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Final Report: Intensive Archeological Survey for the Proposed METRO Maintenance of Way Facility, 1507 Keene Street, Harris County, Texas

Scotty Moore

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Final Report: Intensive Archeological Survey for the Proposed METRO Maintenance of Way Facility, 1507 Keene Street, Harris County, Texas

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**Final Report: Intensive Archeological Survey for the Proposed METRO
Maintenance of Way Facility, 1507 Keene Street, Harris County, Texas**



Prepared by:

Scotty Moore, MA, RPA (Principal Investigator)
Cox|McLain Environmental Consulting, Inc.
1710 South Dairy Ashford Road, Suite 110
Houston, Texas, 77077

For:

METRO of Harris County
1900 Main Street
Houston, Texas, 77002

And:

WSP
16200 Park Row, #200
Houston, Texas, 77084

Under Texas Antiquities Permit 9413

Cox|McLain Environmental Consulting, Inc. Archeological Report 310
(CMEC-AR-310)



COX | McLAIN
Environmental Consulting

November 2, 2020

This report has had archeological site information redacted for public distribution.

MANAGEMENT SUMMARY

The Metropolitan Transit Authority of Harris County (METRO) proposes to develop approximately 5.2 acres located on the northeast quadrant of the Interstate Highway (IH) 45 and IH 10 interchange within the City of Houston, Harris County, Texas. Initially, the proposed project included the construction of an extensive multi-purpose facility that would house the METRO Police Department, a back-up Emergency Operations Center, and Maintenance of Way (MOW) department. Additionally, an ancillary laydown yard would be located immediately north of the facility. Subsequently, however, the proposed development plan was updated to include MOW facilities only. The proposed MOW facility would serve as an ancillary rail maintenance facility composed of a two-story building, surface parking, stormwater detention, and a laydown yard. Designs for the facility are currently under development.

The proposed project comprises a total acreage of approximately 5.2 acres, including approximately 2.7 acres for the proposed facility and approximately 2.6 acres for an ancillary laydown yard. The archeological area of potential effects (APE) is the entire 5.2-acre footprint of the proposed project. The maximum anticipated depth of impacts within the location for the proposed facility is not yet known but is not anticipated to be deeper than one meter (3.3 feet) in the footprint of the proposed MOW facility. Impacts within the ancillary laydown yard are anticipated to be negligible.

The project is owned by and will be overseen by METRO, a political agency of the State of Texas, rendering the project subject to the Antiquities Code of Texas. Additionally, since the project will be partially funded by Full Funding Grant Agreement North Corridor and Federal Transit Administration (FTA) monies, a federal nexus exists. As a result, compliance with Section 106 of the National Historic Preservation Act, as amended, is required.

In May 2020, Cox|McLain Environmental Consulting, Inc. (CMEC) conducted an intensive survey augmented by the excavation of trenches within the footprint of the proposed facility. No subsurface testing was conducted within the location for the ancillary laydown yard due to evidence of extensive surface disturbance and the lack of anticipated sub-surface impacts associated with the current project. The fieldwork was carried out over the course of a single field session (approximately 48 person-hours or 6 person-days) under Texas Antiquities Permit #9413 by archeologists Scotty Moore and Amani Bourji of CMEC.

Nine mechanically excavated trenches totaling 44.9 meters (147.3 feet) were placed and investigated. Subsurface investigations revealed the presence of mixed modern materials and historic-age artifacts throughout the APE within a heavily disturbed, and in some places, burned, matrix that extended approximately 1.2 meters (3.9 feet) below the surface. Below this depth, however, three partially intact and *in situ* cultural features were documented that date to the early

twentieth century. These features appear to be related to residential occupation of the Fifth Ward and consisted of a brick-lined cistern, a possible brick/concrete pier, and an in-filled posthole. Sixteen artifacts were identified in association with these features. Based upon the presence of the intact features and artifacts, the investigated area was determined to meet the criteria for archeological sites and was assigned trinomial 41HR1242 by the Texas Archaeological Research Laboratory.

Results of the survey indicate that all aboveground remnants of 41HR1242 within the APE have been demolished and/or displaced, but subsurface features and deposits are still present within the project area. One of these features, the brick-lined cistern, exhibits high vertical and horizontal integrity below a depth of approximately 1.2 meters (3.9 feet) and could contribute to the National Registry of Historic Places (NRHP) eligibility of the site under Criterion D (research potential). Moreover, preliminary evidence suggests that some or all of the burned overburden that caps intact features at the site could be the result of the Great Fifth Ward Fire of 1912. As a result, intact features identified within the site may be associated with structures that were destroyed by this fire and may therefore be eligible for inclusion on the NRHP under Criterion A (association with important events).

No cultural materials were collected; therefore, only project records will need to be curated per TAC 26.16 and 26.17. Project records will be curated at the CAS at Texas State University where they will be made permanently available to future researchers.

The Texas Historical Commission concurred with all recommendations on November 2, 2020. The eligibility status of site 41HR1242 remains undetermined.

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1. INTRODUCTION

Overview of the Project

The Metropolitan Transit Authority of Harris County (METRO) proposes to develop of approximately 5.2 acres of land located on the northeast quadrant of the Interstate Highway (IH) 45 and IH 10 interchange within the City of Houston, Harris County, Texas (**Figure 1**). Initially, the proposed project included the construction of an extensive multi-purpose facility that would house the METRO Police Department, a back-up Emergency Operations Center, and Maintenance of Way (MOW) department. Additionally, an ancillary laydown yard would be located immediately north of the facility. Subsequently, however, the proposed development plan was updated to include MOW facilities only. The proposed MOW facility would serve as an ancillary rail maintenance facility composed of a two-story building, surface parking, stormwater detention, and a laydown yard.

Proposed on-site improvements include:

- A two-story building with a publicly accessible community meeting room and bathrooms, offices and meeting room spaces
- MOW shop space and laydown yard for equipment and tool storage
- 37 surface parking spaces for trucks and trailers (50 with future growth)
- 56 surface parking spaces for employees and visitors (70 with future growth)
- Onsite stormwater detention

Offsite improvements include water, sanitary, storm, telephone, electrical and gas utility extensions and tie-ins.

The proposed project comprises a total acreage of approximately 5.2 acres, including approximately 2.7 acres for the proposed facility and approximately 2.5 acres for the ancillary laydown yard. The archeological area of potential effects (APE) for this project consists of the entire 5.1-acre project footprint. Limited ground disturbance is anticipated within the proposed laydown yard location, where some superficial leveling will occur to ensure that it can withstand the weight of heavy equipment; however, ground disturbance within the footprint of the proposed MOW facility is not anticipated to extend below a depth of one meter (3.3 feet).

Scotty Moore and Amani Bourji of CMEC performed a pedestrian survey of the APE augmented with mechanically excavated trenches under Antiquities Permit #9413 in May 2020. In addition to pedestrian survey, nine mechanically excavated trenches totaling 44.9 meters (147.3 feet) were investigated.

All work followed guidelines established by the Council of Texas Archeologists (CTA) and approved by the THC. The methods employed during this study and relevant constraints are discussed in Sections 3 and 4.



Project Location

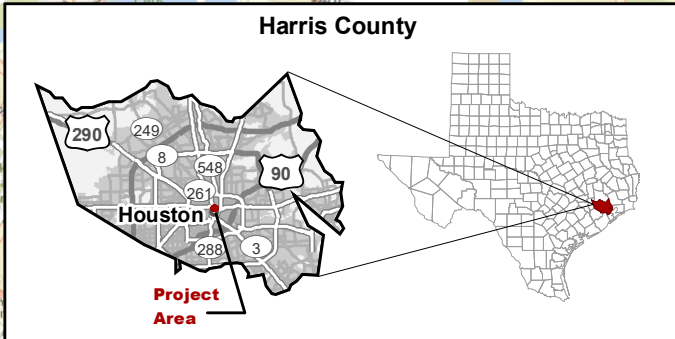
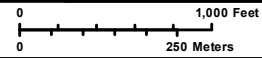


Figure 1
Project Location (Road Base)
 Houston METRO- Maintenance of Way Facility

 Project Location



COX | McLAIN
 Environmental Consulting



1 in = 1,000 feet
 Scale: 1:12,000
 Date: 1/31/2020

Basemap Source: Esri (2020)

Regulatory Context

METRO is the proponent of this project and owns or is proposing to acquire all land within the APE. METRO is an agency of the State of Texas, which makes the project subject to the Antiquities Code of Texas (9 Texas Natural Resource Code [TNRC] 191). Antiquities Permit #9413 was assigned to this project by the THC. The project also has a federal nexus due to FTA involvement, which triggers Section 106 of the National Historic Preservation Act (NHPA), as amended (16 U.S. Code [U.S.C.] 470; 36 Code of Federal Regulations [CFR] 800).

Artifacts observed during the project were described, photographed, and returned to their original contexts; as a result, no artifacts were collected. Project materials (notes, photographs, administrative documents, and other project data) generated from this work will be curated at the Center for Archaeological Studies (CAS) at Texas State University where they will be made permanently available to future researchers per 13 TAC 26.16-17.

Structure of the Report

Following this introduction, Section 2 presents environmental background information, a brief cultural context, and a summary of previous archeological research near the survey area. Section 3 discusses research goals, relevant methods, and the underlying regulatory considerations. Section 4 presents the results of the survey and summarizes the implications of the investigations. References are in Section 5.

2. ENVIRONMENTAL AND CULTURAL CONTEXT

Topography, Geology, and Soils

The project APE lies at an elevation of approximately 15.2 meters (50 feet) above mean sea level on a broad flat terrace approximately 0.5 kilometers (0.3 miles) north of the confluence of White Oak and Buffalo Bayous near downtown Houston within Harris County (**Figure 2**). The project location technically lies within the Northern Humid Gulf Coastal Prairies subregion of the Western Gulf Coastal Plain ecoregion; however, it is located in a heavily developed urban settings that has been anthropogenically altered since the mid-nineteenth century (Griffith et al. 2004; Texas Parks and Wildlife [TPWD] 2011). According to the TPWD's *Texas Ecological Analytical Mapper* database, the entire project location is mapped as either high or low intensity urban development (TPWD 2020).

Geologically, the project area is underlain by the Pleistocene-age Beaumont Formation, which is composed primarily of clay and mud of low permeability, high water holding capacity, poor drainage, and level to depressed relief (USGS 2020a). According to the National Resource Conservation Service (NRCS), the APE is underlain by "Urban Land", which is a designation given to soil units that have undergone such substantial anthropogenic alteration that their original qualities cannot be ascertained (Soil Survey Staff 2020). Although NRCS data is usually available for the upper 2 meters (6.6 feet) of a soil unit, this is not the case with Urban Land, which is typically assessed from the surface only. As a result, NRCS data is not considered to be a reliable source of information for the depth of disturbance within the APE (NRCS 2005).

Vegetation, Physiography, and Land Use

Current land use of the APE is entirely industrial in nature. The northwestern half of the APE is currently utilized as a loading area/laydown yard for gravel and sand mining, while the southeastern half is not in use but is covered by concrete foundation remnants from previous structures and modern refuse (Google Earth 2020). Cleared areas within this portion of the APE are covered with ankle-to-waist high grasses.

Archeological Chronology for Southeast Texas

The entire APE lies within the Southeast Texas archeological region (Kenmotsu and Perttula 1993; Patterson 1995; Perttula 2004; Story et al. 1990), which has a cultural history extending back at least 12,000 years. Human occupation of the area during this time is divided into four broad periods: Paleoindian, Archaic, Late Prehistoric, and Historic. The periods are based on a proposed sequence of economic/subsistence strategies identified in the archeological and historical records. These proposed shifts in dominant lifeways are based on cultural, economic, and technological factors and provide a model useful for attempting to understand ancient and early

historic populations. The dates assigned to the period interfaces represent a generalized time range but are based on scientific results from archeological research. The dates presented in **Table 1** are derived from Perttula (2004). These phases of human occupation are summarized below; for a more detailed discussion regarding the prehistoric record, the reader is referred to Aten (1983), Patterson (1995), and Story and colleagues (1990), among others.

Table 1: Archeological Chronology for Southeast Texas	
Period	Years Before Present*
Paleoindian	
Early	11,500–10,000 B.P.
Late	10,000–8,000 B.P.
Archaic	
Early	8,000–6,000 B.P.
Middle	6,000–3,500 B.P.
Late	3,500–2,200 B.P.
Tchula	2,200–2,000 B.P.
Ceramic	
Early	2,000–1,200 B.P.
Late Prehistoric	1,200–270 B.P.
Protohistoric	270 B.P.–190 B.P.
Historic	Post 190 B.P.
Source: Perttula 2004:9, Table 1.1	
*Based on uncalibrated radiocarbon dates, which are typical in Texas archeology (see Perttula 2004:14, Note 1).	

