Draft
Environmental Assessment

For

Proposed New
Legacy Community Health
Houston, Harris County, Texas

HRSA CFDA-93-526
CIP Grant #: C8DCS29113
Northwest Corner of Worms Street & Lyons Avenue

Prepared for:
Health Resources and Service Administration (HRSA)

April 19, 2016

Ms. Katy Caldwell
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Legacy Community Health
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1415 California Street
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RE: Draft Environmental Assessment
Legacy Community Health
Northwest Corner of Worms Street & Lyons Avenue
Houston, Harris County, Texas
Terracon Project No. 92167164

Dear Ms. Caldwell:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed copy of our Draft Environmental Assessment report, prepared in general accordance with our February 11, 2016 proposal. The assessment is intended to assist Legacy Community Health and Health Resources and Service Administration (HRSA) in making a determination regarding the significance of any identified impacts to the human or natural environment associated with the proposed project, as required by the National Environmental Policy Act (NEPA) of 1969.

Terracon appreciated the opportunity to have worked for you on this project. Please feel free to contact either of the undersigned if you have any questions or require additional information.

Sincerely,
Terracon Consultants, Inc.

Reviewed by:

Patrick R. Korn
Staff Scientist

Ginger C. Horn
Senior Project Manager

Enclosure

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April 2016

SECTION I. GENERAL INFORMATION

Legacy Community Health is seeking to receive federal funds for new construction of a proposed clinic (site) in Houston, Harris County, Texas. The site is located at the northwest corner of Worms Street and Lyon Avenue in Houston, Harris County, Texas, hereafter referred to as the project site. The project site is depicted on *Exhibits 1.0 – 1.1* in *Appendix A*. The project site currently consists of undeveloped land surrounded by an ongoing educational facility development.

Funding assistance through the Health Resources and Services Administration (HRSA) requires compliance with National Environmental Policy Act (NEPA) regulations addressing environmental review procedures for entities assuming HRSA environmental responsibilities.

Terracon Consultants, Inc. performed an Environmental Assessment (EA) of the proposed project that included review of readily available published information and a visual site reconnaissance. The EA was performed in general accordance with the requirements of Title 24, Part 50 of the Code of Federal Regulations, as applicable, and is documented in this report. Reference Section II below, for more detailed site and project information.

A. Project: Legacy Community Health

B. Applicant: Legacy Community Health

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D. Program: Health Resources and Services Administration Fund (HRSAF)

E. Purpose and Need

The proposed project is intended to provide the Filth Ward residents access to an affordable, quality health care center for the uninsured and privately insured alike. The proposed project center will provide primary care in obstetrics (OB) prenatal, family medicine, optometry, dental and a variety of on-site services.

As a full-service, Federally Qualified Health Center, Legacy identifies unmet needs and gaps in health-related services and develops client-centered programs to address those needs. A United Way-affiliated agency since 1990, they currently provide adult primary care, pediatrics, dental care, vision services, behavioral health services, OB/GYN and maternity, vaccinations and immunizations, health promotion and community outreach, wellness and nutrition, and comprehensive HIV/AIDS care. Health Resources and Services Administration's (HRSA) mission is to improve access to health care services for people who are uninsured, isolated or medically vulnerable. Moving forward with the proposed action at this site would help the agency move towards these goals in Harris County, while helping the Legacy Community Health serve a critical need for affordable health care for low-income and working families in the Houston area.

F. Proposed Project

Service Area – Legacy Community Heath serves residents of Harris County and wishes to develop additional facilities to better serve the Fifth Ward Houston, Harris County residents.

Project Area - The project site is located in Houston, Harris County, Texas, at the northwest corner of Worms Street and Lyons Avenue. The overall project area houses the development of a healthcare clinic. This request for review only applies to the development of the healthcare clinic as it is the only facility receiving federal funding and complying with NEPA. The approximately 1.3 acre area of the proposed health care center will herein be referred to as the project site. The general vicinity of the project site is depicted on *Exhibit 1.0* in *Appendix A*.

System Description – Legacy Community Health is proposing to construct a community health clinic in coordination with the Fifth Ward area of Houston, Texas. The proposed project would provide health care to Fifth Ward, Houston, Harris County residents.

Construction Methods - The proposed project would be constructed on vacant and undeveloped land (see *Exhibit 1.1* in *Appendix A*). Construction would be completed during normal daytime hours to avoid noise and dust pollution to the surrounding residential community. Detours of roadways next to project are not anticipated. The location of equipment staging and materials laydown areas are on site.

Operation and Maintenance - System capacity would be provided by the Legacy Community Health.

SECTION II. ENVIRONMENTAL BACKGROUND

A. Description of the Social and Natural Environment

A baseline description of the social and natural environment that is likely to influence the proposed project is provided below. An assessment of the potential impacts of the project on each element is provided in *Section IV – Cumulative Impacts*.

1. Geological Elements

Published U.S. Geological Survey (USGS) topographic maps depict the proposed project vicinity with gentle topography directing overland runoff south towards Buffalo Bayou. The proposed project area has a ground surface elevation of approximately 45 to 50 feet above mean sea level (see *Exhibit 2.0 - 2.2* in *Appendix A*). The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service - Harris County, Texas, classifies the on-site soils as Verland-Urban Land (Mu). This somewhat poorly drained map unit is listed as containing hydric components. The soil observed on the project site did not display any hydric indicators. Soils on the project site are available as *Exhibit 3.0* in *Appendix A.* According to University of Texas' Geology of Texas, dated 1982, the project vicinity is underlain by the Lissie quaternary geologic formation. Caves were not located on the site, according to the USGS and Texas Bureau of Economic Geology.

2. Hydrological Elements

Area topography directs overland runoff generally south. The runoff enters the storm sewer system via existing roadside ditches and underground storm sewer systems and eventually flows into Buffalo Bayou. There are no bayous or tributaries located in the proposed project area.

3. Floodplain Management

Existing drainage is directed generally south across the site by sheet flow towards the existing roadside drainage ditch. Existing sheet flow patterns would be maintained as practicable. The proposed facilities would not significantly affect or impede site or area drainage.

The City of Houston, Harris County, and incorporated areas are participants in the National Flood Insurance Program. Flood Insurance Rate Map (FIRM) Panel Number 48201C0695L, with an effective date of June 18, 2007, indicates that the site is within Zone X, outside of the 100-year and 500-year floodplains. Floodplain location is available as *Exhibit 4* in *Appendix A.*

4. Clean Water Act

Section 404 of the Clean Water Act (CWA) regulates fill within federal waters, including perineal and intermittent drainage ways and adjacent wetlands. No wetlands were observed within the project site during a site reconnaissance conducted on October 1, 2015. Therefore, no Section 404 or 401 coordination is required.

Proposed construction would disturb more than one acre, and a Texas Pollutant Discharge Elimination System (TPDES) construction permit would be required.

5. Safe Drinking Water

Drinking water and water for household uses would be obtained through municipal water sources. The water undergoes assessments by the TCEQ to test for certain chemical constituents and to insure that the water is potable.

6. Wetland Protection

The USACE's Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual, 1987 (1987 Manual) defines wetlands as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." To meet this definition, more than 50 percent of the dominant plant species must be considered hydrophytic, soils must be classified as hydric, and indications of wetland hydrology must be present. The U.S. Army Corps of Engineers regulates certain activities within wetlands that are adjacent to federal waters, and Executive Order 11990 prohibits federal support of new construction in wetlands wherever there is a practicable alternative.

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) depict no wetland areas on the site. NWI data is depicted on *Exhibit 5* in *Appendix A*. A site reconnaissance was performed on the area to be disturbed by the proposed project in an attempt to confirm the NWI information. Areas exhibiting the three specified wetland characteristics were not observed on areas to be disturbed by the proposed project.

7. Threatened and Endangered Species

According to the Endangered Species Act (Act), it is unlawful for any person or entity to take any plant or animal species on the Secretary of the Interior's list of threatened and endangered species (Section 9(a)(1)(B)) and it is the responsibility of each federal agency to insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence or result in the destruction or adverse modification of habitat determined to be critical to the conservation any such species (Section 7(a)(2)). Additionally, Texas laws and regulations prohibit taking plant or animal species that are listed on the Texas Parks and Wildlife Department (TPWD) list of threatened or endangered plant and animal species without a permit. A taking includes: harassing, harming, pursuing, hunting, shooting, killing, trapping, capturing, or collecting such species. These activities are regulated by the United States Fish and Wildlife Service (USFWS) and the TPWD, respectively.

Literature and agency file searches were conducted to identify the potential occurrence of federally or state listed T&E species in the vicinity of the proposed project. T&E species are listed on the Information, Planning, and Conservation System (IPaC) (accessed March 2016) and the TPWD Rare, Threatened, and Endangered Species of Texas by County web page (accessed March 2016). Additional information detailing typical habitat was obtained from the USFWS and TPWD websites (accessed March 2016). The list of T&E species compiled by the USFWS on the IPaC for Harris County, Texas includes three species that should be considered in an effects analysis (reference USFWS IPaC Report in *Appendix B*). Table 1 (below) includes the species listed by the USFWS in Harris County, Texas, their federal status, habitat descriptions, and effect determinations.

Table 1: USFWS Species Listed for Harris County, Texas				
Species	**USFWS Status**	**Habitat Description**	**Habitat Present**	**Findings**
Anthus spragueii (Sprague's Pipit)	Candidate	Only in Texas during migration and winter, mid-September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges	No; absence of suitable habitat within or near the project site	No effect
Hymenoxys texana (Texas Prairie Dawn-Flower)	Endangered	Texas endemic; in poorly drained, sparsely vegetated areas (slick spots) at the base of mima mounds in open grassland or almost barren areas on slightly saline soils that are sticky when wet and powdery when dry; flowering late February-early April	No; absence of suitable habitat within or near the project site	No effect
Trichechus manatus (West Indian Manatee)	Endangered	Shallow coastal waters, rivers, bays, and lakes; typically limited to the tropics and subtropics.	No; absence of suitable habitat within or near the project site	No effect

Source: USFWS IPaC Report pulled March 2016

Suitable habitats for the species listed above were not identified within or near the project site. The list of T&E species compiled by the USFWs on the IPaC for Harris County, Texas also includes three species that should be considered in an effects analysis under specified conditions. These species include the Least Tern (*Sterna antillarum*), the Piping Plover (*Charadrius melodus*), and the Red Knot (*Calidris canutus*). The specified condition provided by the USFWS for these three species is "wind related projects within the migratory route." The project is not a wind related project; therefore, the Least Tern, Piping Plover, and Red Knot should not be considered in the effects analysis.

In addition to the county lists (available in Appendix B), a review of the Texas Natural Diversity Database (TXNDD) for the Settegast, Texas United States Geologic Survey (USGS) topographic quadrangle was performed by TPWD in March 2016, for known occurrences of listed species. Information files were reviewed for known locations of listed species on the topographic quadrangle map representing the site and also on adjacent quadrangles (if applicable). TXNDD search results are not available for public review. The TXNDD review did not reveal the presence of occurrences within the project site or within two miles of the project site. It should be noted that, the TxNDD review did reveal the presence of occurance approximately 2.22 miles southeast of the project site. During the site visit, during the site reconnaissance no presence of any species which are recorded in the TXNDD was observed.

Note that, given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Data from the TXNDD do not provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features within your project area. Absence of information in the TXNDD does not, therefore, mean absence of occurrence.

The project site is generally surrounded by existing roadways and a mixture of undeveloped areas, agricultural fields, and an ongoing development of educational facilities. The site visit did not reveal the presence of potential habitat for the federally- and state-listed species.

Based on the results of the resource review and the preliminary site visit, it is apparent that the project site has been altered from its native state and provides no suitable habitat for the federally listed species and that the proposed development would have no effect on federally listed T&E species. Furthermore, it is likely that state-listed T&E species will not be impacted by the proposed project. The proposed development project would have no effect on federally or state-listed T&E species. Coordination in accordance with Section 7 of the Endangered Species Act is not required.

8. Biological Elements

General - The project site is located within the Northern Humid Gulf Coastal Prairies level IV Ecoregion of the Western Gulf Coastal Plain level III Ecoregion (Griffith et al. 2004). This ecoregion is characterized by irregular plains originally covered by post oak savanna vegetation but now open prairie grasslands dominated by Little bluestem *(Schizachyrium scoparium*), yellow Indiangrass (*Sorghastrum nutans*), brownseed paspalum (*Paspalum plicatulum*), gulf muhly (*Muhlenbergia capillaris*), and switchgrass (*Panicum virgatum*), with some clusters of oaks (*Quercus spp.*), hickory (*Carya spp.*) and eastern redcedar (*Juniperus spp.*). The majority of coastal prairie habitats have been converted to rangeland and pasture. Soils are generally clay, clay loam, or sandy clay loam and the annual precipitation varies from 37 to 58 inches.

The vegetation within and adjoining the project site is primarily comprised of maintained grasses. The dominant vegetation community on the project site was herbaceous upland and was dominated by St. Augustine grass (*Stenotaphrum secundatum*) and Bermuda grass (*Cynodon dactylon*). Also present on the project site was burclover (*Medicago polymorpha*), creeping buttercup (*Ranunculus repens*), Chinese tallowtree (*Triadica sebifera*), common hackberry (*Celtis occidentalis*), and shagbark hickory (*Carya ovata*). Under current conditions, plant and animal species in the area are likely limited to relatively common birds, reptiles, and mammals that are tolerant of close proximity development.

Onsite Habitat - The area in the vicinity of the site is currently an urban area. The proposed site is surrounded by residential and commercial properties. Classification on the Texas Parks and Wildlife Department's (TPWD) 1984 “The Vegetation Types of Texas” map is Urban. This map was derived as part of a program to depict wildlife habitat areas statewide using Landsat and computer analysis. This map is included in *Appendix B*.

No faunal species were observed on-site. Herbaceous uplands may support small rodents, mammals, reptiles, and insects common to high impact areas, such as squirrels, opossum, field mice, and lizards. Site photographs available in *Appendix C* depict current on-site conditions.

Natural Areas – National Wildlife Refuges, National Forests, National Parks, National Natural Landmarks, and designated Wild and Scenic Rivers are not located near (less than 25 miles) the site. The closest state parks to the proposed project include Sheldon Lake State Park,

San Jacinto Battleground State Historic Site, George Bush State Park, Stephen F. Austin, Brazos Bend State Park, and State Park and. The parks are located approximately 17 miles northeast, 22 miles to the southeast, 26 miles to north east, 46 miles southwest, and 52 miles southwest of the project site respectively. In addition, fifteen local parks of varying sizes are located in close proximity (≤ 2.1 miles) to the site, as identified in the following table.

