

# Inter-Agency Project Update Meeting

**NC 143 Improvements**

**From West Buffalo Creek to NC 143 Business, west of Robbinsville**

**Graham County**

WBS No. 34508.1.1

STIP Project No. R-2822B



January 22, 2025, at 1:00 pm  
North Carolina Department of Transportation



## 1.0 Project Description

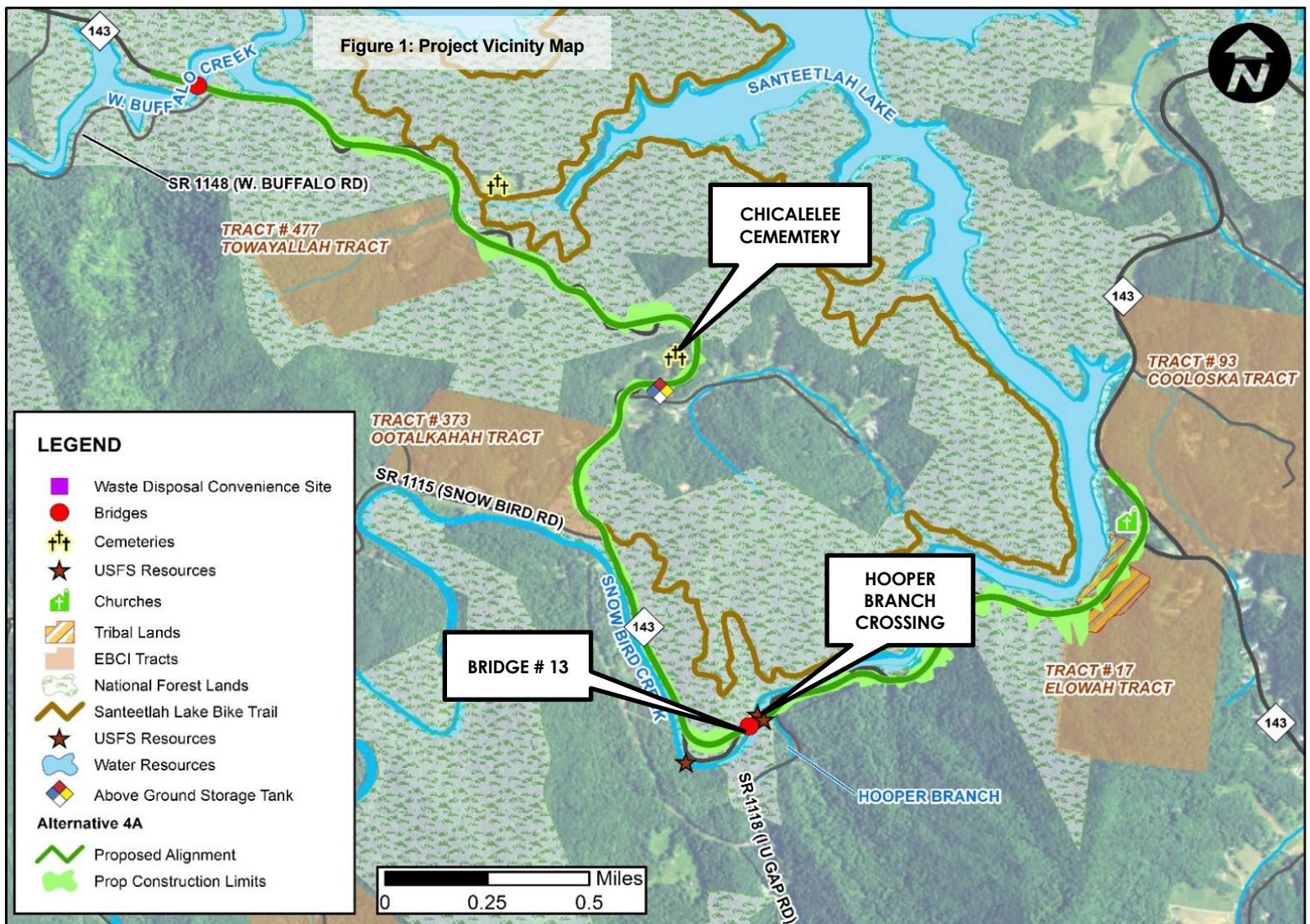
### 1.1 Purpose of Today's Meeting

The purpose of today's meeting is to update our Tribal and Resource Agency partners on the status of the NC 143 improvements and introduce the project to any new team members. We will also discuss how we plan to progress the project through the remainder of the Merger Process and Final Design. The key items of discussion include:

- Hooper Branch Culvert / Bridge # 13
- Chickalelee Cemetery Retaining Wall
- Archaeological Site #31GH227 Retaining Wall
- Endangered Species Surveys and Permit Drawings / Stream and Wetland Delineations schedule

### 1.2 Project Description

The project proposes to make safety improvements along the 4.5-mile-long segment of NC 143 from West Buffalo Creek to NC 143 Business, west of Robbinsville in Graham County by improving horizontal and vertical geometry. The project location is shown below in **Figure 1**. This project is included in the 2020 - 2029 State Transportation Improvement Program (STIP) as Project # R-2822B. The State Minimum Criteria Determination Checklist (MCDC) was signed in **June 2022**.



