

Intensive Pedestrian Survey of the Eisenhower Trail Segment, Howard Peak Greenway Trail, San Antonio, Bexar County, Texas



by
Sarah Wigley

Texas Antiquities Permit No. 9394

NON-REDACTED

Principal Investigator
Cynthia Munoz

Prepared for:
Adams Environmental, Inc.
12521 Nacogdoches Road #102
San Antonio, Texas 78217



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249
Technical Report, No. 90

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Abstract:

On May 19-21, 2020, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) conducted an intensive pedestrian survey of the Eisenhower Park Trail Segment of the Howard Peak Greenway Trail in northwest San Antonio, Bexar County, Texas. The work was conducted in response to a request from Adams Environmental, Inc. The original alignment of the trail (The Rim to Eisenhower Park) had been surveyed previously by CAR in 2015, but a redesign necessitated a survey of this portion of the trail segment. This portion of the trail was redesigned because the slope of the previous path was steep within the project area, and constructing and maintaining the necessary Americans with Disabilities Act (ADA) compliant grade would have been challenging. The work is sponsored by the City of San Antonio (COSA) Parks and Recreation Department. The project falls under the COSA Unified Development Code as well as the Texas Antiquities Code. The CAR obtained Texas Antiquities Permit No. 9394 prior to the beginning work. Cynthia Munoz served as the Principal Investigator, and Sarah Wigley served as the Project Archaeologist.

CAR excavated 22 shovel tests along a 1750 m (1.09 mi.) long and 9.14 m (30 ft.) wide linear area that comprises 0.69 ha (1.7 ac.). One shovel test was positive for cultural material, but delineating shovel tests were negative. Soils within the APE were found to be predominately either fill or extremely shallow. No archaeological sites were recorded during the course of this survey. The CAR recommends that construction proceed as planned. The THC agreed with CAR's recommendation. However, if cultural materials are encountered during project activities, work should cease in the immediate area and the City Archaeologist with the COSA-OHP and the THC should be notified. All records generated during this project and the recovered chert biface are curated at the CAR (accession #2271) in accordance with THC guidelines.

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Acknowledgements:

The fieldwork for this project was carried out by Jason Perez, Peggy Wall, and Sarah Wigley of CAR. Thank you to Cynthia Munoz, CAR Lead Curator and Senior Project Archaeologist/Principal Investigator, who served as the Principal Investigator, offered guidance throughout the course of the project, edited a draft of this report, and curated of records and artifacts associated with this project. Thank you to Dr. Raymond Mauldin, CAR Interim Director, who oversaw the project, edited a draft of this report, and offered guidance throughout. Thanks to Dr. Jessica Nowlin who processed the GIS data and produced maps for the report, to Peggy Wall who edited and produced maps for the report, and to Dr. Kelly Harris who edited this report. Thank you to Sable Kitchen of Adams Environmental, Inc. who helped facilitate the project and answered questions and to Adams Environmental, Inc. for the opportunity to work on this project.

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Chapter 1: Introduction

On May 19-21, 2020, the Center for Archaeological Research (CAR) at The University of Texas at San Antonio (UTSA) carried out an intensive pedestrian survey of the Eisenhower Park Trail Segment of the Howard Peak Greenway Trail in northwest San Antonio, Bexar County, Texas (Figure 1-1). The Greenway Trail System is a network of approximately 124 km (77 mi.) of trails located along waterways in the city used for hiking and biking (San Antonio Parks and Recreation 2020). The work was conducted in response to a request from Adams Environmental, Inc. The CAR conducted 18 initial shovel tests along the 1750 m (1.09 mi.) long and 9.14 m (30 ft.) wide Area of Potential Effect (APE) that comprises 0.69 ha (1.7 ac.), and four shovel tests delineating a positive shovel test. A survey of the initial route of the trail was conducted by CAR in 2015 (Figueroa 2016). However, a redesign of this portion of the trail route made this survey necessary (Figure 1-2).