Table 1. Local Parks Located Near the Project Site

Name	Approximate Distance (miles)	Direction
Tuffly Park	0.93	North
Mickey Leland Memorial Park	1.67	North
Cane River Gardens Park	0.18	East
Boyce-Dorian Park	0.64	East
Nieto Park	2.09	East
Kress Lyons Park	1.40	Southeast
Finnegan Park	0.73	Southeast
Tony Marron Park	1.15	South
Market Square	2.06	South
Swiney Park	0.78	Southwest
Guadalupe Plaza Park	1.37	Southwest
Quebedeaux Park	1.90	Southwest
Hennessey Park	1.09	Southwest
Hogg Park	2.05	West
Davis High School Park	1.55	Northwest

9. Historical and Archeological Resources

Regulatory Framework - Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their actions on cultural resources that are eligible for inclusion in the National Register of Historic Places. In accordance with 36 CFR, Part 800, federal agencies providing financial assistance to projects with the potential to cause adverse effects on historic properties must consult with the appropriate State Historic Preservation Officer (SHPO). The Antiquities Code of Texas requires state agencies and political subdivisions of the state to notify the SHPO of any action on public land involving 5 or more acres of ground disturbance; 5,000 or more cubic yards of earth moving; or any activity that has the potential to disturb recorded historic or archeological sites.

Atlas Review - A review of the Texas Archeological Sites Atlas (Atlas) was completed to determine if State Antiquities Landmarks, National Register of Historic Places (National Register) listings or recorded archeological sites have been documented within the proposed project area. According to the Atlas, no archeological sites, State Antiquities Landmarks, or National Register of Historic Places appears within the project site. Additionally, historical maps and aerial imagery were reviewed to identify impacts to unrecorded, potential historic properties. A Desktop Cultural Resources Review Report was submitted to the THC for review. The State Historic Preservation Officer (SHPO) concurred that there would be no impacts to historic properties in an e-mail dated April 12, 2016. The SHPO concurrence is provided in *Appendix D.*

10. Environmental Justice

The proposed project has several economic benefits for lower income houses in the surrounding area. Legacy Community Health was created for the purpose of reaching lower income, uninsured families by providing them with affordable health care. Houston, Harris County, Texas has a higher median household income than Texas and the United States but has a higher percentage of families below the poverty level than both. Harris County exhibits these general economic features:

1. Higher median household income lower than in the U.S. or Texas.
2. More families below poverty than in the U.S. or Texas.

Any negative impacts are considered temporary and minor.

Table 2. Select U.S. 2010 Economic Census Data

Category	Houston	Texas	U.S.
Median household income	$45,728	$52,576	$53,482
Families below poverty level	23%	17%	15%

11. Socioeconomic Issues

Executive Order 12898 - Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-income Populations augments the 1964 Title VI Civil Rights legislation that assures “no person in the U.S. shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Fair treatment in terms of EJ means that no group of people should bear a disproportionate share of the negative consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies (U.S. Environmental Protection Agency).

The project site is located in Houston, Texas, an incorporated city with an estimated population in 2014 of 2,239,558 people. The zip code is 77020. *Table 4* (below) details demographic characteristics for the area. This area exhibits the following significant characteristics:

1. Higher percent of families below the poverty level than the U.S. or Houston.
2. Fewer high school diploma or higher graduates than the in the U.S. and Houston.
3. A higher percentage of Hispanic population than the U.S. but not Houston.
4. A higher percentage of Black population than the U.S. and Houston

These statistics indicate that the project site is located in a minority dominant neighborhood in which the majority of the families are below the poverty level.

Table 4. Select U.S. 2010 Census Data

Category	0.5 Mile Radius	Houston	U.S.
Population	5,106 persons	2,096,661	308,758,105
Minority	98%	74%	36%

Category	0.5 Mile Radius	Houston	U.S.
White (one race)	2%	26%	64%
Black (one race)	64%	24%	13%
Hispanic (any race)	33%	44%	16%
High school diploma or higher	59%	76%	86%
Language other than English at home	26%	47%	21%
Per Capita Income	$17,759	$27,938	$28,555
Families below poverty level	73%	23%	15%

12. Noise Abatement and Control

The Day/Night Noise Level (DNL) is an average measure of sound used by federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. The Noise Control Act of 1972 (NCA) establishes Environmental Protection Agency (EPA) authority over ambient noise levels. EPA guidelines state, exterior noise levels in excess of 55 decibels (dB) DNL are “normally unacceptable” for noise sensitive areas such as residence, schools and hospitals. No noise ordinances exist in the area of the project site. The project site is located in Houston, Harris County, Texas, approximately 0.31 mile north of Interstate 10.

13. Air Quality

Harris County is located in attainment for exceeding the federally established, health-based National Ambient Air Quality Standard (NAAQS) for ozone. Ozone is produced in the atmosphere when nitrogen oxide (NOX) and volatile organic compounds (VOC) from motor vehicle emissions and other sources react with sunlight. Ozone problems are regional, however as opposed to local, because the chemical reactions in the atmosphere that produce ozone occur over a relatively long period of time and, due to wind action, create ozone problems in areas that are a varying distance from pollutant sources.

Construction vehicle exhaust and dust, and dust from any concrete crushing activity or batch plants associated with construction other site would contribute minor and temporary air quality impacts. Vehicle dust can be controlled by water spray, as necessary, and concrete plants would be permitted in accordance with state law. The proposed project would not have a significant, long–term adverse effect on air quality in the area. No known odor issues have been identified on the site or in the immediate vicinity.

14. Land Use

Existing land use in the project site is urban land. More urban areas are located to the north, south, east and west. *Exhibit 6.0 – 6.4* in *Appendix A* shows historic aerial photographs of the project site and *Exhibit 7.0* Details the plan view of the project site.

Existing land use in the project vicinity, as indicated consists of residential development.

15. Public Services and Utilities

The proposed facility will rely on municipal services and utilities. The proposed project is not expected to interrupt of services and utilities to surrounding communities.

16. Traffic Patterns and Parking Impacts to Residential and Commercial Areas

Traffic flows around the project site are expected to be temporary and minimal impacts. Lyons Avenue may have higher traffic flows rates due to construction crews entering and exiting the site. No detours are expected with the construction. The proposed project includes a parking lot designed to comply with local codes and ordinances. No significant parking impacts are expected to affect surrounding residential and commercial areas.

17. Off-Site Improvement Requirements

No off-site improvements will be needed or required.

18. Site Assessment (Public Health and Safety)

A Phase I Environmental Site Assessment (ESA) was prepared in 2016 for the Legacy Community Health Center (Terracon Project No. 92167157). The purpose of the Phase I ESA is to identify recognized environmental conditions in connection with the site. The preliminary findings of the Phase I ESA did not identify confirmed impact to the soil or shallow groundwater underlying the site alignment; however, several Recognized Environmental Conditions (RECs) or Controlled RECs (CREC) were identified in connection with the site, as follows.

- Potential groundwater impact from releases associated with the Voluntary Cleanup Program Sites (VCP) and Brownfield Management System (BF) facility, Pleasant Hill Village Apartments / 3814 Lyons Avenue, located adjacent south of the site (across Lyons Avenue)
- Potential release from a historical on-site dry cleaning facility.

This Phase I ESA was compiled for the Legacy Health Center. As a result, specifications would be developed to address the possibility of encountering affected soil and shallow groundwater during construction activities and information regarding the identification of affected soils and groundwater, handling and disposition procedures, and worker protection would be provided.

B. Future of the Environment without the Proposed Project

Site will continue be undeveloped with no ecological purpose.

SECTION III. ALTERNATIVES TO THE PROPOSED ACTION

A. Preferred Alternative

The preferred alternative is the proposed project which would provide affordable, quality health care to uninsured and insured residents of Houston, Harris County, Texas. No other sites were considered because the preferred alternative met all location criteria without impacting any natural resources.

B. No Action Alternative

With the No Action Alternative, an affordable health care option will not be created in north western Harris County. This will not address the need to provide affordable health care to low-income and minority populations. Additionally, emergency rooms in the area will continue to be burdened with persons that could have been treated elsewhere.

SECTION IV. **CUMLATIVE IMPACTS**

Long-term, incremental impacts to the area's human and natural environment resulting from the proposed development within the project site would be similar to that of the existing residential development in the immediate area because the project site is located within the footprint for the existing development. Social impacts resulting from the availability of health care for the insured and uninsured, as well as short-term economic stimulus resulting from construction should be beneficial impacts for the area. Short and Long-term adverse impact to air quality and shot-term disruption to normal traffic patterns during construction would be minimal. Long-term impacts to wildlife due to development's overall effects on available habitat would be minimal. No protected wildlife species are known to make use of on-site habitat would be minimal. No protected wildlife species are known to make use of on-site habitat at this time. Cumulative adverse impact to businesses, residents, and regulated natural and cultural resources would be short-term and/or minimal.

A. Cumulative Effects of Proposed Action

Primary impacts include both direct and indirect cultural, economic, and environmental effects on area resources. The project as proposed should not have significant adverse, primary impacts on these or other known projects or programs in the project vicinity. A brief discussion of the evaluation with respect to significance for each of these categories follows:

Geological Elements – Long-term direct minor impacts on soil resources may be expected as a cumulative impact from current and future development activities; however, the level of impact is expected to be minimal due to the development of erosion control measures and BMPs.

Hydrological Elements – No changes will be made to alter the natural drainage/run off from the proposed project site.

Floodplain Management – No impacts will be made to the floodplain.

Clean Water Act – No public water features are located near site and no contaminations of ground water are expect with the proposed project.

Safe Drinking Water – Use of the municipal water by the proposed project will be limited and not considered a major impact.

Wetland Protection – No wetland features were observed on site therefore no impacts will be made.

Threatened and Endangered Species – No recordings of threatened or endangered species have occurred on the project site. No impacts are expected from the proposed project.

Biological Resources - Long-term direct and indirect adverse impacts on biological resources would be anticipated when taken in conjunction with habitat loss as a result of the new development; however, based on surrounding land-uses, the impact is expected to be minor.

Historical and Archeological Resources – No historic or archeological sites were recorded in the project site. In the event of artifacts being uncovered during construction, all construction will cease and the appropriate authorities will be consulted.

Socioeconomic and Environmental Justice – It is not anticipated that there would be any disproportionate impacts to low-income or minority populations. Access to the proposed project would be available to all users. The proposed project would provide long-term health care to low-income and minority residents of Houston.

Noise Abatement and Control – Minimal noise disruption to nearby residence and schools during construction would be expected. During construction DNL count is not expected to exceed 55 dB. Cumulative adverse impacts to area businesses and residents are expected to be short-term and minimal.

Air Quality - Future construction projects, to include the proposed action, would be spatially and temporally separated which would help minimize particulate matter impacts from construction activities and impacts from the generation of equipment emissions. Long-term minor direct impacts on air quality would be anticipated from increased vehicular activity at the proposed location.

Land Use - Land use within vicinity of the site includes residential and commercial properties. Based on the scale of the site, the proposed development would not impact the environment. Cumulative adverse impacts to area businesses and residents are expected to be short-term and minimal.

Public Services and Utilities – Usage of public services and utilities by the proposed project are considered minimal and will not have a major impact to city services.

Traffic Patterns and Parking Impacts to Residential and Commercial Areas – During construction traffic and parking will be impacted but will be temporary. Project design includes a parking lot that meets local codes and ordinances. No significant impacts to traffic or parking are expected.

Off-Site Improvement Requirements – No offsite improvement requirements are necessary for this project.

Site Assessment (Public Health and Safety) – No activities that would be considered dangerous to the public health or safety will occur on the site.

B. Cumulative Effects of the no Action Alternative

Under the No Action Alternative, the site would remain the undeveloped land. Low income and minority populations in the area would continue to have limited access to affordable health care.

SECTION V. **SHORT-TERM AND LONG-TERM CONSIDERATIONS**

In addition to evaluating and considering adverse and beneficial impacts, the relationship between local short-term uses of the environment and the maintenance and/or enhancement of its long-term health and productivity is also of concern, as there may be trade-offs between short-term environmental losses and long-term gains (or vice-versa). In this case a direct, unavoidable adverse impact has been identified that will be attributable during the construction phase (short-term) and in the long-term. Local construction noise and dust would not continue post-construction except in the case of potential repairs in the future as problems are encountered and the systems age. Materials production would similarly cease post-construction, though it can be assumed that the production facilities may remain and continue to operate. Short-term air quality impacts resulting from construction activity would dissipate to acceptable levels and/or be captured and removed from the air by rainfall, and would not be expected to persist longer than a few weeks or months post-construction. Most of the anticipated benefits would also have long-term effects. The exception to this would be the economic benefits of materials production and construction employment, which would similarly be tied to the construction phase.

SECTION VI. **AGENCY CONSULTATION**

A. Summary

Consultation with public agencies that may have jurisdiction over or some other interest in any part of the proposed project is encouraged. A copy of this Draft Environmental Assessment has been available, upon request, to the following agencies for their information and requesting their review and comment:

- Texas Parks and Wildlife Department
- U.S. Fish and Wildlife Service
- Texas Historic Commission

B. Documentation

Copies of the above-referenced agency consultation request letters and responses are provided in *Appendix D – Coordination and Documentation* .

SECTION VII. **SOURCES OF INFORMATION**

Sources of information, unless they are self-evident or otherwise considered to be of general knowledge, have been referenced in the text or using footnotes throughout this document.

