

# Concurrence

## Point 4A Meeting

*Avoidance and Minimization*

**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



June 12, 2019  
North Carolina Department of Transportation  
Structures Design Conference Room C, NCDOT Century Center Building A  
1000 Birch Ridge Drive, Raleigh, NC 27610

Prepared By  
Stantec Consulting Services, Inc.  
801 Jones Franklin Road, Suite 300  
Raleigh, NC 27606  
919-851-6866



**Purpose of Today's Meeting**

The purpose of today's meeting is to present the avoidance and minimization measures taken in support of the LEDPA.

**Project Description**

The North Carolina Department of Transportation (NCDOT) proposes to make safety improvements along NC 143 from West Buffalo Creek to NC 143 Business, near Robbinsville in Graham County. The project length is approximately 4.5 miles long. This project is included in the Draft NCDOT 2020 - 2029 State Transportation Improvement Program (STIP) as Project R-2822B.

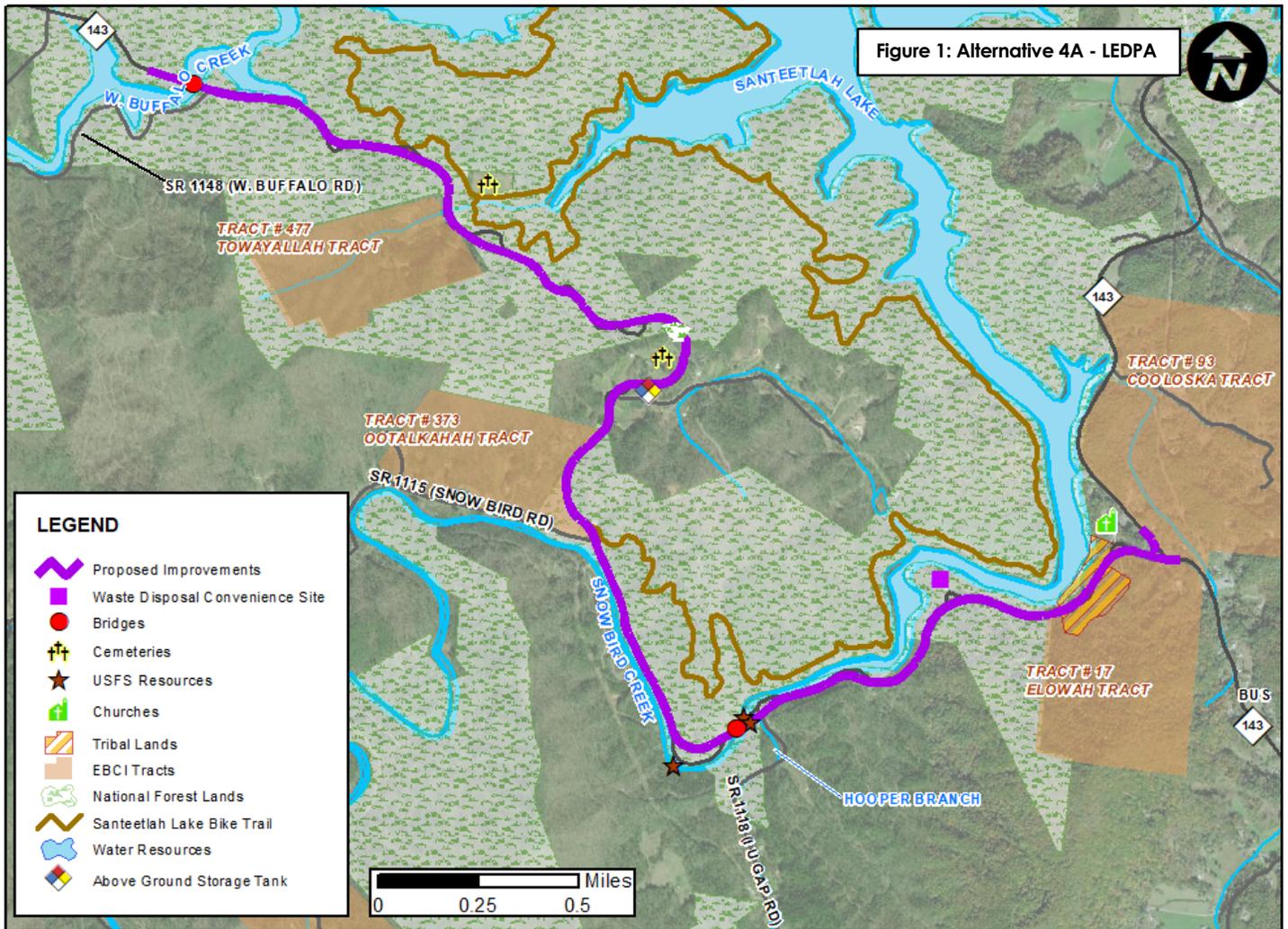
**NEPA/ Section 404 Merger Coordination History**

