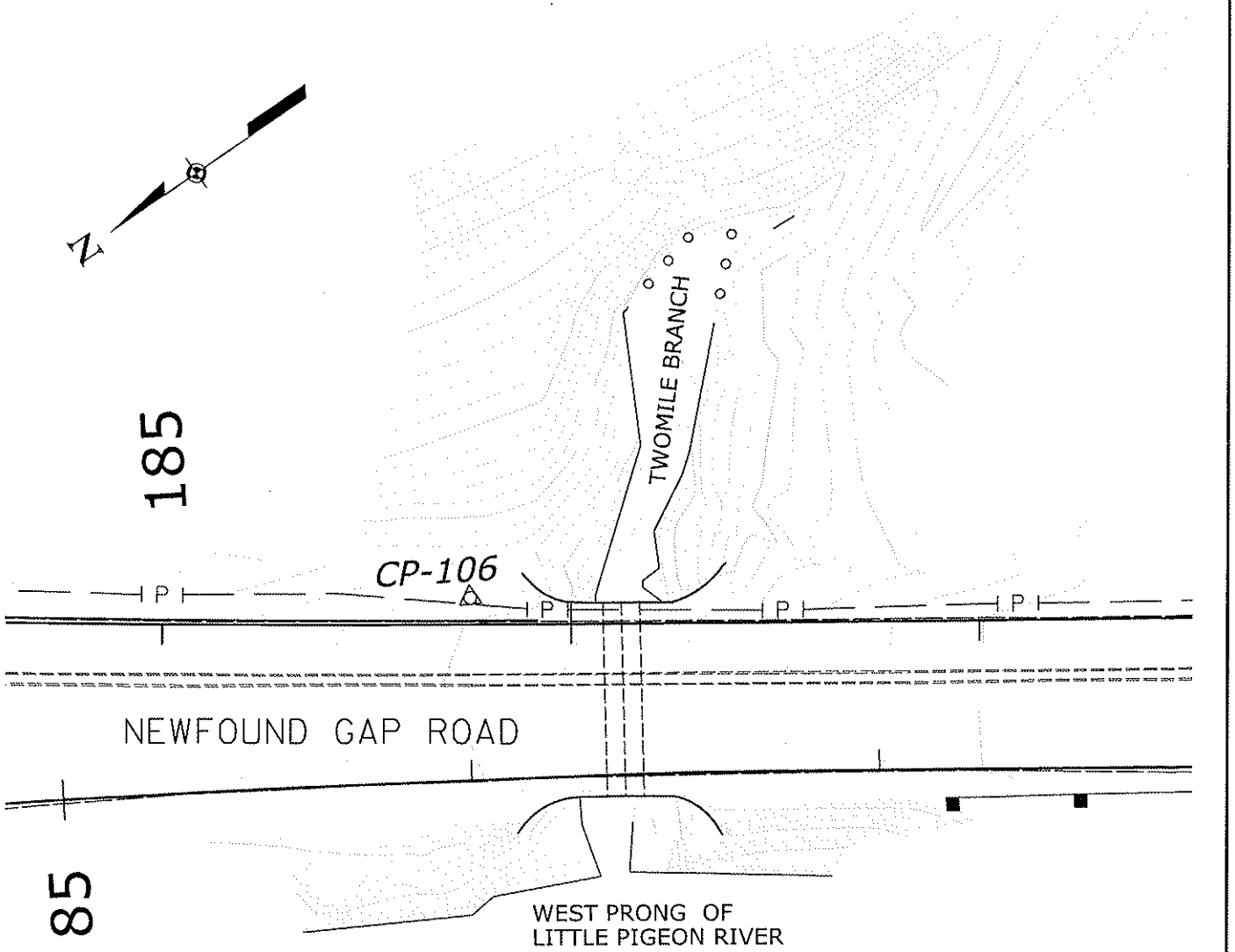
View of Culvert Upstream Side

View of undermined culvert floor, north barrel

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 8 to 11 feet in width in this area with an average depth of approximately 1 foot. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
Minor impacts to stream include: placement of natural stone rip rap to stabilize stream bed immediately upstream and downstream of existing culvert. All other activities will occur on or within the existing structure, including re-establishing culvert floors in both barrels.

Wetlands:
No wetlands are located within the vicinity of this crossing.



PIPE DATA	
INVERT ELEV:	1406.0'
HIGH WATER ELEV.	1414.7'
MATERIAL:	MASONRY BOX CULV.
SIZE:	2@ 9' x 7'
LENGTH:	48'
Q50:	453 CFS
Q100:	533 CFS

IMPROVEMENTS:
GROUT VOIDS
PLACE CLASS 1 GROUTED RIP RAP
CLEAN CULVERT
SEE DETAIL SHEET E.22

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 86+38

0 40 80
SCALE IN FEET

Site #2: West Prong of Little Pigeon River (LON: 83.5342 LAT: 35.6878)

Photographs:

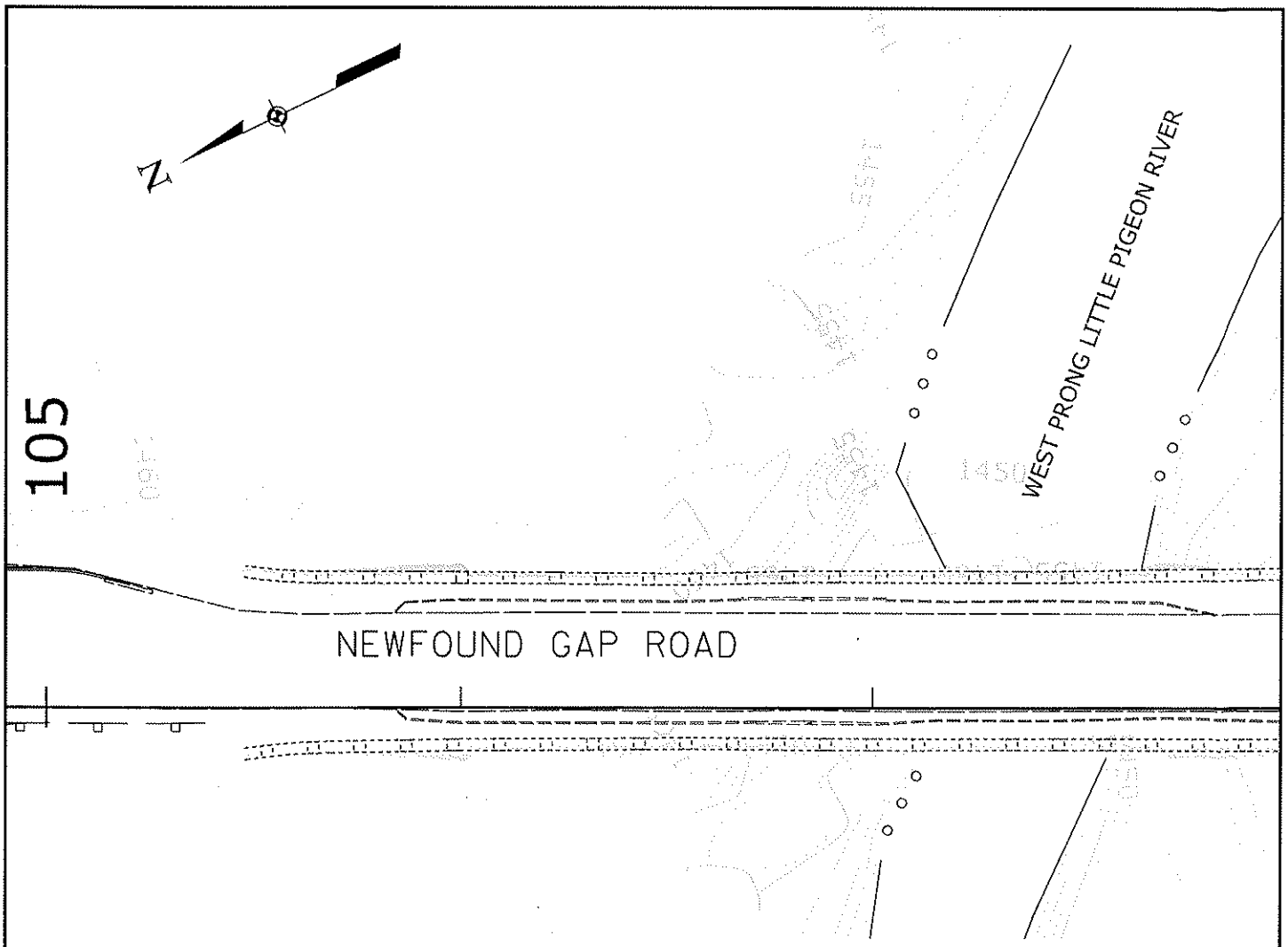
View of Main Channel Upstream of Culvert