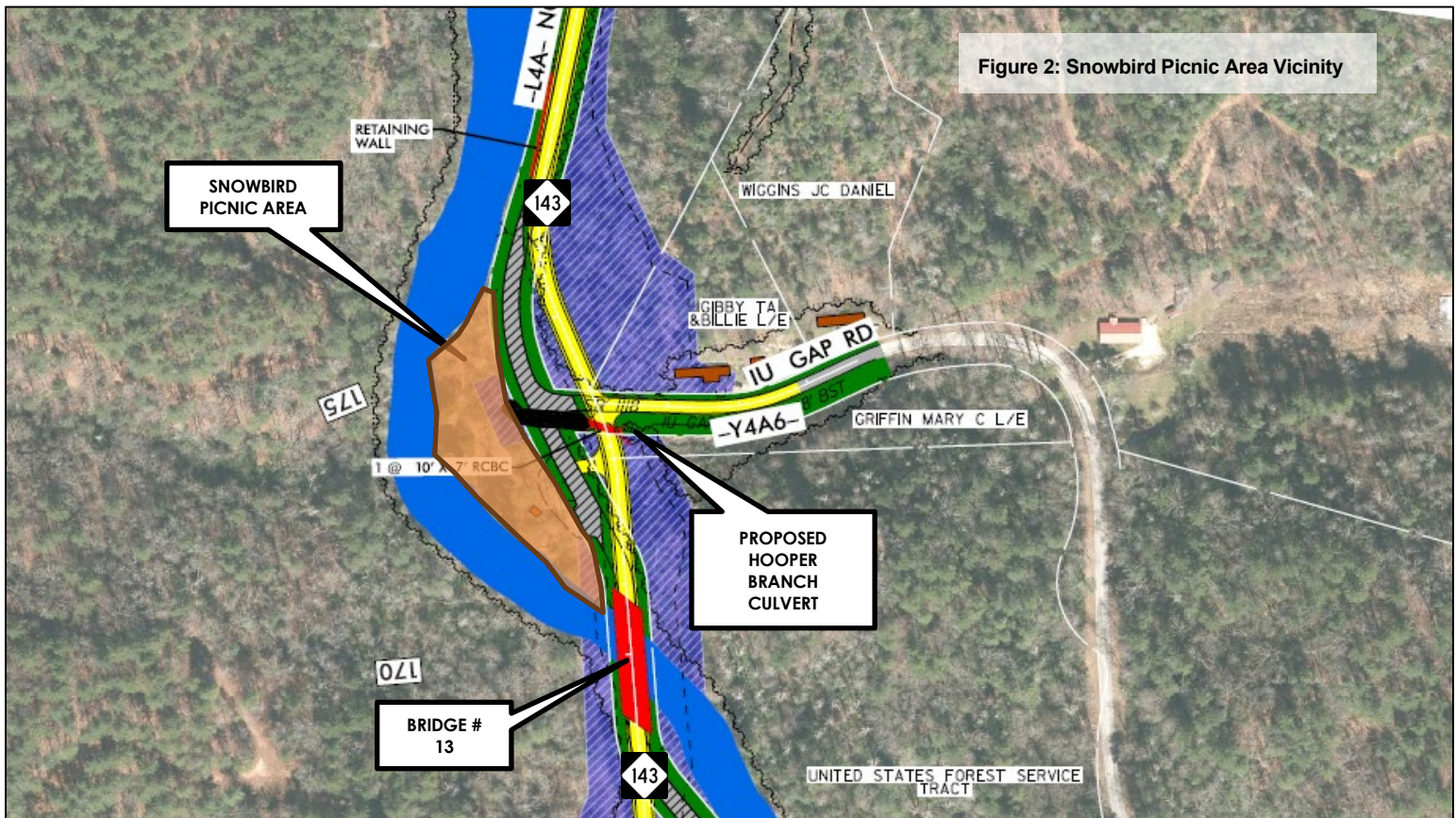


## 2.0 Project History

See **Appendix A** for detailed project history.

## 3.0 Hooper Branch Culvert Replacement / Bridge #13

- During the **November 2018 CP #2A Meeting**, the replacement of Bridge #13 over Snowbird Creek was added to the project. The replacement bridge will be constructed at the location of the existing bridge using staged construction. Both eastbound and westbound approaches will be realigned.
- Due to the staged construction for Bridge #13, a new 60-foot-long hydraulic structure was recommended at Hooper Branch. **Figure 2** shows the proposed realignment of NC 143. **Figure 3** shows the existing Hooper Branch culvert.





- The US Fish and Wildlife Service (USFWS) and the US Forest Service (USFS) requested a bottomless hydraulic structure be evaluated at the Hooper Branch crossing. NCDOT made the following commitment. *“NCDOT will evaluate the feasibility of a bottomless hydraulic structure at the Hooper Branch crossing. Geotechnical information is required to make a final determination. NCDOT will provide the Merger Team with final hydraulic recommendations once information is available.*
- During the **June 2022 Revisited CP 2A / CP 4B Meeting**, NCDOT advised that geotechnical studies indicated a bottomless culvert would not be feasible due to the depth of bedrock at the site.
  - At the meeting USFS requested NCDOT investigate constructing a single-barrel culvert with 20-foot clear width and baffles and sills.
- Per correspondence with NCDOT Structures Management Unit, a cast-in-place single-barrel 20' x 7' culvert with baffles is proposed to be constructed along the realigned NC 143. **Figure 4** shows the cross section of the proposed culvert.
- **Figure 5** shows the recommended hydraulic design in the vicinity of the Hooper Branch crossing.