**Table 1: NEPA/Section 404 Merger Coordination History and Upcoming Meetings**

January 23, 2007	Concurrence Point 1 (Purpose and Need) <b>"The purpose of this action is to improve safety along NC 143 using context sensitive solutions."</b>
December 16, 2010	Concurrence Point 2 (Detailed Study Alternatives) <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>
May 8, 2013 March 25, 2015	Concurrence Point 2A (Bridging Decisions and Alignment Review) Project Coordination Meeting <ul style="list-style-type: none"> <li>Informed the Merger Team of the reprioritization of the project which resulted in the project being unfunded.</li> </ul>
July 20, 2017	Merger Update Meeting <ul style="list-style-type: none"> <li>Project funding shifted from federal to state.</li> <li>NCDOT requested the introduction of an alternative using 3-R guidelines (requires revisiting CP 2/2A).</li> <li>USACE (lead agency) recommended revisiting CP 1 to reconstruct the purpose and need statement to [incorporate metrics into the concurrence form] establish safety screening criteria.</li> </ul>
March 22, 2018	Concurrence Points 1,2, and 2A revisited <ul style="list-style-type: none"> <li>Revise Purpose and Need and introduce Alternative 4A</li> </ul> <b>"The purpose of the project is to improve safety by achieving the minimum geometric standards consistent with the facility's functional classification."</b>
November 2018	Concurrence Point 2A Revisited (see summary below) <ul style="list-style-type: none"> <li>Replacement of Bridge #13 added to Alternatives 1, 2-Revised, and 4A.</li> </ul>
March 20, 2019	Concurrence Point 2A and Concurrence Point 3

**Review of LEDPA – Alternative 4A**

- Upgrade NC 143 by from West Buffalo Creek to NC 143 Business by improving all vertical and horizontal curves to meet a minimum design speed of 35-mph. Improvements are consistent with the minimum recommendations for a rural collector as described in the NCDOT 3-R Guidelines.
- Includes widening NC 143 to 11-foot travel lanes and 6-foot wide shoulders (4-foot paved) in each direction. The 11-foot travel lanes are consistent with the minimum lane and shoulder width recommended by the NCDOT 3-R Guide.
- Replace Bridge #13 over Snow Bird Creek in its existing location using staged construction.



**Environmental Commitments (from Concurrence Point 2A)**

Division 14 and Roadside Environmental Unit (Aesthetics Engineering Section)

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 driveway to the picnic area and remove or replace any structures 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. NCDOT coordinate with the USFS botanist to develop a vegetative planting plan.

Division 14 and Hydraulics Unit

NCDOT will evaluate the feasibility of a bottomless hydraulic culvert at the Hooper Branch crossing. Geotechnical information is required to make a final determination. NCDOT will provide the Merger Team with final hydraulic recommendations during the CP 4B meeting. If a bottomless culvert is determined to not be feasible, CP 2A will be revisited.

**Environmental Commitments (from Concurrence Point 3)**

NCDOT Archaeology Section

NCDOT will conduct geophysical surveys of the Chickalee Cemetery to ensure boundaries are correctly delineated. If the surveys result in modifications to the cemetery boundary and the selected alternative results in potential impacts, the LEDPA decision will be revisited.