Paleoindian Period

The Paleoindian period represents the earliest known occupation in east-central Texas. During this period, people relied on megafauna (predominantly mammoth and *Bison antiquus*) as well as broader-based hunting and gathering strategies for their subsistence needs (Perttula 2004). Paleoindian artifacts include distinctive lanceolate projectile points, side scrapers, end scrapers, graters, modified flake tools, and drills. These tools are sometimes associated with the remains of extinct megafauna species. Typically, Paleoindian sites are located near playa lakes and relict streambeds or along small rises and ridges. These sites are usually ephemeral, however, and may be difficult to recognize. Differences in topographic settings and artifact and faunal assemblages have led archeologists to interpret Paleoindian sites in terms of function classes based on the activities inferred to have taken place there. Typical site types of this period include campsites, kill sites, processing sites, and quarry sites. During the Paleoindian period, the climate was vastly different than it is today—it has changed continuously over the last several thousand years. During the earlier phases, the environment was wetter and cooler. Throughout the course of the

Paleoindian period, the climate became increasingly arid and exhibited greater seasonal variation. These conditions resulted in shifting vegetation patterns and faunal extinctions, which, in turn, affected Paleoindian subsistence strategies, settlement patterns, and lithic technologies.

Archaic Period

Usually divided into three more or less equal parts, the Archaic Period encompasses the bulk of southeast Texas prehistory. The Archaic record is confounded by mixed deposits (Hofman et al. 1989) and possible large-scale erosion that removed evidence of cultural activities during the middle of the period. The available data show that Archaic peoples were more likely than their predecessors to make projectile points and other stone tools out of local raw materials; this pattern may be evidence of more spatially restricted territories and/or subsistence areas and may reflect seasonal rounds through a specific series of resource-gathering zones (Ferring and Yates 1997). Generally, the population is thought to have increased throughout later stages of the Archaic Period, perhaps in response to stabilizing climatic conditions.

Tchula Phase

The end of the Archaic Period was characterized by increased sedentism and a reduced focus on long-distance trade. Tchula-period populations were still primarily hunter-gatherers who occupied coastal areas and lowlands, usually near slow-moving streams throughout southeastern Texas and southern Louisiana (Neuman 1993). Tchula settlement distributions in Texas are sparse, and their cultural centers (notably the site of Tchefuncte) seem to have been more focused on the southeastern Louisiana area.

Ceramic Period

The Ceramic period has been generally divided into three periods (although see Aten [1983] for an alternative division). Ceramic artifacts appear in the archeological record of the Galveston Bay area during the Early Ceramic by approximately A.D. 100, and by A.D. 500 had been adopted by a number of inland populations (Perttula et al. 1995). A plain, sand-tempered type of ceramic identified as Goose Creek became prevalent during the period, although a number of decorated varieties and tempering materials were also present (Patterson 1995; Perttula et al. 1995). The appearance of Caddoan pottery in southeast Texas around A.D. 1000–1300 has been used to suggest the presence of extensive trade networks or migration during this time (Aten 1983). The period has also been associated with the introduction of the bow and arrow around A.D. 600 (Aten 1983).

Late Prehistoric Period

Beginning sometime between A.D. 600 and 900 and continuing to as late as A.D. 1550, the archeological record of southeastern Texas reflects increasing regional and interregional

variability. Settlement patterns suggest an increase in sedentary villages and ceremonial centers. Social-cultural features include an established social hierarchy and widespread long-distance trade (Perttula et al. 1995).

Protohistoric Period

The beginning of the Protohistoric Period is marked by the first appearance of Europeans in Texas with the ill-fated Narvaez expedition that, in 1528, deposited Cabeza de Vaca onto the Texas coastline (possibly on Galveston Island). Long-term contacts with Spanish settlers in this area did not directly impact aboriginal lifeways in the same manner seen in the high-profile early Spanish occupations in south and south-central Texas (Campbell 2003). Nevertheless, even without the missions, military outposts, and other facilities characteristic of the Spanish presence to the south, the effects of trade, disease, and other factors on native populations were still dramatic. Indigenous groups of the Protohistoric Period are little known apart from sporadic finds of European trade goods at native sites (Stephenson 1970).

Historic

The last two centuries saw the immigration of substantial populations who displaced earlier groups. The newcomers documented their lives extensively and created what is commonly referred to as the Historic Period. In brief, the landscape and material culture of southeast Texas during this time are characterized by the overwhelming dominance of European-derived populations, the expansion of agriculture and ranching activities, the discovery and exploitation of petroleum resources, the supplanting of small tenant farming by mechanized agriculture and urban sprawl, and various waves of commercial and industrial development. The most recent example of development is the rise of the service and information economies (Campbell 2003).

Harris County

Harris County (named Harrisburg County until 1839) was formed in 1836, and Houston was named as the county seat at the same time (Henson 2010). German families settled the area of Spring and New Caney beginning in the 1840s, and the towns became agricultural centers. The railroad brought an industrial and urban boom to the towns from 1871 to 1923, when Houston took over as home to the major rail facilities in the region. The San Jacinto estuary continued to be an economic asset to the county: in 1911 the Harris County Ship Channel Navigation District was formed (Henson 2010). The channel was widened and deepened in 1914, and in 1918 petroleum refineries and other industries moved into the district. People in the area east of the East Fork of the San Jacinto River continued to rely on a largely agricultural economy with a focus on rice cultivation. Harris County became the most populous county in Texas in 1930, and it had more than 4 million residents in the 2010 census (Henson 2010).

Fifth Ward

One of the original six wards of Houston, the Fifth Ward was initially bounded by Buffalo Bayou to the south, Lockwood Drive on the east, Liberty Road on the north, and Jensen Drive on the west. The area was sparsely inhabited before the Civil War but was subsequently settled by freedmen and became officially known as the Fifth Ward in 1866, when an alderman was elected to represent the community in the Houston City Government (Kleiner 2010).

Immediately following the Civil War, the population of the Fifth Ward was approximately 1,000 and was evenly comprised of Anglo and African-American inhabitants. Over the course of the last decades of the nineteenth century, the bounds of the Fifth Ward expanded to White Oak Bayou on the west (thereby encompassing the current APE). The demographics of the area steadily changed until it was essentially entirely African-American by the turn of the twentieth century (Kleiner 2010).

Growth in the Fifth Ward was fueled economically by the Phoenix Lumber Mill and the Southern Pacific Railroad, which were the major employers until World War II. These companies in turn spawned the development of numerous ancillary businesses by the 1930s, including printing plants, photography studios, and various clubs and bars (Fifth Ward Redevelopment Corporation 2015).

This growth was interrupted by the so-called “Great Fifth Ward Fire of 1912”, which burned and destroyed 119 houses, 116 boxcars, nine oil tanks, thirteen plants, and the St. Patrick’s Catholic Church and school (Aulbach 2012; see **Figure 3**). The fire began on February 21st, and was thought to be caused by “tramps [who] were suspected of starting the fire in a vacant house where they had been spending nights” (Houston Post 1912). The fire claimed no lives but resulted in an estimated \$7 million in damages, equivalent to approximately \$198 million in 2020 dollars (Aulbach 2012; Kleiner 2010).

With the passage of integration laws in the 1960s, many residents left the community and sought wider opportunities. Throughout the 1970s and 1980s the Fifth Ward fell into decline, with rundown abandoned buildings, and developed a notorious reputation as a crime-ridden area. However, in the 1990s and 2000s the area saw significant housing and commercial growth. By 2010, the neighborhood had an estimated population of 22,000 (Kleiner 2010).



FIGURE 3: AFTERMATH OF 1912 FIRE, FACING NORTH (IMAGE COURTESY OF UH DIGITAL ARCHIVE)

Previous Investigations and Previously Identified Resources

A search of the *Texas Archeological Sites Atlas* (Atlas) maintained by the THC and TARL was conducted in order to identify archeological sites, historical markers, RTHLs, properties or districts listed on the NRHP, SALs, cemeteries, or other cultural resources that may have been previously recorded in or near the project corridor, as well as previous surveys undertaken in the area. A 0.25-mile (0.4-kilometer) buffer area beyond the project area was also examined; this review area was smaller than the traditional 1-mile (1.6-kilometer) buffer due to the presence of dozens of archeological sites and historical markers within downtown Houston and its surroundings.

According to the Atlas survey coverage data, a small sliver of the APE near its northwestern boundary was subjected to survey by Moore Archeological Consulting (now Coastal Environments, Inc.) in 2012 (see **Figure 2**). This survey did not identify any cultural resources within the APE. The remainder of the APE had yet to be surveyed. One additional cultural resources survey, conducted by URS on behalf of METRO in 2008, was identified within the review area but outside of the APE (see **Figure 2**).

No known cultural resources have been identified within the APE. One recorded cultural resource, the NRHP-listed Fire Engine House No. 9, was located just north of the APE but has been demolished since its original listing (see **Figure 2**). Archeological site 41HR983, the NRHP-listed Jefferson Davis Hospital, is located to the southwest of the APE just outside of the 0.25-mile review

area buffer, as are five additional historic-age archeological sites and nine RTHLs (see **Figure 2**). None of these resources will be adversely impacted by the proposed project.

Historic Map and Photography Review

A review of available historic aerial photography, historic maps and drawings, and topographic on Google Earth™, the USGS Historic Topographic Viewer database, the University of Houston Library, the University of Texas Library, and the Nationwide Environmental Title Research (NETR) online database was also undertaken to assess how the area has been utilized over time.

Historic maps from 1869, 1873, 1885, 1891, 1907, 1916, 1922, 1946, 1950, 1955, 1957, 1968, 1975, 1982, 1992, and 1995 were reviewed (Koch 1873; Sanborn 1886, 1907; USGS 2020b; Westyard 1891; Woods 1869). The earliest map reviewed, Woods' 1869 map of the City of Houston, depicts Burnett Street and several residences in the general vicinity of the APE; White Oak Bayou is also depicted in its original, non-channelized form surrounded by a dense riparian belt. The next available map, the August 1885 Sanborn Insurance Map for the City of Houston, does not provide detailed information for the APE itself but does depict the New Orleans railroad line running along its southern border and depicts the "People's Press Company's Compress facility" just outside of the APE. The 1891 "Bird's Eye View" map of Houston depicts the Compress facility and several residences that fall roughly in the location of the current APE (Westyard 1891). The most information-rich early map is the 1896 Sanborn Insurance Map; sheet 74 clearly depicts the entire APE as it existed at this time (Sanborn 1896). Sheet 74 is reproduced in **Figure 4** with the APE overlain. The 1896 map clearly depicts the presence of eleven single-story residences clumped near the current APE's center. It also shows that a significant portion of the Galveston, Harrisburg & San Antonio Railroad repair shops and the drying sheds associated with the M. Butler's Brick Works fall within the APE (see **Figure 4**). The latter was established between 1895 and 1896 and included four kilns, several drying sheds, and a steam and hot air-drying house (Aulbach 2012). The later 1907 Sanborn map sheet of the same location shows that the Galveston, Harrisburg & San Antonio Railroad repair shops still stood at this time but that the Brick Works had been dismantled (Sanborn 1907). The residential areas of the APE had filled in by this date and 21 single-story and one two-story structures are depicted in Sheet 26 (**Figure 5**).