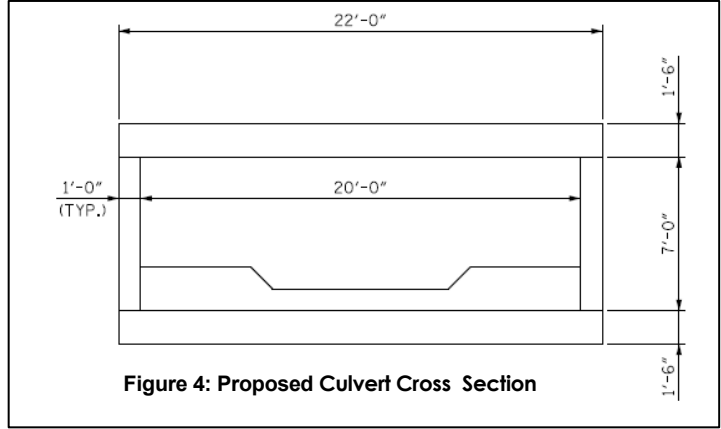
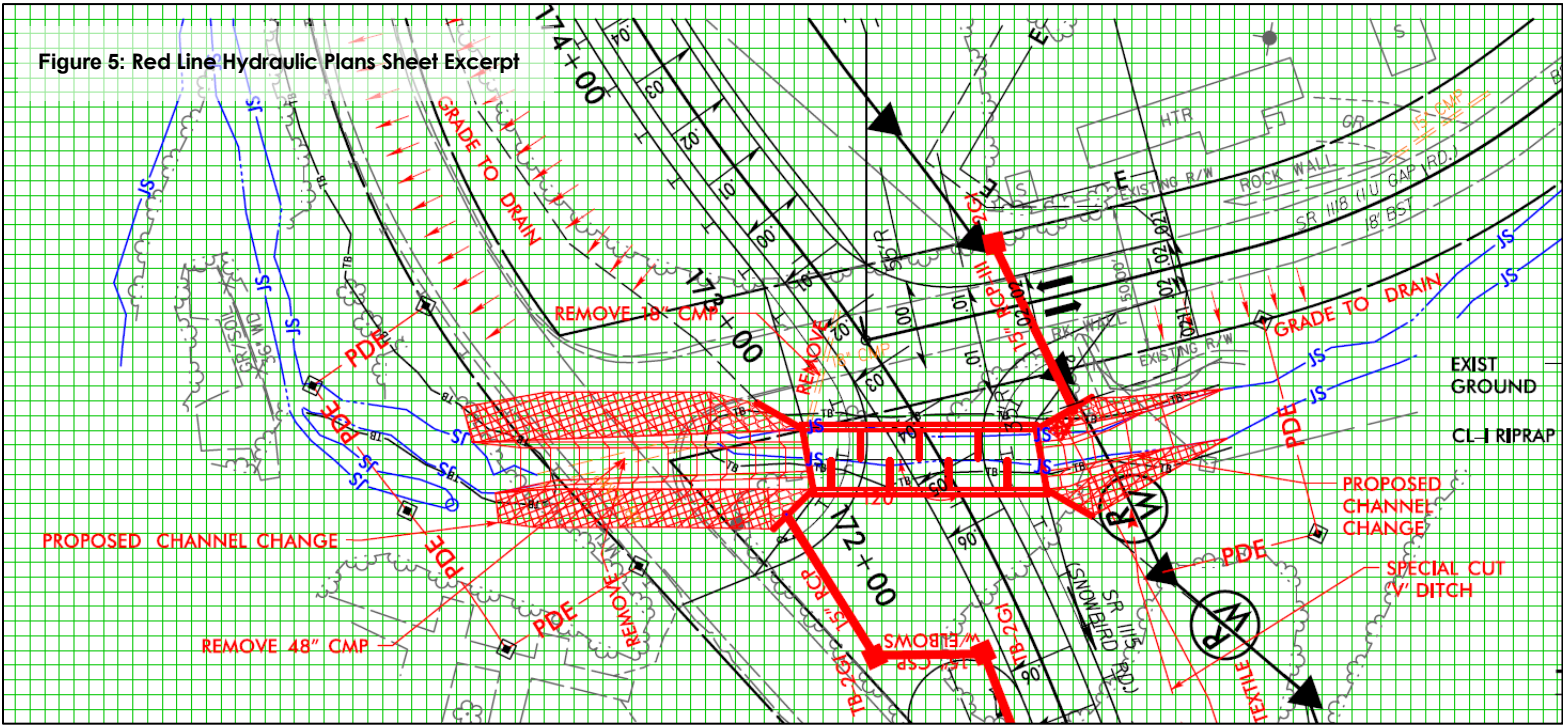
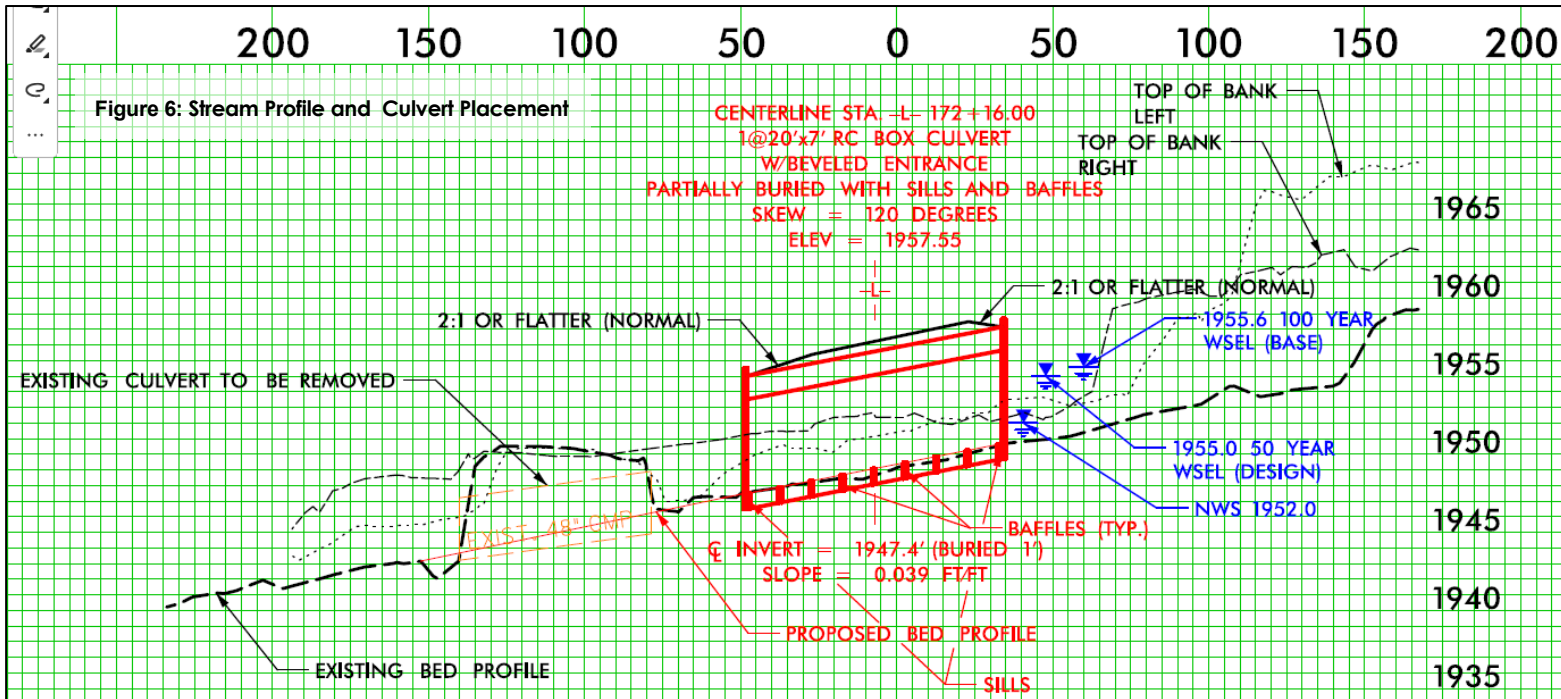


