

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES

KIOWA TRIBE

Kiowa Tribe's 197 Acre Ceremonial Ground

*ENVIRONMENTAL PROTECTION AGENCY'S BROWNFIELDS REVOLVING LOAN FUND
SUPPLEMENTAL BIPARTISAN INFRASTRUCTURE LAW (BIL) FUNDING*

Located approximately 2 miles southeast of Anadarko on State Highway 8

January 27, 2026

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*This project was funded by EPA, but the content does not necessarily reflect EPA's views or policies, and
EPA does not endorse specific products or commercial services selected for this project.*

List of Abbreviations

ABCa	Analysis of Brownfield Cleanup Alternatives
ACM	Asbestos Containing Materials
ACBM	Asbestos Containing Building Materials
ADA	Americans with Disabilities Act
CAS	Compliance Assistance Specialists
CIP	Community Involvement Plan
CFR	Code of Federal Regulations
DEQ	Oklahoma Department of Environmental Quality
EPA	Environmental Protection Agency
NESHAP	National Emission Standards for Hazardous Air Pollutants
NRD	Natural Resources Department
OAC	Oklahoma Administrative Code
ODOL	Oklahoma Department of Labor
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
OKSFM	Oklahoma State Fire Marshal
PCM	Phase Contrast Microscopy
PEL	Permissible Exposure Limit
QAPP	Quality Assurance Project Plan
RFP	Request for Proposal
RLF	Revolving Loan Fund
TEM	Transmission Electron Microscopy

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1.0 Introduction

The Kiowa Tribe is the subrecipient of the Oklahoma Department of Environmental Quality (DEQ) Brownfields Revolving Loan Fund (RLF) with funding provided by the United States Environmental Protection Agency (EPA). The funding is for the cleanup of asbestos containing material (ACM) and asbestos containing building material (ACBM) located within the Lodge and Campground Buildings at Kiowa Tribe's 197 Acre Ceremonial Ground to make way for future redevelopment plans for the property. The buildings are vacant.

This Analysis of Brownfield Cleanup Alternatives (ABC) compares three cleanup strategies and/or alternatives for two asbestos impacted buildings. The purpose of this ABCA is to provide a clear comparison of feasible cleanup alternatives to remove asbestos hazards at Kiowa Tribe's 197 Acre Ceremonial Ground and return the site to a beneficial tribal use.

2.0 Site Information

Kiowa Tribe's 197 Acre Ceremonial Ground is located on Tribal Trust Land and was a former cultural attraction that closed in 2005. Kiowa Tribe's 197 Acre Ceremonial Ground lies approximately 2.3 miles south of Anadarko. The Museum Lodge was built around 1955 and is approximately 15,000 square feet. The Campground Building was built between 1965 and 1975 and is approximately 2,800 square feet. The Cherokee Nation Environmental Programs conducted an Asbestos Sampling Report on April 4, 2023 and a summary of the ACMs and ACBMs is included within this ABCA. On July 17, 2025, the Oklahoma State Fire Marshal (OKSFM) conducted a consultation inspection at the Museum Lodge and the Campground Building. On August 6, 2025, the OKSFM sent a letter to the Kiowa Tribe regarding the results of the inspections. According to the OKSFM's letter, the buildings meet the definition of a *Dangerous Building* and do not meet the minimum requirements for building and fire/life safety code compliance and are unsafe to occupy.

3.0 Contamination

Category I non-friable asbestos is ACM that contains greater than 1% asbestos and cannot be pulverized by hand pressure and includes packings, gaskets, resilient floor coverings, and asphalt roofing products.

Category II non-friable asbestos is ACM that contains more than 1% asbestos that cannot be pulverized by hand pressure but could pose a significant health risk if pulverized by other means.

Friable asbestos is ACM that contains greater than 1% asbestos and can be pulverized by hand pressure.

ACM is considered to be in "Good Condition" if the material has no or very little damage or deterioration.