View of Main Channel Crossing (South Span)

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 40 to 65 feet in width in this area, with an average depth of approximately 3 to 4 feet. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream- work at crossing will include removing debris in the northern two floodplain channels.

Wetlands:
No wetlands are located within the vicinity of this crossing.



BRIDGE DATA
INVERT ELEV: N/A
HIGH WATER ELEV. 1,456.8'
MATERIAL: REINFORCED CONC.
SIZE: 48' SPAN W 14' ARCH
LENGTH: 48'
Q50: 4,865 CFS
Q100: 5,611 CFS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 106+85

0 40 80
SCALE IN FEET

IMPROVEMENTS:
REMOVE DEBRIS

Site #3: UT to West Prong of the Little Pigeon River (LON: 83.5304 LAT: 35.6799)

Photographs:

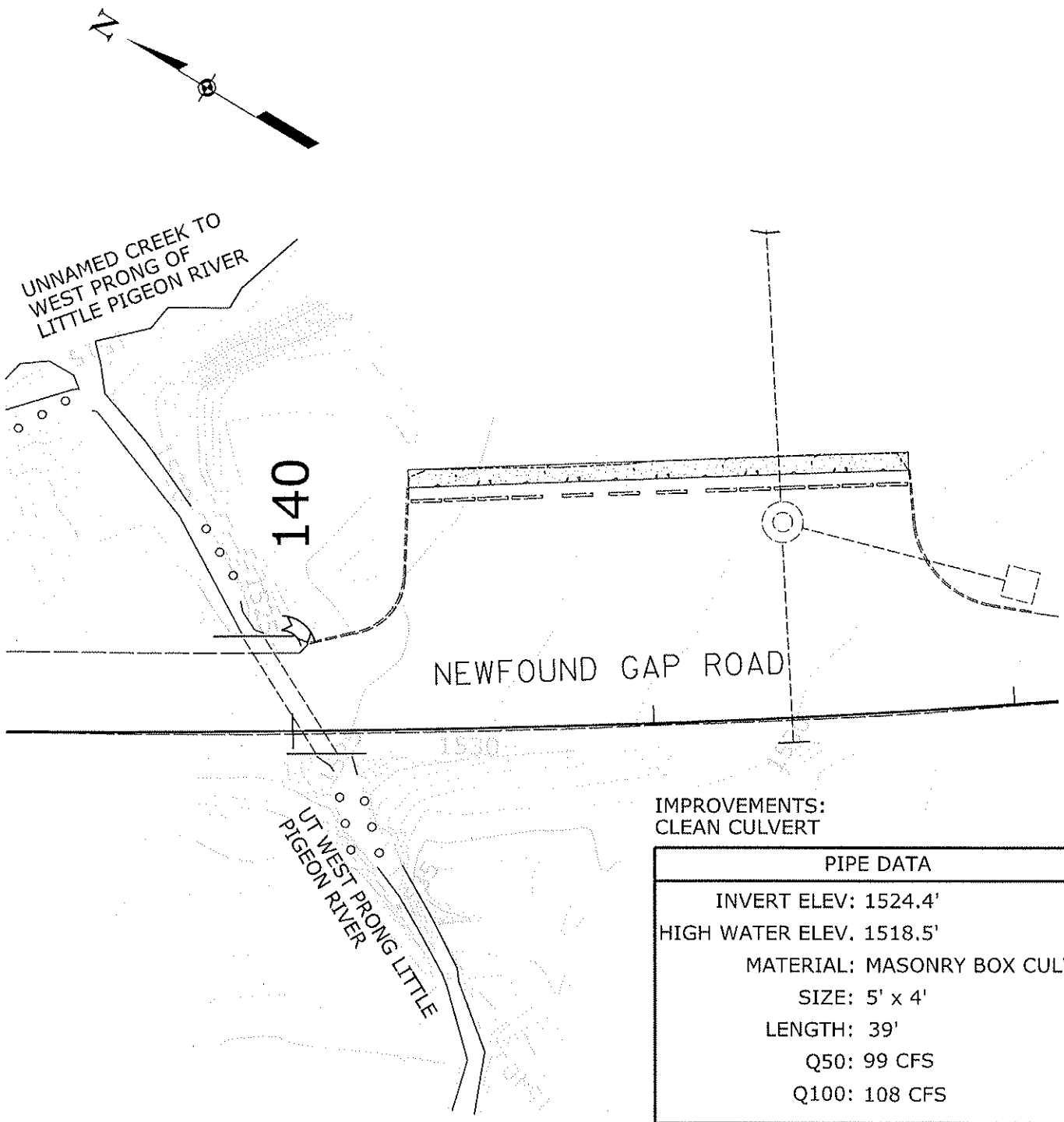
View of Culvert, Upstream

View of Culvert Channel, Looking Upstream

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 4 to 6 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream – work at crossing will include removing debris within the limits of the existing culvert.

Wetlands:
No wetlands are located within the vicinity of this crossing.