Figure 4: Proposed Culvert Cross Section



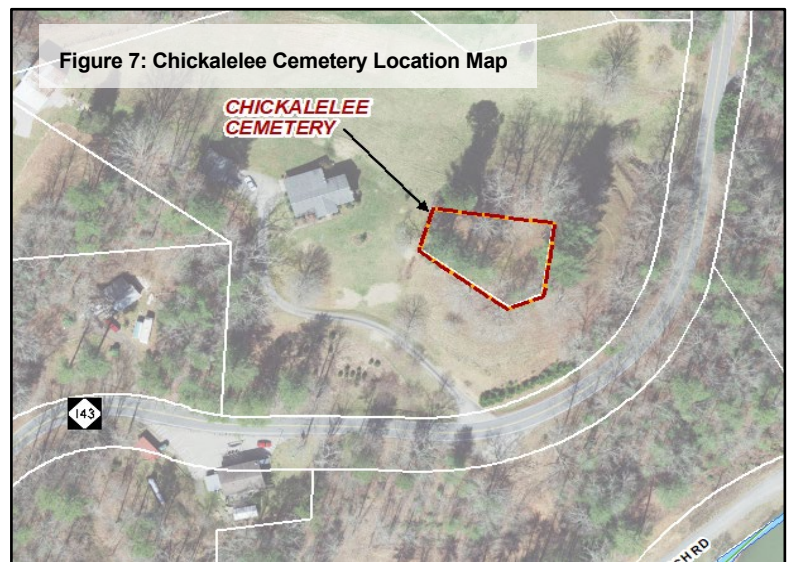
- **Figure 6** is an excerpt from the Culvert Conceptual Design showing the stream profile and the placement of the proposed new culvert in relation to the existing roadbed and culvert