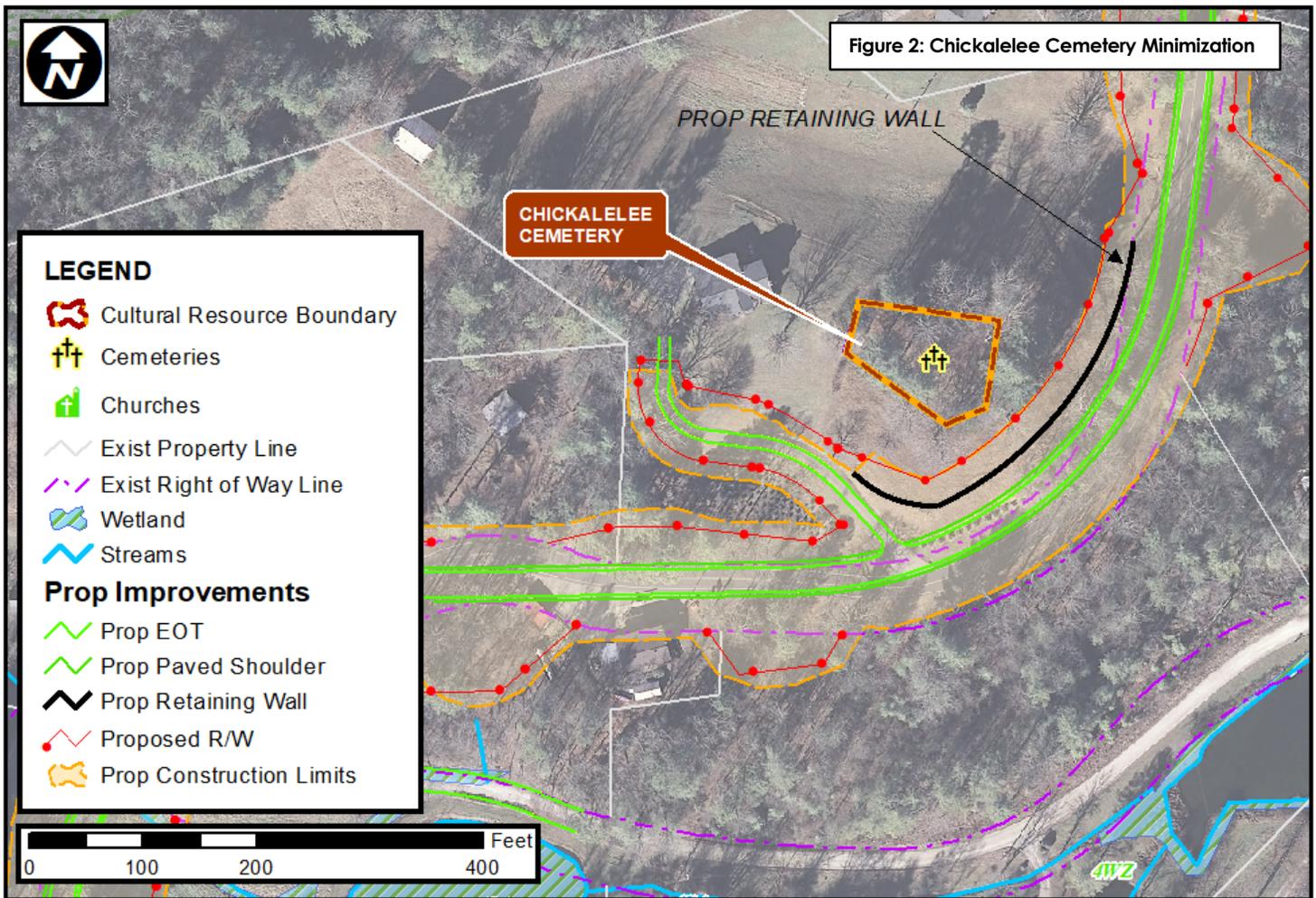


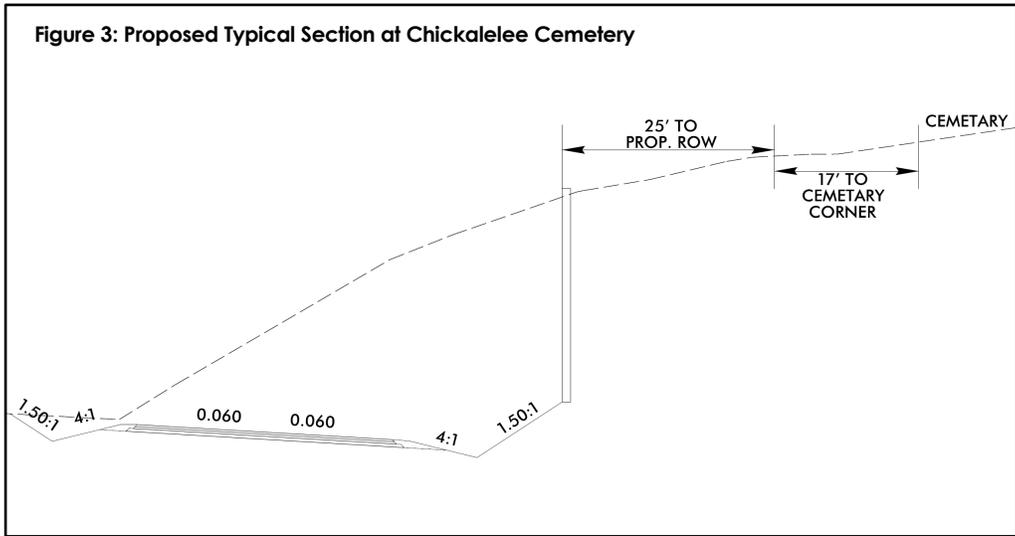
- Geophysical surveys were conducted by New South Associates and the findings were presented to NCDOT on May 9, 2019. The investigations noted no anomalies with characteristics that would be identified as possible graves found outside of the current boundaries of the Chickalelee Cemetery.

**Avoidance and Minimization**

**Chickalelee Cemetery**

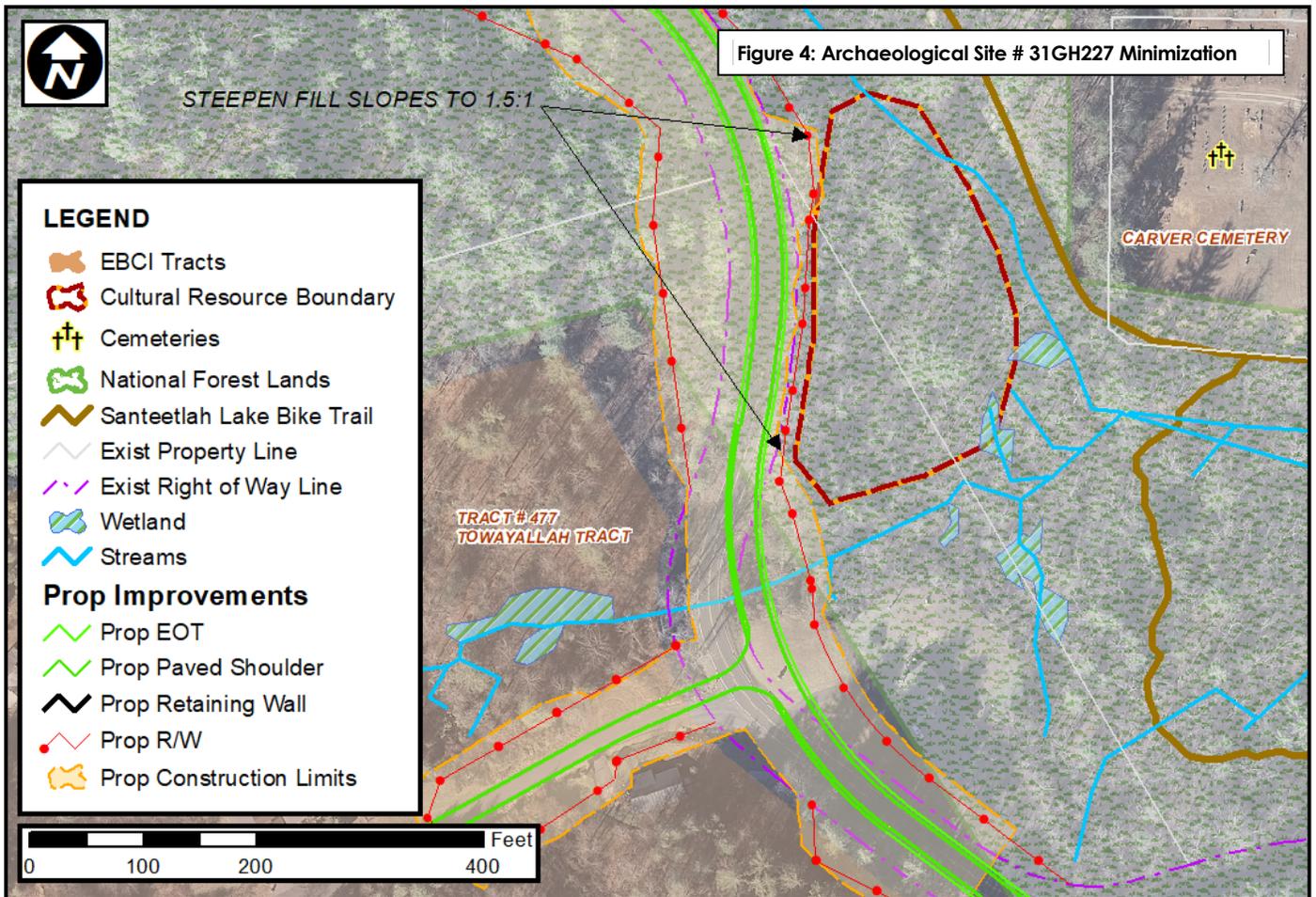
- NC 143 will be realigned (to meet a minimum 35-mph design speed) in the vicinity of the Chickalelee Cemetery, resulting in a cut along the eastbound side of the proposed alignment, just east of the Thunder Mountain General Store and deli.
- An approximately 385-foot long retaining wall with a maximum height of 25-feet is proposed to avoid impacts to the cemetery. Figure 3 shows the proposed typical section at the retaining wall location. The proposed right-of-way line will be a minimum of 17-feet from the outside edge of the cemetery boundary, providing a minimum of 42-feet between the wall and the cemetery.