IMPROVEMENTS:
CLEAN CULVERT

PIPE DATA	
INVERT ELEV:	1524.4'
HIGH WATER ELEV.	1518.5'
MATERIAL:	MASONRY BOX CULV.
SIZE:	5' x 4'
LENGTH:	39'
Q50:	99 CFS
Q100:	108 CFS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

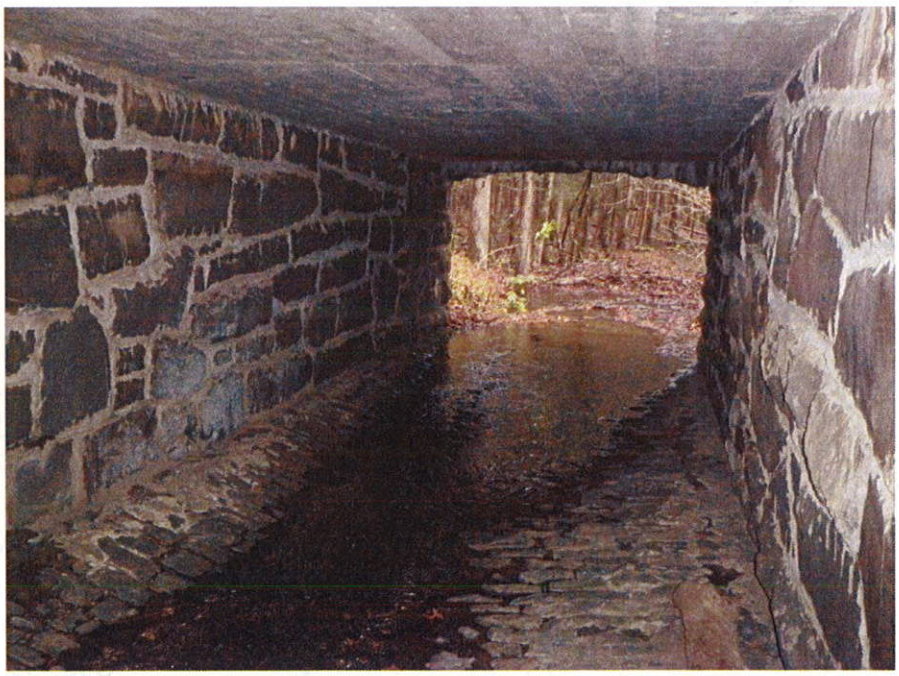
GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 140+05

0 40 80
SCALE IN FEET

Site #4: Sugarland Branch (LON: 83.5274 LAT: 35.6772)

Photographs:

View of Channel, Upstream

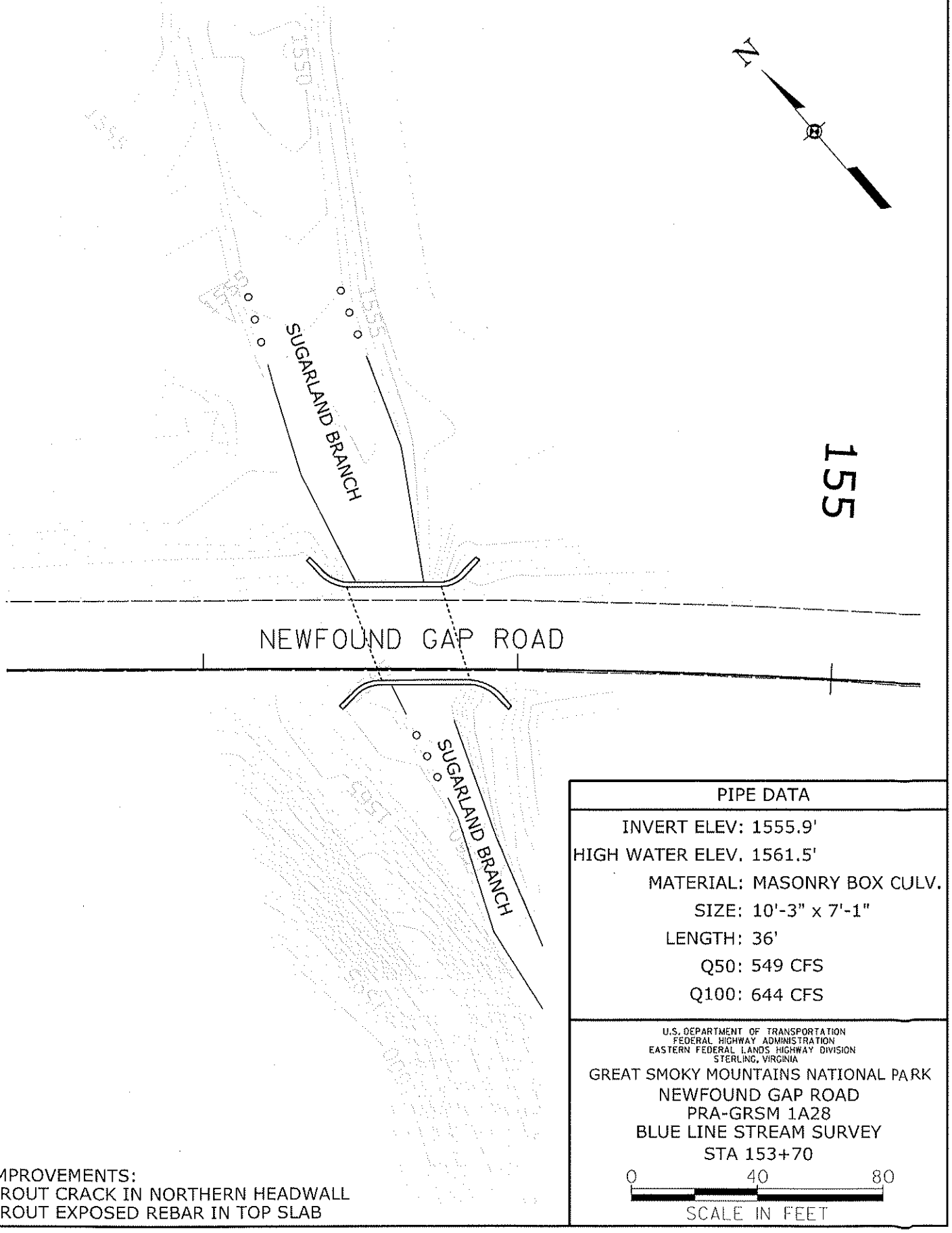


View of Culvert Channel (South Barrel), Looking Downstream

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 12 to 25 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream- work at crossing will include general maintenance to the culvert top slab and culvert/headwall connection.

Wetlands:
No wetlands are located within the vicinity of this crossing.