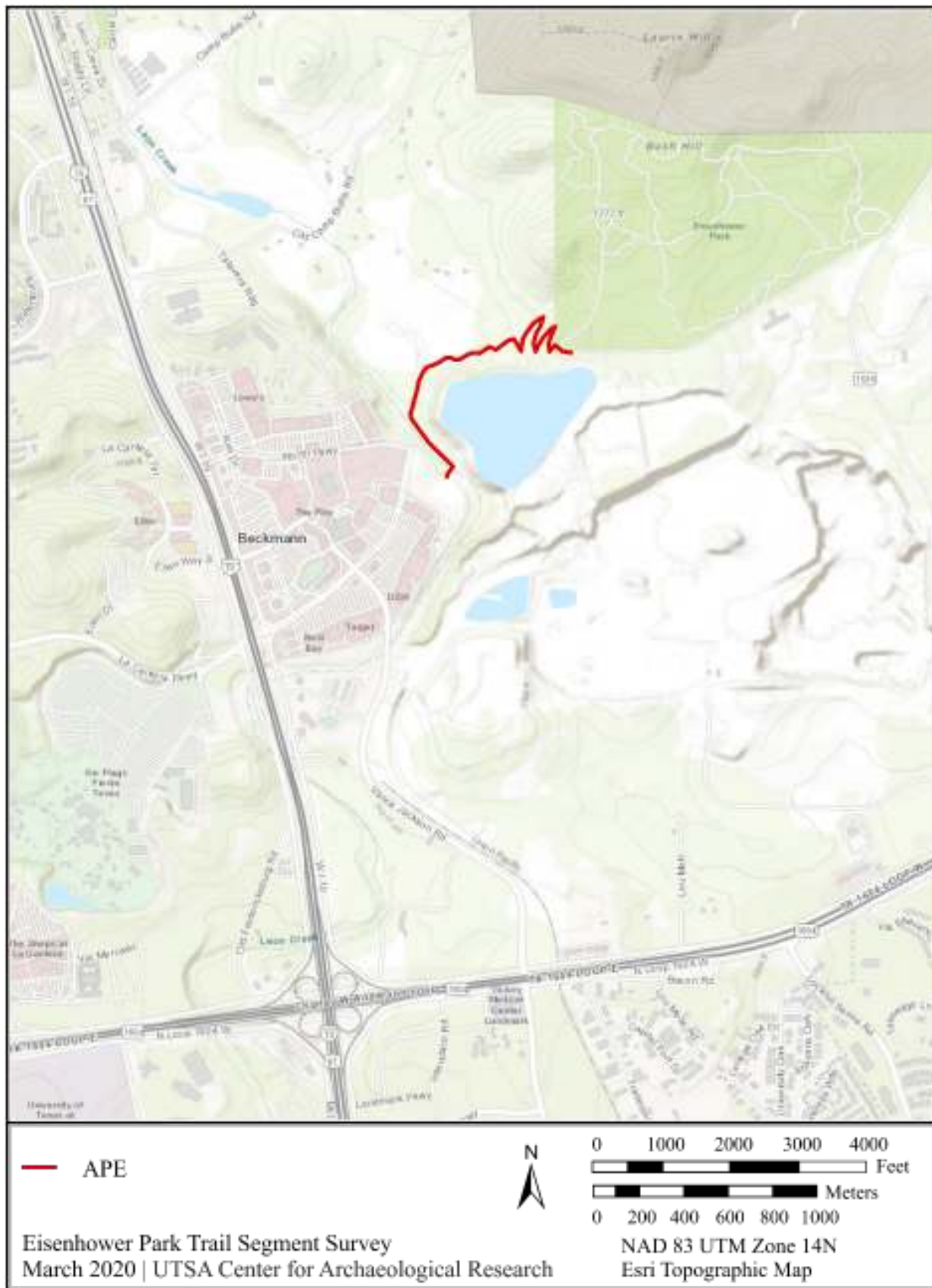


Figure 1-1. APE on a topographic map.

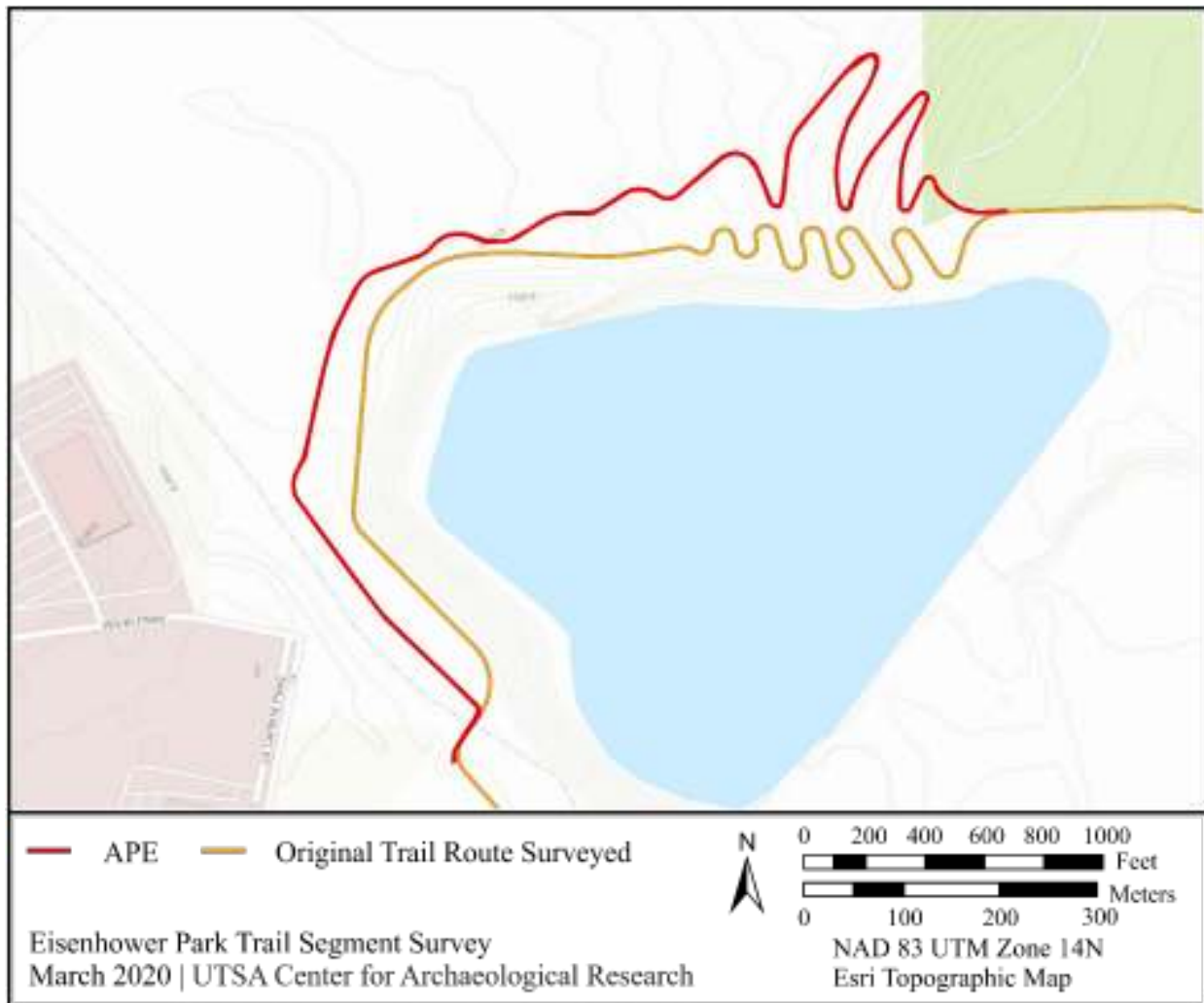


Figure 1-2. APE in red and previous trail route in orange.

The work was sponsored by the City of San Antonio (COSA) Parks and Recreation Department. The City of San Antonio Office of Historic Preservation (COSA-OHP) has review authority over the project under the Unified Development Code. In addition, the project falls under the Texas Antiquities Code because COSA is a municipality of the state. The work was conducted under Texas Antiquities Permit No. 9394. Cindy Munoz served as the Principal Investigator, and Sarah Wigley served as the Project Archaeologist.

During the course of the survey, one shovel test was positive for cultural material. Shovel Test (ST) 7 contained a battered lithic tool in Level 1 (0-20 centimeters below surface [cmbs]; 7.9 in.). The four shovel tests excavated to delineate the extent of the cultural material were negative. No archaeological sites were recorded during the course of this survey. The planned depth of impact of the trail over most of its length is 0-61 cm (0-2 ft.), with the exception of the switchback east of the fence line, which has a depth of impact from 61-427 cm (2-14 ft.). However, shovel testing in this area encountered limestone bedrock well before this depth, so the trail excavations will not impact intact soils below the level of testing. CAR recommends

that construction of the trail should proceed as planned. The THC agreed with CAR's recommendation. However, if cultural materials are encountered during project activities, work should cease in the immediate area and the City Archaeologist with the COSA-OHP and the THC should be notified. All records generated during this project and the recovered chert biface are curated at the CAR (accession #2271) in accordance with THC guidelines.