Capital Area Council of Governments, July 30, 2012. Available at: http://www.capcog.org/

Legacy Community Health, April 13, 2016. Available at: http://www.legacycommunityhealth.org/

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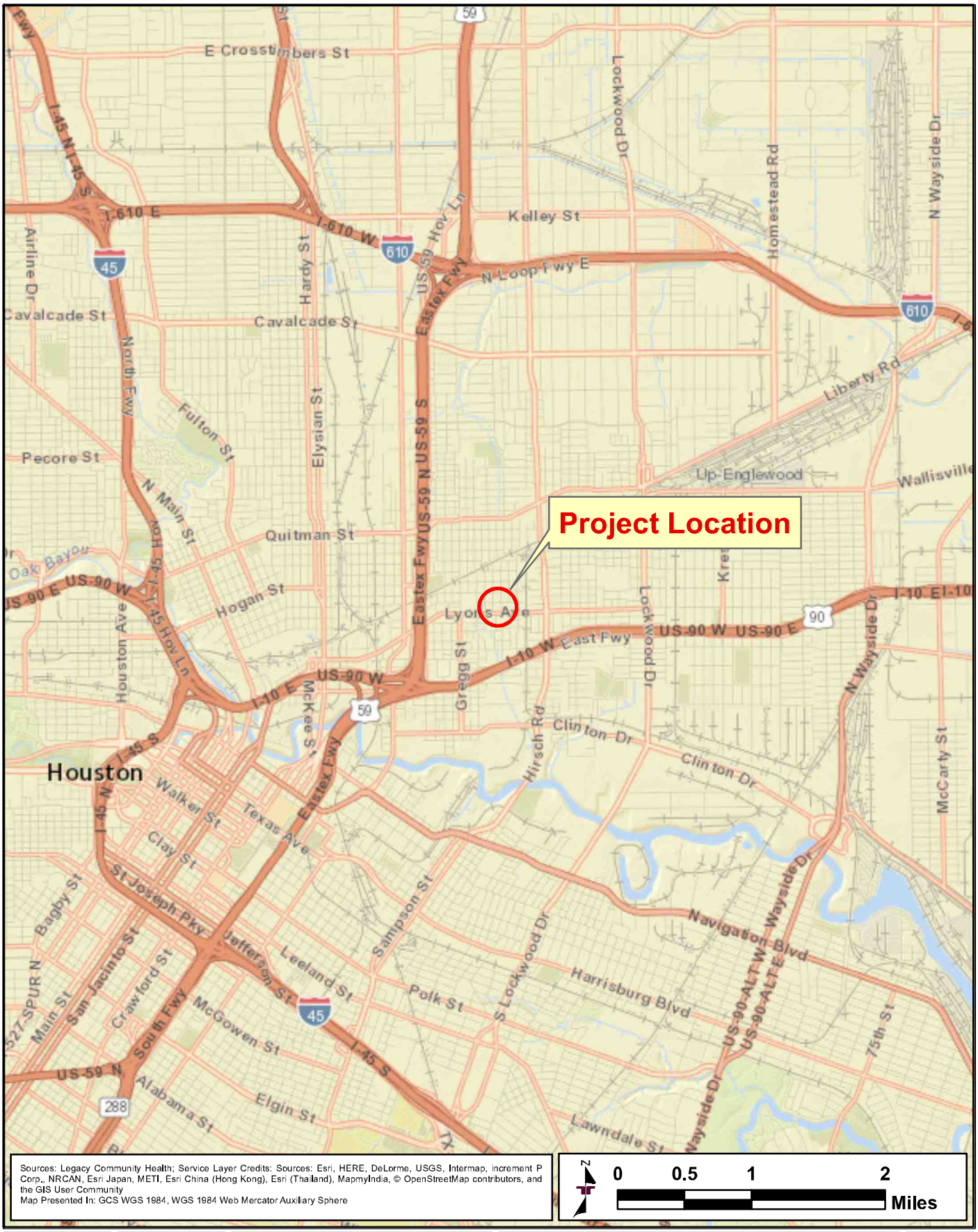
APPENDIX A: Exhibits



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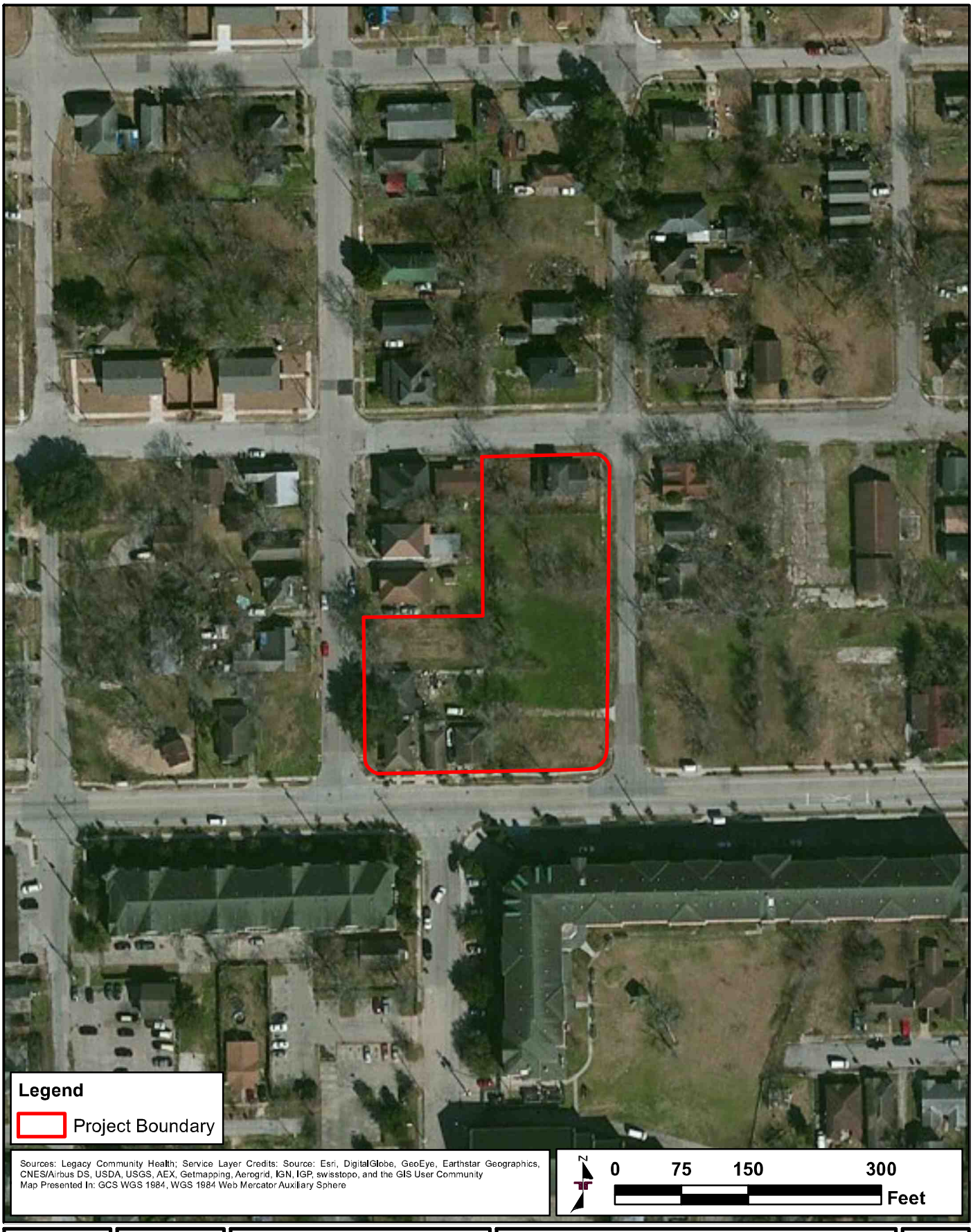
CHECKED BY:	GH
GIS SCALE:	1 " = 1 miles
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

Vicinity Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
1.0



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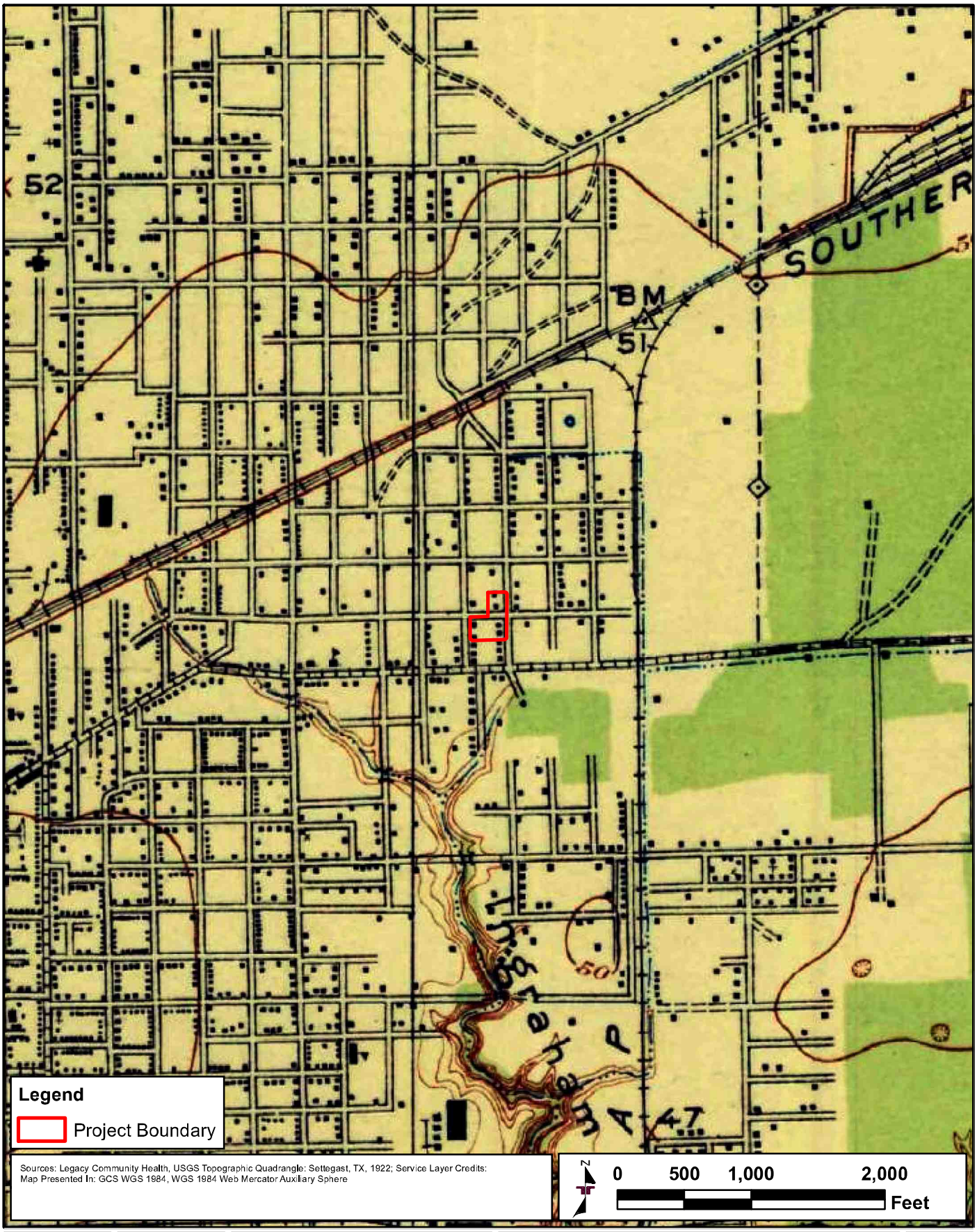
Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

Vicinity Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
1.1



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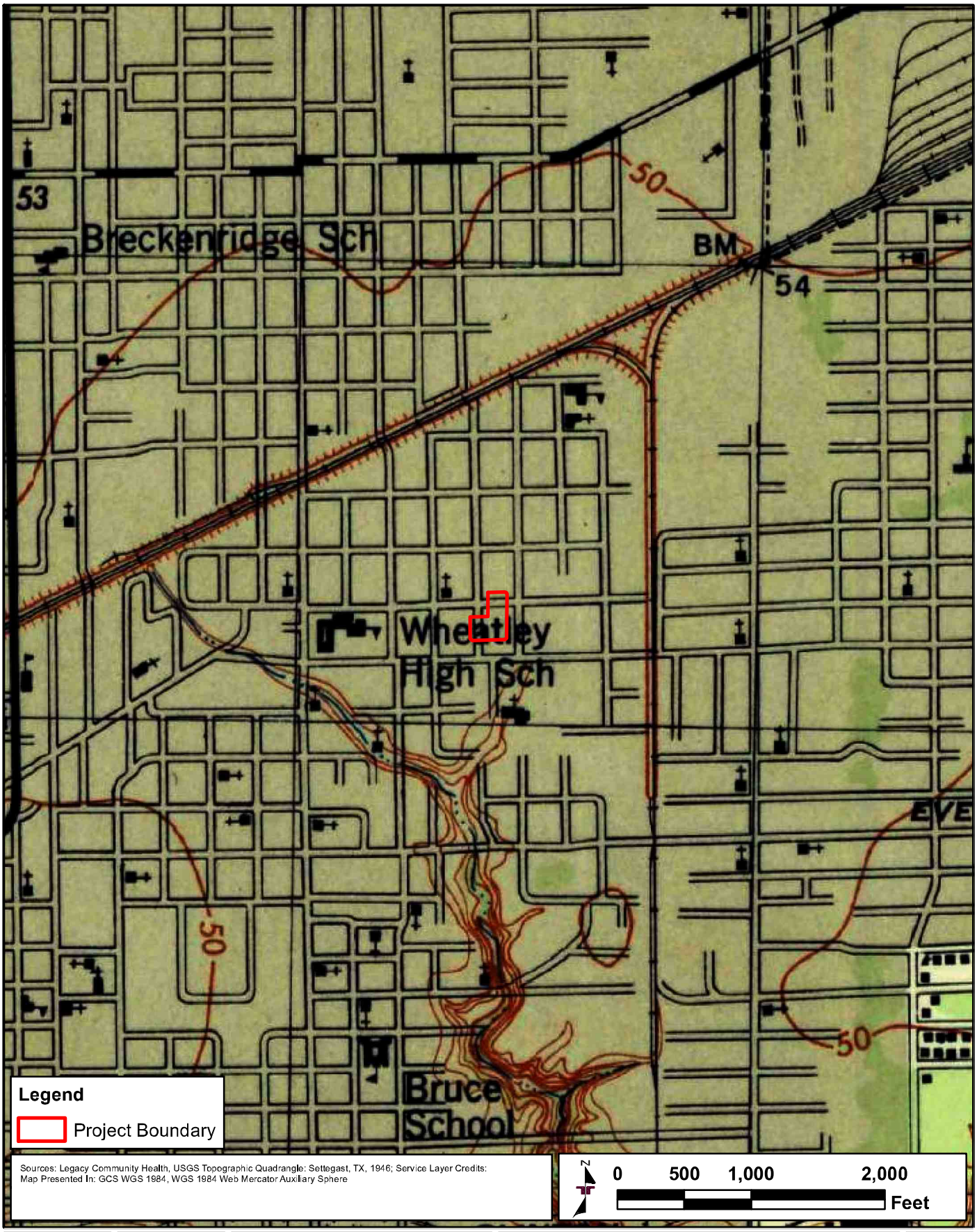
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1922 Topographic Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.0



