

# **FY26 GA DNR Tire Grant Cherokee Bluff Playground Resurfacing Project**

## **Project Narrative**

### Project Description

- Briefly describe your overall project, including project location

Cherokee Bluffs Park, located in Flowery Branch, is a 168-acre public park in southern Hall County, Georgia, offering a range of outdoor recreational activities. Visitors can enjoy multiuse trails, open fields, an amphitheater, picnic areas, a dog park, and a playground. The park not only provides modern amenities but also shares a deep historical connection to Hall County's past.

In the early 1800s, this area was home to the Cherokee Indians, the largest Native American tribe in the United States. The park gets its name from the natural rock cliffs or "bluffs," which were once used by the Cherokee for shelter. As settlers flocked to the area after Hall County was founded in 1818, they were drawn by the potential for cotton agriculture and the discovery of gold, which increased the region's appeal.

However, between 1838 and 1839, the tragic episode known as the Trail of Tears unfolded, when the state of Georgia forcibly removed the Cherokee Indians from their ancestral lands, relocating them to the Indian Territory (present-day Oklahoma). This forced migration was marked by great hardship and loss.

Cherokee Bluffs Park serves as a reminder of both the rich natural resources and the profound history of the land, honoring the memory of its earliest inhabitants while providing a space for community and recreation today.

The park, which first opened in late 2015, has become a year-round destination known for its natural beauty and historical significance, attracting families, nature enthusiasts, and historians alike. Due to the parks' ongoing popularity, regular maintenance is essential. Currently, the playground's surface has deteriorated and needs to be replaced.

### Needs & Purpose

- Describe the need and purpose of the project

Cherokee Bluffs Park in Hall County, Georgia, is a heavily utilized community resource, offering recreational opportunities for children and families throughout the year. The

current playground surface has deteriorated due to natural wear, weather exposure, and high usage leading to uneven areas, reduced shock-absorption, and increased maintenance concerns. These conditions present potential safety hazards for children and limit accessibility for individuals with mobility challenges.

To address these critical concerns, there is an immediate need to replace the existing playground surfacing with Tire Derived Product (TDP) poured-in-place rubber surfacing. TDP surfacing meets current safety standards for impact reduction, increases accessibility for users of all abilities, and requires less ongoing maintenance compared to traditional loose-fill materials. By replacing the aged surface with TCP, Hall County Parks & Leisure will enhance safety, accessibility, and the overall user experience at Cherokee Bluffs Park, ensuring the playground remains a vibrant and inclusive gathering space for the community.

### Community Served

- Describe how the project benefits the community

Cherokee Bluffs Park, located in Hall County, Georgia, stands as a vibrant community asset that brings a wide range of benefits to residents and visitors alike. Spanning over 168 acres near Flowery Branch, this public park offers significant recreational space. It is the essential resource that supports the health and connection of the community while preserving the natural environment.

Primarily, Cherokee Bluffs Park provides crucial recreational opportunities for all ages. The park features well-maintained walking and biking trails, a playground, dog park, open green spaces, and scenic picnic pavilions. These amenities foster active lifestyles, improve mental health, and promote community togetherness. Additionally, educational programs and activities are regularly hosted at the park's Amphitheatre further enhancing its value as a community resource.

Environmentally, Cherokee Bluffs serves as a sanctuary for native vegetation and wildlife, offering a preserved green space in a rapidly urbanizing region. The park's dedication to natural beauty not only enriches Hall County's local ecosystem but also provides opportunities for environmental education.

Cherokee Bluffs Park is a venue for social gatherings, community events, and sporting activities, helping to build strong neighborhood bonds. Its accessibility to residents from Flowery Branch, as well as greater Hall County, with a population of over 200,000, means it

regularly serves thousands of citizens each year. Whether hosting family outings, civic events, or school field trips, the park meets a broad spectrum of community needs.

#### Utilization & Metrics:

- Describe the tire-derived product(s) (TDP) your project will utilize

Poured in place rubber surfacing, made in part from tire derived products, is an increasingly popular choice for playgrounds and recreational areas. At Cherokee Bluff's Park in Hall County, the application of this innovative surfacing material offers a combination of safety, durability, and environmental responsibility. The rubber surface works by grinding recycled tires into a crumb and glue mixture. The mixture is then poured and spread out as it hardens into a smooth, soft surface. The resilient surface absorbs impact better than concrete or asphalt, reducing injuries.

A key advantage of using tire derived products is their positive impact on safety. The poured in place rubber surfacing is specifically designed to absorb impact, reducing the risk of serious injuries from falls. To certify that safety standards are met, metrics such as Head Injury Criterion (HIC) and maximum gravitational force (Gmax) values are strictly measured. HIC scores offer an understanding of how the material's ability can absorb impact and reduce the possibility of head injuries, while Gmax values designate the surfaces overall shock absorbency. Both metrics meet federal safety guidelines set by American Society for Testing and Materials or U.S. Consumer Product Safety Commission.

The thickness of the surface, which is measured to match the fall height of the playground equipment is an important metric. Areas beneath a climbing structure may require a thicker application of the surface. In general, poured in place rubber surfacing varies in thickness from 1.5 to 5 inches, depending on the amount of safety performance desired. High-traffic areas are also calculated to ensure the thickness of the surface provides full protection.

Hall County will provide ongoing monitoring and maintenance of the rubber surfacing to ensure that Cherokee Bluffs Park remains safe, attractive, and functional for the community and its visitors. Utilization of recycled tires enhances safety but also supports broader environmental concern.