PIPE DATA	
INVERT ELEV:	1555.9'
HIGH WATER ELEV.	1561.5'
MATERIAL:	MASONRY BOX CULV.
SIZE:	10'-3" x 7'-1"
LENGTH:	36'
Q50:	549 CFS
Q100:	644 CFS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 153+70

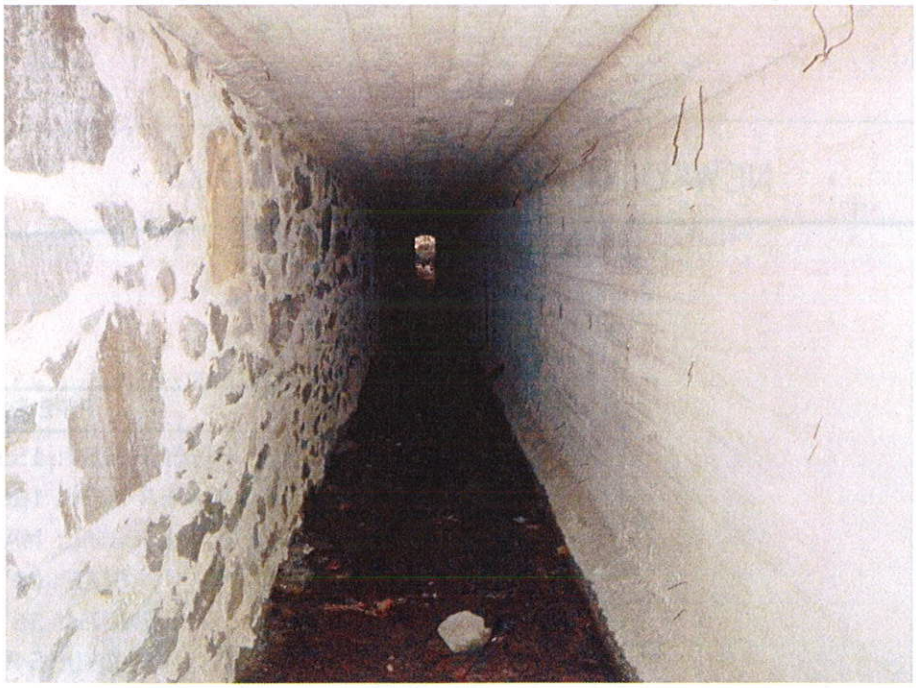
0 40 80
SCALE IN FEET

IMPROVEMENTS:
GROUT CRACK IN NORTHERN HEADWALL
GROUT EXPOSED REBAR IN TOP SLAB

Site #5: UT to West Prong of the Little Pigeon River (LON: 83.5263 LAT: 35.6651)

Photographs:

View of Channel, Downstream of Culvert

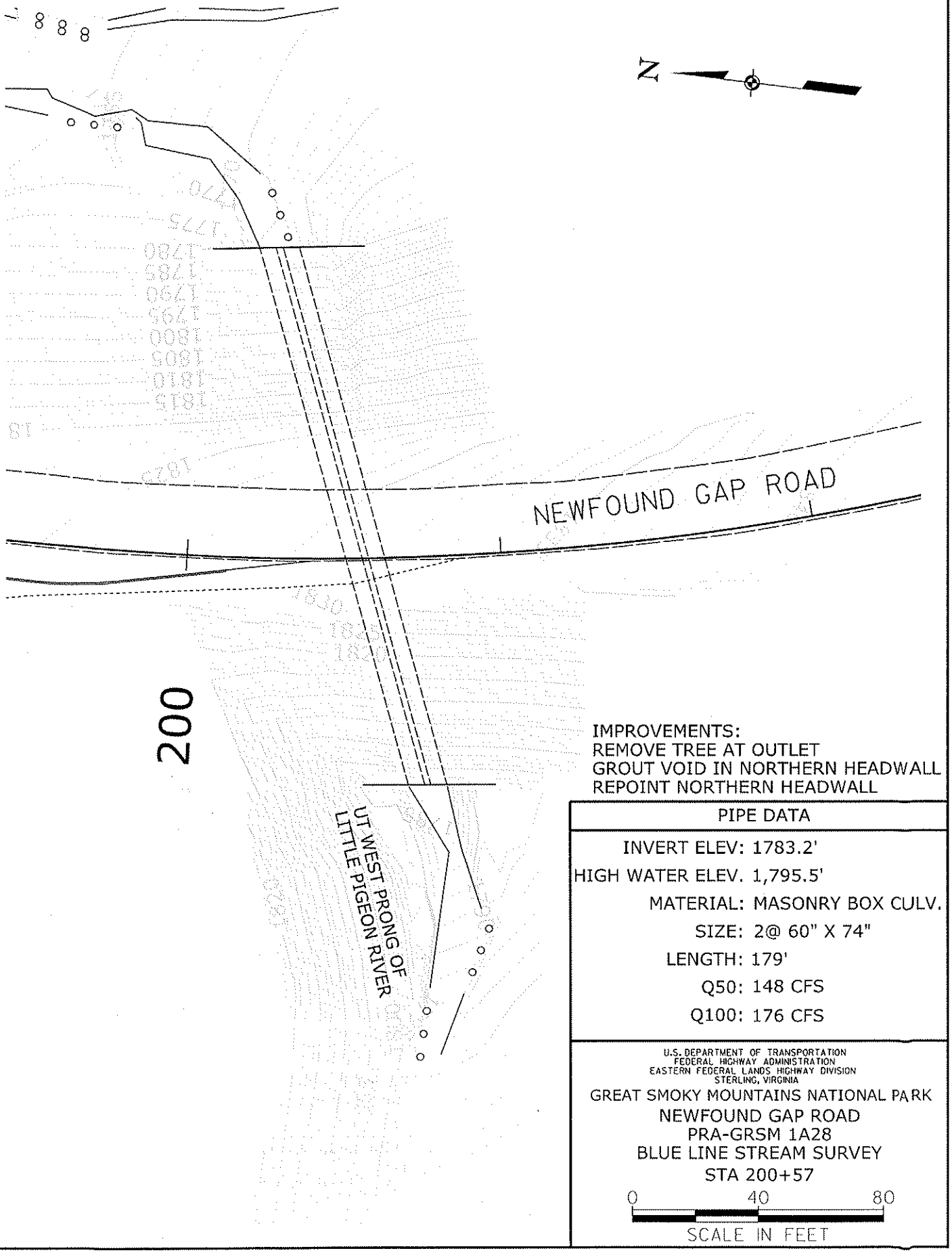


View of Culvert Channel (North Barrel), Looking Downstream

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 8 to 10 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream – work at crossing will include general maintenance to the culvert headwalls and a removal of tree in headwall on downstream end.

Wetlands:
No wetlands are located within the vicinity of this crossing.