This report has five chapters. Following this introductory chapter, Chapter 2 provides a project background, including a brief overview of the project environment, the regional culture history, and previous archaeological work conducted in the area. Chapter 3 presents a discussion of the field and laboratory methods used during the completion of this project. Chapter 4 provides a discussion of the results of these investigations, and Chapter 5 presents a summary of the project and CAR's recommendations.

Chapter 2: Project Background

This chapter presents a background discussion of the project area. This discussion includes the project area's natural environment, a brief summary of the area's culture history, and a review of previous archaeology conducted in the vicinity.

Project Environment

The project is located in northern Bexar County, Texas. Bexar County is positioned where the southernmost Great Plains meets the Gulf Coast, demarcated by the Balcones Escarpment. It is also near a significant climate boundary, partitioning a humid-subtropical from an arid zone (Petersen 2001). The location near these significant geological and climactic boundaries results in a varied resource base. The area contains a number of reliable freshwater sources, including the San Antonio River, freshwater artesian springs, and the Edwards Aquifer (Eckhart 2020). The growing season averages 270 days (Petersen 2001:22). The temperature reaches average lows of 4°C in January and average highs of 36°C in July (Long 2017). Though highly variable, the average annual rainfall is approximately 76.2 cm (30 in.), with seasonal peaks in the spring and fall (Petersen 2001:22). The project area is located within the Balconian biotic province, which is described as an intermediate ecological area between the eastern forest and the western desert (Blair 1950).

The project is north of Loop 1604 and east of I-10. The western portion of the APE follows Leon Creek before running adjacent to a two-track trail running through an open area. This trail segment serves to connect the Leon Creek trail at The Rim to the trail system within Eisenhower Park (see Figueroa 2016). The Rim shopping center is located on a portion of the former Beckman quarry and was developed in 2006-2008 (Pack 2015). The southern portion of the trail is located directly north of this shopping development. The central portion of the trail runs through a grassy brushy environment located within the former quarry area. The predominant vegetation in this area is grasses ranging from knee to shoulder height (Figure 2-1). The trail then crosses a fence line towards Eisenhower Park. The section closest to Eisenhower Park is located in brushy uplands to the north. The predominant vegetation in this area is ashe juniper, with exposed bedrock (Figure 2-2). The elevation of the project area ranges from 335-366 m (1,100-1,200 ft.) above sea level.



Figure 2-1. Project area environment, facing south.



Figure 2-2. Project area environment, facing northeast.

Soils along Leon Creek in the APE consist of Tinn-Frio (Tf) soils (Figure 2-3). These soils have 0 to 1 percent slopes, are frequently flooded, and reach depth of more than 203 cm (80 in.). They are found in flood plains. Portions of this area were flooded during the course of the survey. Northeast of Leon Creek, the APE passes through Patrick soils (PaB). These soils have 1 to 3 percent slopes, are rarely flooded, and reach depth of more than 203 cm (80 in.). A small portion of the APE in the northeast contains Lewisville silty clays (LvA). These soils have 0-1 percent slopes, are formed on stream terraces, and reach depths of more than 203 cm (80 in.). The Eisenhower Park section of trail contains Eckrant cobbly clays (TaB) and Eckrant-Rock outcrop association (TaD). Eckrant cobbly clays have 1 to 8 percent slopes, are formed on ridges, and reach depths of 10-51 cm (4-20 in.). Eckrant Rock outcrop associations have to 8 to 30 percent slopes, are formed on ridges, and reach depth of 1-51 cm (4-20 in.; Natural Resources Conservation Service 2020). Shovel tests in this area were frequently very shallow or unable to be excavated at all due to the prevalence of rock outcroppings. Outside of the APE but within the vicinity, Brackett-Eckrant association (BtE), Pits and Quarries (Pt), Eckrant very cobbly clay (TaC), and Crawford stony and Bexar soils (Cb) are present.