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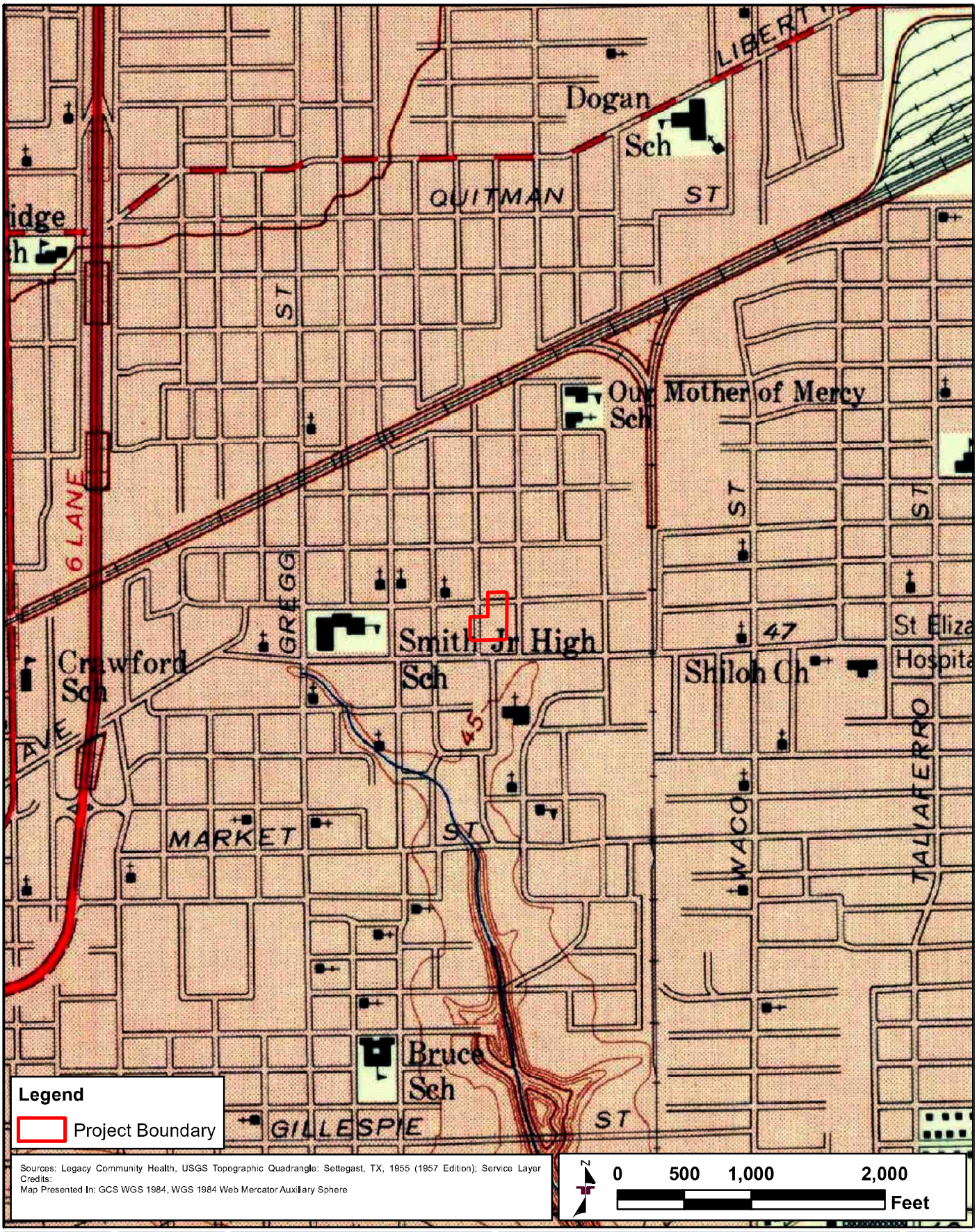
Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1946 Topographic Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.1



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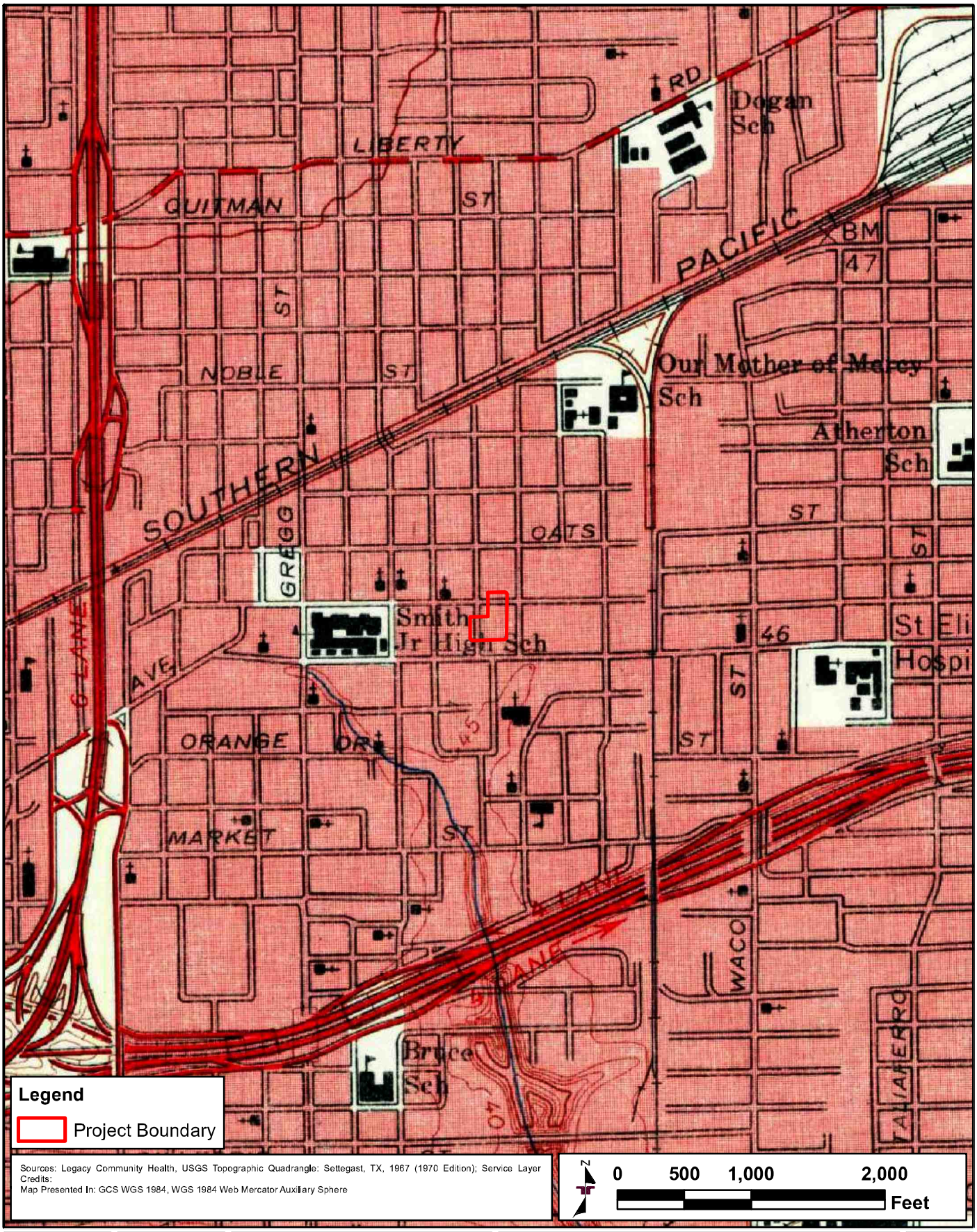
GIS SCALE:	1 " = 1,000 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1955 Topographic Map (1957 Edition)

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.2



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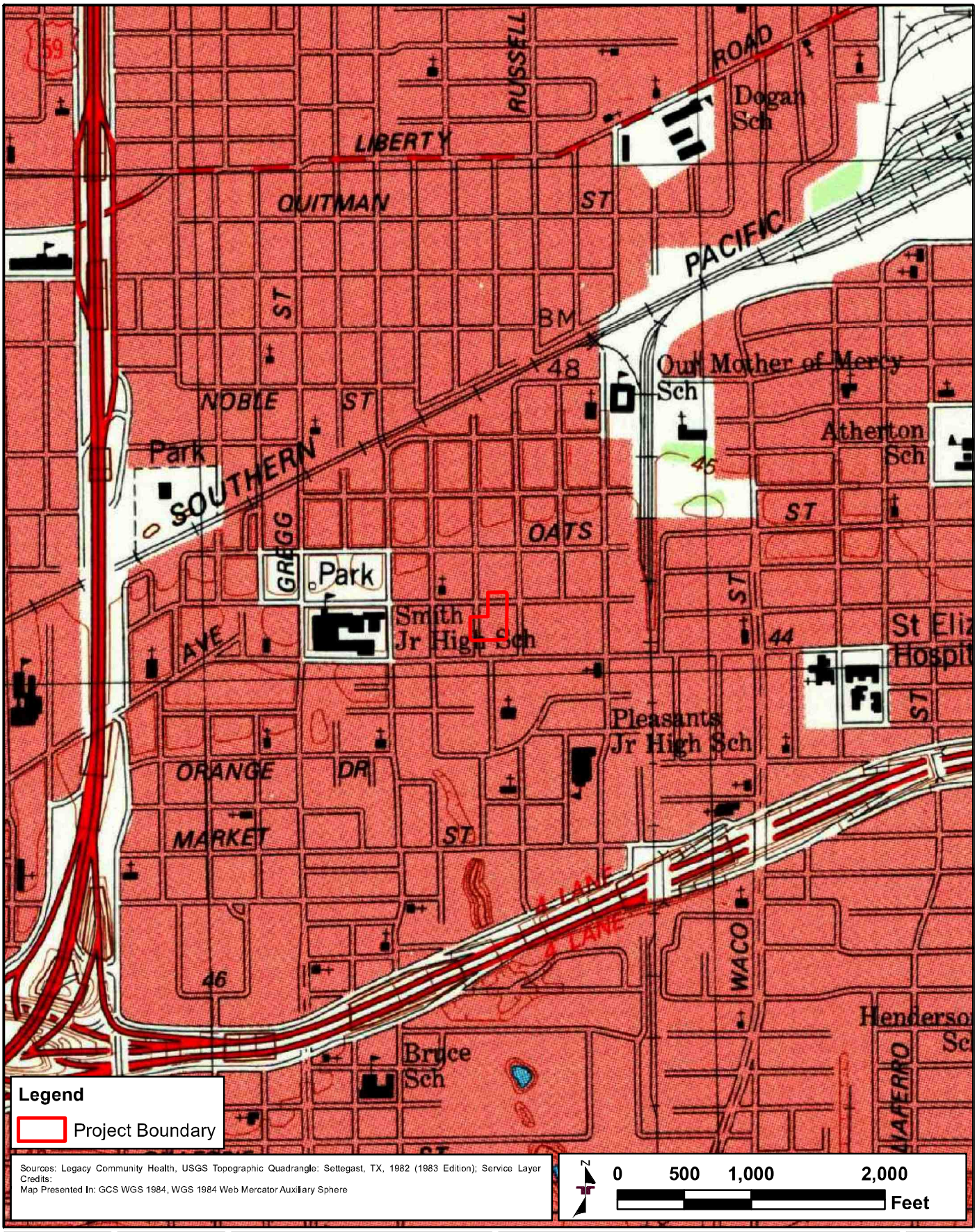
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1967 Topographic Map (1970 Edition)

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.3



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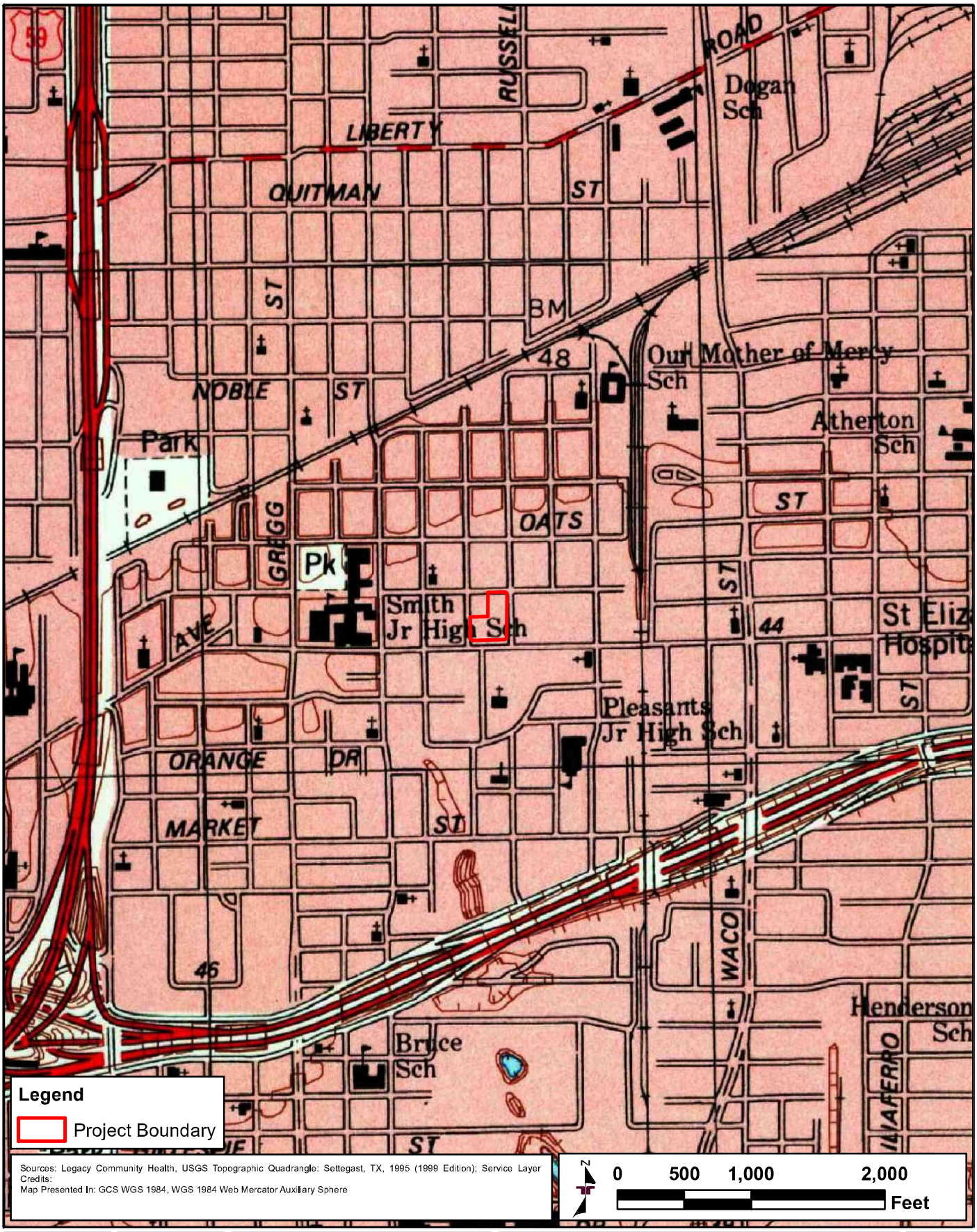
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1982 Topographic Map (1983 Edition)

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.4



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DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1995 Topographic Map (1999 Edition)

