

MetroPark Square (SWG-2016-00264) Alternative Analysis

Need and Purpose:

There is a local need within the City of Shenandoah for retail, restaurant, office, and housing facilities. The purpose of the proposed project is to develop a mixed-use development to satisfy this growing need.

The Applicant is proposing a high quality mixed-use development (MetroPark Square) in the City of Shenandoah, Montgomery County, Texas. This mixed-use project is planned to consist of over 200,000-square feet of retail space, a movie theater, hotels, 900 units of multifamily, and 750,000-square feet of office and medical office space.

Alternatives:

No Action: Though the no action alternative would avoid all impacts to waters of the U.S., it would not meet the need and purpose of the proposed project. Therefore, the no action alternative is not practicable. If the Applicant did not develop this property, other developers would likely attempt to develop this site, as it is the only site available of this size in the City of Shenandoah that is also zoned for a mixed-use development, and is within close proximity to major thoroughfares and hospitals.

Offsite: The Applicant is interested in the City of Shenandoah because of a demonstrated need for mixed-use development. A search within the vicinity of the City of Shenandoah for other properties was conducted before deciding on this location. The Applicant searched for a site that met the following criteria; 1. The site had to be located with direct access to at least one major thoroughfare with the potential to develop additional major access on the opposite side of the proposed development; 2. The site had to meet the minimum separation requirement of a minimum of 3 miles to other existing developments of similar nature; 3. The site had to be 50 to 100-acres in size; and 4. The site had to have available utilities such as gas, electric, and water. Without close proximity to utilities, substantial delays to the project would occur due to the complexities of coordination with the city, public utilities, and other land owners. At the time the Applicant purchased the property, the preferred alternative (Offsite Alternative 1) was the only known property within the City of Shenandoah that met these criteria. The Offsite Alternatives are included in Attachment A of our response letter.

Ten sites were initially reviewed and six were dropped immediately because they were much smaller than the required 50-acres minimum size requirement. These included an approximately (1), 4-acre site off of 2 Prospect Point Dr., (2), an approximately 4.4-acre site at 10527 SH 242, (3), an approximately 5.4-acre site off of Lexington Dr., (4), an approximately 11.6-acre site at 411 Springwood Dr., (5), and an approximately 16.3-acre site off of Darby Loop. These sites as well as the larger sites discussed below, are shown on the attached Offsite Alternative Parcels Map.

Reproductions of the National Wetland Inventory (NWI) maps were reviewed (attached at the back of this analysis) and illustrate that none of the alternative sites appear to be free of aquatic resources. In fact, many of them have significant resources on them. Wetland analysis based on estimations using data from the NNWI provide the following acreages for each offsite alternative. These numbers have not been ground-truthed.

Alt 1 - emergent wetland, 13.6-acres, forested/shrub wetland, 27.7-acres, riverine, 0.6-acres,

Alt 2 – emergent wetland, 2.7-acres, forested/shrub wetland, 17.0-ac, pond, 6.4-acres,

Alt 3 – emergent wetland, 1.9-acres, forested/shrub wetland, 11.6-acres, riverine, 1.0-acres,

Alt 4 – emergent wetland, 0.1-acre, forested/shrub wetland 0.1-acre, riverine, 2.4-acres, and
Alt 5 – forested shrub/scrub wetland, 25.4-acres.

Table 1, below, is a summary of the selection criteria used to select the preferred alternative.

Table 1: Offsite Alternative comparison matrix.