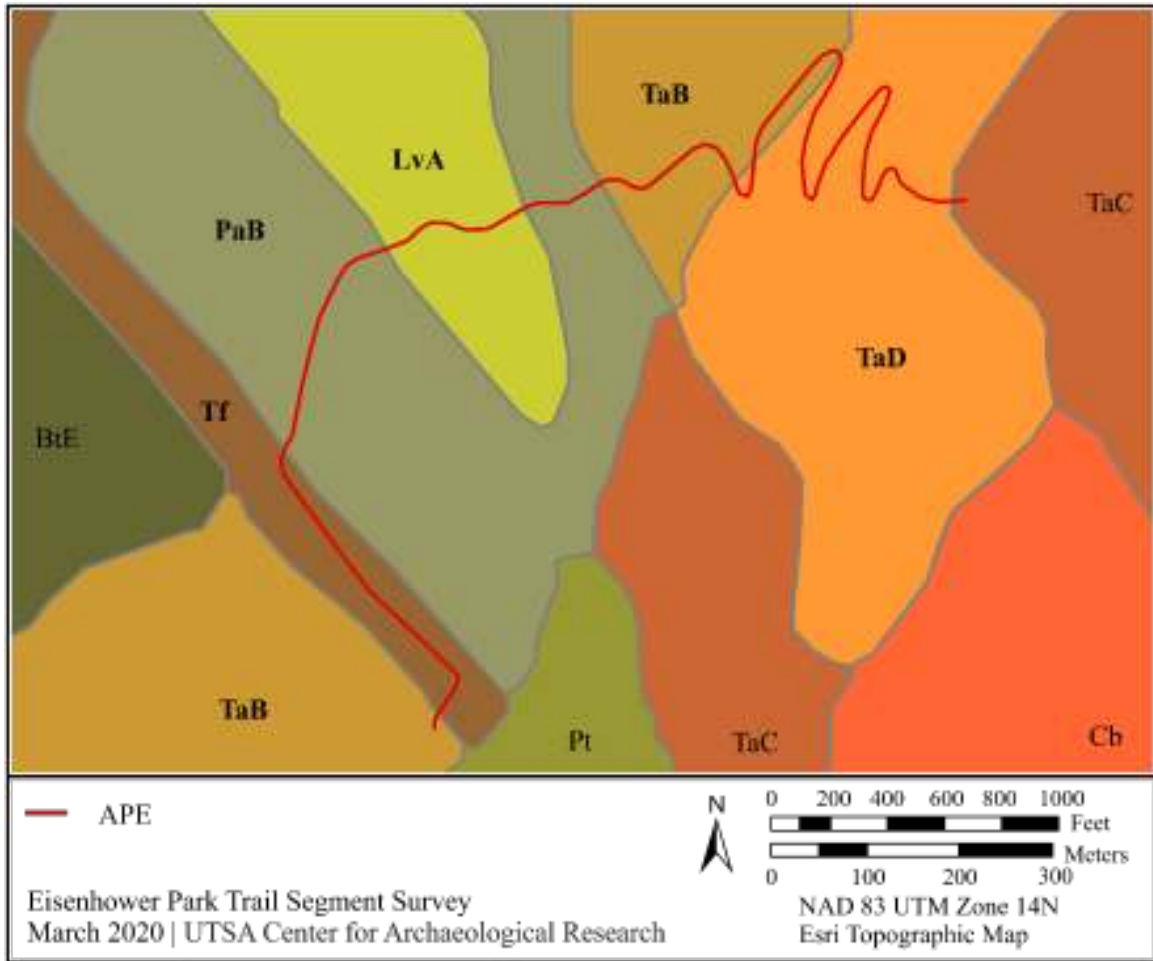


Figure 2-3. Map of soils within and in the vicinity of the APE.

Culture History

No new archaeological sites were documented during the course of this survey. A general discussion of cultural history of the area is provided for context of the project.

Prehistory

The prehistoric record in Texas is generally divided into the Paleoindian, Archaic, and Late Prehistoric periods. Bexar County's archaeological record has been included in reviews of both Central (Collins 2004) and South (Hester 1980) Texas as the county is near a cultural area boundary. The summary below generally follows a Central Texas chronology.

The Paleoindian period in Central Texas spans 13,000-9000 BP. In-depth reviews of this time period are available (see Bousman et al. 2004). Groups inhabiting the area during this period are generally characterized as highly mobile (Bousman et al. 2004). Temporally diagnostic artifacts from the period include Folsom and Clovis points, among others (see Turner et al. 2011).

Faunal remains from Paleoindian components on sites such as Lubbock Lake (41LU1) and Wilson-Leonard (41WM235) suggest a broad subsistence base (Bousman et al. 2004). Within Bexar County, there are multiple sites that have Paleoindian components. These include the Pavo Real (41BX52) site (Collins et al. 2003) and the St. Mary's Hall (41BX229) site (Hester 1977). There are no Paleoindian sites in the immediate project area.

The Archaic period in Central Texas ranges from 9000-1200 BP. The period is characterized by several technological developments, including an increased diversity of material culture and the use of heated rock technology (Carpenter and Hartnett 2011; Collins 2004; Johnson and Goode 1994; Thoms and Clabaugh 2011). The period is often subdivided into Early, Middle, and Late Archaic periods (see Collins 2004; Hester 2004). Temporally diagnostic artifacts from the Early Archaic period (9000-6800 BP) include Angostura, Early Split Stem, and Martindale-Uvalde dart points, among others (Collins 2004). The Middle Archaic spans 6800-4200 BP. Temporally diagnostic artifacts from this period include Calf Creek, Bell-Andice, Nolan, and Travis points, among others (Collins 2004; Houk et al. 2009; Turner et al. 2011). The Late Archaic spans 4200-1200 BP. Temporally diagnostic artifacts from the Late Archaic include a wide variety of types, with Pedernales, Ensor, and Frio points being common (Collins 2004). Archaic Period components in Bexar County are common. Some of the more influential sites include the Granberg site (41BX17), with multiple excavations (see Munoz et al. 2011; Schuetz 1966; Wigley 2018) and Panther Springs (41BX228; Black and McGraw 1985). Two sites, 41BX395 and 41BX702, with potential Early Archaic components are located near the project area. These sites will be discussed in more detail in the following section.

The Late Prehistoric period begins at 1200 BP and terminates around 350 BP (see Carpenter 2017; Kenmotsu and Boyd 2012). The time period is divided into two intervals, Austin (1200-750 BP) and Toyah (750-350 BP). The period is characterized by a shift to bow and arrow technology, evidenced by arrow points such as Scallorn and Perdiz (Collins 2004). The Toyah style interval of this period also includes the adoption of ceramic technology (Collins 2004). There is evidence that burned rock middens increased in use (Black et al. 1997; Mauldin et al. 2003). Bison remains are common on sites (Mauldin et al. 2012), though they may have more intensively exploited toward the end of the period (Lohse et al. 2014). Sites with Late Prehistoric components in Bexar County include 41BX300 (Katz 1987) and 41BX568 (Mauldin et al. 2013). There are no known Late Prehistoric sites in the immediate project area.

Historic Texas

The end of the Late Prehistoric Toyah, at 350 BP (AD 1650), overlaps with the beginning of the Historic period generally marked by the arrival of Europeans in the region in AD 1528. Early interactions between

the indigenous population and the Spanish were infrequent. However, even prior to the establishment of European settlements in the area, Native American populations in the area were impacted by invasive disease and the arrival of other Native American groups that had been displaced by European settlement to the north, south, and east (Kenmotsu and Arnn 2012).

Colonial Period (AD 1700-1824)

The area that would become San Antonio was first explored in 1691 by a Spanish expedition led by Domingo de Teran (Cox 1997). Spanish occupation of the region began when San Antonio was founded in 1718 (Jasinski 2018) with the establishment of the San Antonio Bexar Presidio, intended to provide a way-station between the Rio Grande and east Texas missions (Cox 1997). Five Spanish missions were located along the San Antonio River during this time period. In San Antonio, some Native Americans sought refuge within the missions, which required some adaptation to Spanish Colonial customs as well as changes in mobility patterns (Cargill 1996). Many of the Native Americans who inhabited the missions had been displaced from other parts of Texas as well (Campbell and Campbell 2004). The settlement expanded with Spain's charter of the Villa San Fernando de Bexar in 1731 (Jasinski 2018).

By 1775 populations in all San Antonio missions had declined considerably (Campbell and Campbell 2004), and in 1793 the secularization of the missions began (Chipman and Joseph 2010:214). The land owned by the missions was divided and distributed among the mission residents (de la Teja 1995).