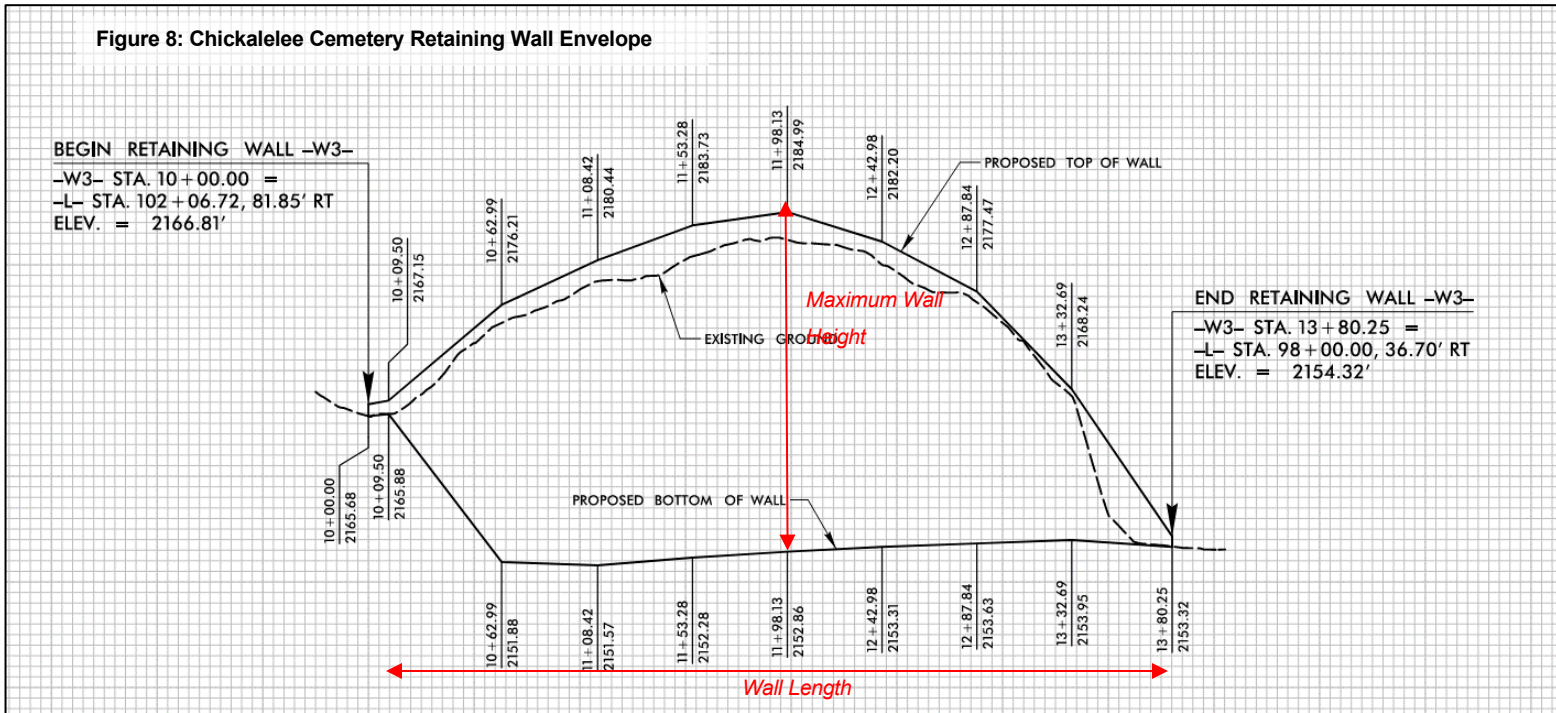


### 3.0 Cultural Resources

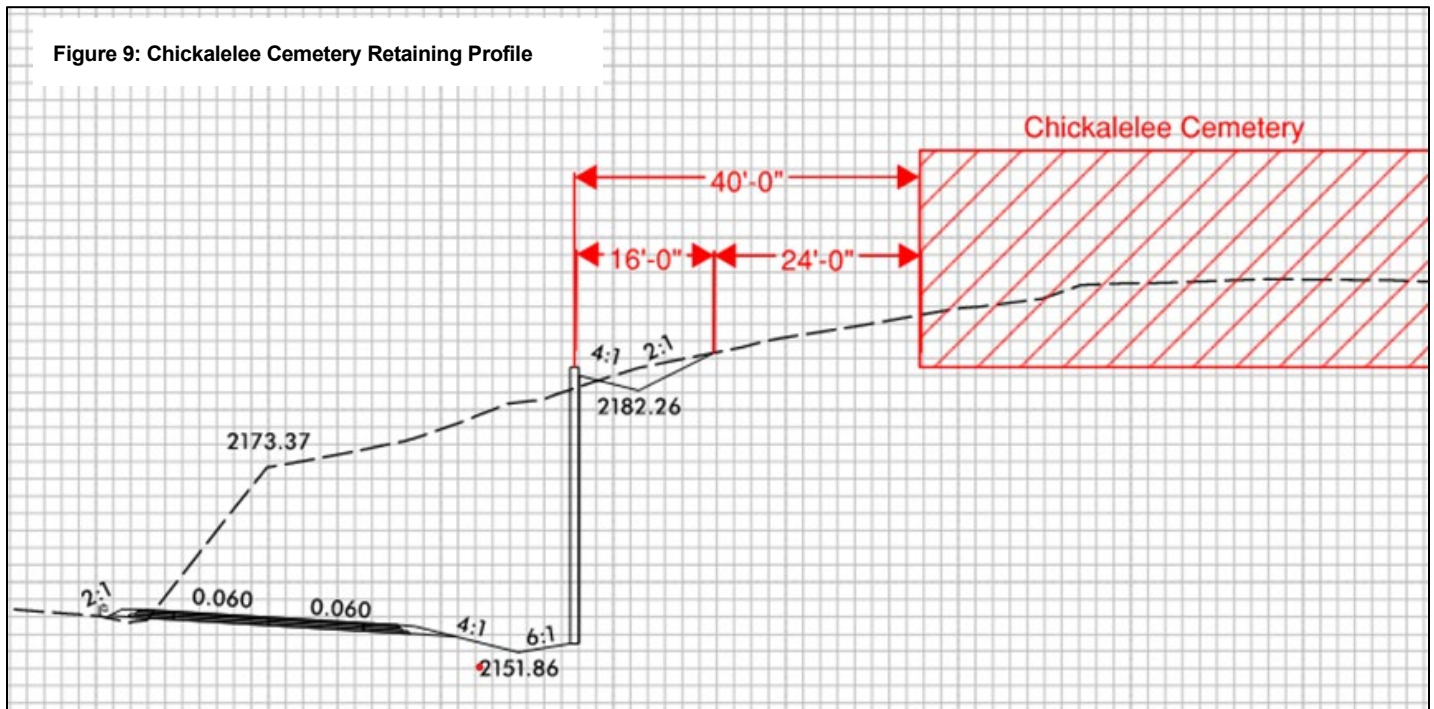
#### 3.1 Chickalee Cemetery

- The Chickalee Cemetery is located just north of the NC 143/Buchanan Branch Road intersection (See Figure 7).
- The cemetery sits on a hill overlooking NC 143, which passes east and south of the site. NC 143 will be realigned to meet a minimum 35-mph design speed in the vicinity of the Chickalee Cemetery. This will require a “cut” into the hill that the cemetery sits upon.
- During the **February 19, 2021, Section 106 Effects Meeting**, USACE and SHPO concurred on a No Adverse Effect determination based on the following conditions.
  - Construction of a 385-foot long retaining wall with a maximum height of 25-feet.
  - Archaeological monitoring by and ECBI THPO archaeologist or representative during construction.
  - Addition of an aesthetic façade on the retaining wall.
  - Landscaping plan to determine the type of vegetation that can be planted behind the retaining wall.
  - Staging of construction equipment is restricted at the cemetery site.
- Based on geotechnical studies, the proposed retaining wall will be approximately 380 feet in length with an average height of 24 feet. The maximum height of the wall is 30 feet. **Figure 8** shows the proposed design and wall envelope.



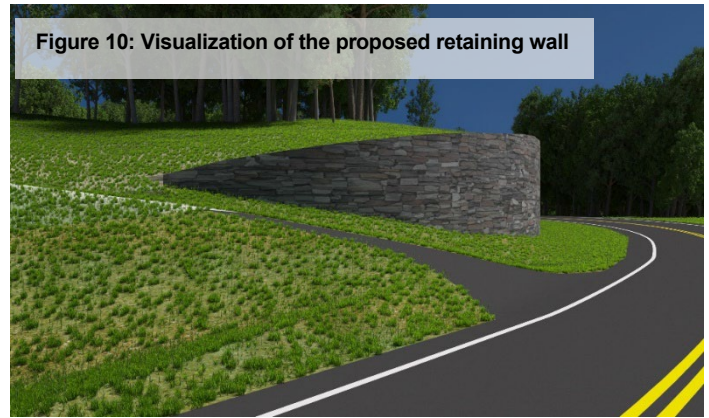


- Per **Figure 9**, the proposed construction of the wall extends 16-feet behind the retaining wall, which fits within a proposed right-of-way measuring 25 feet from the wall. The height of the wall will be increased to 30 feet. However, the wall will not encroach any closer than the measurements that were presented during the February 2021 Section 106 Effects Meeting.