Practicability Category	Factor	Preferred Alternative	Alt. 1 Houston Land Holdings	Alt. 2 Sleepy Hollow Rd.	Alt. 3 Grogans Mill Rd.	Alt. 4 Gosling and Research	Alt. 5 Montgomery Co. School
Available	Available for Acquisition	Yes	No	Yes	No	No	No
		Applicant owns the parcel.	Owner has turned down offers and has no asking price.	Listed for sale	Not for sale	Not for sale	Not for sale
Logistics	Proximity to major thoroughfares	Yes	Yes	No	No	No	No
		The direct access to Interstate-45 and the potential for a major thoroughfare to be constructed on the back side.	Similar to preferred alternative	No direct access and none planned in foreseeable future	No direct access and none planned in foreseeable future	No direct access and none planned in foreseeable future	No direct access and none planned in foreseeable future
	Minimum separation requirements to other existing developments of similar nature	Yes	Yes	Yes	No	Yes	Yes
		Would be located far enough from other similar developments	Would be located far enough from other similar developments	Would be located far enough from other similar developments	Would not be located far enough from other similar developments	Would be located far enough from other similar developments	Would be located far enough from other similar developments
	Sufficient Parcel Size (50 to 100-acres)	Yes	Yes	Yes	Yes	No	No
		The site is of an appropriate size.	The site is of an appropriate size.	The site is of an appropriate size.	The site is of an appropriate size.	The site is too large	The site is too large
	Available Utilities	Yes	Yes	No	Yes	Yes	No
		The site currently has access to utilities.	The site currently has access to utilities.	The site does not have reasonable access to utilities.	The site currently has access to utilities.	The site currently has access to utilities.	The site does not have reasonable access to utilities.

Justification for the Preferred Alternative (Offsite Alternative 1)

There are several critical items which led to the selection of the Preferred Alternative (Offsite Alternative 1). The following is the justification for Applicant's preferred 85-acre site:

1. The site had to be located within the City of Shenandoah and needed direct access to a major thoroughfare with the potential to develop additional thoroughfares on the back side. Major thoroughfares make the usefulness of mixed-use developments easier. Easy access to nearby businesses, retail markets, residential developments, hospitals, additional thoroughfares are critical to a project's success. With direct access to Interstate 45 and the David Memorial Drive on the existing Major thoroughfare plan, this requirement is met.
2. The site location had to meet the minimum separation requirements to other existing developments of similar nature. The minimum separation distance of 3 miles was required. This site met the minimum distance requirement of over 3 miles from the closest similar development.
3. The site had to be between 50 to 100-acres in size. The site is 85-acres and meets this size criteria.
4. The site had to have reasonable access to utilities. Due to the adjacent retail property to the north, called Sam Moon Center, and due to the adjacent retail property to the south, called Chuy's Restaurant, this site has direct access to the necessary utilities of water, gas, and electricity.
5. Other Considerations – this site is also the Preferred Alternative because of the immediate adjacency to Sam Moon Center. The Applicant's current headquarters is located within Sam Moon Center which significantly improves the management of this project. Also, within the last year, Methodist Hospital and Children's Hospital opened within half a mile of this site. These hospitals are in addition to St. Luke's and Memorial Hermann which are also within a half a mile of this site. The proximity to hospitals expedites critical care for the residents of the multi-family and the patrons of the restaurants, retail, office, and hotels.

Offsite Alternatives

Of the 5 Alternative sites, only Alternative 1 meets the proximity to major thoroughfares. However, Alternative 1, is also nearly 100% encumbered by FEMA floodplain and is not adjacent to Applicant's headquarters. Alternative 1 is also not located within the city of Shenandoah and does not have current plans for a back side thoroughfare.

Alternatives 2, 3, 4 and 5 do not have the required direct access and none are planned for the foreseeable future.

Alternative 2 and 5 do not have current access to utilities

Therefore, all offsite alternatives were rejected.

Onsite:

Onsite Alternative (Preferred):

The preferred alternative will include the construction of much needed high quality mixed-use development. This development consists of over 200,000-square foot of retail space, a movie theater, hotels, 900 units of multifamily, and 750,000-square foot of office and medical office space. The preferred alternative proposes to permanently impact 16.85-acres of emergent wetlands, 0.13-acres of linear emergent wetlands, 2.88-acres of forested wetlands, and 4.30-acres of open water. This alternative avoids permanent impacts to 1,320-lf of perennial stream and 5.15-acres of emergent wetland, 0.28-acres forested wetland (total of 25% reduction over Alternative 2). This alternative proposes to solve part of the detention need by routing stormwater north in the right-of-way of the proposed extension of David Memorial Dr. The culverts would turn east and go under the rail road tracks then turn north. There would be a temporary crossing constructed to place the culverts under the perennial stream before turning it to the east to access the offsite drainage ditch to the east temporarily impacting 50-lf of the