IMPROVEMENTS:
REMOVE TREE AT OUTLET
GROUT VOID IN NORTHERN HEADWALL
REPOINT NORTHERN HEADWALL

PIPE DATA	
INVERT ELEV:	1783.2'
HIGH WATER ELEV.	1,795.5'
MATERIAL:	MASONRY BOX CULV.
SIZE:	2@ 60" X 74"
LENGTH:	179'
Q50:	148 CFS
Q100:	176 CFS

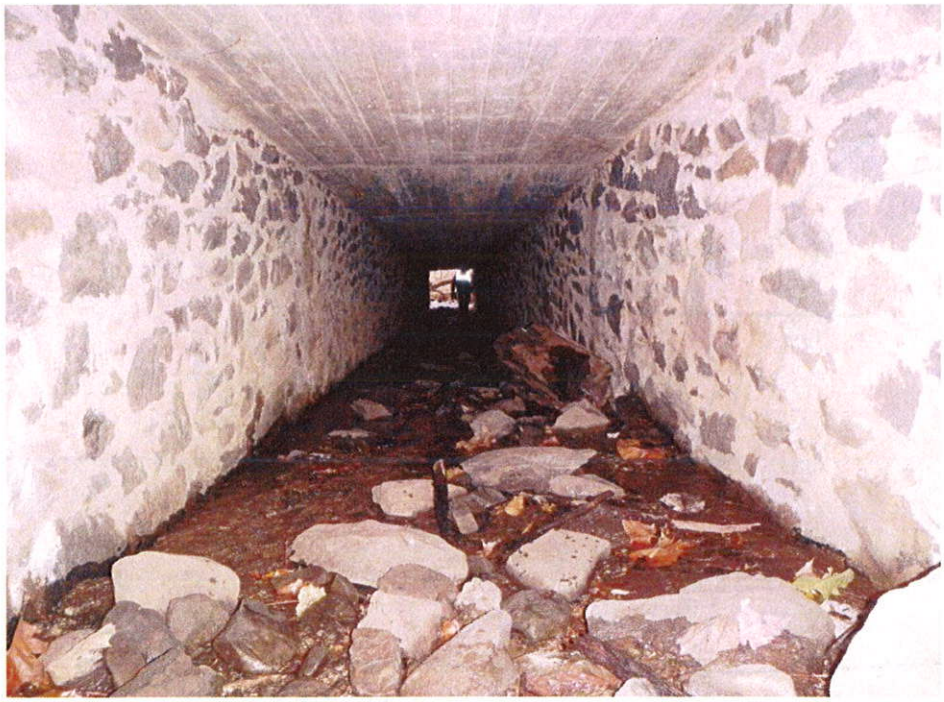
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 200+57

0 40 80
SCALE IN FEET

Site #6: Critter Branch (LON: 83.5188 LAT: 35.6580)

Photographs:



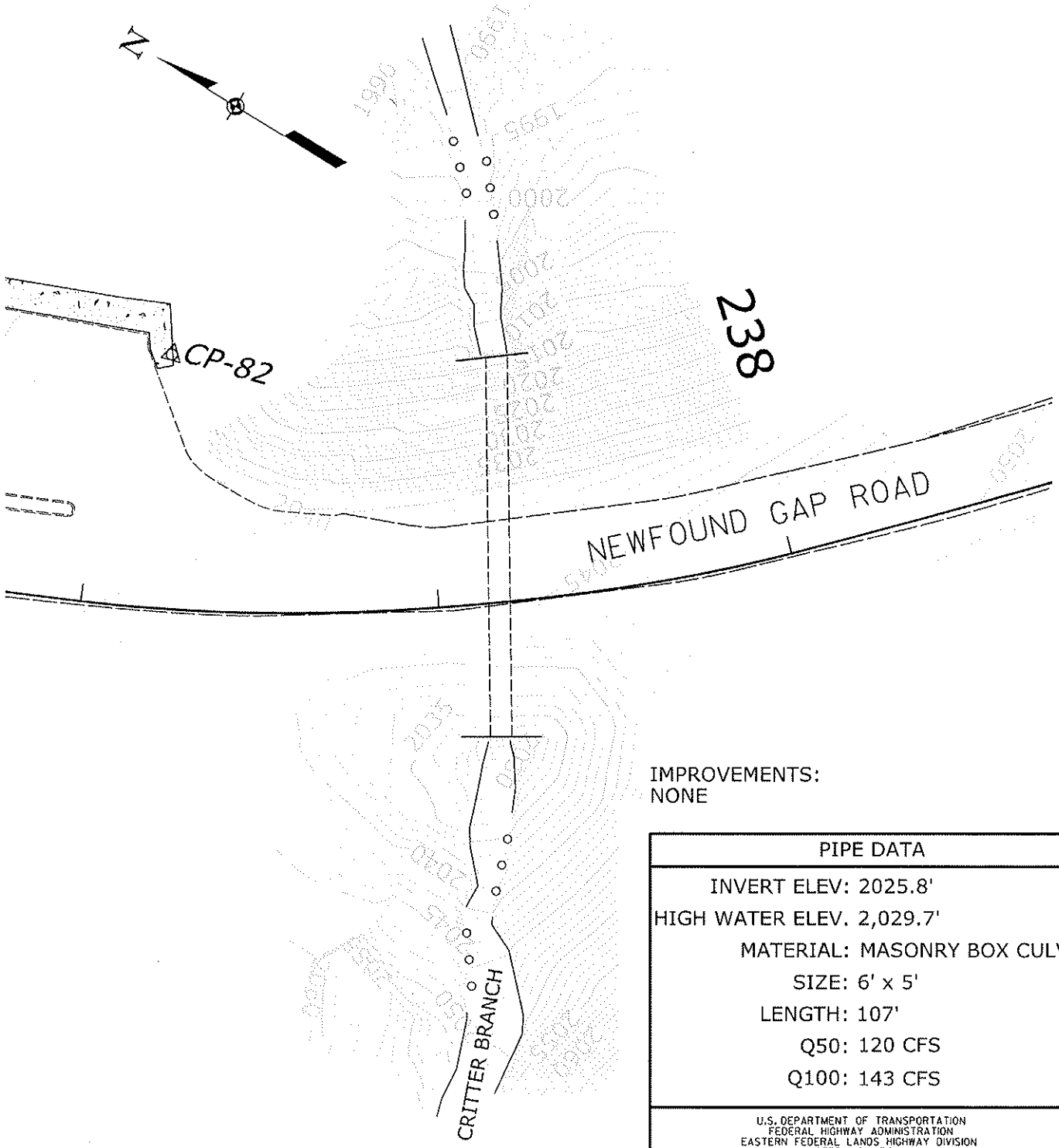
View of Culvert Channel, Looking Downstream

View of Channel, Downstream of Culvert

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 8 to 10 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream – no work will be completed at this crossing.

Wetlands:
No wetlands are located within the vicinity of this crossing.