ACM is considered to be "Damaged" if there is visible damage, such as crumbling, blistering, water stains, gouges or abrasions over less than one-tenth of the surface of the material.

ACM is considered to be "Significantly Damaged" if there is visible damage, such as crumbling, blistering, water stains, gouges or abrasions over greater than one-tenth of the surface of the material.

3.1 Summary of ACM on Site

Below are Tables showing the *Summary of Findings* from the April 4, 2023 Asbestos Sampling Report.

Table 1: Asbestos Containing Materials at the Campground Building

Material Description	Location	Friability	Condition	% ACM	Number of Samples
Floor Tile	Main Room	Category I nonfriable ACM	Significantly Damaged	3	1
Drywall – ceiling	Main Room	Category II nonfriable ACM	Significantly Damaged	4 & 2	2
Drywall – ceiling	Room 1	Friable ACM	Significantly Damaged	2	1
Drywall	Hot Water Room	Category II nonfriable ACM	Significantly Damaged	4	1
Ceiling Texture	Room 2	Friable ACM	Significantly Damaged	3	2

Table 2: Asbestos Containing Materials at the Museum Lodge

Material Description	Location	Friability	Condition	% ACM	Number of Samples
Brown Floor Tile	Room 2	Category I nonfriable ACM	Significantly Damaged	4	1
Mastic	Museum Lodge	Category I nonfriable ACM	Significantly Damaged	6	1
Ceramic Floor Tile	Room 2	Category I nonfriable ACM	Significantly Damaged	4	1
Mastic	Room 2	Category I nonfriable ACM	Significantly Damaged	4	2
Floor Tile	Room 2	Category I nonfriable ACM	Significantly Damaged	5	1
Floor Tile	Main Room	Category I nonfriable ACM	Significantly Damaged	6 & 2	3
Floor Tile	Museum	Category I nonfriable ACM	Significantly Damaged	4	1

3.2 Exposure Pathways

Asbestos primarily poses an inhalation risk. Asbestos fibers are released from ACM or ACBM and, if inhaled, lodge deep in lung tissue posing an increased risk of lung cancer, mesothelioma and other respiratory diseases.

3.3 Release to the Environment

The Campground Building contains both friable and nonfriable ACM. Broken windows in the building are sealed with plywood and doors remain in good condition and are closed and

secured. There are no uncontrolled openings to the environment and the ACM in this building does not pose a risk of releases to the environment.

The Museum Lodge contains only nonfriable ACM in the floor tile. While some openings are present in the building (roof/window), these openings do not pose a risk of releases of asbestos fibers to the environment based upon the very stable asbestos floor tiles and mastic present within the building.

4.0 Cleanup Standards

Any material containing more than 1% of fibers of: chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered that is five micrometers or longer with an aspect ratio of greater than three-to-one is considered an asbestos containing material. This material must be abated to allow for demolition or renovation per 40 Code of Federal Regulations (CFR) 61.145.

Per 40 CFR 763.90 air clearance sampling must be performed at the completion of an action to abate, encapsulate or enclose asbestos. If Phase Contrast Microscopy (PCM) analysis is used, the clearance criteria is 0.01 fibers per cubic centimeter (f/cc). If Transmission Electron Microscopy (TEM) is used, the clearance criteria is 70 s/mm².

5.0 Applicable Laws

The following outlines applicable laws associated with this project.

5.1 Archaeological Resources

This project shall comply with the Archaeological Resources protection Act of 1979 by receiving a permit prior to excavating or removing any archaeological resource located on public lands or Tribal lands and ensure compliance with permit requirements.

5.2 Asbestos Regulations

Oklahoma Administrative Code (OAC) 380:50 authorizes the Oklahoma Department of Labor (ODOL) as the licensing agency for asbestos workers in Oklahoma. EPA does not provide asbestos licensing and has delegated asbestos licensing to ODOL in Oklahoma. All asbestos workers on the project will have appropriate ODOL licensing or equivalent.