Archaeological sites dating to the colonial period in San Antonio are often characterized by the presence of irregular limestone architectural features, Spanish Colonial ceramics, Native American ceramics, and faunal bone (Figueroa and Mauldin 2005; Hanson 2016; Kemp et al. 2020; Mauldin and Kemp 2016). Sites in San Antonio dating to this time period include 41BX2170, a multicomponent site with features related to the Siege of Bexar, the Veramendi site (41BX2164), a historic home dating to the Spanish Colonial period (Kemp et al. 2020), and the various missions (Fisher 1998), including Mission de Valero (41BX6; Anderson et al. 2017; Cox 1997; Fox 1976; Zapata 2017).

Mexican Period (AD 1821-1836)

Unrest in Mexico began with a failed rebellion against the Spanish in 1810 (Chipman and Joseph 2010; Cox 1997). San Antonio participated in another failed rebellion in 1812-1813, which resulted in retaliation against its citizens by the Spanish. Spanish executions and fleeing citizens led to significant depopulation of the city during this time period (Chipman and Joseph 2010; Cox 1997). After years of unrest, Texas ceased to be ruled by Spain and became part of Mexico with the adoption of the Constitution of 1824 (Cox 1997). Under this constitution, Texas became part of the state of Coahuila, and a system which provided

land to settlers was created (Campbell 2003). This policy played a role in an influx of settlers from the United States during this time period, until immigration from the United States was prohibited in 1830 (Campbell 2003). Conflict within the newly formed Mexican government, as well conflict between the existing inhabitants of Texas and the new arrivals, resulted in some instability and unrest in the region (Campbell 2003).

Republic of Texas and Statehood (AD 1835-1950)

During the Texas Revolution (1835-1836), San Antonio was the site of numerous battles, including the Battle of the Alamo, at the site of the Mission Valero. The population of the city was decimated by the warfare. The number of people living in San Antonio grew rapidly after Texas became part of the United States in 1845, and in 1860, it was the largest city in Texas (Jasinski 2018).

The state joined the Confederacy in 1861, and San Antonio served as a Confederate depot during the Civil War (Jasinski 2018). Confederate forces in Texas surrendered on June 2, 1865 (Wooster 2018). Union forces arrived and declared freedom for all slaves on June 19, 1865 (Acosta 2018).

After the Civil War, San Antonio served as a cattle, military, and mercantile center due to its proximity to the border and the southwest (Cox 1997; Jasinski 2018). The arrival of the railroad in 1877 further increased growth in the city. San Antonio was once again the largest city in the state in 1900, 1910, and 1920 (Jasinski 2018) and was known for its unique mix of cultures due to Mexican and European, significantly German, immigration. Characteristic artifact assemblages from sites dating to this period in Bexar County include metal, glass, and white earthenware (Mauldin and Kemp 2016). The city continued to grow through the twentieth century, with an associated expansion of construction and infrastructure projects (Heusinger 1951).

Previous Archaeology

There are four recorded archaeological sites within 1.2 km (0.75 mi.) of the APE (Figure 2-4; THC 2020). All are prehistoric in nature. Three were recorded within the boundaries of Eisenhower Park, and the fourth was recorded during the previous trail survey.


Site 41BX395 was recorded by CAR during the course of a pedestrian survey of Camp Bullis (Gerstle et al. 1978). It is described as an upland site located along a seasonal stream, within 1 km (0.62 mi.) of Salado Creek. The site is mostly exposed bedrock with some very thin soil cover. The site is a 40 m (131 ft.) by 20 m (66 ft.) lithic scatter consisting of chert nodules, cores, and preforms (Gerstle et al. 1978). The site was revisited prior to the development of Eisenhower Park (McGraw 1986). The revisit expanded the site area

to 250 m (820 ft.) by 200 m (656 ft.) and found the site to be significantly eroded. Shovel tests at the site were shallow. The deepest reached 21 cmbs (8.3 in.), but cultural material was only recovered from the first 10 cm (3.9 in.). A potentially Early Archaic dart point fragment was recorded.

Sites 41BX702 and 41BX703 were also recorded during the course of the Eisenhower Park survey (McGraw 1986). Site 41BX702 is a prehistoric lithic scatter spanning 120 m (394 ft.) by 75 m (246 ft.), consisting primarily of debitage as well as two projectile point fragments. The projectile point fragments may be Early Archaic. The site is extensively eroded and located on an upland ridge. Soils were thin with numerous bedrock exposures. Two shovel tests reached depths of 35 cmbs (13.8 in.), but both were sterile.

Site 41BX703 is a prehistoric lithic scatter spanning 75 m (246 ft.) by 50 m (164 ft.), consisting of debitage. It is extensively eroded and also located in an upland ridge context. Soils were thin with numerous bedrock exposures. A shovel test reached 15 cmbs (5.9 in.) before encountering bedrock and was sterile.

Site 41BX2109 was recorded during the course of the previous trail survey (Figueroa 2016). It is described a lithic scatter containing cultural material from 10-40 cmbs (3.9-15.7 in.). Soils were thin and cultural material was sparse, consisting of two flakes and 106.2 g of burned rock.



Redacted Image

Figure 2-4. Archaeological sites within 1.2 km (0.75 mi.) of the APE.

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Chapter 3: Methodology

This chapter provides a discussion of the field and laboratory methods used during the completion of this project. This includes discussion of excavation techniques, collection policy, site definitions, field documentation, and final curation. This methodology was defined in the scope of work (SOW) prior to beginning of this project and approved by the THC and COSA-OHP.

Field Methods

In order to identify and document potential cultural resources, CAR staff completed a pedestrian survey with shovel testing within the 1750 m (1.09 mi.) long 9.14 m (30 ft.) wide linear APE. CAR staff excavated 22 shovel tests in total, including 18 initial shovel and four shovel tests excavated to delineate a single positive shovel test (ST 7). Delineating shovel tests were excavated at 15 m (49.2 ft.) intervals. Delineating shovel tests were not excavated north or south of the positive shovel test due to the limits of the APE. Shovel tests were approximately 30 cm (11.8 in.) in diameter and 80 cm (31.5 in.) in depth, unless excavators encountered impassable obstructions or buried utilities. Shovel tests were excavated in 20 cm (7.9 in.) levels, and soil matrixes were screened through quarter-inch hardware cloth. At the conclusion of each shovel test, the archaeologist photographed the shovel test termination and refilled the hole with the screened soil. CAR staff collected all artifacts recovered from shovel tests. No surface artifacts were observed during the course of this survey.