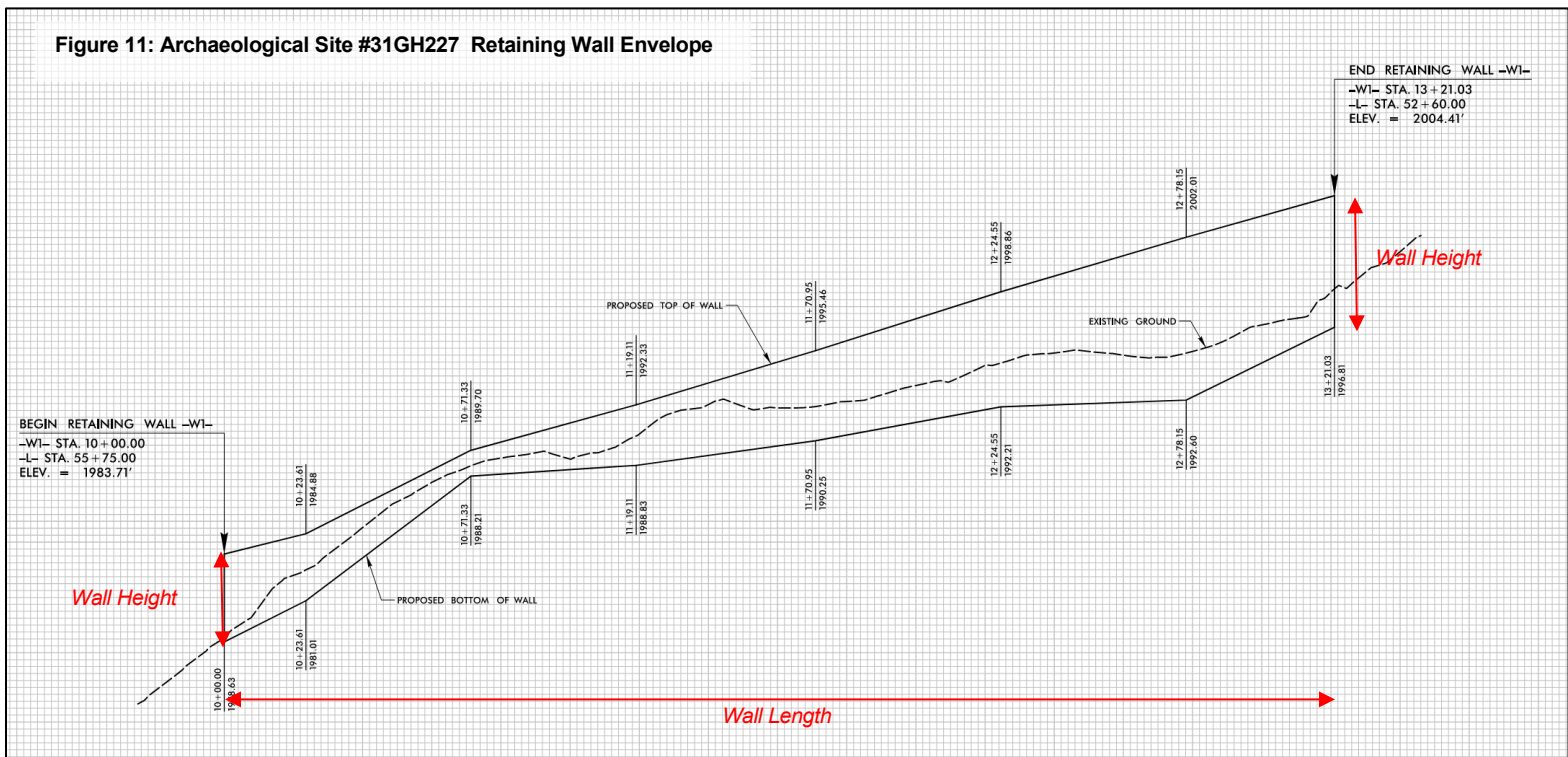
- **Figure 10** shows a visualization of the proposed retaining wall.
- The Section 106 Effects determination conditions noted *Archaeological monitoring by and ECBI THPO archaeologist or representative during construction.*
  - NCDOT requests authorization to use an EBCI – approved firm to conduct monitoring during construction.



### 3.2 Archaeological Site #31GH227 Avoidance

- The proposed project will include a shored Mechanically Stabilized Earth (MSE) retaining wall to avoid this archaeological site. The wall is currently planned to be approximately 450 feet long and averages 6 feet in height. The maximum height of the wall is 20 feet. **Figure 11** shows the proposed design and retaining wall envelope.

**Figure 11: Archaeological Site #31GH227 Retaining Wall Envelope**



- **Figure 12** shows the proposed retaining wall and roadway typical section in relation to the archaeological site boundary.