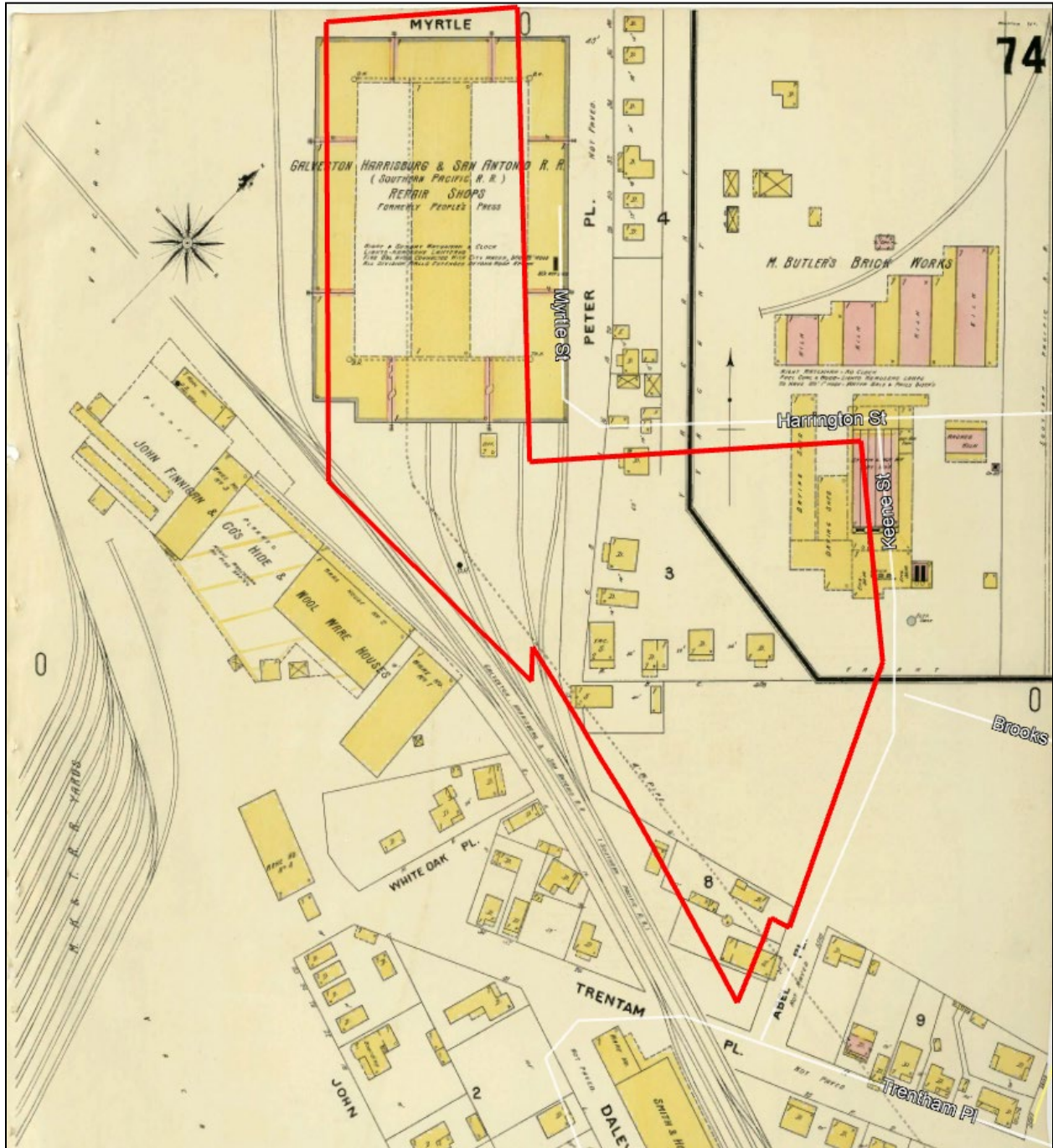


FIGURE 4: VIEW OF APE (BOUNDARIES IN RED) SUPERIMPOSED OVER 1896 SANBORN INSURANCE MAP

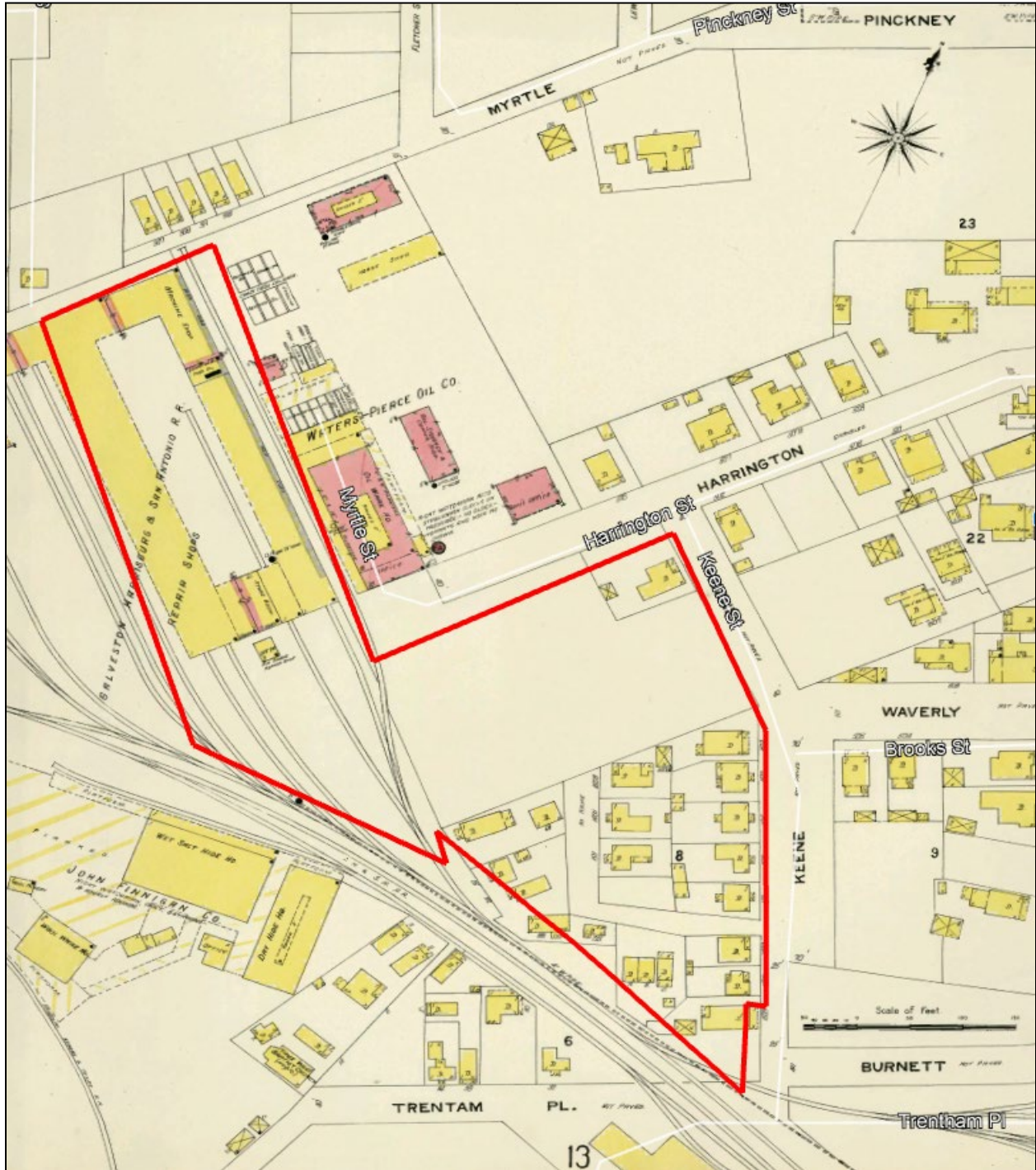


FIGURE 5: VIEW OF APE (BOUNDARIES IN RED) SUPERIMPOSED OVER 1907 SANBORN INSURANCE MAP

The earliest topographic map of the area is the 1916 1:24,000-scale Settegast topographic map; however, it depicts no specific details in the area surrounding the APE but describes it simply as “City of Houston, developed”. The 1922 revision, however, has considerable detail and depicts 20 separate structures within the APE; the majority of these appear in the same general configuration as those depicted in the 1907 Sanborn map. This map also depicts the Hardy rail yards immediately to the southeast and the New Orleans railroad line has been renamed the Galveston, Harrisburg and San Antonio Railroad. Subsequent topographic maps fail to depict individual structures within the APE or for its surrounding environs; instead, the entire region is depicted as uniformly “urbanized” (USGS 2020b).

Aerial imagery from 1944, 1953, 1969, 1978, 1995, 2004, 2008, 2010, 2012, and 2014 was also reviewed (Google Earth 2020; NETR 2020). The 1944 imagery is of low resolution but shows that the railroad repair shops were no longer present by this date and that the APE was utilized for residences along Burnett Street and Myrtle Street with commercial/industrial structures near its center. Imagery from 1953 is clearer and shows that most residences in the APE have been replaced by industrial/commercial structures by this date except at its northern boundary. By 1978 all residential structures are replaced by a combination of what appear to be laydown yards and industrial/commercial structures. The overall disposition and arrangement of these facilities appears to change from 1978 until 1995, when the western half of the APE is cleared of all structures and the eastern half is cleared of standing structural elements (foundations are left visible; Google Earth 2020; NETR 2020). The disposition of the APE appears to have remained substantially the same from 1995 to present.

Disturbances

Known and perceived disturbances in the survey area include those associated with construction and maintenance of existing highways and streets; rail construction, maintenance, and removal; channelization of waterways; flooding and flood debris removal; construction and demolition of industrial facilities; and both illicit and officially sanctioned dumping of fill, trash, and industrial waste. Historic maps of the area show considerable evidence of industrial facilities along Buffalo Bayou, including sawmills, paper mills, soap works, foundries, factories, cotton compressors, cotton gins, oil refineries, and power plants. As documented in survey and testing project reports for various sites along the Elysian Viaduct, such as 41HR907, 41HR908, 41HR1157, and 41HR982/41HR1037 (Frost Town), as well as in METRO’s recent data recovery excavations at Frost Town, generations of industrial land use have left thick, widespread deposits of incinerator spoil, ironworks slag, and other contaminants along both banks of Buffalo Bayou.

3. RESEARCH GOALS AND METHODS

Purpose of the Research

The present study was carried out to accomplish three major goals:

1. To identify all historic and prehistoric archeological resources located within the survey area defined in Chapter 1;
2. To perform a preliminary evaluation of the identified resources' potential to be included on the NRHP; and
3. To make recommendations about the need for further research on the identified resources based on the preliminary NRHP/SAL evaluation, with guidance on methodology and ethics from the THC and CTA.

Section 106 of the National Historic Preservation Act

Section 106 of the NHPA of 1966, as amended (16 U.S.C. 470; 36 CFR 800), directs federal agencies and entities using federal funds to “take into account the effects of their undertakings on historic properties” (36 CFR 800.1a). The CFR defines a “historic property” as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior” (36 CFR 800.16).

In order to determine the presence of historic properties (with this phrase understood in its broad Section 106 sense), an APE is first delineated. The APE is the area in which direct impacts (and in a federal context, indirect impacts as well) to historic properties may occur. Within the APE, resources are evaluated to determine whether they are eligible for inclusion in the NRHP and to determine the presence of any properties that are already listed on the NRHP. To determine whether a property is significant, cultural resource professionals and regulators evaluate the resource using these criteria:

- ...The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and
- a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
 - b. that are associated with the lives of persons significant in our past; or
 - c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that

represent a significant and distinguishable entity whose components may lack individual distinction; or

- d. that have yielded or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

Note that significance and NRHP eligibility are determined by two primary components: integrity *and* at least one of the four types of association and data potential listed under 36 CFR 60.4(a–d). The criterion most often applied to archeological sites is the last—and arguably the broadest—of the four; its phrasing allows regulators to consider a broad range of research questions and analytical techniques that may be relevant to the specific resource (36 CFR 60.4(d)).

Occasionally, certain resources fall into categories which require further evaluation using one or more of the following Criteria Considerations. If a resource is identified and falls into one of these categories, the Criteria Considerations listed below may be applied in conjunction with one or more of the four National Register criteria listed above:

- a. A religious property deriving primary significance from architectural or artistic distinction or historical importance, or
- b. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or
- c. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life, or
- d. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or
- e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or
- f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance, or
- g. A property achieving significance within the past 50 years if it is of exceptional importance (36 CFR 60.4).

Resources listed in the NRHP or recommended eligible for the NRHP are treated the same under Section 106.

After cultural resources within the APE are identified and evaluated, effects evaluations are completed to determine whether the proposed project has no effect, no adverse effect, or an adverse effect on the resources. Effects are evaluated by assessing the impacts that the proposed project will have on the characteristics that make the property eligible for listing in the NRHP and on its integrity. Types of potential adverse effects considered include physical impacts, such as the destruction of all or part of a resource; property acquisitions that adversely impact the historic setting of a resource, even if built resources are not directly impacted; noise and vibration impacts evaluated according to accepted professional standards; changes to significant viewsheds; and cumulative effects that may occur later in time. If the project will have an adverse effect on cultural resources, measures can be taken to avoid, minimize, or mitigate this adverse effect. In some instances, changes to the proposed project can be made to avoid adverse effects. In other cases, adverse effects may be unavoidable, and mitigation to compensate for these impacts will be proposed and agreed upon by consulting parties.

Antiquities Code of Texas

Because the project is owned and funded by METRO, an agency of the State of Texas, the project is subject to the Antiquities Code of Texas (9 TNRC 191), which requires consideration of effects on properties designated as—or eligible to be designated as—SALs, which are defined as:

. . . sites, objects, buildings, structures and historic shipwrecks, and locations of historical, archeological, educational, or scientific interest including, but not limited to, prehistoric American Indian or aboriginal campsites, dwellings, and habitation sites, aboriginal paintings, petroglyphs, and other marks or carvings on rock or elsewhere which pertain to early American Indian or other archeological sites of every character, treasure imbedded in the earth, sunken or abandoned ships and wrecks of the sea or any part of their contents, maps, records, documents, books, artifacts, and implements of culture in any way related to the inhabitants, prehistory, history, government, or culture in, on, or under any of the lands of the State of Texas, including the tidelands, submerged land, and the bed of the sea within the jurisdiction of the State of Texas.
(13 TAC 26.2)

Rules of practice and procedures for the evaluation of cultural resources as SALs and/or for listing on the NRHP, which is also explicitly referenced at the state level, are detailed at 13 TAC 26. An archeological site identified on lands owned or controlled by the State of Texas may be of sufficient significance to allow designation as a SAL if at least one of the following criteria applies:

1. the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;

2. the site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site;
3. the site possesses unique or rare attributes concerning Texas prehistory and/or history;
4. the study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; or
5. there is a high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively, further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected. (13 TAC 26.10)

For archeological resources, the state-level process requires securing a valid Texas Antiquities Permit from the THC, the lead state agency for Antiquities Code compliance. This permit must be maintained throughout all stages of investigation, analysis, and reporting. Texas Antiquities Permit #9413 was assigned to this project.