The Project Archaeologist maintained a daily log, and all archaeologists completed standard shovel test forms. Activities and discoveries were documented and supported by digital data, including photographs, where appropriate. CAR staff recorded both positive and negative shovel tests with a GPS unit.

If evidence of cultural materials potentially meeting criteria for an archaeological site was encountered in a shovel test or on the surface, shovel tests were excavated at close intervals to define the extent of the distribution. A minimum of six shovel tests were excavated to define the site boundaries within the limits of the easement. Location data was collected using a GPS unit. No cultural materials meeting criteria for an archaeological site were encountered during the course of this survey.

For the purposes of this survey, CAR defined an archaeological site as follows:

- 1) Four or more surface artifacts within a three-meter (9.8 ft.) radius;
- 2) an intact feature, such as a hearth or evidence of a structure;
- 3) a positive shovel test with five or more artifacts;

- 4) a shovel test with three or more positive levels;
- 5) evidence of a feature (e.g., charcoal or several pieces of burned rock) in a shovel test, or
- 6) two positive shovel tests within 30 m (98.4 ft.) of each other.

Laboratory Methods

All records generated during the project were prepared in accordance with Federal Regulations 36 CFR Part 79 and THC requirements for State Held-in-Trust collections. Field forms were printed on acid-free paper and completed with pencil. A single artifact was recovered during the course of this survey. This artifact was brought to the CAR laboratory, washed, air-dried, and stored in 4 mil zip-lock, archival-quality bags. An acid-free label was placed in the artifact bag. The laser printer generated label contains provenience information and a corresponding lot number. The artifact was stored in an acid-free box that is labeled with a standard tag.

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper, labeled, and placed in archival-quality page protectors to prevent accidental smearing due to moisture. All project-related materials, including the final report, and the recovered chert biface are permanently stored at the CAR curation facility (accession #2271).

Chapter 4: Results

In May of 2020, CAR conducted a pedestrian survey of a section of the Howard Peak Greenway Trail that was rerouted after the survey of the initially planned trail route was already completed (see Figueroa 2016). This survey was necessary because the reroute deviated from the original trail alignment within a portion of the trail segment. This trail segment connects the Leon Creek segment near The Rim shopping development with the section running through Eisenhower Park. This chapter provides the results of the investigation.

Results

CAR staff excavated 22 shovel tests in the APE (Table 4-1 and Figure 4-1). Eighteen shovel tests (STs 1-18) were excavated initially to explore the deposits within the APE, and four (STs 19-22) were excavated to delineate a single positive shovel test (ST 7). All other shovel tests were negative for cultural material, including the delineating shovel tests. Ten shovel tests reached the full 80 cmbs (31.5 in.). Eleven were terminated early due to encountering bedrock. One shovel test, ST 18, did not encounter solid bedrock but was nevertheless obstructed by limestone and large roots. The average terminating depth was 47 cmbs (18.5 in.). Shovel tests in the southern portion of the trail were excavated primarily in disturbed soils that appeared to be significantly impacted by past quarry activities, while shovel tests in the northern section across the fence line were located within shallow soils similar to those encountered on past surveys (Figueroa 2016; Gerstle et al. 1978; McGraw 1986).

Table 4-1. Shovel Test Summary

ST	Cultural Material Present	Termination Depth (cmbs)	Reason for Termination
1	No	17	Limestone bedrock
2	No	80	Complete
3	No	80	Complete
4	No	80	Complete
5	No	20	Limestone bedrock
6	No	30	Limestone bedrock
7	Yes	80	Complete
8	No	80	Complete
9	No	36	Limestone bedrock
10	No	80	Complete
11	No	16	Limestone bedrock
12	No	20	Limestone bedrock
13	No	3	Limestone bedrock

Table 4-1. Shovel Test Summary, continued....

ST	Cultural Material Present	Termination Depth (cmbs)	Reason for Termination
14	No	0	Exposed limestone bedrock
15	No	23	Limestone bedrock
16	No	15	Limestone bedrock
17	No	15	Limestone bedrock
18	No	45	Limestone and roots
19	No	80	Complete
20	No	80	Complete
21	No	80	Complete
22	No	80	Complete