**Archaeological Site # 31GH227**

- The roadway curves, adjacent to the Towayallah Tract, are proposed to be realigned to provide a minimum design speed of 35 mph.
- In the vicinity of Site # 31GH227, fill slopes will be steepened up to 1.5:1. This will eliminate impacts to the archaeological site.





**Residential and Business Impacts in Vicinity of NC 143/NC 143 Business Intersection**

- Initially, the proposed design realigned the intersection of NC 143/NC 143 business to make NC 143 the primary through movement. This resulted in impacts to the following properties:
  - Buffalo Independent Baptist Church
  - Hunting Boy Wood Carving (Relocation)
  - 3298 Massey Branch Road (Relocation)
  - 2623 Snow Bird Road (Relocation)
- In order to reduce property impacts in the vicinity of the NC 143/NC 143 Business intersection, it is recommended that the intersection be reconfigured as follows:
  - NC 143 west of the intersection is realigned to have a minimum design speed of 35-mph.
  - The skew at the NC 143 (west) approach to NC 143 Business is removed and a curve is introduced to create a 90-degree intersection, improving sight distance.
  - This modification will result in the following:
    - ✓ Elimination of impacts to Buffalo Independent Baptist Church
    - ✓ Removal of direct impacts to Hunting Boy Wood Carving
    - ✓ Removal of impacts to 3298 Massey Branch Road.