Survey/Testing Methods and Protocols

CMEC archeologists conducted an intensive survey and testing program per 13 TAC 26.20 and using the definitions in 13 TAC 26.5. Field methods and strategies complied with the requirements of 13 TAC 26.20 and the standards ratified by the THC and the Council of Texas Archeologists (CTA) in April 2020. Fieldwork was conducted over the course of a single field session in May 2020.

Pedestrian survey was conducted by field crew members who walked the entire surface of the APE and noted/photographed evidence for disturbance, refuse dumping, and itinerant camps. Per the THC-approved research design, no shovel test units were excavated due to the known near-surface disturbance within the APE.

Subsurface investigations were conducted via mechanically excavated trenches placed within the footprint for the proposed METRO multi-purpose facility within the southeastern portion of the APE. The trenches were excavated to depths at which the presence, absence, and integrity of buried prehistoric- or historic-age archeological deposits could be evaluated (e.g., Pleistocene-age basal clay). All mechanical excavations were performed utilizing a 39-inch-wide (1-meter-wide) clean-out bucket under the supervision of archeologists who examined profiles, trench floors, and backdirt for the presence of cultural materials and features. The trenching progressed in 5-centimeter (1.97-inch) depth increments, with a sample from each increment screened through 0.635-centimeter (0.25-inch) hardware cloth or crumbled/troweled (when the clay or moisture content was too high for effective screening of sediments). All trenches were at least 4.6 meters (15 feet) in length and were extended as necessary to better delineate features; the longest trench

measured 7.2 meters (24 feet). Trench widths were generally one clean-out bucket's width (1 meter or 39 inches), but some trenches were widened to better delineate features; the widest trench was 2.9 meters (6.5 feet) wide. Final trench depths measured approximately 2.5 to 4.3 meters (7.6 to 14.1 feet) and varied based on the presence and disposition of features and stratigraphy.

Following completion of the mechanical excavations, CMEC personnel examined the exposed deposits (as allowed by trench configuration and safety issues) and described them using conventional texture classifications and Munsell color designations. In general, the upper 2 meters (6.6 feet) of each trench profile was scraped via straight-edged shovel to expose stratigraphy. Below this depth, excavated sediment was examined and assessed but trench walls were not scraped due to safety concerns. CMEC staff complied with Occupational Health and Safety Organization standards for trench safety. Basic recordation of trench data was performed via ground-level observations; however, when archeological features were identified within the first meter of deposits, crew members were permitted to enter trenches to collect artifacts and to record and photograph features.

Prior to any trench ingress, field crew took air quality readings of carbon monoxide, methane, oxygen, and hydrogen sulfide using an RKI Eagle Multiple Gas Monitor to ensure that conditions were safe. Results of each air quality test were documented by the Project Archeologist. Safety benches would have been pulled back from the central cut when ground-level observations were insufficient for documenting and assessing the potential integrity of archeological deposits; however, this contingency was not activated. Following description of the deposits and sketching and photographing of profiles and features observed, CMEC personnel supervised the complete backfilling and leveling of each trench location.

Per the THC-approved research design, CMEC followed a no-collection policy. Artifacts were recorded in field notes (including information on unit, depth, material class, and approximate number) and then returned to their original contexts.

CMEC personnel also kept a complete record of field notes with observations including (but not limited to) identified features, cultural materials, location markers, contextual integrity, estimated time periods of occupations, vegetation, topography, hydrology, land use, soil exposures, general conditions at the time of the survey, and field techniques employed. These field notes were supplemented by digital photographs.

Given the previous residential use of the parcels and demolition of the historic-age buildings, these intensive field investigations had a low likelihood of encountering human burials. If unanticipated burials had been found, all work in the vicinity would have ceased and all requirements of the Texas Health and Safety Code (THSC) as found in 8 THSC 711 would have

been followed, including notification of the Harris County Clerk's office and METRO. No burials were identified during the project.

Reporting and Curation

This report represents the initial written summary of the findings of the archeological survey per 13 TAC 26.24 and CTA guidelines. Following these standards, the report includes a description of the methods employed and work accomplished. The report also includes a series of maps identifying the locations of all mechanical trenches, a table summarizing data obtained for each excavation unit (including the depth, nature, and integrity of archeological deposits encountered), and a description of each new or revised archeological site. The report highlights any potentially significant archeological features that were encountered and provides an evaluation of their archeological research potential. The report concludes with a data-supported assessment that summarizes whether additional fieldwork is warranted at each site or site subarea. The assessment takes into consideration the anticipated scope of planned construction activities when assessing potential impacts to any archeological deposits. The report includes recommendations for further work with appropriate justifications based on the requirements of 13 TAC 26.20 and using the definitions in 13 TAC 26.5. Report drafts have been submitted to State points of contact in PDF format.

Comments will be incorporated into a final project report to be submitted to METRO and the THC. Per 13 TAC 26.16, the final permit-closure submittal will include a transmittal letter, abstract form, project area shapefile, tagged PDF files of the report in both restricted (with site locations) and public (without site locations) versions, as applicable. All materials and forms generated by this project will be made available to future researchers through curation at an approved repository per 13 TAC 26.16 and 26.17 at the Center for Archaeological Studies at Texas State University.

4. RESULTS AND RECOMMENDATIONS

General Field Observations and Results

Over the course of a single field session between May 11 and May 13, 2020, CMEC personnel conducted an intensive archeological survey within the 5.1-acre APE located at 1507 Keene Street in Houston, Harris County, Texas. This survey was augmented with the mechanical excavation of nine trenches within the footprint of the proposed METRO multi-purpose facility, where ground disturbing activities could exceed 5.5 meters (18 feet) in depth (**Figure 6**). The entire APE was contained within a modern chain-link fence, though the eastern gate to the APE was broken and hanging ajar.

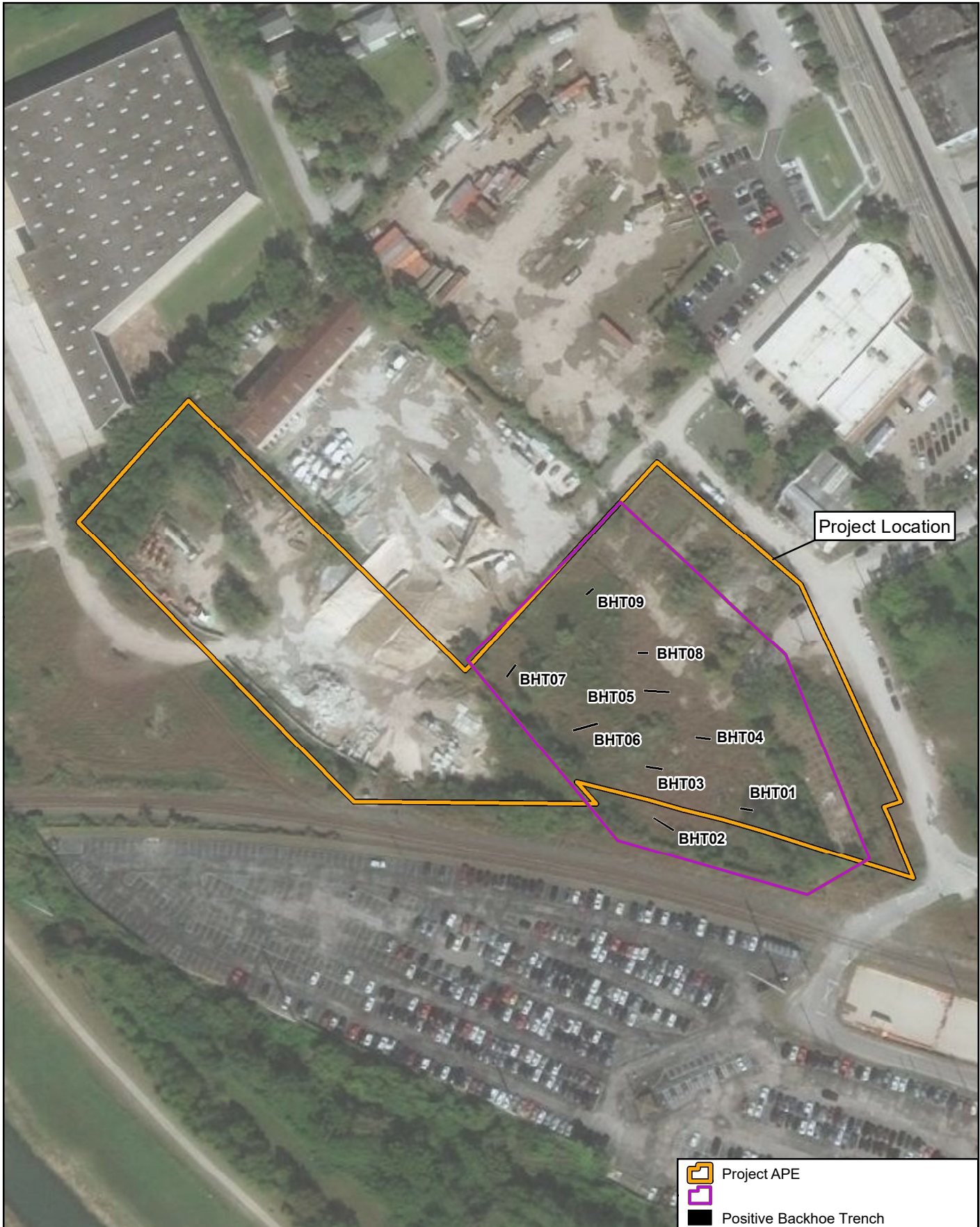
Field conditions on the days of survey were warm to hot with variable cloud cover. No logistical issues were encountered over the course of fieldwork.

The survey area consisted of a formally undeveloped parcel that exhibited an irregular ground surface disturbed from scraping and dumping events. Ankle-to-waist-high grasses were pervasive throughout the APE; as a result, ground surface visibility was low to very low (less than 10 percent) in most places, except where footpaths had been worn across it by local itinerant populations (**Figure 7**). Evidence of sediment scraping and piling was present across the APE, with the largest spoil pile located near the APE's center. Here, the overgrown sediment pile stood approximately 1.2 meters (4 feet) high.

Modern refuse was ubiquitous across the entire APE and consisted primarily of personal items, clothing, and food waste (**Figure 8**), though evidence of commercial dumping in the form of rubber tire and culvert accumulations was also observed. A small itinerant camp occupied by approximately 8 to 10 people was present on the western side of the APE (**Figure 9**).

In addition to modern trash, remnants of cracked and broken poured-concrete foundations were observed along the entire eastern edge of the APE (**Figure 10**). These foundations are observable in historic imagery of the APE and appear to date to the early 1980s to the early 2000s and therefore do not represent historic-age cultural resources. To the extent that they were associated with portable material culture, it consisted of refuse dating from the late twentieth century to present day (e.g., the broken VHS tapes seen in **Figure 8**).

Overall, the surface of APE appeared to be extensively and substantially disturbed by clearing and dumping activities. The irregular ground surface further indicated that near-surface sediments were not *in situ*.



Project Location

BHT09

BHT08

BHT07

BHT05

BHT06

BHT04

BHT03

BHT01

BHT02

 Project APE

 Positive Backhoe Trench



COX | McLAIN
Environmental Consulting

0 150 Feet 1 in = 150 feet
0 40 Meters Scale: 1:1,800 Date: 6/3/2020

Figure 6.
Survey Results
Houston METRO of Harris County - Proposed Maintenance of Way Facility

Data Source: CMEC (2020)
Aerial Source: Maxar (2019)

G:\Projects\Houston_METRO\Metro_PD_CEMetroPD_Arch_Figure 3_Survey Results_20200522_LG.mxd



FIGURE 7: VIEW OF APE FROM CENTER, FACING EAST.



FIGURE 8: VIEW OF MODERN REFUSE ON SURFACE OF APE.



FIGURE 9: VIEW OF MODERN FOUNDATION REMNANTS, FACING SOUTH



FIGURE 10: VIEW OF INTENERANT CAMP LOCATED NEAR WESTERN MARGIN OF APE, FACING WEST.