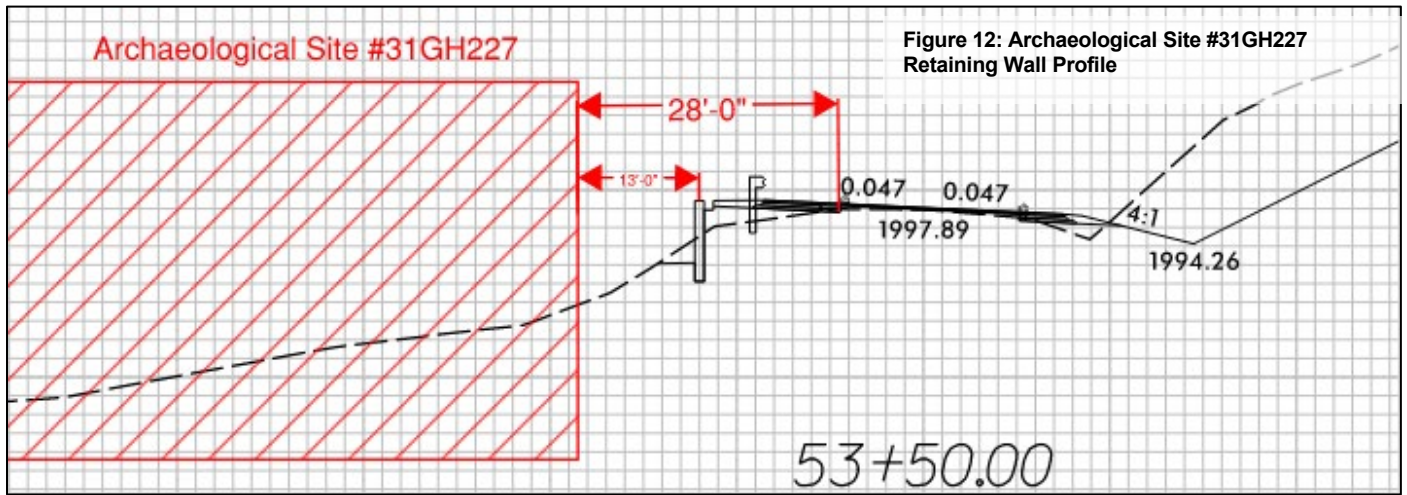


Figure 12: Archaeological Site #31GH227 Retaining Wall Profile

### 3.3 Other Tribal Coordination

- Newly identified Traditional Cultural Property (TCP)
  - In 2024, NCDOT was notified of a TCP near the Waste Convenience Site.
  - NC 143 will be realigned in the vicinity of the TCP, requiring additional Section 106 coordination and an effects determination.
- Property access for geotechnical field investigations
- Right-of-Way Acquisition

## 4.0 Additional Discussion Items

### 4.1 Threatened and Endangered Species Surveys

- USFS Species of Conservation Concern Surveys
  - Surveys were completed in areas where geotechnical borings were required.
  - Additional surveys for the remainder of the project study area.
- Virginia Spiraea – Spring 2025 – Coordination w/ USFS to receive the forms to complete the Species of Concerns Surveys.
- Bat Surveys
  - Completed in 2019
  - Additional bat surveys to be completed in 2025. A May Effect Not Likely to Adversely Affect biological conclusion anticipated.

### 4.2 Concurrence Point 4B – 30% Hydraulic Design

- Updated stream and wetland field verifications to be completed in Spring 2025.
- Based on the schedule for updated stream and wetland delineations, the CP 4B Meeting will be conducted in Spring/Summer 2025.

### 4.3 Upcoming US Forest Service Coordination

- Snowbird Picnic parking lot and access revisions (see Figure 13).
- Right of Way Acquisition



Figure 13: Snowbird Picnic Area access





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**5.0 Project Milestone Schedule**

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<b>May 2025</b>	Concurrence Point 4B – 30% Hydraulics Design
<b>Spring - Summer 2025</b>	Revisit Section 106 Effects
<b>Summer 2025</b>	Follow up USFS Coordination
<b>Summer 2025</b>	Permit Agency Review Meeting (Division 14 Meeting in lieu of CP 4C Meeting)
<b>Summer 2025</b>	Right-of-Way Acquisition
<b>Summer 2027</b>	Construction

## **APPENDIX A: PROJECT HISTORY SUMMARY**

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<p><b>January 23, 2007</b></p>	<p>Concurrence Point 1 (Purpose and Need)  <b>“The purpose of this action is to improve safety along NC 143 using context sensitive solutions.”</b></p> <ul style="list-style-type: none"> <li>• Project Study Area defined (see Figure 1)</li> </ul>
<p><b>December 16, 2010</b></p>	<p>Concurrence Point 2 (Detailed Study Alternatives)</p> <ul style="list-style-type: none"> <li>• The project study area was revised to encompass the alignment for Alternative 2, which was the Section 4(f) Avoidance Alternative. This alternative was developed to avoid impacts to the Snowbird Picnic Area.</li> <li>• Alternative 1, 2, and 4 were carried forward for detailed study.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Alternative 1:</b> Proposes to widen existing NC 143 with substantial horizontal alignment improvements from West Buffalo creek to just north of NC 143 Business. This alternative has a design speed of 45 mph and includes realignment of the NC 143 intersection with NC 143 Business near the eastern project terminus.</li> <li>• <b>Alternative 2,</b> proposes to widen NC 143 with horizontal alignment improvements from West Buffalo creek to Carver cemetery and construct NC 143 along a new alignment to the north and east of the existing road with a new 640-long crossing of Santeetlah Lake from Carver cemetery to north of Jackson Branch Road (SR 1149). This alternative has a design speed of 45 mph.</li> <li>• <b>Alternative 4 (Transportation System Management Alternative),</b> proposes to improve NC 143 without vertical or horizontal alignment improvements from West Buffalo Creek to NC 143 Business. The alternative consists solely of pavement and shoulder widening. Proposed total pavement width of 22 feet (two 11-foot travel lanes) and 4-foot (usable width) grassed shoulders<sup>4</sup>. No improvements would be made to NC 143 intersection with NC 143 Business near the eastern project terminus. This alternative has a design speed of 45 mph.</li> </ul>
<p><b>May 8, 2013</b></p>	<p>Concurrence Point 2A (Bridging Decisions and Alignment Review)</p>
<p><b>February 2015</b></p>	<p>Draft Visual Impact Assessment submitted to the USFS for review.</p>
<p><b>March 25, 2015</b></p>	<p>Project Coordination Meeting</p> <ul style="list-style-type: none"> <li>• Informed the Merger Team of the reprioritization of the project which resulted in the project being unfunded and going on hold.</li> <li>• Draft Visual Impact Assessment was reviewed by the USFS.</li> </ul>
<p><b>July 20, 2017</b></p>	<p>Merger Update Meeting</p> <ul style="list-style-type: none"> <li>• Project funding shifted from federal to state – Section 4(f) USDOT Act no longer applies to the project.</li> <li>• <b>NCDOT requested the introduction of an alternative using 3-R guidelines (requires revisiting CP 2/2A).</b></li> <li>• <b>USACE (lead agency) recommended revisiting CP 1 to reconstruct the purpose and need statement to incorporate metrics into the concurrence form and establish safety screening criteria.</b></li> </ul>
<p><b>March 22, 2018</b></p>	<p>Concurrence Points 1,2, and 2A revisited</p> <ul style="list-style-type: none"> <li>• Revise Purpose and Need and introduce Alternative 4A</li> </ul> <p><b>“The purpose of the project is to improve safety by achieving the minimum geometric standards consistent with the facility’s functional classification.”</b></p> <ul style="list-style-type: none"> <li>• Retaining Bridge #13 was recommended.</li> </ul>



- The 48-in corrugated metal pipe along Hooper Branch would be removed and replaced with at 115-foot, 8x8 reinforced concrete box culvert (RCBC).