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
2.5

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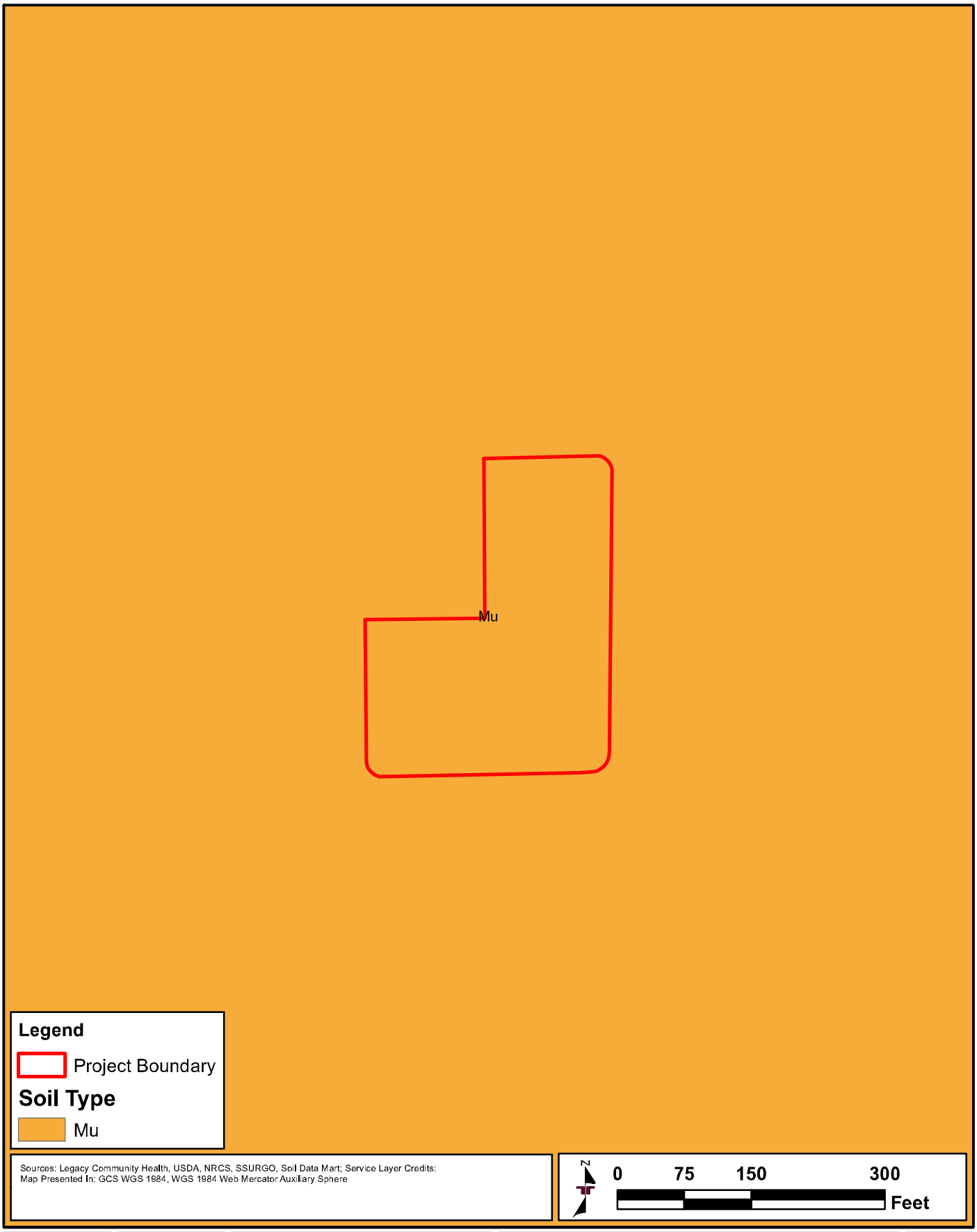
CHECKED BY:	GH
GIS SCALE:	1 " = 1,000 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

National Wetlands Inventory Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
3.0



Legend

Project Boundary

Soil Type

Mu

Sources: Legacy Community Health, USDA, NRCS, SSURGO, Soil Data Mart; Service Layer Credits:
Map Presented In: GCS WGS 1984, WGS 1984 Web Mercator Auxiliary Sphere

N

0 75 150 300

Feet

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GIS SCALE:	1 " = 150 feet
DATE:	2/26/2016

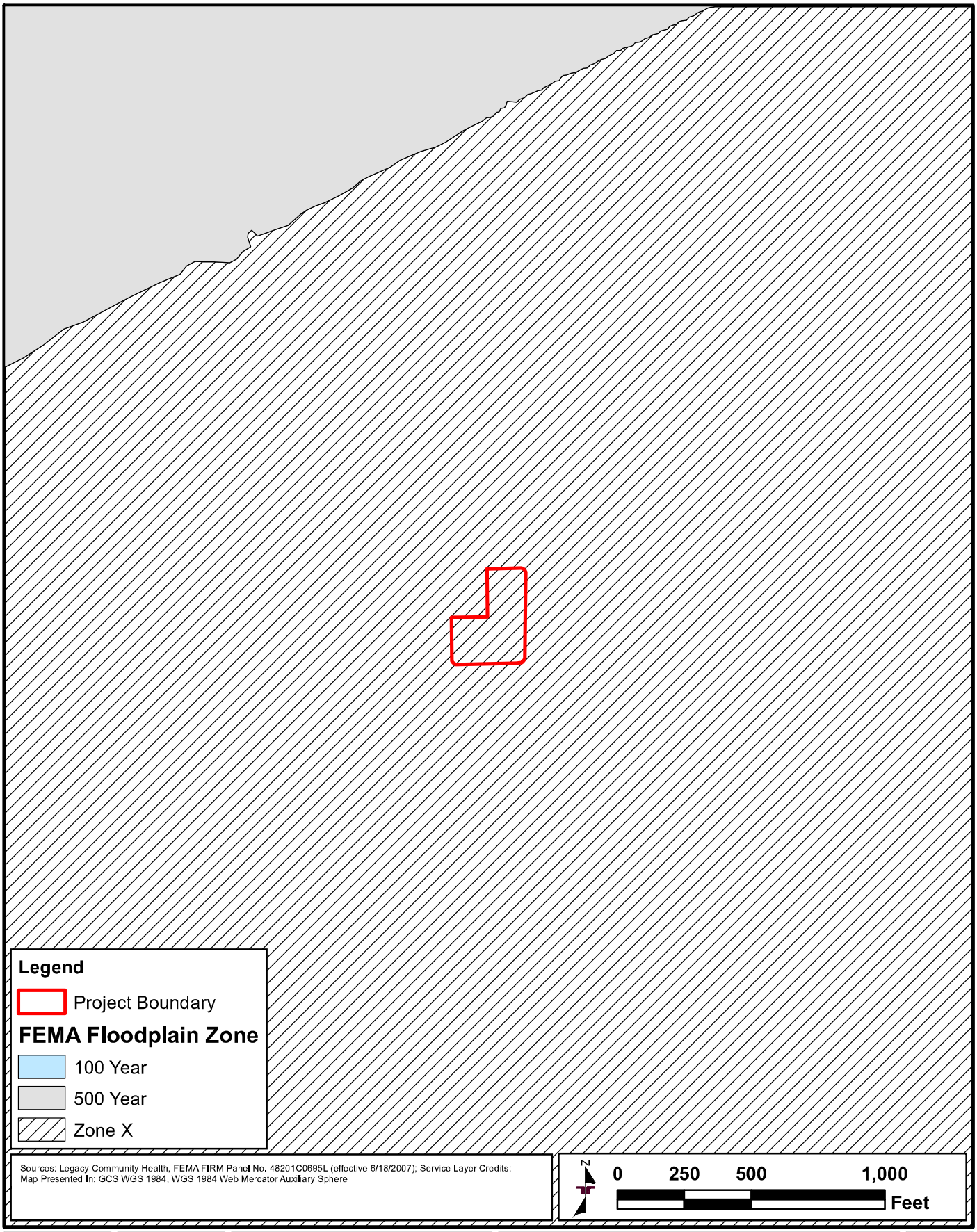
Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

Harris County Soils Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit

4.0



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GIS SCALE:	1 " = 500 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

FEMA Floodplain Map

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
5.0

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GIS SCALE:	1 " = 200 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1944 Aerial Photograph

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
6.0

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Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1978 Aerial Photograph

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
6.1

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GIS SCALE:	1 " = 200 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

1996 Aerial Photograph

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
6.2

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Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

2004 Aerial Photograph

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
6.3

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GIS SCALE:	1 " = 200 feet
DATE:	2/26/2016

Terracon
Consulting Engineers and Scientists
Terracon Project No. 92167164

2010 Aerial Photograph

Legacy Community Health EA
NWC of Worms Street and Lyons Avenue
Houston, Harris County, Texas

Exhibit
6.4

1st Floor Plan

0 8' 16' 32

17 MARCH 2016

Kirksey ARCHITECTURE

2nd Floor Plan

0 8' 16' 32

17 MARCH 2016

Kirksey ARCHITECTURE

APPENDIX B: Miscellaneous Data and Exhibits

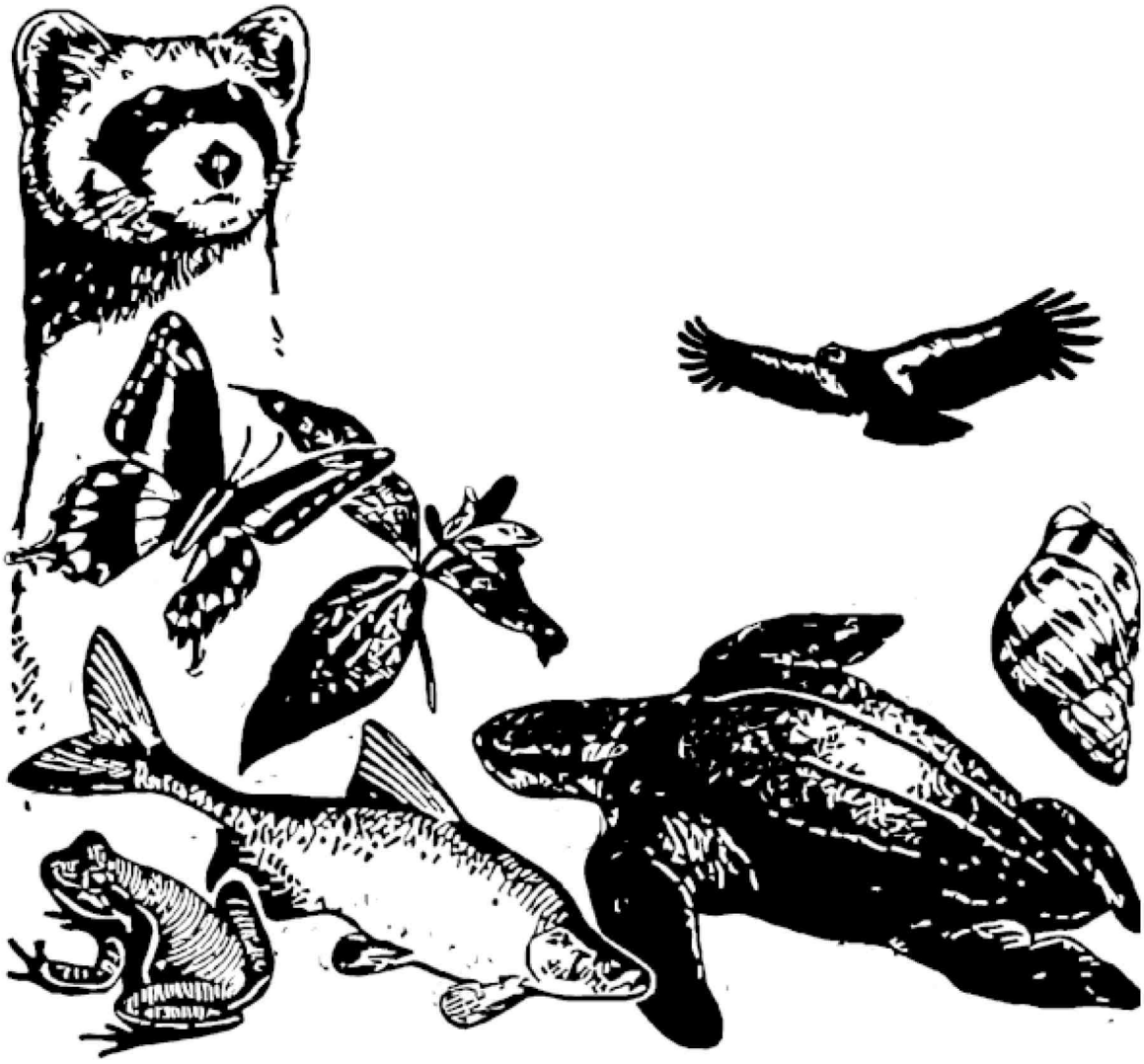
U.S. Fish & Wildlife Service

Legacy

IPaC Trust Resources Report

Generated March 14, 2016 02:55 PM MDT, IPaC v3.0.0

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.



IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

Table of Contents

U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Legacy

LOCATION

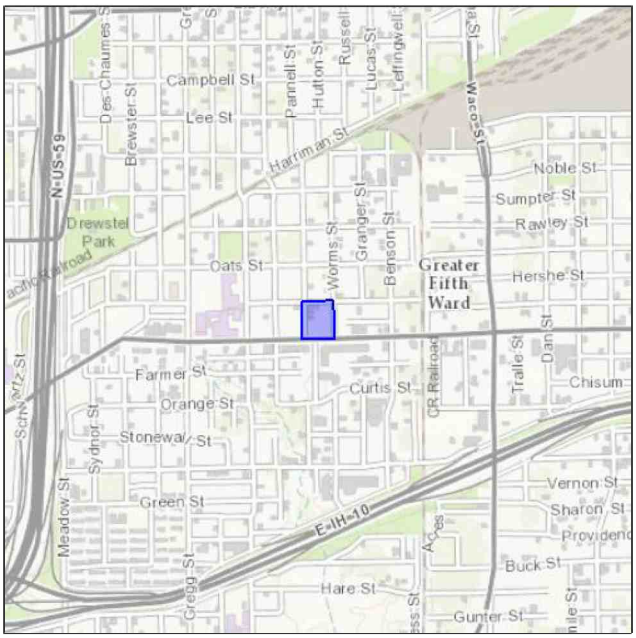
Harris County, Texas

DESCRIPTION

92167164

IPAC LINK

https://ecos.fws.gov/ipac/project/WDLOL-LYGC5-EV3ES-3KLLZ-D45ZPE



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Texas Coastal Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(281) 286-8282

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Least Tern Sterna antillarum — Endangered

THIS SPECIES ONLY NEEDS TO BE CONSIDERED IF THE FOLLOWING CONDITION APPLIES
Wind related projects within migratory route.

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B07N

Piping Plover Charadrius melodus — Threatened

THIS SPECIES ONLY NEEDS TO BE CONSIDERED IF THE FOLLOWING CONDITION APPLIES
Wind related projects within migratory route.

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B079

Red Knot Calidris canutus rufa — Threatened

THIS SPECIES ONLY NEEDS TO BE CONSIDERED IF THE FOLLOWING CONDITION APPLIES
Wind related projects within migratory route.