Mechanical Excavations

In all, nine trenches were mechanically excavated within the APE (see **Figure 6**). Trench placement was hampered by the presence of surface trash dumps and concrete foundation remnants. All trenches were at least 4.6 meters (15 feet) in length and were extended as necessary to better delineate features; the longest trench measured 7.2 meters (24 feet). Trench widths were generally one clean-out bucket's width (39 inches [1 meter]), but some trenches were widened to better delineate features; the widest trench was 2.9 meters (6.5 feet) wide. Final trench depths measured approximately 2.5 to 4.3 meters (7.6 to 14.1 feet) and varied based on the presence and disposition of features and stratigraphy. Following the excavation and documenting of these trenches, they were backfilled and compressed to a level as near to the original ground surface as possible. Specific measurements and more detailed information for individual trenches are presented in **Appendix A**.

Mixed historic and modern refuse were identified in all nine trenches within their uppermost 1.2 meters (3.9 feet). Modern refuse primarily consisted of plastic and glass bottles; the most commonly identified historic items were historic-age brick fragments. Due to evidence for significant mixing at these depths, resources were noted within backdirt and trench walls but were not otherwise documented (**Figure 11**). As a result, all trenches were considered to be positive for cultural resources. Three *in situ* historic-age features and 16 associated artifacts were identified within two trenches; more detailed descriptions of them are presented below the description of site 41HR1242.

Soils

According to NRCS data the survey area is entirely underlain by extensively disturbed urban land (Soil Survey Staff 2020). This characterization is borne out in the stratigraphy encountered within the upper meter of trenches across the APE, which was substantially disturbed across all exposed profiles. Although the precise disposition of all trenches varied somewhat, in general all trenches consisted of four primary zones: first, a variable-thickness modern Ap horizon that began at the surface and varied in thickness from 2 to 30 centimeters (0.8 to 11.8 inches) below surface across the project area; second, a zone of fill sediments with variable thicknesses that extended to 120 centimeters below surface (47 inches) and which showed no evidence of soil formation, but which contained a mixture of modern and historic-age debris that was often burned; third, a weakly structured Btk horizon that was mostly sterile but contained all of the historic-age features and extended to approximately 240 centimeters (95 inches); finally, an indurated and firm Btk horizon that exhibited clay concretions and clay ped linings and is consistent with Beaumont Formation's basal clay (**Figure 12**).



FIGURE 11: ASSORTED HISTORIC AND MODERN MATERIALS OBSERVED IN DISTURBED FILL OF TRENCH 1.

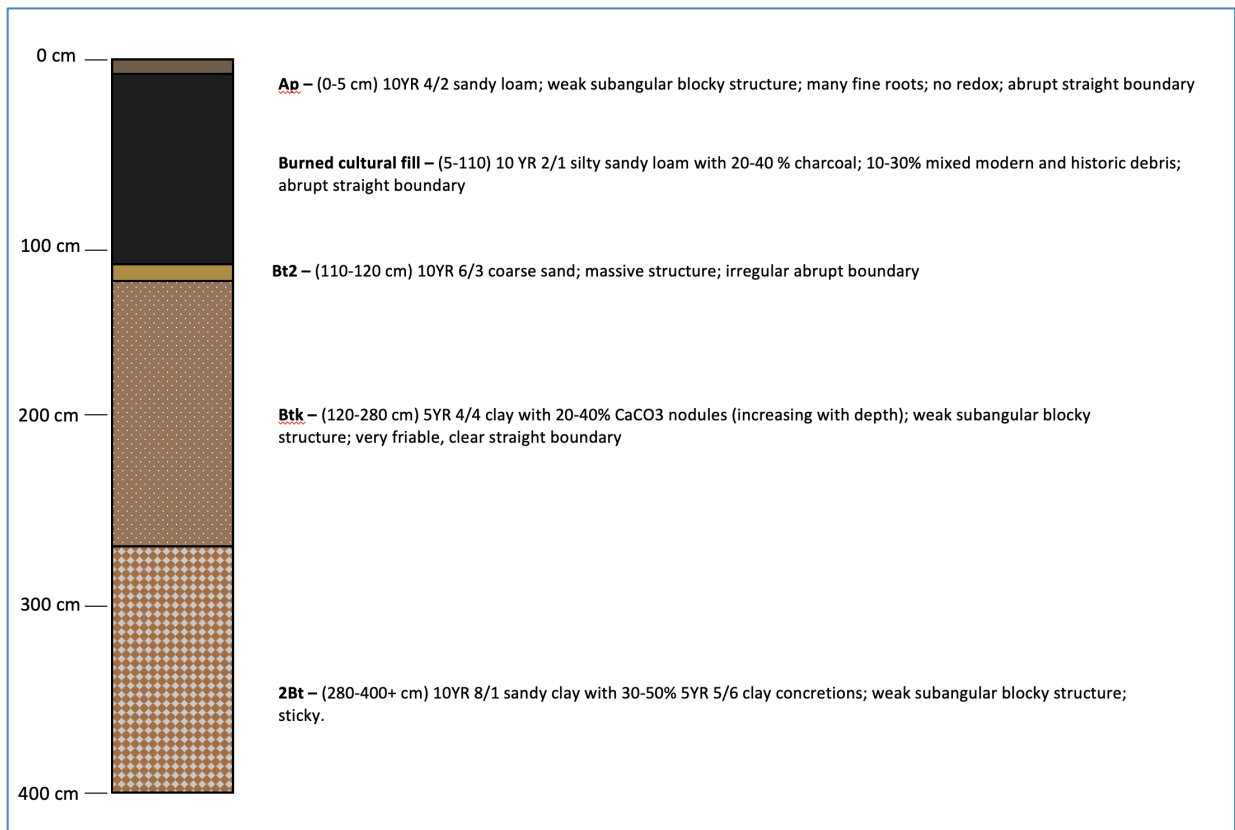


FIGURE 12: IDEALIZED STRATIGRAPHIC SEQUENCE FOR TRENCHES EXCAVATED WITHIN THE APE.

In many locations, a 10-centimeter-thick (3.9-inch-thick) layer of coarse sterile sand was observed across trenches below the mixed and burned fill. The initial field hypothesis that this sand represented deposits from overbank flooding events was rejected because the sand layer appeared too regular and uniform in particle size for this to be the case. A second possibility was that demolition crews in the late 20th century excavated the area and laid down a layer of sand fill prior to pushing demolished residential debris on top of it; however, there is no obvious reason why they would have taken this step. A third possibility, suggested by TxDOT archeologist Dr. Jason Barrett, was that the sand represents sterile fill imported and placed at the turn of the twentieth century to help level the area for residential construction. Given the current evidence, this third possibility seems the most likely.

Below the 1.2-meter-deep disturbance threshold, stratigraphy across the entire survey area suggests a low-energy depositional environment consistent with a back swamp or low-lying riparian area. Observed strata consisted of a generally uniform sequence of clay deposits across the survey area; their significantly different colors suggest potentially different parent material but are consistent with published descriptions of the Beaumont Formation (USGS 2020). Beginning at approximately 3 meters (9.8 feet) below surface, clays were either gleyed or hydric (e.g., formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions); both suggest environments where standing water was common and oxygen levels were reduced (e.g., a back swamp).

Finally, it should be noted that while evidence of burned fill was observed in all trenches between 0 and 1.2 meters (0 and 3.9 feet) below the surface, discrete “burned zones” were observable in Trenches 2, 4, 5, and 6 (**Figure 13**). These burned zones appeared at approximately the same depth across the APE (approximately 1.0 to 1.2 meters [3.3 to 3.9 feet]) and exhibited clear, straight boundaries. Initially, it was hypothesized that the burned zones represented areas where incinerated trash and debris had purposefully been dumped, as was common within Houston during the early to mid-twentieth century (*cf.* Boyd and Norment 2015). However, an alternative hypothesis is that these zones represent remnants of the above-mentioned Fifth Ward Fire of 1912. This possibility is explored more below.



FIGURE 13: VIEW OF "BURNED ZONE" IN TRENCH 2.

Site 41HR1242

Site 41HR1242 is a newly recorded site first identified by this survey and consists of the remnants of an early twentieth-century Fifth Ward residential community (see **Figure 6**; **Figure 14**). It is bounded to the south by the Southern Pacific Railroad (outside of the APE), to the west and northwest by an industrial complex, and to the northeast by modern concrete foundations that line Keene Street. These boundaries are at least partially constricted by the limits of the APE, and it is possible that subsurface features associated with the community occur outside of it, especially to the east of Keene Street.

The site lacks a surface component due to decades of industrial and commercial use and its related ground disturbance. Further, as discussed above, the upper 120 centimeters (47 inches) of the subsurface is heavily mixed, includes redeposited cultural material, and lacks intact features. However, the site contains at least three partially intact features and 16 associated artifacts, all of which are discussed in more detail below.

Feature 1

Feature 1 is a circular brick-and-mortar lined feature that was encountered near the southern boundary of Trench 5 approximately 120 centimeters (47 inches) below the surface underneath disturbed and burned fill (**Figure 15**). The circular feature has an outside diameter of 3.06 meters (10.0 feet) and an inside diameter of 2.80 meters (9.2 feet). Based upon its uniform circular appearance and the associated artifacts identified with it, the feature appears to be a brick-and-mortar-lined cistern. There was no intact evidence for a neck or cap and the feature appeared to have been partially destroyed by later ground disturbance and demolition within the property. Exposed cement adhering to the uppermost exposed course of bricks appears to taper slightly upward and inward (**Figure 16**); this could suggest that this portion of the feature represents the shoulder of the feature. The exposed bricks appeared to be unmarked house bricks measuring $8\frac{3}{4}$ by $4\frac{1}{4}$ by 4 inches and were either 2.5YR 4/8 or 2/5YR 5/3 in color. The mortar between the bricks was 10YR 7/1 and appeared to be made of Portland cement. The feature's horizontal extent was established by expanding the width of the backhoe trench; however, no attempt was made to systematically excavate the feature below the depth of its initial discovery.

The matrix overlying Feature 1 was burned and included mixed modern and historic-age debris including multiple brick fragments that were likely once part of the feature itself. In addition, thirteen artifacts were observed adjacent to the edges of the feature just below the interface between the intact feature deposits and the overlying fill (**Figures 17** and **18**; **Table 2**). The artifacts were uncovered during attempts to reveal the edges of feature and were all excavated from unburned fill located adjacent to and inside the brick ring. The most notable artifacts were a nearly intact clear glass Coca-Cola bottle that was manufactured between 1900 and 1916 (see **Figure 17**) and a "Johnson Bros. Ironestone China" transfer printed ware sherd (see **Figure 18**) that was manufactured between 1893 and 1913 (Birks 2005; Bottle Research Group 2018; Petretti 1997).

Transfer printed ware refers to ceramics that had a design from an inked copper plate transferred to a ceramic dish. The transfer printing process was first used in the 1750s but could only be used for display items since the print would easily be removed by use (Coysh and Henrywood 1982). By the 1780s, many blue-printing departments were established by Staffordshire potters. Stippling was added during the early nineteenth century (1800 to 1815) as a technique to add detail. During the "Second Transitional Period" (1835 to 1845), glazes were clear and the use of colors other than blue for patterns became popular. As technology improved, other colors were added, including purple and red (Maryland Archaeological Conservation Lab [MACL] 2015).

These artifacts suggest that upper (e.g., later) deposits within the feature date to the turn of the 20th century; deeper deposits could contain older materials. If the overlying mixed burden post-dates the 1912 Fifth Ward Fire, it is likely that the cistern was abandoned after this date.

Other artifacts observed in associated with this feature included clear bottle glass fragments (n=5), clear bottle glass base (n=1), green bottle glass shard (n=1), refined earthenware ceramic sherds (n=3), and oyster shell (n=1). The clear glass bottle base exhibited a “A. B. Co” mark, which attributed to the American Bottle Company of Chicago Illinois and dates to 1905–1929 (Toulouse 1971).

The refined earthenware sherds had no obvious markings and it is often difficult to distinguish between refined earthenware paste types (pearlware, ironstone ware, whiteware). Based upon field observations, it is likely that the three sherds are white ware, which usually has a harder paste than pearlware but a softer paste than ironstone ware. Indeed, the paste on the “Johnson Bros.” sherd mentioned above appeared to be somewhat harder than that of the three unmarked sherds. Whiteware does not have a specific date at which it came into production; rather, it had developed from pearlware by around the 1820s and was present in most American households by the 1830s (Miller 1980). Modern or pure white whiteware gained popularity between the 1890s and the 1920s but are still produced today (Moir 1987). These wares exhibit absolutely no evidence of the blue in their glazes, which are very often crazed.

Colorless glass bottles are uncommon prior to the 1870s but were ubiquitous after the use of automatic bottle machines became widespread in the mid to late 1910s (Lindsey 2014). Colorless glass turns amethyst (i.e., solarized) when manganese—which was added to glass to neutralize impurities—is exposed to sunlight (Lindsey 2014; Stelle 2018). The addition of manganese to glass for tableware items occurred as early as 1850, but was not prevalent in bottle glass until later, between 1870 and about 1920 (Lockhart 2006).