- Describe the total project cost utilizing conventional or virgin materials vs. the total project cost utilizing TDP.

Cherokee Bluffs Park playground surface requires installation for an area of 4,200 square feet. Two common options considered are wood fiber mulch and poured in place rubber surfacing. Each material has its own unique characteristics, and a notable initial cost but long-term benefits overtime.

Wood fiber mulch is known for its lower upfront cost. The average cost to cover 4,200 square feet with the appropriate safety depth is \$12,600. However, wood fiber mulch requires extensive annual maintenance and replacement to maintain its safety and appearance. With a life span of 3 years and the average annual maintenance cost of \$3,780, total project cost over a fifteen-year period accumulates to \$100,800.

Poured in place rubber surfacing is made from recycled tires and is installed as a single continuous layer. While the initial cost is much higher the annual maintenance is much lower. Installation for 4,200 square feet is estimated to cost \$84,000, but the notable durability and low maintenance requirements keep the annual cost dramatically lower. Poured in place rubber surface typically lasts up to 15 years. The total estimated maintenance for the full fifteen-year period is only \$7,500, bringing the total project cost for bonded rubber to \$91,500.

While the wood fiber mulch requires lower upfront investment, its long-term maintenance makes it more costly overall. Poured in place rubber surfacing is a much larger investment but the low maintenance and longevity make it a competitive option over a 15-year period. As of today, the replacement cost of playground surfacing with conventional material will cost \$12,600 or to utilize TDP surfacing will cost \$84,000. The difference in cost is the eligible amount for grant funding at \$71,400. Hall County seeks to provide Cherokee Bluffs Park with a playground surface that can provide lasting performance, continuous use, and the safest environment. The decision between the two surfaces is not inclusive of immediate budget constraints but also long-term use, convenience, and safety.

- Describe the number # of lbs. of TDP used for project

Poured-in-place rubber surfacing is a popular choice for playgrounds and recreational areas due to its safety, accessibility, and durability. It is made up of two layers, the base layer and the wear layer. The base layer is the bottom layer that uses recycled rubber to create padding, and the wear layer is the top layer made up of colorful rubber granules.

Cherokee Bluffs playground would require a poured-in-place rubber surfacing of 4,200 square feet. This would require an 8,400 pounds on the base layer and 12,600 on the wear

layer, totaling 21,000 pounds needed. Covering the playground with poured-in-place rubber surfacing is a long-term advantage that provides the community with a safe and accessible area for children to play.

- Describe how the TDP will be incorporated into your project

Tire Derived Products (TDP) are made from recycled rubber, mostly from used tires. For a poured-in-place rubber surface, TDP will be used as the main component in the base layer of the playground. When installing the surface, contractors will take crumb rubber made from used shredded tires. This recycled rubber will be mixed with a type of glue or binder, then poured and spread evenly over the prepared ground. The process creates a thick, soft, and cushiony layer to provide shock absorption.

After the TDP is installed as the base layer, a top layer made from colorful rubber granules is poured and smoothed out. This top layer gives the surface a finished look and adds increased durability along with weather resistance.

- Where are you sourcing the TDP and/or related services?

Hall County has received a quote from Playground Creations, located within Atlanta, GA. Playground Creations operates as a division of Architectural Design Specialties, Inc. and serves the State of Georgia for both commercial and neighborhood recreational needs. Typically, Playground Creations does not manufacture crumb rubber but sources it out from certified and established recyclers and manufactures. In Georgia and throughout the southeast of the United States, Tire-Derived Products (TDP) is commonly sourced from Liberty Tire Recycling, GroundScape Solutions, or Georgia's Local Tire Recycling Facility. Liberty Tire Recycling is one of the largest suppliers in North America. GroundScape Solutions are also known for supplying certified playground rubber surfacing across Atlanta and the southeast, but Georgia's Local Tire Recycling Facility utilizes crumb rubber from in-state scrap tire processing facilities. Georgia's Local Tire Recycling Facility is backed by the Georgia Environmental Protection Division to ensure the material is locally sourced and meets all safety and environmental standards.

### Marketing and Education

- How will you share information about your project to your community?

As communities continue to seek safe, sustainable, and innovative solutions for public spaces, the use of Tire-Derived Products (TDP) for playground surfacing has become increasingly popular. Many community members may not be familiar with what TDP is,

where it comes from, or why it is beneficial. It is important to share this information and educate the community so everyone can feel informed about these improvements to local playgrounds.

One effective way that Hall County has found to spread awareness is by hosting a community meeting. Meetings give residents an opportunity to learn about TDP surfacing directly. Meeting organizers can explain what TDP is, how it is used to recycle old tires, and why it helps make playgrounds safer by providing a soft, shock-absorbing surface that meets national safety standards. Discussions can also include the environmental benefits of recycling tires and promoting sustainability within the local area.

In addition to meetings, distributing clear educational materials can help reach a wider audience. Flyers, brochures, and easy-to-read fact sheets can summarize key points about TDP surfacing. Cherokee Bluffs Park is often visited by the local schools to teach on the local area's civilization history. Utilizing this opportunity to make TDP education interactive can increase understanding throughout the community. Inviting experts such as representatives from the tire recycling company to help children understand the connection between environmental responsibility and their own play spaces can be beneficial for future generations to have a safer, greener, and more inclusive play area for everyone.