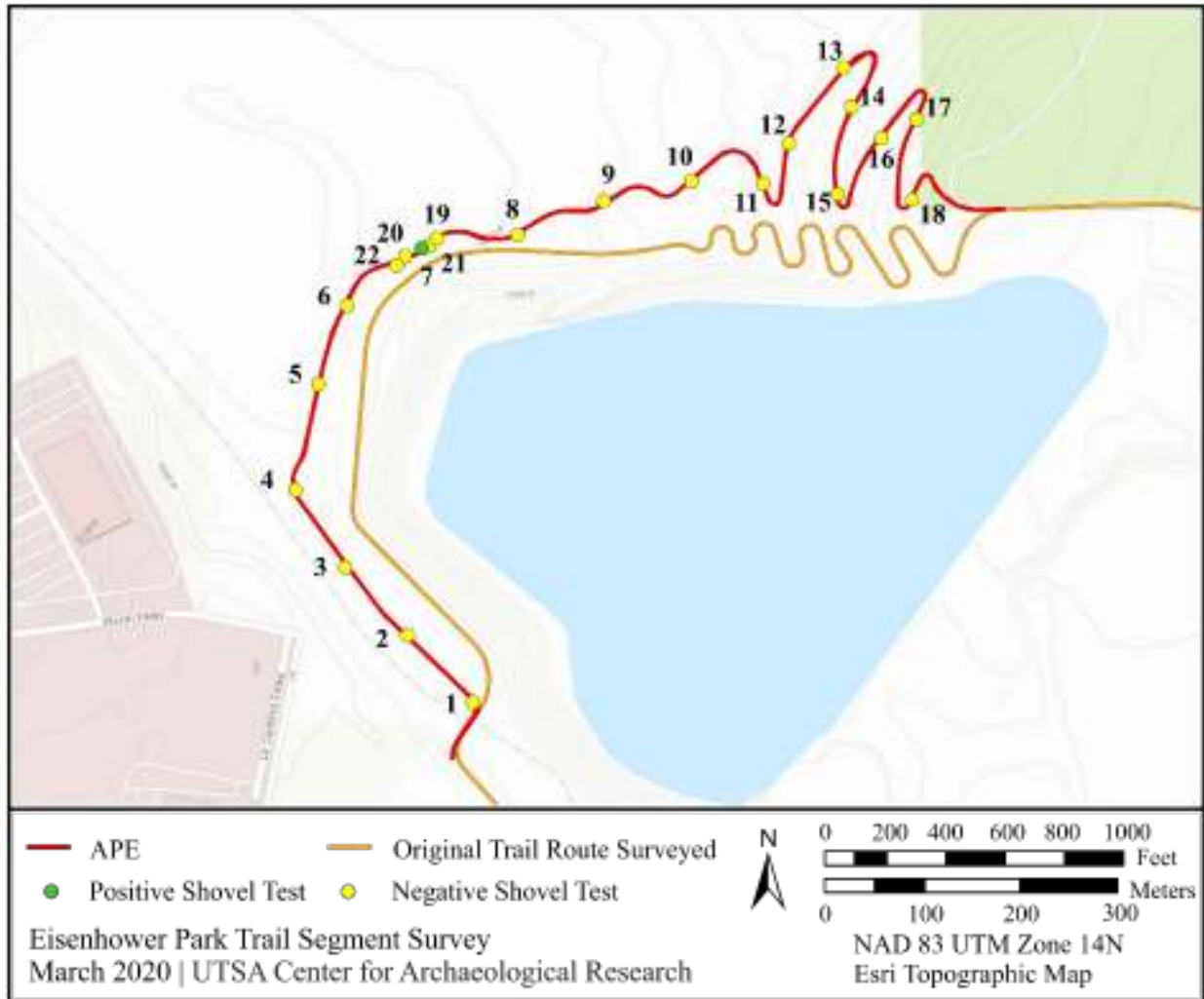


Figure 4-1. Map of shovel test locations within the APE.

STs 1-8 and 19-22 were located downslope and surrounding the old quarry pit. These shovel tests encountered a fine, powdery, very pale brown (10YR 7/3 to 10YR 8/4) sediment that appeared to be associated with the past quarrying activity in the area (Figure 4-2). This unusual sediment was also noted in the previous survey (Figuroa 2016). While in most areas this layer extended to 80 cm (31.5 in.) and likely below, in a few shovel tests (ST 8, ST 19, ST 20, and ST 21), intact clay was discovered at 35-70 cm (13.8-27.6 in.), suggesting that intact deposits lie below this layer of fill. As soil maps of the area indicate that the natural soils in the area consist of Tinn-Frio soils, Patrick soils, Lewisville silty clays, and Eckrant cobbly clays (Figure 4-3) and because some of these soil types reach depths of more than 203 cm (80 in.), deposits below the fill layer could be deep.



Figure 4-2. ST 7 termination. Note light, silty sediment to the bottom.

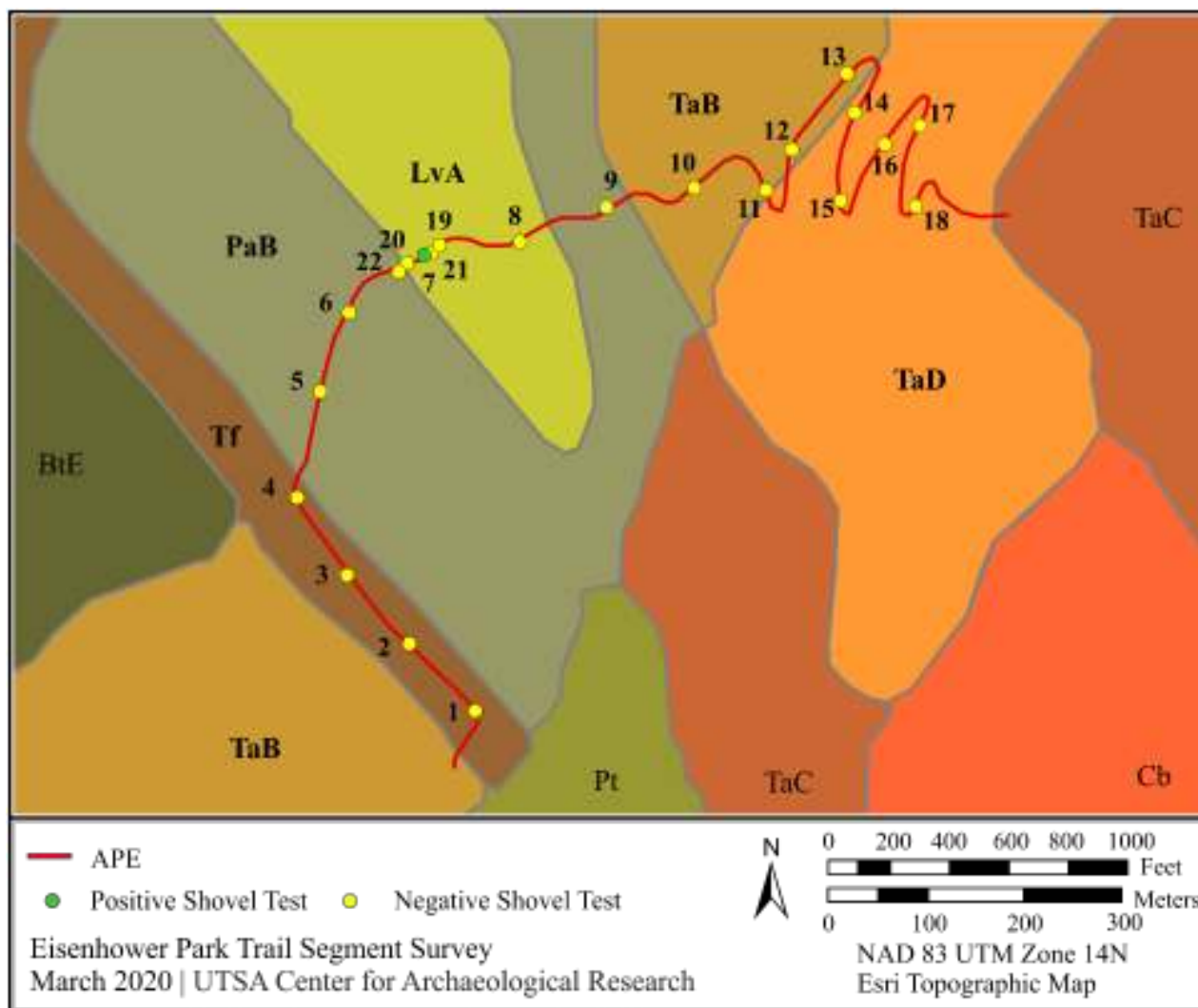


Figure 4-3. Map of shovel test distribution within natural soil zones.