IMPROVEMENTS:
NONE

PIPE DATA
INVERT ELEV: 2025.8'
HIGH WATER ELEV. 2,029.7'
MATERIAL: MASONRY BOX CULV.
SIZE: 6' x 5'
LENGTH: 107'
Q50: 120 CFS
Q100: 143 CFS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

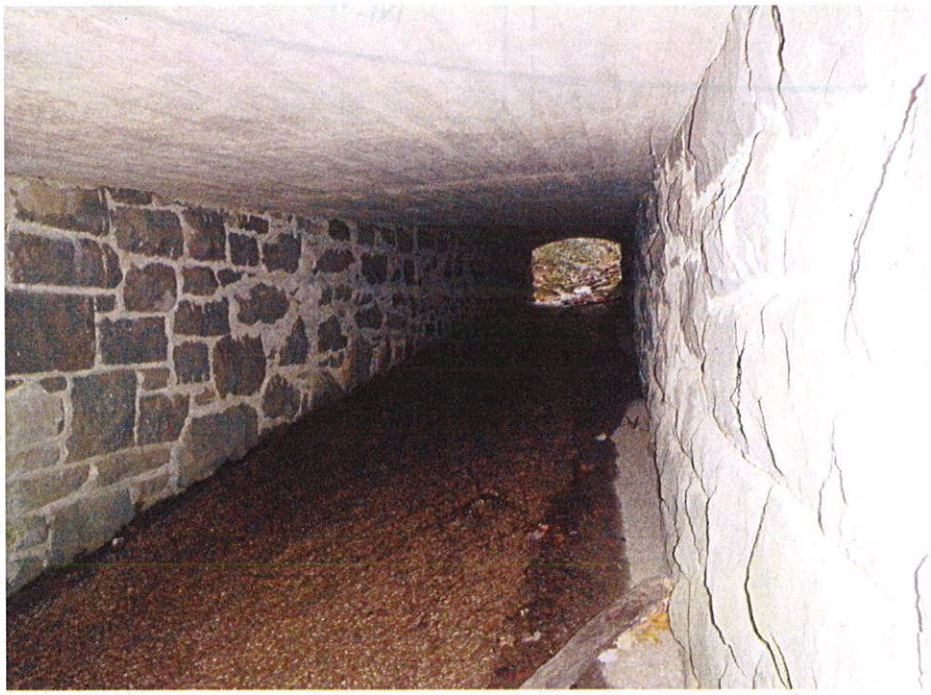
GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 237+17

0 40 80
SCALE IN FEET

Site #7: Hickory King Branch (LON: 83.5141 LAT: 35.6539)

Photographs:

View of Channel, Upstream of Culvert

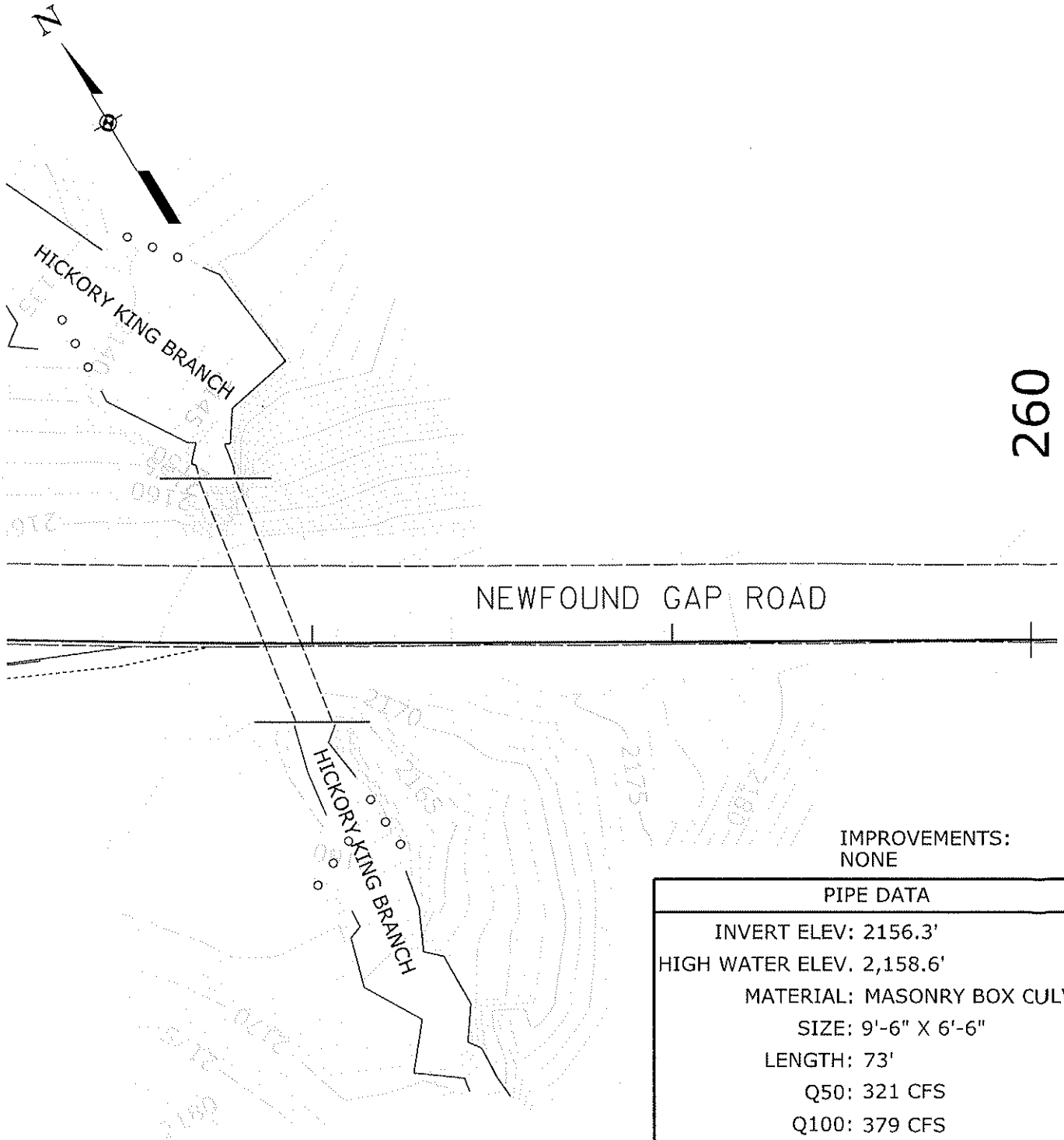


View of Culvert Channel, Looking Upstream

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 12 to 15 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream – no work will be completed at this crossing.

Wetlands:
No wetlands are located within the vicinity of this crossing.