- **Alternative 1:** Minimum design speed of 45-mph proposed total pavement width of 22 feet (two 11-foot travel lanes) and 6-foot-wide shoulders (4-foot paved) in each direction. (see Figure 2)
- **Alternative 2-Revised:** Retained new alignment segment with a new 640-foot-long crossing of Santeetlah Lake. Minimum design speed of 35-mph and widen NC 143 to have 11-foot travel lanes and 6-foot-wide shoulders (4-foot paved) in each direction. (see Figure 3)
- **Alternative 4:** This alternative does not, modify any of the horizontal or vertical curves along NC 143. Proposed to widen the roadway (consisting of two 11-foot travel lanes and 6-foot-wide shoulders (4-foot paved)) from West Buffalo Creek to just north of NC 143 Business. (see Figure 4)
- **Alternative 4A:** Proposed to widen existing NC 143 from West Buffalo Creek to just north of NC 143 Business. Proposed improvements include upgrading NC 143 to ensure that all vertical and horizontal curves have a minimal design speed of 35-mph. Widening improvements include two, 11-foot lanes and 6-foot-wide shoulders (4-foot paved), which is consistent with the minimal recommendations for a Rural Collector in the NCDOT 3-R guidance.

**November 2018**

Concurrence Point 2A Revisited

- **Replacement of Bridge #13 over Snowbird Creek added to Alternatives 1, 2-Revised, and 4A.**
  - A three-span structure along the existing alignment using staged construction was recommended.
- A new 60-foot-long hydraulic structure was now recommended at Hooper Branch due to the staged construction.
  - USFWS and the USFS requested a bottomless hydraulic structure be evaluated at this location.
- NCDOT added the following commitment:  
***NCDOT will evaluate the feasibility of a bottomless hydraulic structure at the Hooper Branch crossing. Geotechnical information is required to make a final determination. NCDOT will provide the Merger Team with final hydraulic recommendations once information is available.***
- Due to the realignment of NC 143, access to the Snowbird Picnic area would be modified. This will also result in the abandonment of a small portion of existing NC 143, requiring a redesign of the access to the Snowbird Picnic Area.
  - USFS requested the bridge replacement include paving the parking area, moving, or replacing the stone picnic area sign if it is affected, and inclusion of a vegetative planting plan for adjacent disturbed areas.
  - These should be considered mitigative measures to address the impacts from the revised CP2A bridge changes.
- NCDOT added the following commitments

***Replacement of Bridge #13 over Snowbird Creek will require the modification of the driveway access to the Snowbird Picnic Area. NCDOT will coordinate with the Forest Service to develop a revised paved driveway and paved parking. Also, NCDOT will replace any structures (including the stone picnic area sign) that are affected by the bridge replacement or construction.***

***NCDOT will add a vegetative planting plan in the scope of the project to mitigate the impacts to disturbed areas.***



<b>March 20, 2019</b>	Concurrence Point 2A and Concurrence Point 3 <ul style="list-style-type: none"> <li>• <b>Alternative 4A Selected as the Least Environmentally Damaging Practicable Alternative</b></li> </ul>
<b>June 19, 2019</b>	Concurrence Point 4A NCWRC requested a commitment from NCDOT to work with NCWRC to survey and move hellbenders prior to construction. <ul style="list-style-type: none"> <li>• The relocation of the identified species would require the use of heavy equipment to move boulders. NCDOT added the following commitment:</li> </ul> <p><b><i>NCDOT will conduct follow-up surveys of the hellbender and coordinate with the NC Wildlife Resources Commission to remove any identified hellbenders within one week of initiating construction of temporary causeways or in-water work.</i></b></p>
<b>August 19, 2019</b>	Field Meeting at the Snowbird Picnic Area with the USFS. USFS Attendees: Andy Gaston, Amy Mathis, Eric Crews, Logan Free <ul style="list-style-type: none"> <li>• Discussion on retaining walls along Snowbird Creek</li> <li>• Discussion on the parking lot layout for the Snowbird picnic area</li> <li>• Discussion on Hooper Branch and the bottomless culvert</li> <li>• NCDOT added the following commitment</li> </ul> <p><b><i>NCDOT will coordinate with the US Forest Service to develop aesthetic treatments to the proposed retaining wall along Snowbird Creek between Snowbird Road and I U Gap Road.</i></b></p>
<b>February 19, 2021</b>	Section 106 Effects Meeting held.
<b>May 2021</b>	Final USFS Comments received on Visual Impact Assessment <ul style="list-style-type: none"> <li>• NCDOT added the following commitment.</li> </ul> <p><b><i>NCDOT will construct cut and fill areas that will be designed to mimic the character of the surrounding landscapes.</i></b></p>
<b>March 2022</b>	Hooper Branch <ul style="list-style-type: none"> <li>• <b>Geotechnical studies indicated that a bottomless culvert would not be feasible at Hooper Branch</b></li> </ul>
<b>May 2022</b>	Revisit Concurrence Point 2A/Concurrence Point 4B <ul style="list-style-type: none"> <li>• NCDOT was directed by USFS to evaluate a single box culvert at Hooper Branch.</li> <li>• NCDOT instructed to revisit CP 4B when stream and wetland surveys were updated.</li> </ul>
<b>June 2022</b>	State Minimum Criteria Determination Checklist signed