The ODOL does not have jurisdiction on Tribal Trust Lands in Oklahoma. The DEQ will hire an industrial hygienist to oversee the asbestos abatements, ensure all applicable regulations are followed, provide approval of project designs, write a Quality Assurance Project Plan (QAPP), conduct third-party air confirmation monitoring and provide a final closeout report.

The work will conform to the National Emission Standards for Hazardous Air Pollutants (NESHAP) reporting requirements and NESHAP submissions to DEQ (EPA delegated NESHAP agency in Oklahoma) and EPA are required. NESHAP reporting requirements are required to be submitted to the EPA for this project since the buildings are located on Tribal Trust Land.

5.3 Clean Water Act

This project shall comply with Section 404 of the Clean Water Act. No part of the project will require dredging or filling of any creek, stream, tributary, river or water body without first obtaining approval and a permit from the United States Army Corps of Engineers.

5.4 Disadvantaged Business Enterprises

This project shall comply with 40 CFR Part 33 *Participation by Disadvantaged Business Enterprises in United States Environmental Protection Agency Programs*. The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of the contract. The contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of the contract which may result in the termination of the contract or other legally available remedies.

5.5 Endangered Species Act

This project will comply with the Endangered Species Act. The following Threatened and Endangered species have been identified in Caddo County, Oklahoma: whooping crane, Arkansas River shiner, black-capped Vireo and piping Plover. If any Threatened and Endangered species are identified while working on this project, habitat will not be disturbed and, work will halt immediately and the DEQ contacted for further instruction.

5.6 Historic Preservation

This project shall comply with the National Historic Preservation Act and conduct consultations with the State and/or Tribal Historic Preservation Office and/or Officers. The Museum Lodge and Campground Building at Kiowa Tribe's 197 Acre Ceremonial Ground are currently not listed as historic properties. On March 15, 2024, DEQ submitted notification to the Kiowa Tribe's Tribal Historic Preservation Officer, pursuant to Section 106 of the National Historical Preservation Act. DEQ did not receive a response. The Section 106 consultation has been completed.

5.7 Occupational Safety and Health Administration

This project shall comply with 29 CFR 1910 Occupational Safety and Health Standards including Subpart Z Toxic and Hazardous Substances, 29 CFR 1926 Safety and Health Regulations for Construction including Subpart Z Toxic and Hazardous Substances and other applicable regulations. Employers shall communicate hazards to employees, train each employee who is exposed to airborne concentrations of asbestos at or above the permissible exposure limit (PEL) and/or excursion limit and ensure employee participation in the training program. Training shall be provided prior to or at the time of initial assignment and at least annually thereafter; the training shall be conducted in a manner which the employee is able to understand; the employer shall make a copy of OSHA regulations and appendices and have it readily available without cost to all affected employees. The employer shall inform all employees concerning the availability of self-help smoking cessation program material and maintain all employees' training records for one year beyond the last date of employment of the employee. Ensure medical monitoring and physical examinations, including a pulmonary function test, chest X-rays are performed and maintain a medical history for each employee.

Ensure compliance with confined space. Ensure compliance with respiratory protection requirements and standards. Notifications to other contractors on a multi-employer site. Contractor shall post OSHA regulations at the job site including minimum or prevailing wage notices and emergency numbers. Ensure compliance of proper bagging, disposal drums and labeling. Ensure compliance with shut down and lock out electric power to work area including requirements for temporary electrical systems. For assistance for compliance with OSHA regulations, contact an OSHA Compliance Assistance Specialists (CAS).

5.8 Oklahoma Pollutant Discharge Elimination System Standards

This project shall comply with Oklahoma Administrative Code (OAC) 252:606 Oklahoma Pollutant Discharge Elimination System Standards. Notices of intent for construction and industrial stormwater discharges or no exposure certificate(s) must be submitted to the DEQ and Stormwater Pollution Prevention Plans must be produced, followed and maintained, if applicable. Applicable industrial stormwater activities include water transportation. Applicable construction stormwater activities include disturbance of one acre or more of land (including borrow areas, stockpiles, staging areas, etc.).