It should be noted that Figure 17 also depicts a Ferris brick fragment, two plastic fragments, and one composite road reflector; these materials were all encountered at the interface of the feature with overlying fill and cannot be conclusively associated with the feature.

Based upon available data, Feature 1 appears to have moderate to high vertical integrity below a depth of 120 centimeters (47 inches) and high horizontal integrity. Its research potential is considered to be very high.



FIGURE 15: VIEW OF FEATURE 1, FACING WEST.



FIGURE 16: PROFILE VIEW OF FEATURE 1 SHOWING POSSIBLE SHOULDER, FACING NORTH.

Table 2: *In Situ* Artifacts Observed at 41SM497

Material	Artifact class	Count	Associated Feature	Notes
Ceramic	Refined earthenware sherd	3	Feature 1	Possibly whiteware
	Tranferware sherd	1	Feature 1	Johnson Brothers "Ironstone China"
Ecofact	Oyster shell (intact)	1	Feature 1	
Ferrous iron	Wire nail	1	Feature 3	5 cm long; head intact
Glass	Clear flat glass	2	Feature 2	Thickness: 0.4 cm (one fragment); 0.3 cm (one fragment)
	Clear bottle shard	5	Feature 1	
	Clear bottle base	1	Feature 1	"A.B. Co" makers mark
	Whole bottle	1	Feature 1	Coca-Cola; bottled in Houston, Texas
	Green glass	1	Feature 1	Possible beer bottle
Total		16		

Feature 2

Feature 2 is a structural pier or footing that was encountered at approximately 140 centimeters (55 inches) below surface in the middle of Trench 6 (see **Figure 6**). It is composed of Portland cement with brick fragments used for temper and measured approximately 110 centimeters (43 inches) east to west and was oriented parallel to the trench (**Figure 19**). The exposed portion of the feature extended approximately 55 centimeters (22 inches) north of the south wall and was 15 centimeters (5.9 inches) thick. Brick fragments were uniformly 2.5YR 4/4 in color but varied in size and shape, suggesting that they were informally added to the cement.

A smaller molded concrete block fashioned from Portland cement appears to sit centered above the brick/concrete base; this portion of the feature was located immediately outside of Trench 6 and is visible in the southern trench wall profile (**Figure 20**). Thus, although the feature was first encountered at 140 centimeters (55 inches) below surface, its upper-most intact component lies 120 centimeters (47 inches) below the surface. This is consistent with the starting depth of other intact features at the site. The exposed portion of the upper block measured 68 centimeters (26.7 inches) from east to west and 32 centimeters (12.6 inches) vertically.

The north-south dimensions of the feature could not be ascertained due to its partial enclosure within the southern trench wall, but based upon its exposed surfaces the feature appears to be considerably larger than a standard house pier from the turn of the twentieth century. It may be the case that the feature supported a larger structure or even industrial machinery associated with the nearby Galveston, Harrisburg & San Antonio Railroad line, which was located approximately 20 meters (65.6 feet) to the west.



FIGURE 19: PROFILE VIEW OF FEATURE 2, FACING NORTH.



FIGURE 20: PLAN VIEW OF FEATURE 2, FACING WEST.

Two flat clear glass artifacts were observed resting immediately above the concrete/brick portion of the feature on its northern side (see **Table 2**). One measured 4 millimeters in thickness while the other measures 3 millimeters; plate glass of these thicknesses have been in production since 1920 when the continuous thread production process was invented (Seeley 1996).

Feature 2 appears to have high vertical integrity below a depth of 120 centimeters (47 inches) and high horizontal integrity. Its research potential is moderate since unexposed, intact components of the feature may still be present.

Feature 3

Feature 3 is a circular post mold that was identified in the western half of Trench 6 (see **Figure 6**; **Figure 21**). The feature first appeared at a depth of 120 centimeters (47 inches) below the surface and expressed as a soil feature measuring 25 centimeters (9.8 inches) north to south by 28 centimeters (11 inches) east to west. The interior of the feature consisted of burned 10YR 3/1 friable sandy loam and gravel that was surrounded by compact, reduced 2.5Y 5/6 clay. The feature was observable until 140 centimeters (55 inches) below surface, after which it abruptly disappeared. Burned fill from the feature was screened separately from trench matrix; one small ferrous iron wire nail fragment measuring 5 centimeters (2 inches) was observed near its bottom (see **Table 2**). Feature 3 was located approximately 1.3 meters (4.3 feet) west of Feature 2 and was encountered at approximately the same depth below mixed fill. The feature was completely excavated during trenching.

Based upon available data, Feature 3 appeared to have moderate vertical integrity below a depth of 120 centimeters (47 inches) and high horizontal integrity. Its research potential is very low.

Overall, the features and associated artifacts observed during the present investigations suggest an early-twentieth-century residential occupation that potentially predates the 1912 fire. The presence of the large cistern is the best evidence that intact elements of the early Fifth Ward community are still preserved within the site, since cisterns were often communal features in early urban neighborhoods that would have services multiple households.

If the intact components of the site do indeed date to the first decade of the twentieth century, then the most relevant historical map available is the 1907 Sanborn Insurance Company map (see **Figure 5**). A comparison of identified feature locations with this map suggests that the cistern likely was utilized by the residents of the small residential neighborhood that once occupied what is now the southernmost quarter of the APE.



FIGURE 21: VIEW OF FEATURE 3, FACING WEST

Due to municipal closures caused by the COVID-19 pandemic, access to most historical land and deed records for the site were not available at the time of survey. Deed and record searches conducted via the Harris County Tax Appraisal District’s website revealed that site falls within two parcels (Tract 5, ABST 1 J Austin [parcel 0400160000005] and TR B BLK 8, Allen A C [parcel 0031560000002]). However, online records do not extend far enough into the twentieth century to be of much utility. Results of the deed search are presented in **Table 3**. None of the people listed as owners are known to be associated with significant events and thus do not alter the site’s eligibility status.

Table 3: Deed Research for 41HR1242			
Parcel	Seller	Buyer	Date
0400160000005	E. F. Gattis	A. J. Gattis	January 2, 1988
	A.J. Gattis	METRO of Harris County	May 2, 2008
0031560000002	A.J. Gattis	METRO of Harris County	May 2, 2008

Data Source: hcad.org (2020)

Conclusions and Recommendations

In accordance with 36 CFR 800.4, CMEC archeologists made a reasonable and good-faith effort to evaluate the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16.(1)) or State Antiquities Landmarks (13 TAC 26.12). This undertaking included the investigation of 9 mechanically excavated trenches and resulted in the discovery of 3 subsurface features and 16 associated historic artifacts.

Results of the survey indicate that the APE has been substantially and significantly disturbed to a maximum depth of approximately 120 centimeters (47 inches). All matrix above this level contains displaced and out of context historical artifacts and structural debris mixed with modern refuse, fill dirt, and burned materials. However, stratigraphy below 120 centimeters (47 inches) appears to be intact across the entire footprint of the proposed multi-purpose facility. Historic features and artifacts dating to the first decade of the twentieth century are present and appear to have high vertical and horizontal integrity below the 120-centimeter threshold.

These features appear to be related to residential occupation of the Fifth Ward and consisted of a brick-and-mortar-lined feature (likely a cistern), a brick/concrete pier, and an in-filled posthole. Sixteen artifacts were identified in association with these features. Based upon the presence of the intact features and artifacts, the investigated area was determined to meet the criteria for archeological sites and was assigned trinomial 41HR1242 by the Texas Archaeological Research Laboratory.

Results of the survey indicate that all aboveground remnants of 41HR1242 within the APE have been demolished and/or displaced, but subsurface features and deposits are still present within the project area. One of these features, the brick-lined cistern, exhibits high vertical and horizontal integrity below the 1.2-meter threshold and could contribute to the National Registry of Historic Places (NRHP) eligibility of the site under Criterion D (research potential). Moreover, preliminary evidence suggests that some or all of the burned overburden that caps intact features at the site could be the result of the Great Fifth Ward Fire of 1912. As a result, intact features identified within the site may be associated with structures that were destroyed by this fire and may therefore be eligible for inclusion on the NRHP under Criterion A (association with important events).

Under the revised plans for developing the property, however, METRO proposes construction activities that will not result in ground disturbance deeper than 1 meter (3.3 feet). The proposed project will not impact any intact archeological deposits associated with 41HR1242 and the results of this study will be used to facilitate the final design process. Therefore, no NRHP-eligible properties will be negatively affected by the project and a finding of no adverse effects is recommended. The proposed project should therefore be allowed to proceed without further archeological work. Should design plans change in the future and new impacts deeper than 1 meter be proposed, further coordination with THC may be necessary.

No cultural materials were collected; therefore, only project records will need to be curated per TAC 26.16 and 26.17. Project records will be curated at the CAS at Texas State University where they will be made permanently available to future researchers.

Per THC requirements, if any unanticipated cultural materials or deposits are found at any stage of clearing, preparation, or construction, the work should cease in that area and METRO personnel should be notified immediately. During evaluation of any unanticipated finds and coordination between METRO and THC, clearing, preparation, and/or construction could continue in any other areas along the corridor where no such deposits or materials are observed.

The THC concurred with all recommendations made in this report on November 2, 2020. The eligibility status of site 41HR1242 remains undetermined.

5. REFERENCES

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APPENDIX A: MECHANICAL TRENCH EXCAVATION RESULTS

Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmbs*)	Description/Notes	Cultural Material
BHT 01 5.1 meters North/South Orientation	0–25	(10YR 4/4) sandy clay loam; many fine roots; firm consistency; abrupt, wavy boundary.	Modern refuse
	25–35	(10YR 8/2) sand; no structure; many fine roots	Modern refuse
	35–45	(5YR 5/6) clay with (10YR 5/1) clay; streaks of subangular blocky structure; abrupt, straight boundary	N/A
	45–55	(7.5YR 3/1) clay with 5% charcoal flecks; abrupt, irregular boundary	Lumbered wood, ceramic, brick fragments
	55–80	(7.5YR 3/1) clay with 25% red, 25% gray, 25% (10YR 5/6) clay, 25% (10YR 5/2) clay; heavily mixed; no structure; abrupt, irregular boundary	Brick fragment, clear bottled glass, carbonized metal, fabric slag
	80–90	(10YR 3/1) sandy gravelly clay loam; no structure; abrupt, irregular boundary	Ceramic brick fragments smaller than 2 cm, modern nail, plastic
	90–95	(7.5YR 4/6) Gravelly clay loam; abrupt, irregular boundary	Metal wire, small brick fragments less than 1/2 cm.
	95–115	(10YR 4/1) clay; less than 5% charcoal; evenly distributed; abrupt, irregular boundary	N/A
	115–390	33% (10YR 4/4) clay, 33% (10YR 5/8) clay, 33% (10YR 7/1) clay; massive structure	N/A

Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmbs*)	Description/Notes	Cultural Material
BHT 02			
4.8 meters	0–20	50% (2.5YR 5/8) clay with 25% (10YR 8/8) clay, and 25% (10YR 7/1) clay; many roots; firm consistency; no structure; abrupt, irregular boundary	N/A
North/South Orientation	20–35	(10YR 3/1) clay with 10% (10YR7/1) clay; firm consistency; no structure; abrupt, irregular boundary	Carbonized wood, brick fragments less than 5 cm
	35–40	(10YR 5/4) Sandy loam; many rootlets; loose consistency; abrupt, irregular boundary	N/A
	40–45	50% (10YR 4/2) clay with 25% (10YR 2/1) clay, 25% (10YR8/1) sand is in concentrations smaller than 2 cm; loose consistency; abrupt, straight boundary	Brick fragments less than 1 cm, fabric/carpet
	45–65	(10YR 5/4) sand, with 10% (10YR 4/1) clay; 10-20% gravels; orthoclase; 5% iron concretions; abrupt, irregular boundary; loose consistency	Brick fragments, carbonized wood
	65–80	33% (10YR 4/2) clay, 33% (10YR 5/6) clay, and 33% (10YR 7/8) clay; firm consistency; no structure; abrupt, irregular boundary	Plastic wire, clear bottle glass, less than 5% charcoal concentrations smaller than 1 cm
	80–120	(10YR 2/1) sandy clay; burned/reduced; slightly firm consistency; no structure; abrupt, irregular boundary	Bottle glass (clear, blue, green, brown) whiteware, brick fragments and full bricks, blue ceramics
	120–340	(10YR 6/1) sandy clay with 5% (10YR 7/4) clay; slightly firm consistency; no structure; increased redox with depth	N/A
BHT 03			
4.1 meters	0–85	Mixed fill; (10YR 5/4) clay loam with 10% (10YR 3/1), 10%(2.5YR 5/8) clay, 10% (10YR 4/2) clay loam, 10% (10YR 8/1) sandy clay, 10% (7.5YR 5/6) clay loam, 10% (7.5YR 3/4) clay, 10% (7.5YR 5/4) clay loam; no structure; many roots; variable consistency; abrupt, straight boundary. Trench terminated at impenetrable asphalt surface.	Metal wire, 2x4 lumber, plastic, oyster shell
East/West Orientation			

Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmbs*)	Description/Notes	Cultural Material
BHT 04 5.3 meters East/West Orientation	0–60	Mixed fill; 50% (10YR 4/3) gravelly loam with 25% (10YR 5/6) clay, 25% (10YR 6/3) sandy loam; no structure; variable consistency at 60 cm; iron asphalt; soil feature similar to soil feature one but, with less iron.	Poured concrete fragment tile, rubber, plastic, unidentified metal, lumber
	40–60	(10YR 6/4) sandy clay loam with 10% (2.5YR 5/8) clay; many roots; friable consistency; no structure; abrupt, straight boundary	Plastic wire, clear bottle glass, less than 5% charcoal
	60–75	(10YR 7/2) sand with less than 5% (10YR 5/6) clay loam; friable consistency; no structure; abrupt, straight boundary	N/A
	75–90	(10YR 2/1) clay loam burned trash layer; firm consistency; no structure; abrupt, straight boundary; burned layer extends 80 cm North of the South wall	Metal wire, small brick fragments less than ½ cm
	90–100	(10YR 4/1) clay; firm consistency; no structure; abrupt, straight boundary	N/A
	100–105	(10YR 2/1) clay loam; firm consistency; no structure; abrupt, straight boundary	N/A
	200–290	(10YR 6/1) sandy clay with 5% (10YR 7/4) clay; slightly firm consistency; no structure; increased redox with depth	N/A

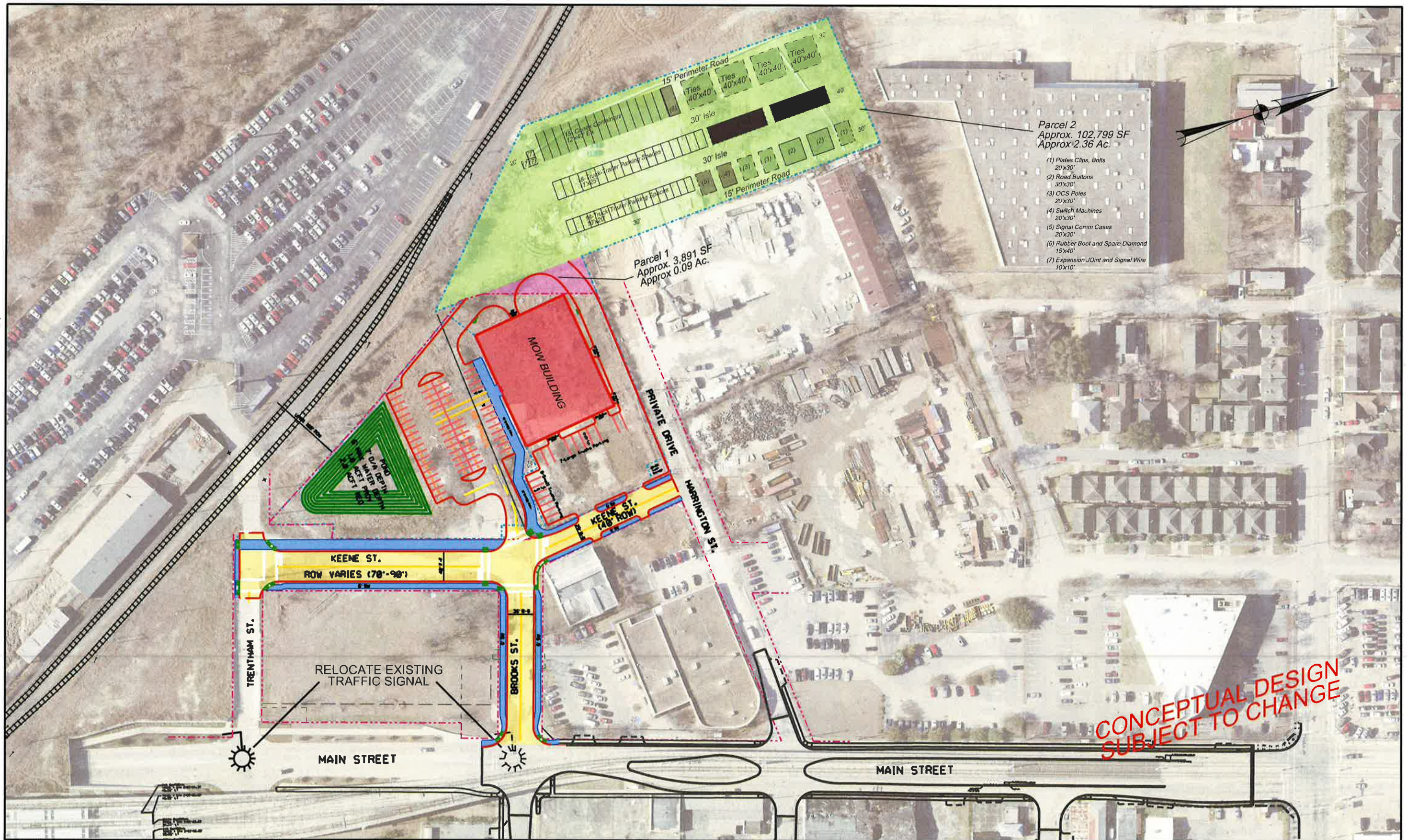
Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmb ^s *)	Description/Notes	Cultural Material
BHT 05 6.2 meters East/West Orientation	0–40	Mixed/disturbed; 50% (10YR 3/1) clay with 25% (2.5YR 5/8) clay, 25% (10YR5/4) clay loam; no structure; variable consistency; abrupt, irregular boundary	Oyster shell, brick fragments less than 5 cm
	40–60	(10YR 6/4) sandy clay loam with 10% (2.5YR 5/8) clay; many roots; friable consistency; no structure; abrupt, straight boundary	Oyster shell, brick fragments less than 5cm, clear glass, ceramic
	60–75	(10YR 7/2) sand with less than 5% (10YR 5/6) clay loam; friable consistency; no structure; abrupt, straight boundary	Oyster shell; brick fragments less than 2 cm
	75–90	(10YR 2/1) clay loam burned trash layer; firm consistency; no structure; abrupt, straight boundary; burned layer extends 80 cm North of the South wall	Metal nails, unidentified metal debris, ceramic pipe fragments
	90–100	(10YR 4/1) clay; firm consistency; no structure; abrupt, straight boundary	N/A
	100–105	(10YR 2/1) clay loam; firm consistency; no structure; abrupt, straight boundary	Brick fragments less than 5 cm in diameter
	105–320	(10YR 4/2) silty sand; friable consistency; no structure. Trench terminated at Feature 1.	Burned whole bricks; Feature 1
BHT 06 5.1 meters East/West Orientation	0–65	Mixed fill; 50% (10YR 5/4) clay, 25% (10YR 7/6) clay and 25% (7.5YR 4/6) clay; firm consistency; no structure; abrupt, irregular boundary	Brick fragments less than 1cm, oyster shell, plastic, carbonized wood
	65–90	(10YR 3/1) clay loam with 10% (7.5YR 7/3) clay; somewhat loose consistency; no structure; straight clear boundary; sporadic sand lenses; (10YR 5/1) lenses measure 5cm vertically x 6cm horizontally	Yellow ceramic tile; (2.5Y 8/6) unidentified metal, 10% charcoal flecks smaller than 1 cm
	90–120	(7.5YR 2.5/1) clay loam; firm consistency; no structure; abrupt, straight boundary	Metal nail, oyster shell, Feature 2
	120–300	(5Y 6/1) clay with 20% (5Y 6/6) clay; subangular blocky structure; firm consistency	Features 2 and 3

Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmbs*)	Description/Notes	Cultural Material
BHT 07			
4.8 meters	0–15	(10YR 4/3) sandy loam; friable consistency; weak subangular blocky structure; many roots; abrupt, straight boundary	N/A
East/West Orientation	15–25	(2.5YR 4/6) sandy clay loam with 40% sub-rounded sandstone gravels and cobbles; friable consistency; no structure; abrupt, straight boundary	N/A
	25–50	(7.5YR 3/1) sandy clay loam; 10% charcoal concentrations less than 2cm; loose consistency; no structure; irregular diffused boundary	Broken clear glass, unidentifiable metal
	50–150	(7.5YR 6/2) clay with 40%-50% redox; (2.5YR 4/6) clay; firm consistency; very weak subangular blocky structure diffused, straight boundary	N/A
	150–190	(10YR 4/4) Gravelly clay with 5-10% calcium carbonate concentrations; subangular block structure; very firm; diffused, straight boundary	N/A
	190–390	(7.5YR 5/6) gravelly clay; very firm; subangular blocky structure	N/A
BHT 08			
4.7 meters	0–55	Mixed/disturbed fill; 50% (10YR 3/1) clay, 25% (10YR 6/2) clay loam, (2.5YR 4/6) clay loam; variable consistency; no structure; terminated at asphalt chunks that cover entire trench floor	N/A
East/West Orientation			

Backhoe Trench Excavation Results			
Trench # and Orientation	Depth (cmbs*)	Description/Notes	Cultural Material
BHT 09			
4.8 meters	0–25	(10YR 7/2) sandy loam; friable; no structure; many roots; abrupt, irregular boundary	N/A
East/West Orientation	25–45	Mixed fill; 33% (10YR 5/6) sandy clay loam with 33% (2.5YR 4/6) clay, 33% (10YR 7/2) clay loam; variable consistency; no structure; diffused, straight boundary	N/A
	45–55	(7.5YR 5/6) sandy loam with 5% (2.5YR 4/6) clay; loose consistency; no structure; diffused, straight boundary	N/A
	55–85	Mixed fill; 33% (10YR 5/6) sandy clay loam with 33% (2.5YR 4/6) lay 33% (10YR /2) clay loam; variable consistency; no structure; diffused, straight boundary	N/A
	85–120	50% (2.5YR 4/6) clay with 50% (10YR /1) clay; very firm; no structure; carbonized wood; straight and abrupt boundary	N/A
	120–190	(7.5YR 4/6) clay loam with 30% (2.5YR 5.6) clay and 10% (10YR 7/1); carbonized wood throughout firm; no structure; abrupt, straight boundary	N/A
	190–270	(2.5YR 7/3) sandy clay with 30% (2.5Y 7/6) sandy clay; friable; unknown structure; carbonized wood throughout	N/A

APPENDIX B: PRELIMINARY DESIGN PLANS

5/13/2020 H:\Engineering\Capital Programs\Design Development\LET\MOW - Maintenance of Way\MOW at Keene\MOW CAD\1\MOW at Keene - Overview Sht.dgn



- Parcel 2
Approx. 102,799 SF
Approx 2.36 Ac.
- (1) Plates Clips, Bolts 20"x30"
 - (2) Road Buttons 30"x30"
 - (3) OCS Poles 20"x30"
 - (4) Switch Machines 20"x30"
 - (5) Signal Comm Cases 20"x30"
 - (6) Rubber Boot and Spare Diamond 15"x40"
 - (7) Expansion JOint and Signal Wire 10"x10"

Parcel 1
Approx. 3,891 SF
Approx 0.09 Ac.