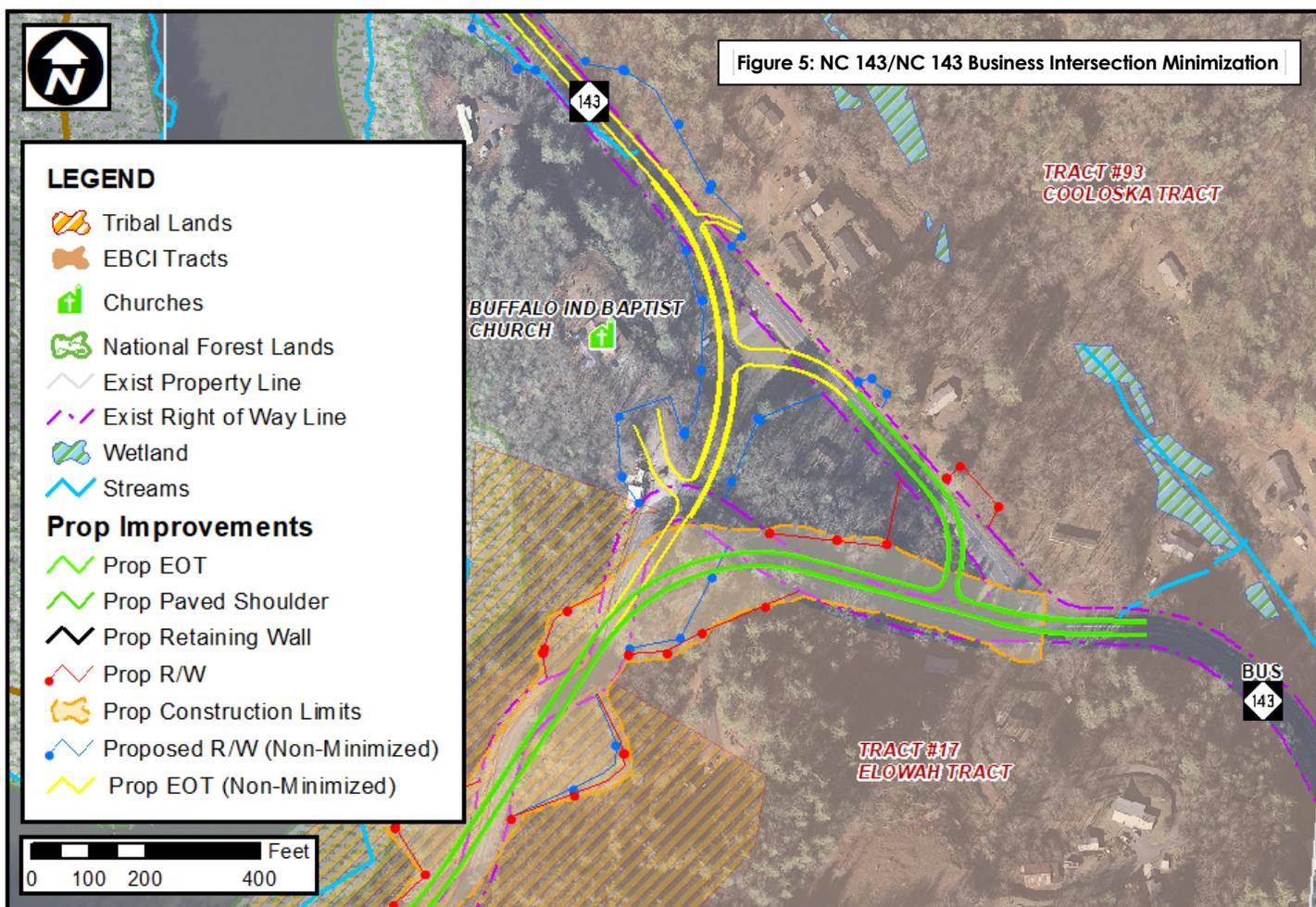


Table 2 provides a comparison of impacts between Alternative 4A (Non-minimized) and Alternative 4A (Minimized).



**Table 2: Impact Comparison between Alternative 4A and Alternative 4A - Minimized**

Resource	Alternative 4A (Non-Minimized)	Alternative 4A (Minimized)
Streams (linear feet)	3,200	3,200
Wetlands (acres)	0.08	0.08
Ponds (acres)	0.4	0.4
Trout Buffers (square feet)	82,930	82,930
Endangered Species	N	N
<b>Cultural Resources</b>		
Eastern Band of Cherokee Indian Tracts		
Towayallah Tract (acres)	3.0	3.0
Ootalkahah Tract (acres)	2.6	2.6
Elowah Tract (acres)	5.3	5.3
Collooska Tract (acres)	0.5	0
<b>Total</b>	<b>11.4</b>	<b>10.9</b>
Tribal lands (acres)	2.8	2.8
Indian Springs Cultural Washing Site	N	N
Origin of Snow Bird Legend Site	N	N
Chickalelee Cemetery	Y	N
NR - Archaeological Sites Impacts	Y	N
Other Cemeteries	N	N
NRHP- Eligible Historic Structures	0	0
<b>Community Resources</b>		
Residential Relocations (Estimated)	2	1
Business Relocations (Estimated)	3	2
Churches	0	0
Hazardous Material Sites	1	1
<b>US Forest Service Resources</b>		
Property Impacts (acres)	30.2	30.2
Santeetlah Bike Trail (linear feet)	480	480
Long Hungry Road Camping Area	N	N
Snowbird Picnic Area	Y	Y