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DM

Sprague's Pipit Anthus spragueii — Candidate

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0GD

Flowering Plants

Texas Prairie Dawn-flower Hymenoxys texana — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2RK

Mammals

West Indian Manatee Trichechus manatus — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A007

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

---

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php

The following species of migratory birds could potentially be affected by activities in this location:

American Oystercatcher Haematopus palliatus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0G8

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Black Rail Laterallus jamaicensis — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09A

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Dickcissel Spiza americana — Bird of conservation concern
Season: Breeding

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Henslow's Sparrow Ammodramus henslowii — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09D

Hudsonian Godwit Limosa haemastica — Bird of conservation concern
Season: Migrating

Lark Bunting Calamospiza melanocorys — Bird of conservation concern
Season: Wintering

Le Conte's Sparrow Ammodramus leconteii — Bird of conservation concern
Season: Wintering

Least Bittern Ixobrychus exilis — Bird of conservation concern
Season: Breeding

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Year-round
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Mississippi Kite Ictinia mississippiensis — Bird of conservation concern
Season: Breeding

Nelson's Sparrow Ammodramus nelsoni — Bird of conservation concern
Season: Wintering

Painted Bunting Passerina ciris — Bird of conservation concern
Season: Breeding

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Prothonotary Warbler Protonotaria citrea — Bird of conservation concern
Season: Breeding

Red Knot Calidris canutus rufa — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0DM

Red-headed Woodpecker Melanerpes erythrocephalus — Bird of conservation concern
Year-round

Rusty Blackbird Euphagus carolinus — Bird of conservation concern
Season: Wintering

Sedge Wren Cistothorus platensis — Bird of conservation concern
Season: Wintering

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Snowy Plover Charadrius alexandrinus — Bird of conservation concern
Season: Breeding

Swainson's Warbler Limnothlypis swainsonii — Bird of conservation concern
Season: Breeding

Worm Eating Warbler Helmitheros vermivorum — Bird of conservation concern
Season: Migrating

Yellow Rail Coturnicops noveboracensis — Bird of conservation concern
Season: Wintering
https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JG

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

Last Revision: 2/8/2016 12:14:00 PM

HARRIS COUNTY

AMPHIBIANS

		Federal Status	State Status
Houston toad	*Anaxyrus houstonensis*	LE	E

endemic; sandy substrate, water in pools, ephemeral pools, stock tanks; breeds in spring especially after rains; burrows in soil of adjacent uplands when inactive; breeds February-June; associated with soils of the Sparta, Carrizo, Goliad, Queen City, Recklaw, Weches, and Willis geologic formations

Southern Crawfish Frog *Lithobates areolatus areolatus*

The Southern Crawfish Frog can be found in abandoned crawfish holes and small mammal burrows. This species inhabits moist meadows, pasturelands, pine scrub, and river flood plains. This species spends nearly all of its time in burrows and only leaves the burrow area to breed. Although this species can be difficult to detect due to its reclusive nature, the call of breeding males can be heard over great distances. Eggs are laid and larvae develop in temporary water such as flooded fields, ditches, farm ponds and small lakes. Habitat: Shallow water, Herbaceous Wetland, Riparian, Temporary Pool, Cropland/hedgerow, Grassland/herbaceous, Suburban/orchard, Woodland – Conifer.

BIRDS

		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon *Falco peregrinus tundrius* DL

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Bald Eagle *Haliaeetus leucocephalus* DL T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Black Rail *Laterallus jamaicensis*

salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous year's dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Brown Pelican *Pelecanus occidentalis* DL

largely coastal and near shore areas, where it roosts and nests on islands and spoil banks

Henslow's Sparrow *Ammodramus henslowii*

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking

HARRIS COUNTY

BIRDS

		Federal Status	State Status
Mountain Plover	*Charadrius montanus*		

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Peregrine Falcon	*Falco peregrinus*	DL	T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

Red Knot	*Calidris canutus rufa*	T	

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

Red-cockaded Woodpecker	*Picoides borealis*	LE	E

cavity nests in older pine (60+ years); forages in younger pine (30+ years); prefers longleaf, shortleaf, and loblolly

Snowy Plover	*Charadrius alexandrinus*		

formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast

Sprague's Pipit	*Anthus spragueii*	C	

only in Texas during migration and winter, mid September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.

White-faced Ibis	*Plegadis chihi*		T

prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats

White-tailed Hawk	*Buteo albicaudatus*		T

near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral; breeding March-May

HARRIS COUNTY

BIRDS		Federal Status	State Status
Whooping Crane	*Grus americana*	LE	E

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties

Wood Stork	*Mycteria americana*		T

forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

FISHES		Federal Status	State Status
American eel	*Anguilla rostrata*		

coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally

Creek chubsucker	*Erimyzon oblongus*		T

tributaries of the Red, Sabine, Neches, Trinity, and San Jacinto rivers; small rivers and creeks of various types; seldom in impoundments; prefers headwaters, but seldom occurs in springs; young typically in headwater rivulets or marshes; spawns in river mouths or pools, riffles, lake outlets, upstream creeks

Smalltooth sawfish	*Pristis pectinata*	LE	E

different life history stages have different patterns of habitat use; young found very close to shore in muddy and sandy bottoms, seldom descending to depths greater than 32 ft (10 m); in sheltered bays, on shallow banks, and in estuaries or river mouths; adult sawfish are encountered in various habitat types (mangrove, reef, seagrass, and coral), in varying salinity regimes and temperatures, and at various water depths, feed on a variety of fish species and crustaceans

MAMMALS		Federal Status	State Status
Louisiana black bear	*Ursus americanus luteolus*	LT	T

possible as transient; bottomland hardwoods and large tracts of inaccessible forested areas

Plains spotted skunk	*Spilogale putorius interrupta*		

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Rafinesque's big-eared bat	*Corynorhinus rafinesquii*		T

roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures

Red wolf	*Canis rufus*	LE	E

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies

HARRIS COUNTY

MAMMALS

		Federal Status	State Status
Southeastern myotis bat	*Myotis austroriparius*		

roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures

MOLLUSKS

		Federal Status	State Status
Louisiana pigtoe	*Pleurobema riddellii*		T

streams and moderate-size rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments; Sabine, Neches, and Trinity (historic) River basins

Sandbank pocketbook	*Lampsilis satura*		T

small to large rivers with moderate flows and swift current on gravel, gravel-sand, and sand bottoms; east Texas, Sulfur south through San Jacinto River basins; Neches River

Texas pigtoe	*Fusconaia askewi*		T

rivers with mixed mud, sand, and fine gravel in protected areas associated with fallen trees or other structures; east Texas River basins, Sabine through Trinity rivers as well as San Jacinto River

REPTILES

		Federal Status	State Status
Alligator snapping turtle	*Macrochelys temminckii*		T

perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October

Green sea turtle	*Chelonia mydas*	LT	T

Gulf and bay system; shallow water seagrass beds, open water between feeding and nesting areas, barrier island beaches; adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds; nesting behavior extends from March to October, with peak activity in May and June

Kemp's Ridley sea turtle	*Lepidochelys kempii*	LE	E

Gulf and bay system, adults stay within the shallow waters of the Gulf of Mexico; feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August

Leatherback sea turtle	*Dermochelys coriacea*	LE	E

Gulf and bay systems, and widest ranging open water reptile; omnivorous, shows a preference for jellyfish; in the US portion of their western Atlantic nesting territories, nesting season ranges from March to August

Loggerhead sea turtle	*Caretta caretta*	LT	T

Gulf and bay system primarily for juveniles, adults are most pelagic of the sea turtles; omnivorous, shows a preference for mollusks, crustaceans, and coral; nests from April through November

HARRIS COUNTY

REPTILES

		Federal Status	State Status
Texas horned lizard	*Phrynosoma cornutum*		T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Timber rattlesnake	*Crotalus horridus*		T

swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

PLANTS

		Federal Status	State Status
Awnless bluestem	*Bothriochloa exaristata*		

GLOBAL RANK: G4; Coastal prairies on black clay; Perennial; Flowering April-Dec; Fruiting April- Dec

Coastal gay-feather	*Liatris bracteata*		

Texas endemic; coastal prairie grasslands of various types, from salty prairie on low- lying somewhat saline clay loams to upland prairie on nonsaline clayey to sandy loams; flowering in fall

Giant sharpstem umbrella-sedge	*Cyperus cephalanthus*		

in Texas on saturated, fine sandy loam soils, along nearly level fringes of deep prairie depressions; also in depressional area within coastal prairie remnant on heavy black clay; in Louisiana, most sites are coastal prairie on poorly drained sites, some on slightly elevated areas surrounded by standing shallow water, and on moderately drained sites; soils include very strongly acid to moderately alkaline silt loams and silty clay loams; flowering/fruiting May-June, August-September, and possibly other times in response to rainfall

Goldenwave tickseed	*Coreopsis intermedia*		

GLOBAL RANK: G3; In deep sandy soils of sandhills in openings in or along margins of post oak woodlands and pine-oak forests of east Texas; Perennial; Flowering/Fruiting May-Aug

Houston daisy	*Rayjacksonia aurea*		

Texas endemic; on and around naturally barren or sparsely vegetated saline slick spots or pimple mounds on coastal prairies, usually on sandy to sandy loam soils, occasionally in pastures and on roadsides in similar soil types where mowing may mimic natural prairie disturbance regimes; flowering late September-November (-December)

Indianola beakrush	*Rhynchospora indianolensis*		

GLOBAL RANK: G3Q; Locally abundant in cattle pastures in some areas (at least during wet years), possibly becoming a management problem in such sites; Perennial; Flowering/Fruiting April-Nov

Panicled indigobush	*Amorpha paniculata*		

A stout shrub, 3 m (9 ft) tall that grows in acid seep forests, peat bogs, wet floodplain forests, and seasonal wetlands on the edge of Saline Prairies in East Texas. It is distinguished from other Amorpha species by its fuzzy leaflets with prominent raised veins underneath, and the flower panicles, which are 8 to 16 inches long and slender, held above the foliage. Perennial; Flowering summer

HARRIS COUNTY

PLANTS

Federal Status State Status

Texas ladies'-tresses *Spiranthes brevilabris var. brevilabris*

Sandy soils in moist prairies, incl. blackland/Fleming prairies, calcareous prairie pockets surrounded by pines, pine-hardwood forest, open pinelands, wetland pine savannahs/flatwoods, and dry to moist fields, meadows, and roadsides. Delicate, nearly ephemeral orchid, producing winter rosettes, flowers Feb-Apr. Historically endemic to SE coastal plain.

Texas meadow-rue *Thalictrum texanum*

Texas endemic; mostly found in woodlands and woodland margins on soils with a surface layer of sandy loam, but it also occurs on prairie pimple mounds; both on uplands and creek terraces, but perhaps most common on claypan savannas; soils are very moist during its active growing season; flowering/fruiting (January-)February-May, withering by midsummer, foliage reappears in late fall(November) and may persist through the winter

Texas prairie dawn *Hymenoxys texana* LE E

Texas endemic; in poorly drained, sparsely vegtated areas (slick spots) at the base of mima mounds in open grassland or almost barren areas on slightly saline soils that are sticky when wet and powdery when dry; flowering late February-early April

Texas tauschia *Tauschia texana*

GLOBAL RANK: G3; Occurs in loamy soils in deciduous forests or woodlands on river and stream terraces; Perennial; Flowering/Fruiting Feb-April

Texas windmill-grass *Chloris texensis*

Texas endemic; sandy to sandy loam soils in relatively bare areas in coastal prairie grassland remnants, often on roadsides where regular mowing may mimic natural prairie fire regimes; flowering in fall

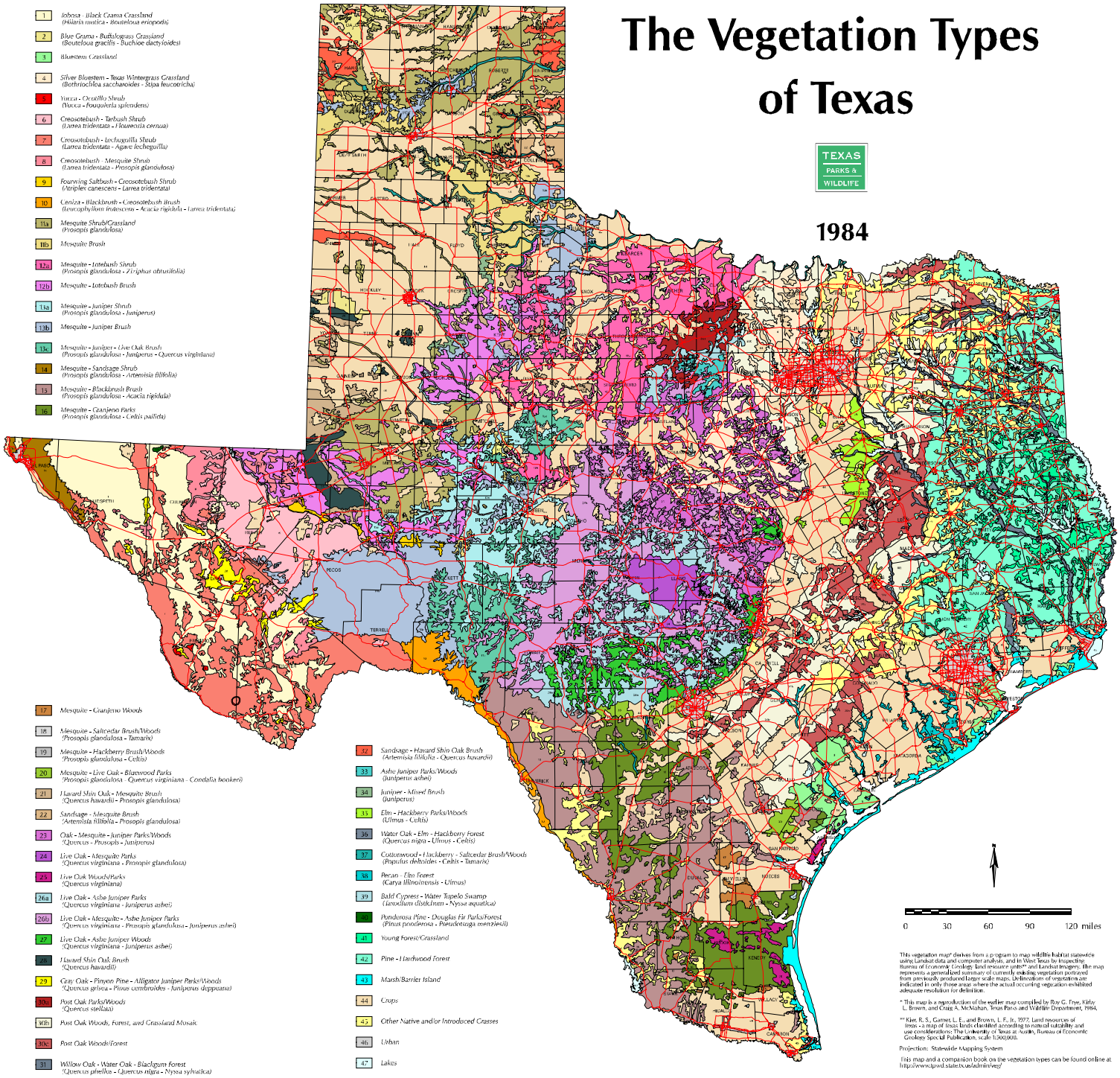
Threeflower broomweed *Thurovia triflora*

Texas endemic; near coast in sparse, low vegetation on a veneer of light colored silt or fine sand over saline clay along drier upper margins of ecotone between between salty prairies and tidal flats; further inland associated with vegetated slick spots on prairie mima mounds; flowering September-November

The Vegetation Types of Texas

TEXAS PARKS & WILDLIFE

1984



This vegetation map* derives from a program to map wildlife habitat statewide using Landsat data and computer analysis, and in West Texas by inspecting Bureau of Economic Geology land resource units** and Landsat imagery. The map represents a generalized summary of currently existing vegetation portrayed from previously produced larger scale maps. Delineation of vegetation are indicated in only those areas where the actual occurring vegetation exhibited adequate resolution for definition.

* This map is a reproduction of the earlier map compiled by Ray G. Frye, Kirby L. Brown, and Craig A. McMahan, Texas Parks and Wildlife Department, 1984.