**CONCEPTUAL DESIGN
SUBJECT TO CHANGE**

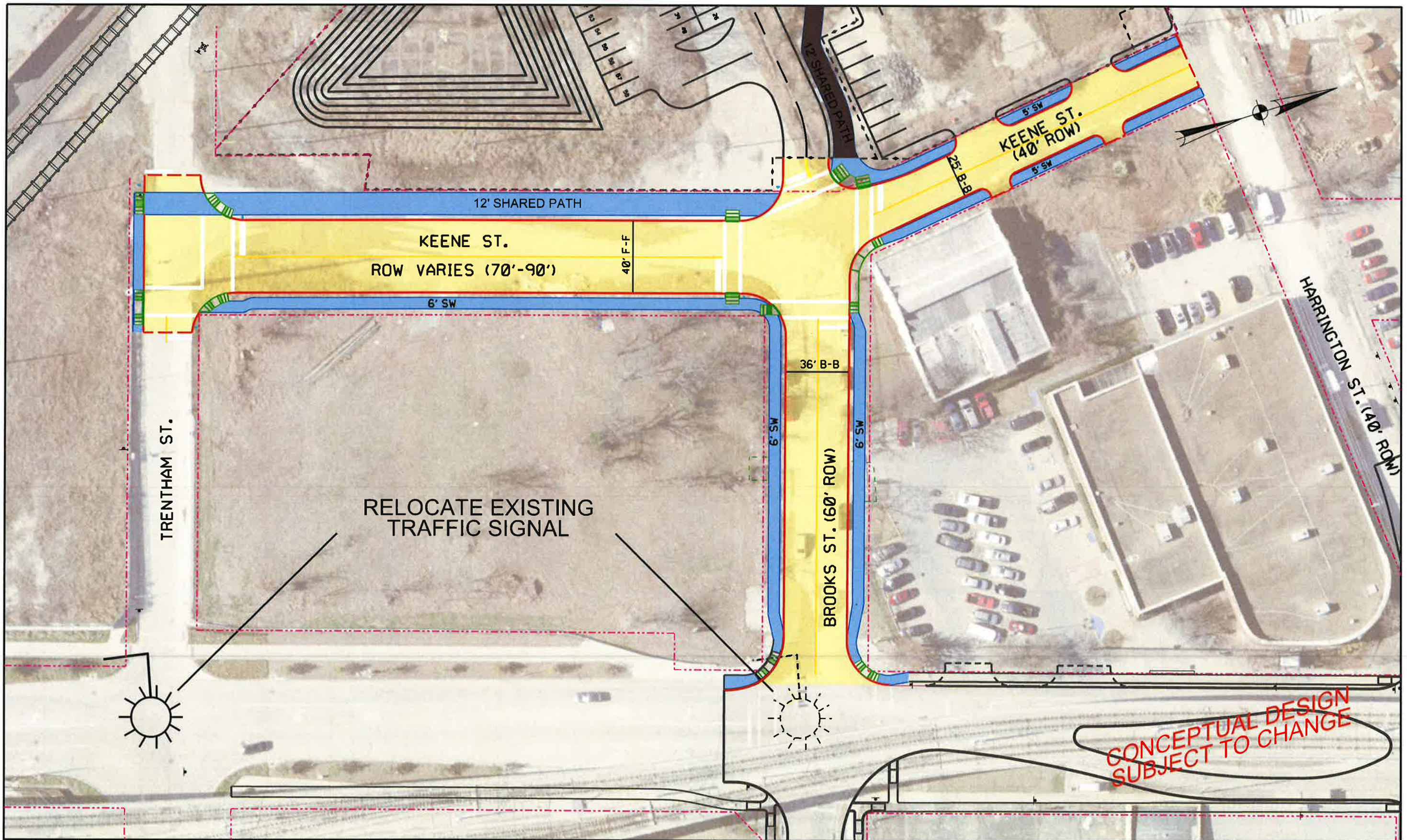
REV	DATE	DESCRIPTION	ADD	AMD	CCR	BY	ENG	CHK	APP



S. SAFARI	5/13/2020
DRN BY	DATE
M. TEGETHOFF	5/13/2020
DRN CRD BY	DATE
DES BY	DATE
DES CRD BY	DATE
APPROVED BY	DATE
SCALE:	1"=120' With 11"x17"

MOW AT KEENE		
PROJECT OVERVIEW		
CONTRACT NO.	DRAWING NO.	REV.

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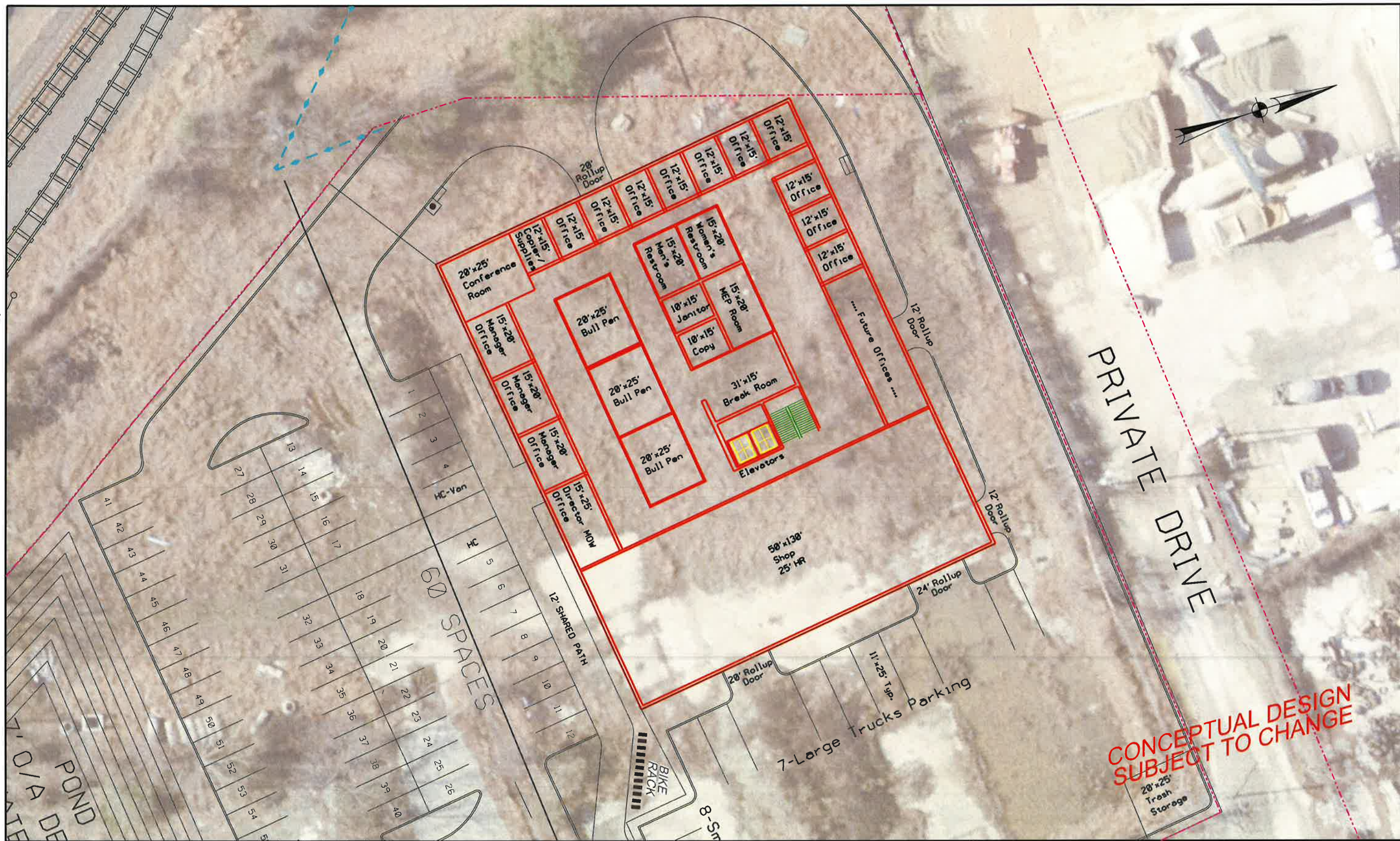
REV	DATE	DESCRIPTION	ADD	AMD	CCR	BY	ENG	CHK	APP



S. SAFARI	5/13/2020
DRN BY	DATE
M. TEGETHOFF	5/13/2020
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DES BY	DATE
DES CKD BY	DATE
APPROVED BY	DATE
SCALE: 1"=50' With 11"x17"	

MOW AT KEENE		
KEENE AND BROOKS STREET CONSTRUCTION		
CONTRACT NO.	DRAWING NO.	REV.

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**CONCEPTUAL DESIGN
SUBJECT TO CHANGE**

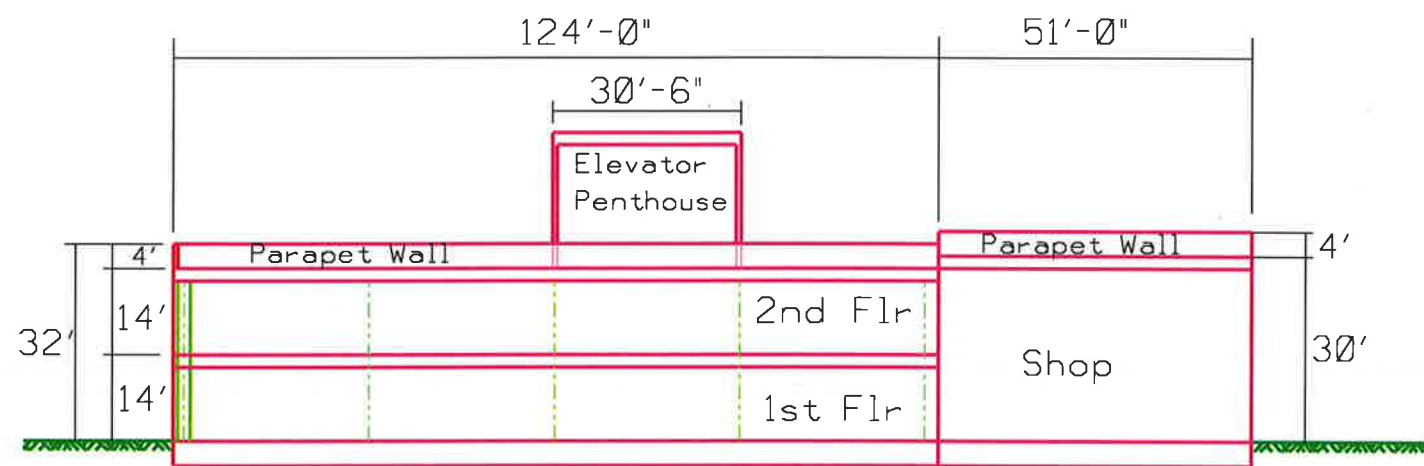
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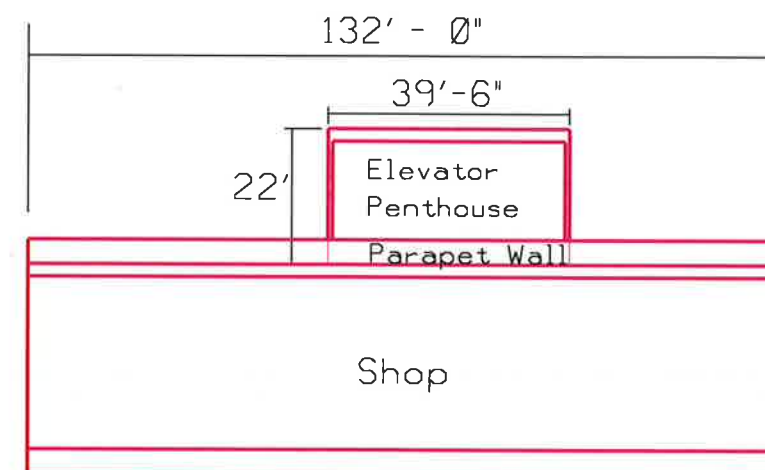
DESIGNED BY	S. SAFARI	DATE	5/13/2020
DESIGNED BY	M. TEGETHOFF	DATE	5/13/2020
DESIGNED BY		DATE	
DESIGNED BY		DATE	
APPROVED BY		DATE	
SCALE:	1" = 30' With 11" x 17"		

MOW AT KEENE	
2ND FLOOR PLAN VIEW	
CONTRACT NO.	DRAWING NO.
	REV.

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SECTION A-A



SECTION B-B

CONCEPTUAL DESIGN
SUBJECT TO CHANGE

REV	DATE	DESCRIPTION	ADD	AMD	CCR	BY	ENG	CHK	APP



S. SAFARI	5/13/2020
DRN BY	DATE
M. TEGETHOFF	5/13/2020
DRN CKD BY	DATE
DES BY	DATE
DES CKD BY	DATE
APPROVED BY	DATE
SCALE: 1"=30' With 11"x17"	

MOW AT KEENE		
PROFILE SECTIONS		
CONTRACT NO.	DRAWING NO.	REV.

APPENDIX C: REGULATORY CORRESPONDENCE

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.



Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
Permit 9413
THC Tracking #202101274
Houston METRO MOW Facility
1507 Keene St
Houston, TX 77009

Description: Houston METRO proposes to construct a Maintenance-of-Way (MOW) Facility.

Dear Terence Plaskon:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff led by Bill Martin and Justin Kockritz has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- THC/SHPO concurs with information provided.
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

Archeology Comments

- No adverse effects on historic properties.
- THC/SHPO concurs with information provided.
- This draft report is acceptable. Please submit a final report: one restricted version with any site location information (if applicable), and one public version with all site location information redacted. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submitting abstracts online at <http://xapps.thc.state.tx.us/Abstract> and e-mailing survey area shapefiles to archeological_projects@thc.texas.gov if this has not already occurred. Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We have the following comments: We concur that the deeply buried historic occupation may be eligible, but remains undetermined at this time. Assuming it is eligible, this project will have no adverse effect.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers:

bill.martin@thc.texas.gov, justin.kockritz@thc.texas.gov

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit <http://thc.texas.gov/etrac-system>.

Sincerely,

A handwritten signature in black ink, appearing to read "William A. Martin". The signature is fluid and cursive, with a prominent initial "W" and a long, sweeping underline.

For Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.