6.0 Evaluation of Alternatives

The cleanup alternatives, including no action, are outlined below.

6.1 Alternative 1 – No Action

This alternative is for no action and no changes would be made to the asbestos located within the buildings. The asbestos would continue to pose a risk to human health and the environment. If the buildings are further damaged by weather or fire then there is a risk of release of asbestos to the environment. Residents of Caddo County could be exposed to asbestos by such a release. While the asbestos is currently contained within the buildings, any damage to the building as occurs over time could result in exposure of the asbestos to the environment. There is no long term protectiveness through this alternative. There is no cost associated with this alternative. This alternative would require continued operations and maintenance (O&M) associated with ensuring no future releases of ACMs to the environment.

6.2 Alternative 2 – Asbestos Abatement

This alternative involves removing all ACM from the buildings while not demolishing the buildings. This option enables and allows for safe renovation or demolition of the buildings. There would be no ongoing asbestos risk to human health and the environment. There is complete long-term protectiveness since all the ACM will be removed from the buildings. The ODOL standards for asbestos abatements of buildings in good repair will ensure that there is no release of asbestos to the environment during remediation activities.

The Oklahoma State Fire Marshal (OKSFM) conducted an on-site life safety assessment of the buildings. The buildings meet the definition of a Dangerous Building and are not fit for human occupancy due to the conditions and life safety issues observed. The OKSFM deemed the buildings not meeting the minimum requirements for building fire/life safety code compliance and are unsafe to occupy. If a building is in poor repair the ability of the abatement company to build and maintain an airtight envelope that would prevent the release of asbestos to the

Analysis of Brownfields Cleanup Alternatives

Kiowa Tribe's 197 Acre Ceremonial Ground

January 27, 2026

environment is uncertain. Additionally, buildings in poor condition also pose a risk to remediation workers.

Under this alternative the buildings would be preserved for reuse. The estimated cost of abating asbestos from these buildings is approximately \$106,025. This alternative would involve no O&M associated with maintaining asbestos.

6.3 Alternative 3 – Wet Demolition

This alternative involves demolishing the buildings with the asbestos in place. Construction/demolition contractors will be required to be monitored per ODOL and/or OSHA standards and air monitoring will be performed to ensure that asbestos is not being released to the environment or exposing workers or neighboring residents. Since the buildings will not be preserved and asbestos will be disposed of with the construction debris from the demolition, there will be no ongoing risk to human health and the environment. Since the buildings are in poor repair and the OKSFM deemed the buildings unsafe to occupy, this alternative prevents remediation workers from having to work in unsafe conditions. To prevent the release of asbestos to the environment water will be sprayed on the building while demolition is occurring, suppressing dust and the release of asbestos fibers. The water has the potential to be contaminated with asbestos and any flowing water will be controlled and contained during the demolition. The contaminated water will be properly disposed of, along with construction debris. After the demolition is complete, soil sampling for bulk asbestos will be performed to ensure that no asbestos remains on the demolition site. The buildings will not be preserved under this alternative. There is complete long-term protectiveness with this alternative. The estimated cost for this alternative is \$154,200. This alternative would involve no O&M associated with maintaining asbestos.

7.0 Preferred Cleanup Alternative

Due to the buildings not meeting the minimum requirements for building and fire/life safety code compliance, are unsafe to occupy and to reduce risks to occupants and remediation workers, the preferred method is to perform a wet-demolition (Alternative 3) on the Campground and Museum/Lodge buildings.

8.0 Public Notice

A draft public notice for this ABCA is below. There will be a thirty-day public comment period after the public notice has been issued for this ABCA. The public may submit comments in writing, see section 8.1 below. Comments will be responded to within five (5) business days, and the responses posted to the administrative record within ten (10) business days. The following draft public notice of the ABCA will be posted and/or published in the Anadarko News Paper and on DEQ's website.