IMPROVEMENTS:
NONE

PIPE DATA
INVERT ELEV: 2156.3'
HIGH WATER ELEV. 2,158.6'
MATERIAL: MASONRY BOX CULV.
SIZE: 9'-6" X 6'-6"
LENGTH: 73'
Q50: 321 CFS
Q100: 379 CFS

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FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

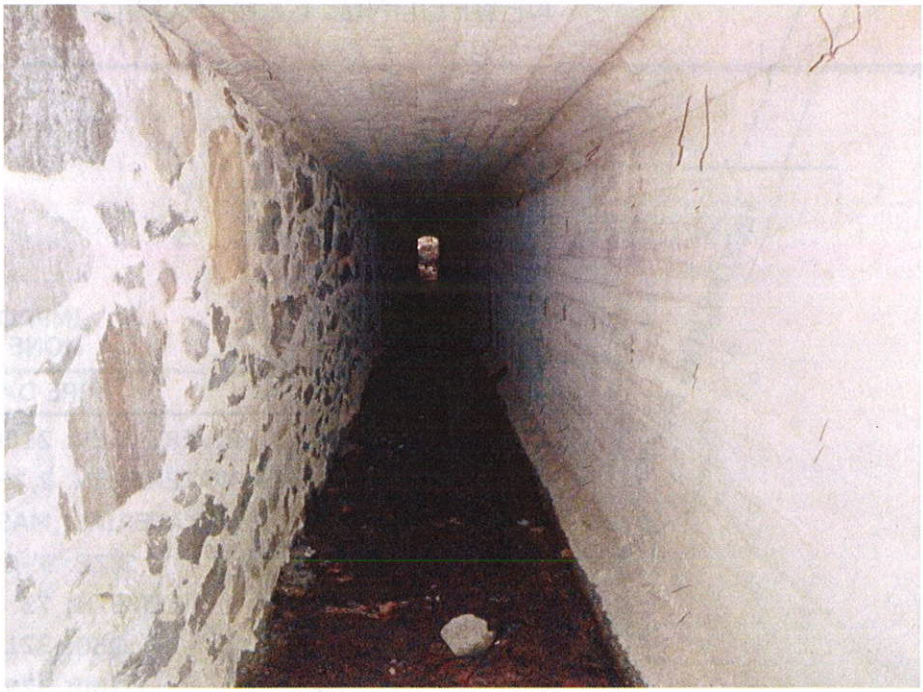
GREAT SMOKY MOUNTAINS NATIONAL PARK
NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 257+92

0 40 80
SCALE IN FEET

Site #8: Steep Branch (LON: 83.5051 LAT: 35.6432)

Photographs:

View of Channel, Downstream of Culvert

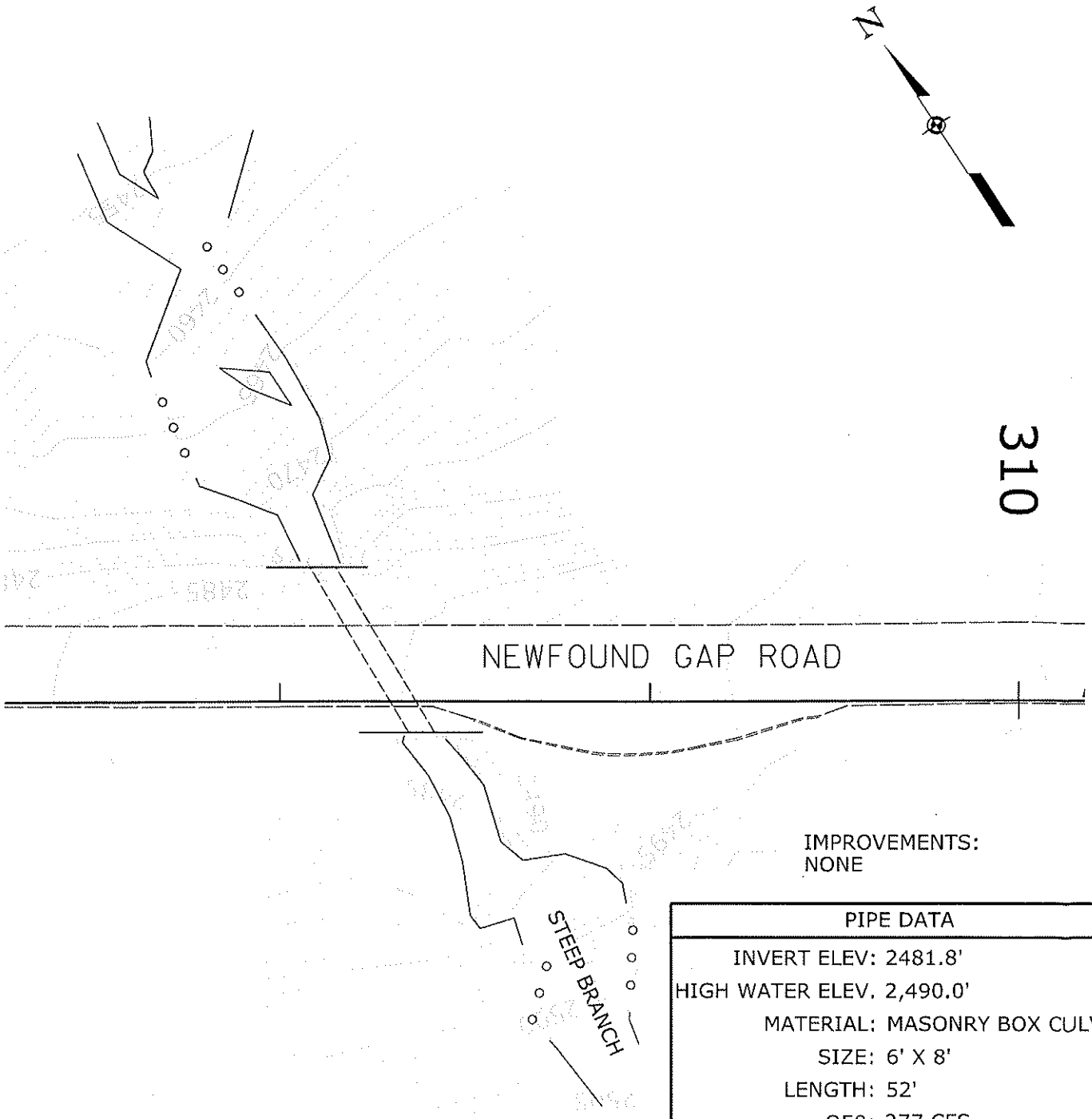


View of Culvert Channel, Looking Downstream

Narrative Description of Existing Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
The stream channel ranges from 10 to 12 feet in width in this area, with an average depth of approximately 4 to 6 inches. The substrate is gravel, cobble, and boulder. Woody riparian vegetation is present on both banks along the length of the channel outside the road corridor. The stream appears to be a stable, perennial channel.

Narrative Description of Proposed Stream (e.g., depth, length, average width, substrate, and riparian vegetation):
No impacts are proposed to the stream – no work will be completed at this crossing.

Wetlands:
No wetlands are located within the vicinity of this crossing.