In STs 9-18, located east of the fence line along the trail towards Eisenhower Park, the soils were black to dark brown (10YR 2/1 to 10YR 3/3) clayey, shallow, and rocky (Figure 4-4). The average shovel test in this area terminated at 25 cmbs (9.8 in.) due to encountering limestone bedrock, and only one (ST 10) reached the full 80 cmbs (31.5 in.). One shovel test, ST 14, was unable to be excavated due to the exposed bedrock in the surrounding area (Figure 4-5). Another, ST 13, reached only 3 cmbs (1.2 in.) before encountering bedrock. This is consistent with the findings of the previous survey (Figuroa 2016). No shovel tests within Eisenhower Park were positive for cultural material.



Figure 4-4. ST 12 termination. Note shallow, rocky soils.



Figure 4-5. ST 14 area, facing east. Note exposed bedrock and slope.

The one positive shovel test, ST 7, was located within the downslope area of fine, light-colored sediments described above (Figure 4-6). One lithic tool, a chert biface (Figure 4-7), was recovered from Level 1 (0-20 cmbs; 0-7.9 in.) in this shovel test. The tool showed evidence of crushing and was found within a gravel layer of likely fill located above the fine, light, powdery soils described previously. None of the delineating shovel tests (STs 19-22) were positive for cultural material.

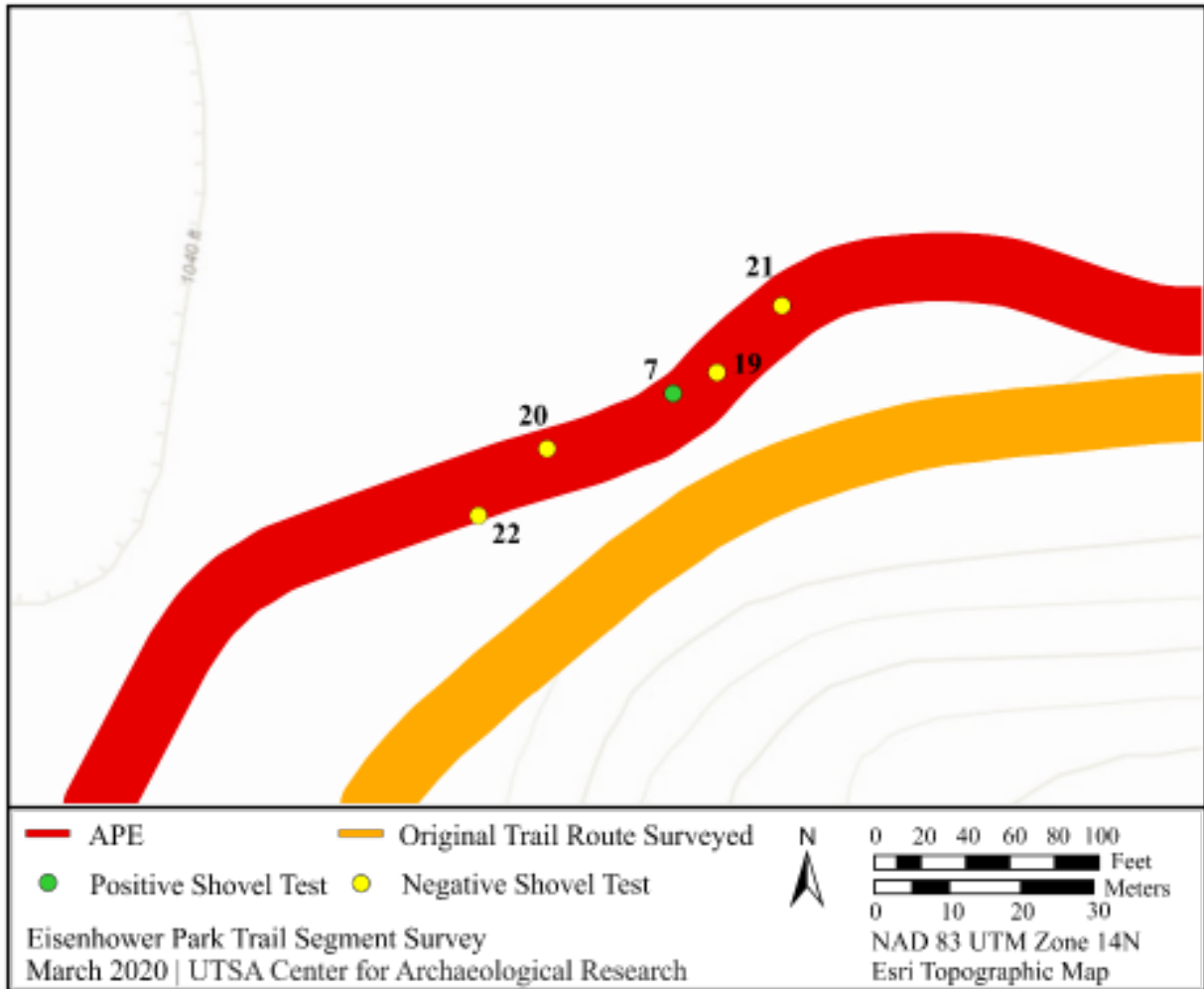


Figure 4-6. ST 7 (positive) and delineating shovel tests.



Figure 4-7. Biface recovered from ST 7, Level 1 (0-20 cmbs).

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Chapter 5: Summary and Recommendations

CAR conducted an intensive pedestrian of the Eisenhower Park Trail Segment of the Howard Peak Greenway Trail in May of 2020. This trail was surveyed by CAR in 2015 (Figueroa 2016), but a redesign of a portion of the trail path necessitated this survey. The APE consisted of a 1750 m (1.09 mi.) long and 9.14 m (30 ft.) wide linear area that comprises 0.69 ha (1.7 ac.).

In total, 22 shovel tests were excavated. No archaeological sites were documented during the course of this survey. The single positive shovel test, ST 7, was recorded in disturbed context, and all delineating shovel tests were negative for cultural material. Soils encountered during the course of testing consisted primarily of either fill or very shallow deposits. There is evidence of intact soil below the fill zone in the former quarry area southwest of Eisenhower Park. However, no impacts below 61 cmbs (2 ft.) are planned for this section of the trail. The CAR recommends that trail development proceed as planned. The THC agreed with CAR's recommendation. However, if cultural materials are encountered during project activities, work should cease in the immediate area and the City Archaeologist with the COSA-OHP and the THC should be notified. All records generated during this project and the recovered chert biface are curated at the CAR (accession #2271) in accordance with THC guidelines.

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