KIOWA TRIBE

**PUBLIC NOTICE
ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES**

Kiowa Tribe's 197 Acre Ceremonial Ground

Kiowa Tribe Subrecipient of DEQ Brownfields RLF with Funding Provided by EPA

ABCAs Filed: ABCA for Asbestos Contamination at Museum Lodge and Campground Buildings

Grantee: Oklahoma Department of Environmental Quality
Aron Samwel/Brownfields Manager
707 North Robinson, Oklahoma City, Oklahoma 73101

Property/Facility Information:

Name: Kiowa Tribe's 197 Acre Ceremonial Ground

Street Address: Located approximately 2 miles southeast of Anadarko on State Highway 8

Latitude & Longitude: 35.037130, -98.225940

Proposed Remedial option: Wet Demolition of the Museum Lodge and Campground Buildings.

Location where the ABCA and any amendments can be reviewed during normal business hours:

1. Locally at: Abraham Williams, 100 Kiowa Way Carnegie, OK 73015
2. DEQ's Central Records office: DEQ's Central Records office 707 N. Robinson, Oklahoma City, Oklahoma, 73102

Review and Comment Period: The public comment period dates will be included with the publication.
(30 calendar days from the date of publication)

A brownfield is an abandoned, idled, or underused industrial or commercial facility or other real property at which the expansion or redevelopment of the real property is complicated by environmental contamination caused by pollution.

The purpose of this notice is to inform the public that through EPA funding the DEQ has performed site characterization, risk evaluation, and will perform remediation on the site as follows:

The property was formerly a cultural attraction with a museum and gift shop and support buildings. The buildings contain asbestos. The asbestos in the Museum Lodge building and the Campground building will be removed through a wet demolition due to the poor conditions of the building. The property will be available for Tribal reuse once the buildings are removed.

This project was funded by EPA, but the content does not necessarily reflect EPA's views or policies, and EPA does not endorse specific products or commercial services selected for this project. The public may review and submit comments regarding the ABCA and any amendments to the Grantee contact listed below and may request a public forum during the above specified public comment period. Written comments should be submitted to Kasie Stambaugh at the address below.

For more information contact:

For Grantee: Terance Paukei
Kiowa Tribe/Natural Resources Specialist
100 Kiowa Way Carnegie, OK 73015
(505) 453-6979
tpaukei@kiowatribe.org

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For DEQ:

Kasie Stambaugh
707 N. Robinson, P. O. Box 1677
Oklahoma City, OK 73101-1677
(405) 702-5123
fax: (405) 702-5101
Kasie.Stambaugh@deq.ok.gov

8.1 Contacts for Public Comments

The public may submit comments regarding this project, during the public comment period, to the individuals listed below.

For the Kiowa Tribe:

Ashley Joslyn
Kiowa Tribe/Communications Coordinator
100 Kiowa Way
Carnegie, Oklahoma 73015
(580) 917-1357
ajoslyn@kiowatribe.org

For the DEQ:

Kasie Stambaugh
707 N. Robinson, P. O. Box 1677
Oklahoma City, OK 73101-1677
(405) 702-5123
Kasie.Stambaugh@deq.ok.gov

9.0 Map and Photographs

A map of the Kiowa Tribe's 197 Acre Ceremonial Ground and photographs of the building are enclosed.

10.0 Proposed Schedule and Timeline

The proposed schedule and timelines are enclosed.