** Kier, R. S., Garner, L. E., and Brown, L. F., Jr., 1977, Land resources of Texas - a map of Texas lands classified according to natural suitability and use considerations: The University of Texas at Austin, Bureau of Economic Geology Special Publication, scale 1:500,000.

Projection: Statewide Mapping System

This map and a companion book on the vegetation types can be found online at http://www.tpwd.state.tx.us/admin/veg/

Map prepared by GIS Lab, TPWD

APPENDIX C: Project Photographs

Photo 1 Looking northwest at the project site from Lyons Avenue.

Photo 2 Looking north at the project site.

Photo 3 Looking south at the project site from New Orleans Street.

Photo 4 Looking north at home on 3807 Lyons Avenue.

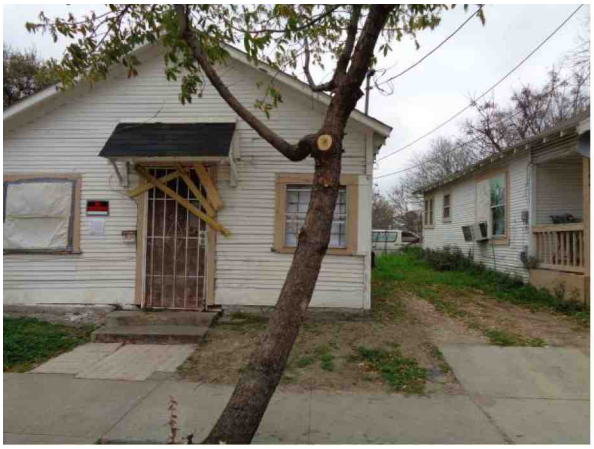


Photo 5 Vacant house on project site.

Photo 6 House at southwest corner of the project site

Photo 7 Looking east from Pannell Street at house on the west boundary of the project site.

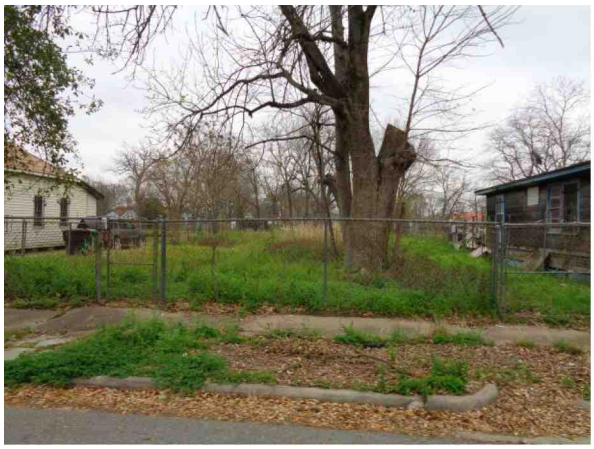


Photo 8 Vacant lot on the northwest corner of the project site.

APPENDIX D: Coordination and Documentation

Korn, Patrick R

From: Horn, Ginger C
Sent: Tuesday, April 12, 2016 4:10 PM
To: Korn, Patrick R
Subject: FW: Project Review: 201605933

FYI...Can you get Legacy finished up?

Ginger C. Horn, PWS
Manager I Natural/Cultural Resource Services
Terracon
11555 Clay Road, Suite 100 I Houston, Texas 77043
P [713] 690-8989 I F [713] 690-8787 I M [214] 497-9906
Direct Office Phone [713] 329-2513
ginger.horn@terracon.com I terracon.com

From: Yelacic, David M
Sent: Tuesday, April 12, 2016 11:35 AM
To: Horn, Ginger C <Ginger.Horn@terracon.com>; Hanzlik, Jeremy <Jeremy.Hanzlik@terracon.com>
Subject: FW: Project Review: 201605933

It looks like the Legacy Community Health Clinic is free to proceed.

DY

Sent from my Android phone using TouchDown (www.nitrodesk.com)

-----Original Message-----
From: reviews@thc.state.tx.us [reviews@thc.state.tx.us]
Received: Tuesday, 12 Apr 2016, 11:21AM
To: Yelacic, David M [David.Yelacic@terracon.com]; reviews@thc.state.tx.us [reviews@thc.state.tx.us]
Subject: Project Review: 201605933

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
201605933
Legacy Community Clinic EA
Lyons Avenue at Worms Street
Houston,TX

Dear David Yelacic:
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

- No historic properties present or affected
- No additional historical assessment warranted

Archeology Comments

- No historic properties present or affected
- THC/SHPO concurs with information provided

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.state.tx.us, justin.kockritz@thc.state.tx.us.

Sincerely,

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

Project Coordination and Review Requests

(Including Threatened and Endangered Species)

EARLY PROJECT COORDINATION

If you are in the information gathering phase of project coordination and assessment, ***in lieu of*** submitting a Project Review form or a letter request, you may obtain information from the following Texas Parks and Wildlife Department (TPWD) sources regarding sensitive resource information for use in your analyses. TPWD recommends you use at least the following two sources of information when analyzing for project impacts to sensitive resources, including before submitting a request for TPWD review and recommendations.

RARE, THREATENED, AND ENDANGERED SPECIES OF TEXAS BY COUNTY - This database includes lists of species known to occur and potentially occurring in Texas at the county level. It can be accessed online at: http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/ or by contacting our administrative staff at (512) 389-4571. Appropriate use and interpretation of the county level lists are the responsibility of the recipient.

TEXAS NATURAL DIVERSITY DATABASE (TXNDD) – The TXNDD is publicly available location specific data on rare, threatened and endangered species, natural communities and other significant features of conservation concern to TPWD. This information can be obtained by submitting a data request to txndd@tpwd.state.tx.us. Response to a data request will include available TXNDD records, reports, and geographic information system compatible shapefiles of recorded locations for species and other rare resources on the U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle of the project and surrounding area. Responses generally take a maximum of five business days from receipt of the request. Appropriate use and interpretation of TXNDD data are the responsibility of the recipient.

WILDLIFE HABITAT ASSESSMENT (WHAB) PROGRAM REVIEW

PROJECT REVIEW REQUESTS – The WHAB Program can provide a review of your assessment, after your analysis for impacts using the above two data sources. Please complete the WHAB Review Request form (attached; use Word format for fill-in version), or use the form as an outline of information to include with your letter request. The WHAB Program response will provide an evaluation of your environmental assessment for impacts to fish and wildlife and their habitats, including rare, threatened, and endangered species, other significant resources and concerns presently known or potentially occurring in the vicinity of your project. WHAB Program responses generally take 4 to 6 weeks on average from receipt, depending on the size of your request.

The request should include all the information listed on the next two pages and be sent to the address shown on the last page. The more pertinent information you provide, the more customized our review, and the faster our turnaround. Review requests submitted without adequate project detail may cause a delay in our response as we will need to contact you and wait for supplemental information. The potential for adverse impacts to natural resources from project activities varies based on the type of activity; location; season; vegetation; present physical features (both natural and man-made); degree of disturbance; planned avoidance, minimization, mitigation, enhancement, and restoration measures; species-specific tolerance levels; etc. Current color photographs and aerial photographs of the site greatly facilitate the review process. Complete information allows us to more accurately assess the potential for project impacts, as well as, assists us in narrowing the list of rare, threatened, and endangered species and other natural resources that may need to be addressed further.

WILDLIFE HABITAT ASSESSMENT PROGRAM
Review Requests
(Including Threatened and Endangered Species)

Name: **Patrick R Korn** Date: **04/15/2016**

Your Company: **Terracon** Phone: (**832**) **783-8321**

Your Company Address: **11555 Clay Road Suite 100** Fax: (**713**) **690-8787**

City, State, Zip: **Houston Texas 77043** E-mail: **prkorn@terracon.com**

Project Title, Number and Site Location: **Legacy Community Health Center, 92167164, Houston** County(ies): **Harris County**

1. Scope of Project:

(a) What regulations will this review help you to comply with? OR, if not regulatory, why is the review being requested? Who is the project sponsor?

This review will help to comply wth NEPA regulations for the project sponsor, Legacy Community Health

(b) What and where is the project site? What activities will be conducted at the site? (Especially activity types, extent, boundaries, length & width, waterways, vegetation disturbance, and total acreage of site and acreage of the site that will be disturbed)

The project site is located in Houston, Harris County, Texas, at the northwest corner of Worms Street and Lyons Avenue. The overall project area houses the development of a healthcare clinic. This request for review only applies to the development of the healthcare clinic as it is the only facility receiving federal funding and complying with NEPA. The approximately 1.3 acre area of the proposed health care center will herein be referred to as the project site. The activities necessary for the development of the proposed healthcare clinic would the clearing and grading of approximately 1.3 acre of disturbed upland.

(c) If this request is for a site investigation or risk assessment, why is the site being investigated? If applicable, what contaminant pathways are being evaluated?

Not Applicable

(d) Schedule of activities – Approximately when (which calendar months, how many years) will the project be active on the site?

Construction activities will begin after the approval of the NEPA documentation.

2. Vegetation: Species, dominant plants, structure and composition, vegetation layers, height of layers, natural vegetation community types.

The dominant vegetation community on the project site was herbaceous upland and was dominated by St. Augustine grass (Stenotaphrum secundatum) and Bermuda grass (Cynodon dactylon). Also present on the project site was burclover (Medicago polymorpha), creeping buttercup (Ranunculus repens), Chinese tallowtree (Triadica sebifera), common hackberry (Celtis occidentalis), and shagbark hickory (Carya ovata).

3. Other Natural Resources/Physical Features:

(a) Soils, geology, watercourses, aquifers, flood zones, etc.

According to the USDA NRCS Soil Survey, the soil in the project site consists of Verland-Urban Land (Mu). This somewhat poorly drained map unit is listed as containing hydric components. The soil observed on the project site did not display any hydric indicators. The project site is not located in the FEMA 100-year or 500-year floodplain and is located in the Buffalo-San Jacinto Watershed.

(b) Habitat, animals, animal assemblages, other sensitive features, etc.

The project site consists of disturbed herbaceous upland vegetation that does not offer habitat for any federally or state-listed threatened or endangered species. There are also no sensitive features within the project site.

4. Existing Site Development: Extent of pavement, gravel, shell, or other cover; buildings, landscaped, xeriscaped, drainage system, etc.

The project site is located in an existing residential area that has been fully developed.

5. Historic Use/Function of Site: Pasture, forest, urban, row crops, rangeland, wetland, etc. If the request is for a risk assessment, when was, or for how long, has the site been active, inactive? Are cultural resources present

on the site or will the project cross or impact state or federal lands, local parklands?

The project site has been utilized as residential neighborhood since 1944. Historical maps and aerial imagery were reviewed to identify impacts to unrecorded, potential historic properties. A Desktop Cultural Resources Review Report was submitted to the THC for review. The State Historic Preservation Officer (SHPO) concurred that there would be no impacts to historic properties in an e-mail dated April 12, 2016.

6. **Has a threatened and endangered species survey or assessment,** wetland delineation, or other biological assessment already been performed? (In general, TPWD recommends an on-site habitat assessment be performed.) [X] Yes [ ] No

   (a) If yes, provide surveyor name, qualifications, methods or protocols, acreage surveyed, level of effort, weather conditions, time of day, and dates the survey was performed.

A Threatened and Endangered Species Habitat Assessment was completed by Terracon on March 26, 2016. A copy of this report is available upon request.

TEXAS PARKS & WILDLIFE

WILDLIFE HABITAT ASSESSMENT PROGRAM
Review Requests (Continued)
(Including Threatened and Endangered Species)

6. (b) If yes, please provide results and copy of survey/assessment report.

7. **Could current on-site or adjacent habitat support rare species?** ☐ Yes ☒ No
Specifically, explain why or why not.

The project site consists of highly developed upland. No habitat for listed species exists on the project site.

8. **Provide a description of potential negative direct and indirect impacts** from proposed project activities or former and current site activities, such as types of habitat and acreage to be degraded or lost, temporarily and permanently. Also, describe cumulative effects that could be anticipated from the project on the natural environment.

Approximately 1.3 acre of disturbed upland would be impacted by the proposed development.

9. **Provide a description of planned beneficial mitigation and enhancements** or restoration efforts. Be sure to note the avoidance, minimization, and compensatory mitigation measures planned to address the threat of negative impacts (e.g. which erosion control measures will be used, what will site restoration activities encompass, etc.).

There is no planned enhancement on the project site. This site will not impact any critical habitat or other valuable natural resource. BMPs will be used to mitigate impacts to off site habitats in the vicinity.

10. **Include copies of coordination with other agencies** relevant to impacts or enhancements of natural resources for this project, or agency & contact name.

11. **Clearly delineate exact location of site and its boundaries** using an applicable USGS quad (most preferable) as the base layer or best map available. The topographic map citation should include the USGS quad name. The map must contain identifiable features and a scale that allows us to find your site **and** accurately pinpoint your site boundaries. When using internet maps, provide both a location map (zoomed out for highway reference) and a layout map (zoomed in for site features, boundaries, and neighboring street reference)

12. **Originals or color-copy photographs** of site and surrounding area with captions or narratives.

13. **Aerial photographs with pertinent features labeled** . Aerials should show the year photograph was taken.

Send completed form to:

Texas Parks and Wildlife Department
Wildlife Division
Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744-3291
(512) 389-4571 (Phone) (512) 389-4599 (Fax)

APPENDIX E: Credentials

PATRICK R. KORN
STAFF ENVIRONMENTAL SCIENTIST

PROFESSIONAL EXPERIENCE

Mr. Korn is a Staff Environmental Scientist in the Environmental Department of Terracon's Houston, Texas office. Mr. Korn has over three years of experience working directly with wetlands and waters associated with Section 404 of the Clean Water Act (CWA).

Mr. Korn has performed, overseen, and managed numerous wetland delineations and threatened and endangered species assessments. He has assisted with and authored several NEPA studies (Categorical Exclusions, Environmental Assessments) for government agencies including the Texas General Land Office, Houston Parks Board, and Texas Department of Transportation. During his graduate studies in North Carolina he studied the effects of saltwater incursion into a freshwater wetland mitigation bank, established in accordance with Section 404 of the Clean Water Act (CWA), while working on the publication of his thesis.

Mr. Korn has performed numerous US Army Corps of Engineers (USACE) jurisdictional determinations and wetland delineations in Texas. He has also prepared and secured several 404/401 USACE permits and Letters of Permission (LOP). He has been responsible for environmental project coordination with the US Army Corps of Engineers in the Galveston District and has experience coordinating with federal and state resource agencies such as the United States Fish and Wildlife Service, Texas Parks and Wildlife Department, Texas Historical Commission, and Texas Commission on Environmental Quality. He also has experience working on non-compliance cases with the USACE along the Texas coast associated with Section 404 and Section 10 violations.

Mr. Korn has performed numerous tasks associated with stormwater Multi Sector General Permits (MSGP) and Municipal Separate Storm Sewer System (MS4) Permits for the Port of Houston Authority and Houston Airport System, including analytical and visual stormwater sampling, Annual Comprehensive Site Compliance Inspections, analysis of best management practices (BMPs), and the revision of Stormwater Pollution Prevention Plans (SWPPP).