IMPROVEMENTS:
NONE

PIPE DATA	
INVERT ELEV:	2481.8'
HIGH WATER ELEV.	2,490.0'
MATERIAL:	MASONRY BOX CULV.
SIZE:	6' X 8'
LENGTH:	52'
Q50:	277 CFS
Q100:	327 CFS

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STERLING, VIRGINIA

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NEWFOUND GAP ROAD
PRA-GRSM 1A28
BLUE LINE STREAM SURVEY
STA 308+33

0 40 80
SCALE IN FEET

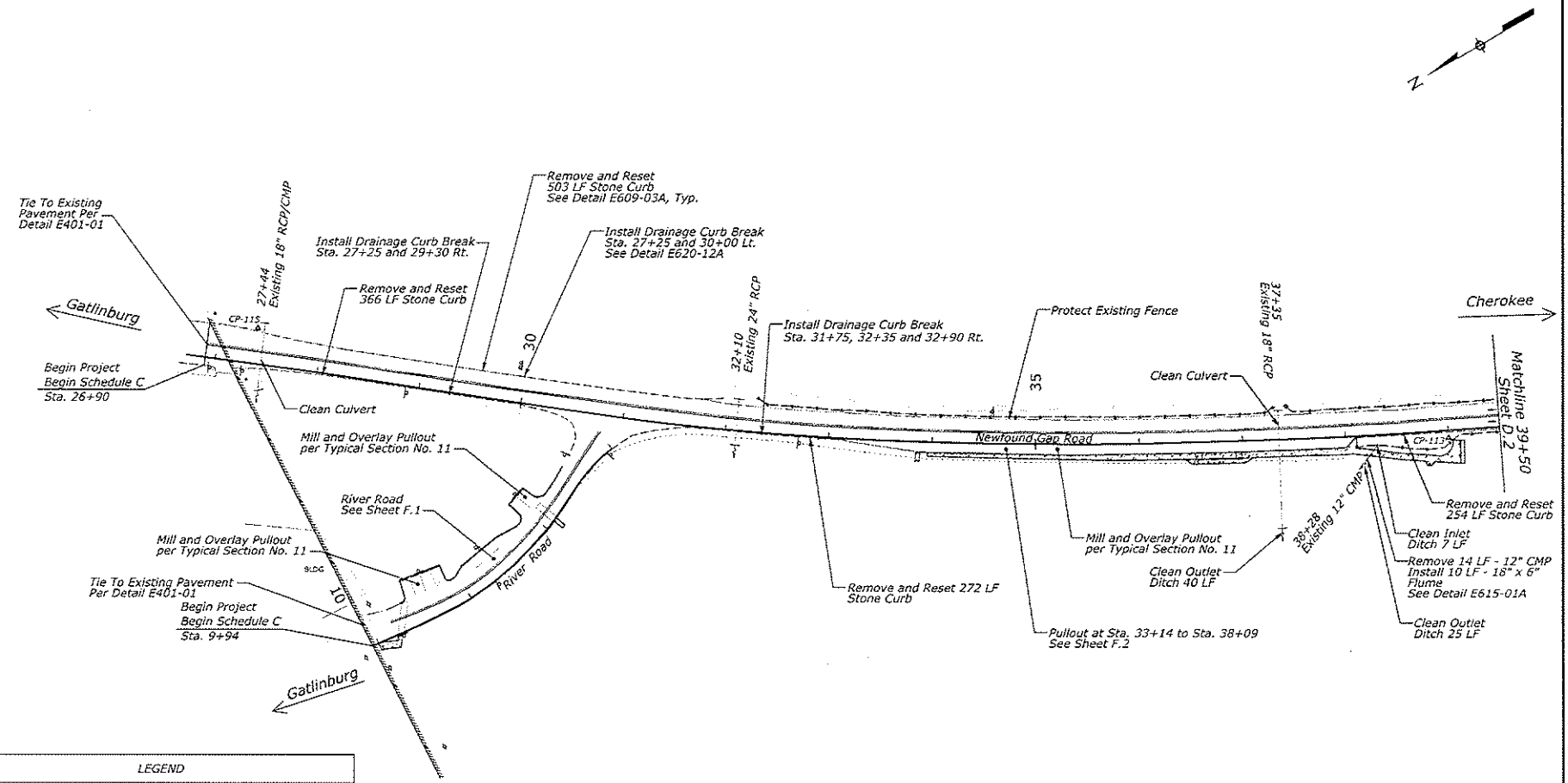
Section 9: Purpose and Justification
9. Describe the purpose for the proposed activity and overall project.
The purpose of the work is the rehabilitation of the existing road surface and culverts under the road. The existing structures have deteriorated and are in need of repair. The condition of the existing road surface has also led to hazardous conditions for motorists using the roadway.

Section 10: Alternatives
10. Describe all practicable alternatives considered, including what has been done to avoid or minimize impacts to streams or wetlands. For activities not covered by General Permit, each alternative must include the following: (1) feasibility, (2) environmental consequences and (3) social and economic benefits of each alternative.
Construction activities associated with the proposed road improvements are all required for maintenance and/or safety related reasons. The improvements will not increase the number of travel lanes or the true vehicular capacity of the roadway. Impacts to streams associated with the work will be limited to rehabilitation of the existing culverts under the road. No new stream crossings will be added as part of the project.

Section 11: Mitigation
11.1 A detailed discussion of the proposed mitigation, if required. 11.2 If you believe mitigation is not required, state the reason or cite the regulation to support this position. 11.3 A detailed discussion of why you believe the mitigation would result in no net loss of resource value. 11.4 A detailed description of the proposed monitoring plan for the mitigation site 11.5 A discussion of long term protection measures for the mitigation site.
No mitigation is proposed for the work. All activities will be limited to maintenance work on existing structures.

Section 12: Technical Information
12.1 Detailed plans, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans need to include dimensions of the existing and proposed stream or wetland such as depth, length, average width, substrate and riparian vegetation. 12.2 If mitigation is proposed, submit detailed plans, blueprints, or legible sketches of the proposed mitigation. 12.3 For both the proposed activity and mitigation, provide a discussion regarding the sequencing of events. 12.4 Location and type of erosion prevention and sediment control measures for the proposed alterations. 12.5 A discussion on how the proposed activity will be performed (construction methods). 12.6 A copy of all hydrologic or jurisdictional determination documents issued for the water resources on the project site.

NPS NO.	REG	STATE	PROJECT	SHEET NO.
133 / 121491	SE	TN	PRA-GRSM 1A28	D.1



LEGEND

NOTE:

Baseline stationing is based on wheel measurements along right side edge of pavement. The pavement has been marked with stations every 100 feet and PK nails every 500 feet.

Existing utilities based on Subsurface Utility Engineering Survey Quality B.

Approximate Location of Full Depth Pavement Reconstruction. See Typical Section, Detail No. 1. Verify with CO Prior to Construction.

Approximate Location of Pavement Undercut Patch Verify with CO Prior to Construction. See Detail 428-A.

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LINE GRAPH SCHEDULE C

Station 26+90 to Station 39+50

NPS PMIS NO.: 177321

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