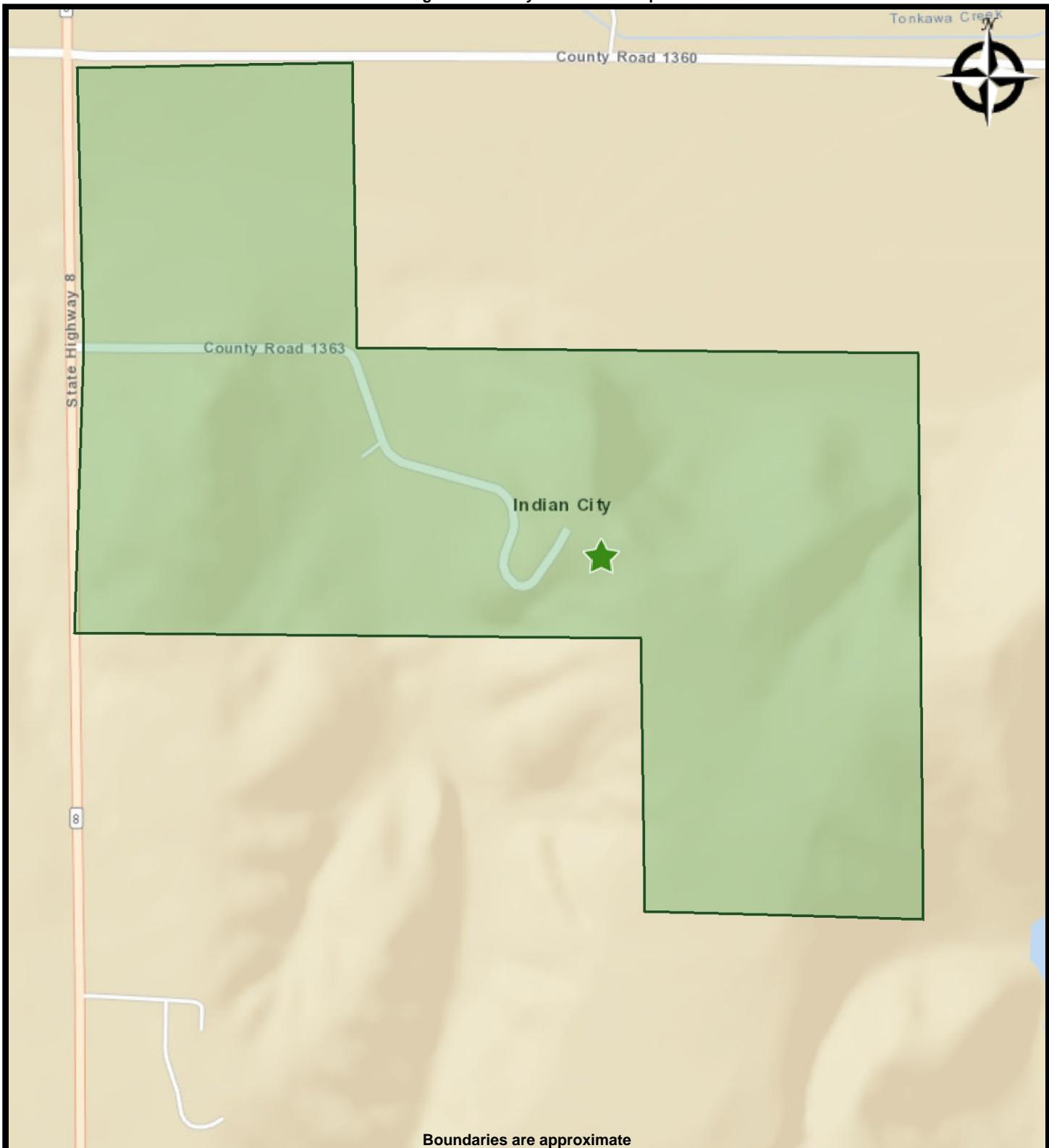


FIGURE 1

INDIAN CITY

35.037606 -98.225977

Anadarko, Oklahoma 73005

PREPARED FOR: Kiowa Tribe of Oklahoma

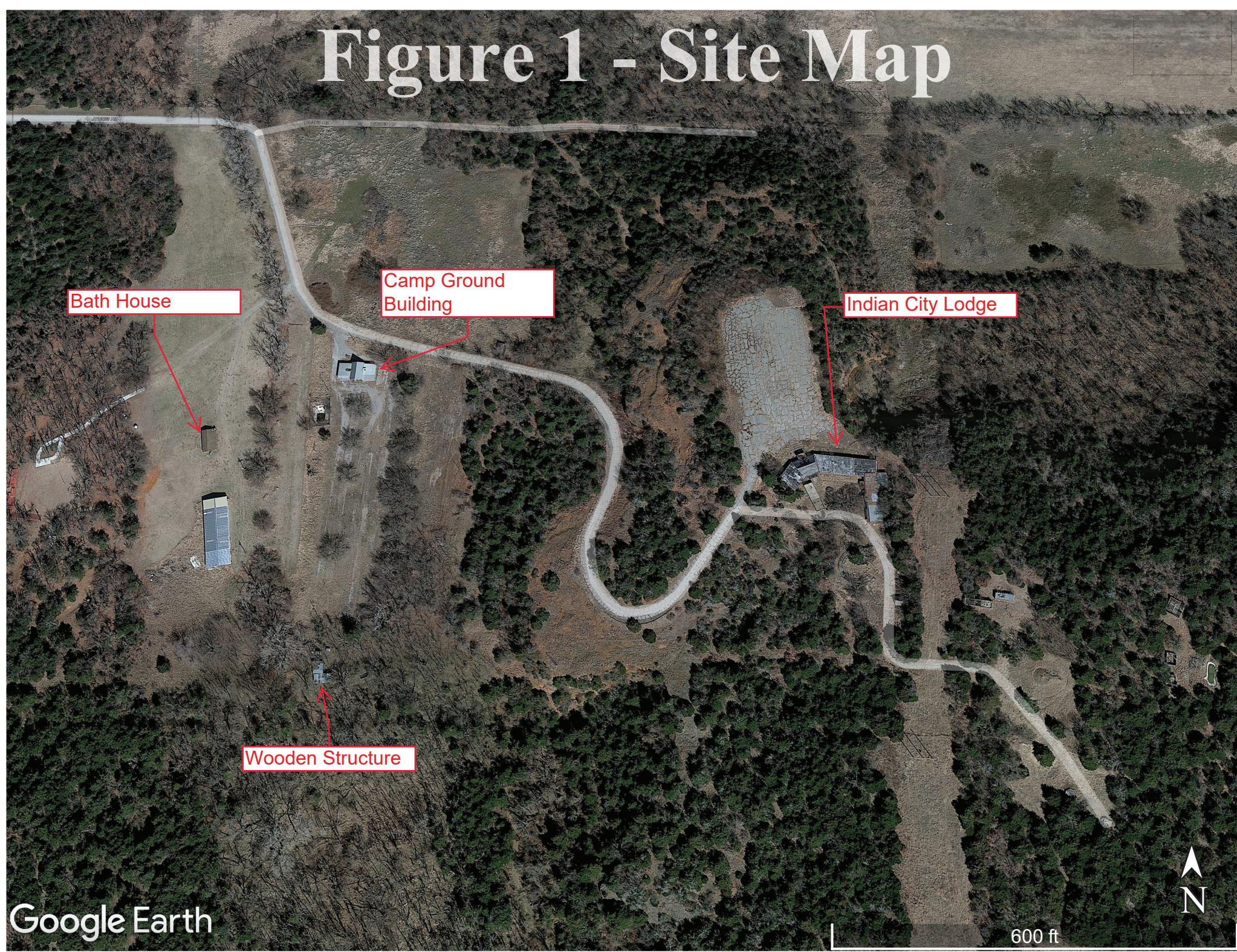
PROJ. MGR: Sheila Sevenstar-Horn

DATE: 2/19/2018

DRAWN BY: Chelsea Jones

PROJ. #: ITEC180101

Figure 1 - Site Map



Camp Ground Building Sample



Indian City Lodge



Projected Kiowa Tribe Timeline