In addition to threatened and endangered species assessments, Mr. Korn has performed various biological studies including wildlife habitat assessments, Migratory Bird Treaty Act surveys, iHGM assessments, feral hog monitoring, and oyster surveys. Mr. Korn has also assisted with several Phase I Environmental Site Assessments (ESA) and is familiar with obtaining and reviewing records provided by Environmental Database Resources (EDR).

PROJECT EXPERIENCE

** Work performed prior to joining Terracon.*

Harris County Engineering Department – Harris County, Texas

Project manager and performed waters of the U.S. as well as threatened and endangered species assessments on multiple linear transportation projects in preparation for USACE Section 404 Nationwide Permits or Regional General Permits.

Education

Master of Science, Biology, 2014, East Carolina University

Bachelor of Science, Zoology, Natural Resources Management, 2011, Ohio State University

Work History

Terracon, Staff Environmental Scientist, August 2015-Present

Crouch Environmental Services, Project Manager, August 2014 – August 2015

Dickinson ISD – Galveston County, Texas
Project manager and performed evaluation of road way expansion work being completed in TxDOT right-of-way to prepare for TxDOT NEPA documentation.

City of Mont Belvieu – Chambers County, Texas
Project manager and performed waters of the U.S. as well as threatened and endangered species assessments on a 243-acre water resources project. Guided discussions with USACE in regards to development opportunities associated with potential wetlands impacts located on the project site.*

Pinto-Lion LP – Harris County, Texas
Performed wetland assessment on project as related to performed Hydrogeomorphic (HGM) modeling, stream assessments, and prepared USACE Section 404 Permit application and required Mitigation Plan for proposed impacts to Waters of the U.S. for proposed commercial development.*

City of Houston – Harris County, Texas
Project manager and performed waters of the U.S. as well as threatened and endangered species assessments on multiple linear transportation projects in preparation for USACE Section 404 Nationwide Permits.*

Houston Parks Board – Harris County, Texas
Performed waters of the U.S. as well as threatened and endangered species assessments on multiple hike and bike trail projects in preparation for USACE Section 404 Nationwide Permits and TxDOT NEPA documentation.*

Port of Houston Authority – Harris County, Texas
Performed waters of the U.S. as well as threatened and endangered species assessments to evaluate a rail spur expansion being completed through TxDOT right-of-way, in addition to TxDOT NEPA documentation and USACE Section 404 Nationwide Permitting.*

Houston Airport System – Harris County, Texas
Performed waters of the U.S. as well as threatened and endangered species assessments to evaluate a hardstand development project being, in addition to TxDOT NEPA documentation and USACE Section 404 Nationwide Permitting.*

Boone Towing – Harris County, Texas
Performed elevation contour mapping and fill calculations to prepare for a Letter of Permission Application to the USACE for a 2-acre dredging project in Old River.*

Key Largo Subdivision – Brazoria County, Texas
Performed a delineation of waters of the U.S. and a delineation of impacts to support an after-the-fact permit application to the USACE for a residential development that violated Section 404 of the Clean Water Act.*

City of Surfside Village – Brazoria County, Texas
Co-authored and provided technical expertise for the Biological Assessment portion of the Environmental Assessment for a beach nourishment and sustainability project designed to preserve the shoreline of the City of Surfside Village.*

Port of Houston Authority – Harris County, Texas
Project manager for field surveys and reporting for analytical and visual stormwater sampling, Stormwater Pollution Prevention Plan revisions, annual comprehensive compliance evaluations, best management practices analysis and review, coordination with the TCEQ, and illicit discharge sampling.*

Houston Airport System – Harris County, Texas
Project manager for field surveys and reporting for visual stormwater sampling at Bush Intercontinental, Hobby, and Ellington Airfields.*

GINGER C. (MELMS) HORN, CPESC, CFM, PWS
SENIOR ENVIRONMENTAL PROJECT MANAGER

PROFESSIONAL EXPERIENCE

Ms. Horn offers over 28 years of professional experience in the field of environmental natural resource planning. Her work has included various types of environmental assessments and obligations management plans for environmental and regulatory compliance. She provides expertise in environmental studies and permits including Section 404 wetland evaluations, permitting and mitigation, threatened and endangered species investigations, cultural resource studies, and other similar studies for large programs. She is additionally experienced in NEPA, wetlands assessments, endangered species compliance assessments, erosion and sediment control, SWPPP, and additional permitting. Ms. Horn has extensive experience reviewing and authoring, Environmental Impact Statements (EIS), Environmental Assessments (EA), Categorical Exclusion (CE), Environmental Site Assessments (ESA), Storm Water Pollution Prevention Plans (SWPPP), Wetland Mitigation Plans, Tree Mitigation Plans, NEPA documents, and 404 Permits.

She provides services to private industry and public sector clients locally, nationally, and internationally.

Ms. Horn has management experience at all levels. Her experience includes small projects in a select area, multiple task on area projects, and large project that cross state or regional boundaries with multidisiplines and multiple sub-projects needed by the client. She has managed and provided training to staff and external members for both project management and field work on these projects. Management of larger projects includes West Harris County Regional Water District, Keystone XL Pipeline, and EXCO.

PROJECT EXPERIENCE

West Harris County Regional Water Authority (WHCRWA) Second Source Alignment – Texas

Project manager for an EA for WHCRWA and have completed 16 different projects for WHCRWA. Ms. Horn conducted an Environmental assessment of the project area, approximately 30-mile 96-inch water pipeline. The assessment included documentation and coordination of potentially jurisdictional waters report, USACE Permitting, threatened and endangered species, and cultural resouces in the project corridor. Worked with USACE in preperation of a Section 404 Nationwide Permit application and required Mitigation Plan for proposed impacts to Waters of the U.S. for proposed development. Secured a NWP for the temporary impact to 15 acres of freshwater emergent wetlands and a NWP for the permanent loss of 0.38 acre of freshwater emergent wetlands. In the process of securing a Section 404 Permit for the conversion and re-establishment of 28 acres of forested wetlands to emergent wetlands and the temporary impact to 7 acres of emergent wetlands. Developed an in depth Alternatives Analyses for the proposed projects and coordinated mitigation efforts which included the purchase of mitigation bank credits and the development of a permittee-responsible mitigation area located offsite. Also performed extensive GIS map-making and analysis.

Education

MA, E-Education, 2003, University of Phoenix

Bachelor of Science, Agriculture Education, 1985, Sam Houston State University

Certifications

TXDOT Pre-Certification

PWS (Professional Wetland Scientist)

Wetlands Delineator Certification

CFM (Certified Floodplain Manager) Texas (No. 00390-02N), 2002

CPESC (Certified Professional Erosion and Sediment Control Specialist) (No. 1084)

Certified Arborist (No. TX-3587A)

RailSafe System / Railroad Education: Roadway Worker Protection

FERC: Environmental Review and Compliance for Natural Gas Facilities Training

TWIC: Transportation Worker Identification Card

Affiliations

International Society of Arboriculture

Texas Floodplain Management Association

Society of Wetland Scientist

Work History

Terracon Consultants, Houston, 2011-present

Jacobs, Dallas, 2010-2011

AECOM, 2006-2010

GM Consulting, 2003-2006

North Texas Council of Governments, 2001-2003

USDA-NRCS (Natural Resources Conservation Service), 1987-2001

EXCO –Texas & Louisiana
Project Manager for the EXCO projects. Perform a desktop and site visit to determine the existence and approximate boundaries of the waters of the U.S. (WOUS) on the site following the U.S. Army Corps of Engineers (USACE), archeological analysis, and stormwater compliance for site in Texas and Louisiana. Have completed over 60 projects for EXCO.

Harris County Flood Control District – Hockley, Texas
Performed a wetland determination and delineation, ordinary high water mark (OHWM) delineation for a stream, and performed GIS map-making and analysis for an approximate 67-acre tract of undeveloped land. Completed Waters of the U.S. Delineation report and presented to the USACE for verification of jurisdictional opinion. Additionally performed a site visit with USACE project manager in order to receive concurrence with isolated wetland determination and prepared proper documentation for coordination with the Environmental Protection Agency (EPA). The EPA and USACE determined that no Waters of the U.S. exist on the project site and, thus, no permit is necessary to construct on the project site.

Grace Community Church – Spring, Texas
Project manager and performed wetland assessment on project site in preparation of a USACE Section 404 Individual Permit application and required Mitigation Plan for proposed impacts to Waters of the U.S. for proposed development. Worked with Landowner, Montgomery County, and Harris County to coordinate efforts dealing with abandoned sandpits along Spring Creek. Performed wetland assessment on project as related to performed Hydrogeomorphic (HGM) modeling, stream assessments, and USACE inspections. Developed mitigation plan for permitee- responsible on-site mitigation. Provided an archeological review of the project area. Received Individual Permit for the project from USACE

Keystone XL Project, TransCanada Keystone Pipeline – Houston, Texas
Project manager of Environmental Impact Statement (EIS) for NEPA Compliance in relationship to the Steele City Segment, Gulf Coast Segment, and Texas Lateral areas of the 2,000 mile pipeline project. Ms Horn wrote and compiled the draft EIS document for the Department of State. Ms. Horn was the assistant project manager for the Gulf Coast Segment and Houston Lateral environmental evaluation projects. Responsibilities involved assignments on different projects requiring the preparation of a variety of environmental documents in accordance with NEPA and SWPP guidelines. Wrote and submitted NEPA Documents to Department of State. Submitted answers to all data request presented by Department of State. Associated studies included Section 404 wetland evaluations, permitting and mitigation; threatened and endangered species investigations; cultural resource studies; tree impact analyses and mitigation; and other similar studies. Worked closely with federal and state agency and provided documents for federal and state clearances. EIS was cleared by Department of Transportation.

Bluebonnet Pipeline EA – Moody, Texas
Project manager for an EA in Bell County for City of Moody, TX. Ms. Horn conducted an EA of the project area, approximately ~30,000 feet pipeline in Bell County, Texas. The assessment included documentation and coordination of potentially jurisdictional waters report, USACE Permitting, threatened and endangered species, and cultural resouces in the project corridor.

Cypress Creek Renewables, LLC – Texas
Authorized Project Reviewer for Texas Solar Farms. Performed Quality Control and review for over 22 project with respect to Waters of the U.S. (WOUS) delineations and determinations for proposed solar farm sites around Texas. Supervised staff that completed field delineations and developed GIS maps and reports for the project.

Waterline at West Area Bay – League City, Texas
Project manager and preformed wetland delineation for Clean Water Act on a proposed pipeline. Assisted with USACE permit.

Prolamsa, Inc. – Bryan, Texas
Performed a Waters of the U.S. determination and delineation, threatened and endangered species habitat evaluation, and cultural resources assessment on approximately 350 acres of undeveloped land. Wrote

technical reports and presented Waters of the U.S. delineation report to the USACE for verification of jurisdictional opinion. Additionally performed a site visit with USACE project manager in order to receive concurrence with isolated pond determination. The USACE determined that no Waters of the U.S. exist on the project site and, thus, no permit is necessary to construct on the project site.

Harris County Flood Control District – Hockley, Texas

Performed a wetland determination and delineation, ordinary high water mark (OHWM) delineation for a stream, and performed GIS map-making and analysis for an approximate 67-acre tract of undeveloped land. Completed Waters of the U.S. Delineation report and presented to the USACE for verification of jurisdictional opinion. Additionally performed a site visit with USACE project manager in order to receive concurrence with isolated wetland determination and prepared proper documentation for coordination with the Environmental Protection Agency (EPA). The EPA and USACE determined that no Waters of the U.S. exist on the project site and, thus, no permit is necessary to construct on the project site.

Fort Bragg Army Base – Fort Bragg, North Carolina

Project manager for an Environmental Assessment (EA) on Fort Bragg Army Base in Fort Bragg, North Carolina relating to NEPA compliance. Ms. Horn conducted an environmental assessment of the project area. The assessment included documentation and coordination of potentially jurisdictional waters report, USACE Permitting, threatened and endangered species, and cultural resources in the project corridor. Ms. Horn assisted and reviewed the preparation of a variety of environmental documents in accordance with NEPA including a Description of Proposed Action and Alternatives (DOPAA), Environmental Condition of Property Report, and an EA.

West High School Complex – West, Texas

Project manager for an Environmental Assessment (EA) in West, Texas for the West Independent School District relating to FEMA NEPA compliance. Ms. Horn conducted an environmental assessment of the project area. The assessment included documentation and coordination of potentially jurisdictional waters report, USACE Permitting, threatened and endangered species, and cultural resources in the project corridor. Ms. Horn assisted and reviewed the preparation of a variety of environmental documents in accordance with NEPA.

East Mesa Water Reclamation Facility Solar Farm Project - Las Cruces, New Mexico

Authorized Project Reviewer for Categorical Exclusion (CE) in Las Cruses, New Mexico for the City of Las Cruces. Ms. Horn assisted local staff conducted an environmental assessment of the project area. The assessment included documentation and coordination of potentially jurisdictional waters report, USACE Permitting, threatened and endangered species, and cultural resources in the project corridor. Ms. Horn assisted and reviewed the preparation of a variety of environmental documents in accordance with NEPA.

Federal Communications Commission (FCC) Proposed Telecommunications Towers/Utility Easements; Texas and Oklahoma. Client: Numerous carriers.

MS. Horn has performed numerous NEPA evaluations for proposed and existing telecommunications towers/utility easements in accordance with FCC NEPA Regulations (Title 47 of the Code of Federal Regulations (CFR), Part 1, Subpart I, rule section 1.1307(a)(4), as amended by the Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (47 CFR Part 1, Appendix B) and the Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process (47 CFR Part 1, Appendix C). Project responsibilities consisted of evaluating for the presence/absence of wetlands, floodplains, federal land, tribal land, threatened and endangered species, critical habitat, historic resources impacted by the visual effect of the proposed tower, and archaeological resources impacted by the proposed construction footprint. Agency consultations included Section 7 consultation with the United States Fish and Wildlife (USFWS) agency, state wildlife/natural resource agency (when applicable), the State Historic Preservation offices (SHPO), and numerous tribes as identified through the FCC Tribal Consultation Notification System.

APPENDIX F: Common Acronyms

Common Acronyms:

CFR	Code of Federal Regulations
CWA	Clean Water Act
DNL	Day/Night Noise Level
EA	Environmental Assessment
EF	Environmental Justice
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FIRM	Flood Insurance Rate Map
HRSA	Health Resources and Services Administration
HRSAF	Health Resources and Services Administration Fund
LSCC	Lone Star Circle of Care
NAAQS	National Ambient Air Quality Standard
NCA	Noise Control Act
NEPA	National Environmental Policy Act
NOX	Nitrogen Oxide
NWI	National Wetland Inventory
PST	Petroleum Storage Tanks
SH	State Highway
SHPO	State Historical Preservation Officer
THC	Texas Historical Commission
TPDES	Texas Pollution Discharge Elimination System
TPWD	Texas Parks & Wildlife Department
USACE	U.S. Army Corps of Engineers
USDA	U. S. Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Service
VOC	Volatile Organic Compounds