stream. Additionally, there would be temporary impacts to 0.3-acres of emergent wetlands to install the culverts. The extension of David Memorial Dr. would have a bridge crossing that would span the perennial stream and would not result in permanent impacts to the stream. The preferred alternative is mapped on Sheet 1 of 3 in Appendix B. The preferred alternative is the least environmentally damaging practicable alternative because it meets the site criteria and the project purpose and need, while proposing the minimum necessary impacts to waters of the U.S. necessary to complete the project. Table 2 provides details of the proposed impacts by project type and avoidance of in the preferred alternative.

Table 2. Details of the preferred alternatives' proposed impacts and avoidance of waters of the U.S.

	Impact Acreage/Linear Feet					Avoided Acreage/Linear Feet
Feature Type	David Memorial Roadway	Detention Ponds	Main MetroPark Development	Total Permanent	Stormwater Utility Line Total Temporary Impacts	
Emergent Wetlands	3.0-ac	1.5-ac	12.3-ac	16.8	0.3-ac	5.2-ac
Linear Emergent Wetlands	0.08-ac	-	0.05-ac	0.13-ac	-	-
Forested Wetlands	0.9-ac	1.5-ac	0.5-ac	2.9	-	0.3-ac
Open Water	0.4-ac	-	3.9-ac	4.3	-	-
Perennial Stream	-	-	-		50-lf	1,270-lf

Onsite Alternative 2:

This is the original preferred alternative. It required impacts to all aquatic resources in order to handle the drainage needs on-site. It would have impacted 22.3 acres of emergent wetlands, 0.13-acres of linear emergent wetlands, 3.2-acres of forested wetlands, 4.3-acres of open water, and 1,320-linear feet of perennial stream.

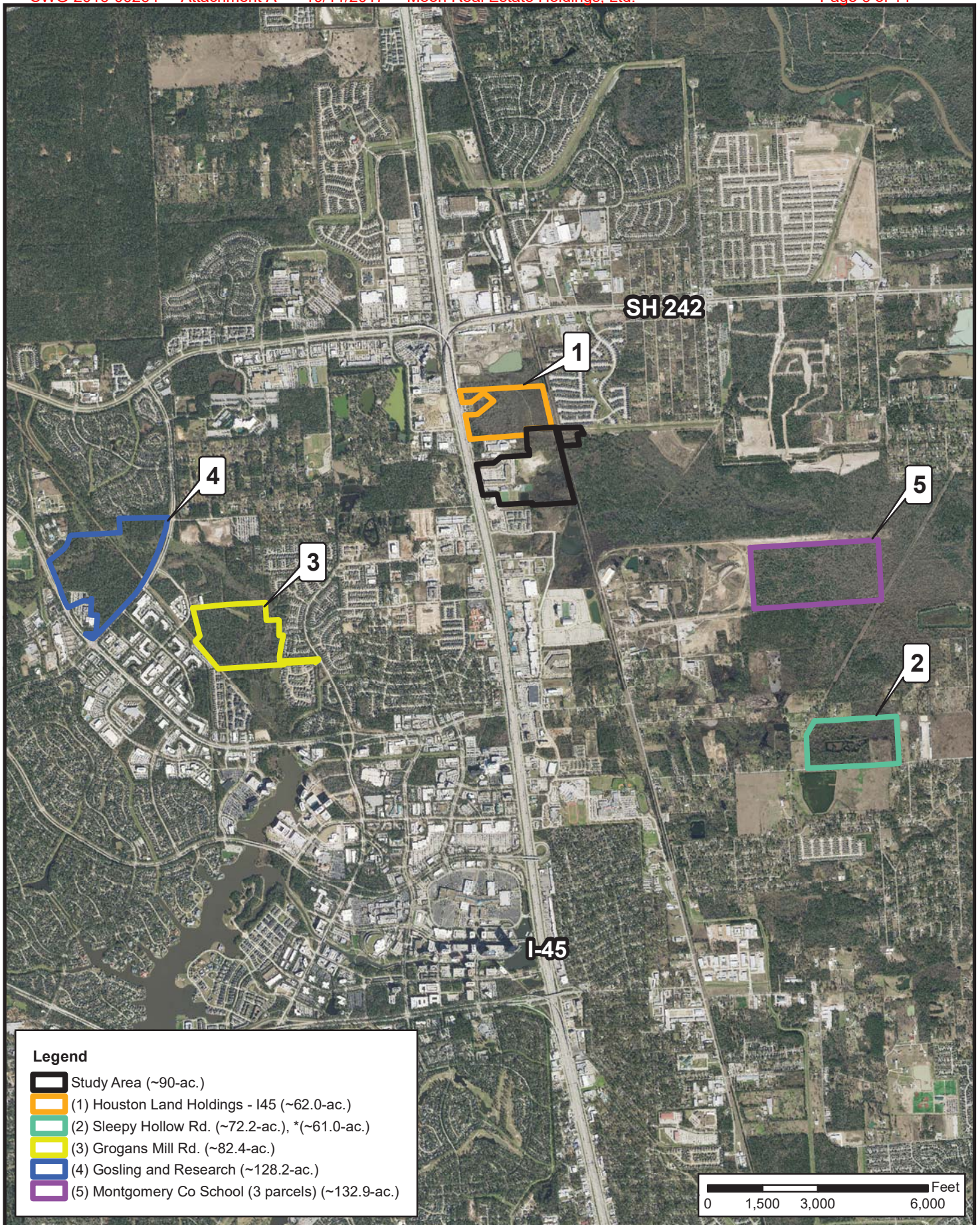
Onsite Alternative 3:

This alternative looked at removing the residential component of the project. This did not meet the need and purpose of the project. This Alternative proposes avoid to 2.2-acres open water, 14.3-acres emergent wetlands, 0.05-acres of linear emergent wetlands, 2.0-acres forested wetlands, and 785-lf of perennial stream. This alternative proposes to impact to 2.1-acres open water, 8.1-acres emergent wetlands, 0.08-acres linear emergent wetland, 1.1-acres forested wetlands, and 535-lf of perennial stream.

Table 3, below, summarizes the onsite alternatives' impacts and avoidance to waters of the U.S., including wetlands and stream only.

Table 3. Summary of onsite alternatives' impacts to waters of the U.S. (excludes open water).

Onsite Alternatives	Waters of the U.S. Permanent Impacts	Waters of the U.S. Temporary Impacts	Waters of the U.S. Permanent Avoided Impacts
Onsite Alternative 1 (Preferred)	19.9-acres	0.3-acres/50-lf	5.4-acres/1,270-lf
Onsite Alternative 2	25.6/1,320-lf		none
Onsite Alternative 3	9.3-acres/535-lf		16.4-acres/785-lf



SHEET 1 OF 1 SHEET	DATE:	08/15/2017
	DESIGN:	MMC
	DRAWN:	MMC
	CHECKED:	LDC
	KHA NO.:	064471000

Offsite Alternative
Parcels Map




MetroPark Square
Shenandoah
Montgomery County, Texas



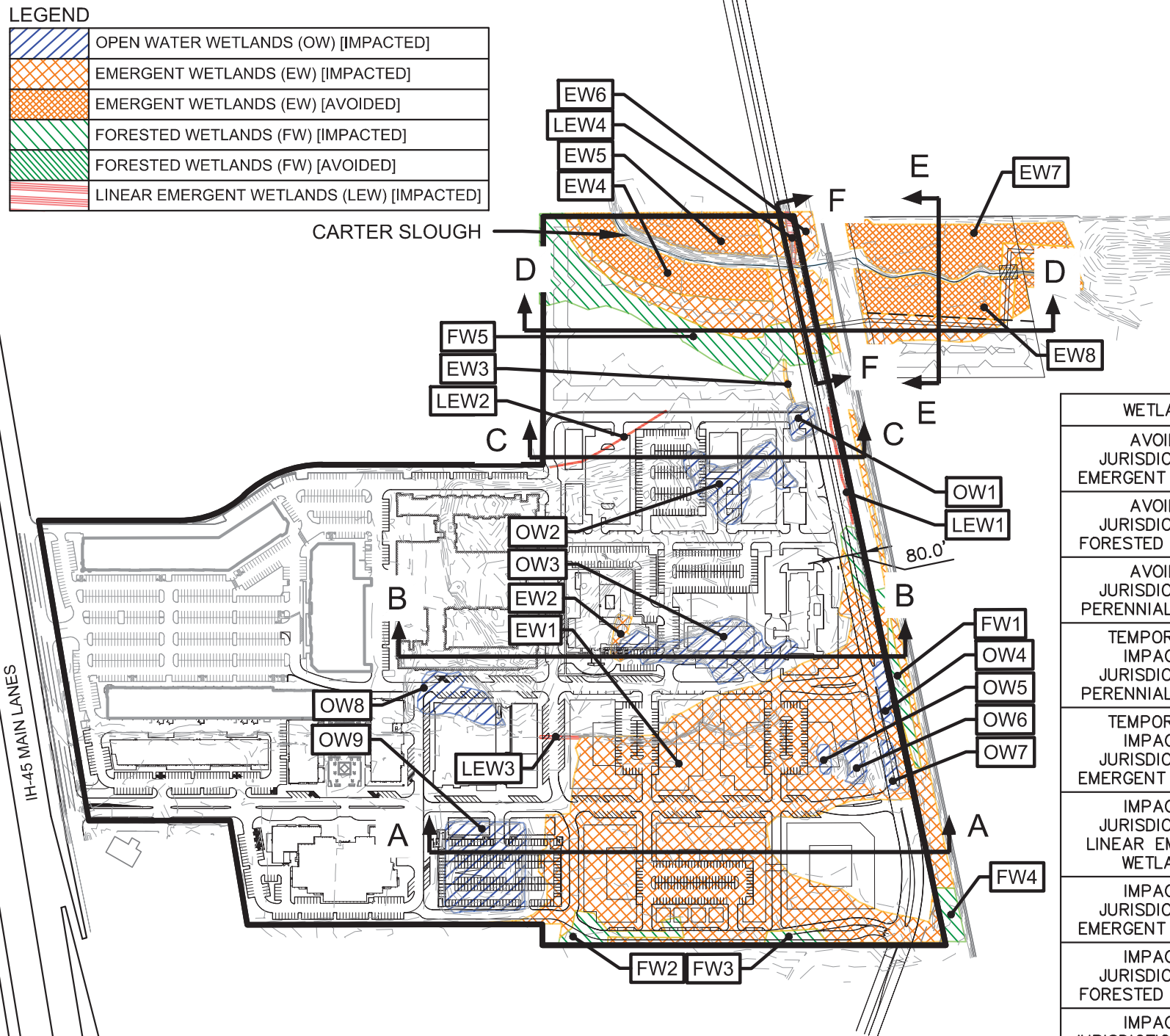
Kimley»Horn

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LEGEND

	OPEN WATER WETLANDS (OW) [IMPACTED]
	EMERGENT WETLANDS (EW) [IMPACTED]
	EMERGENT WETLANDS (EW) [AVOIDED]
	FORESTED WETLANDS (FW) [IMPACTED]
	FORESTED WETLANDS (FW) [AVOIDED]
	LINEAR EMERGENT WETLANDS (LEW) [IMPACTED]

CARTER SLOUGH



WETLAND STATISTICS	
AVOIDED JURISDICTIONAL EMERGENT WETLAND	5.17 AC
AVOIDED JURISDICTIONAL FORESTED WETLAND	0.27 AC
AVOIDED JURISDICTIONAL PERENNIAL STREAM	1,270 LF 0.73 AC
TEMPORARILY IMPACTED JURISDICTIONAL PERENNIAL STREAM	50 LF 0.03 AC
TEMPORARILY IMPACTED JURISDICTIONAL EMERGENT WETLAND	0.33 AC
IMPACTED JURISDICTIONAL LINEAR EMERGENT WETLANDS	0.13 AC
IMPACTED JURISDICTIONAL EMERGENT WETLAND	16.85 AC
IMPACTED JURISDICTIONAL FORESTED WETLAND	2.88 AC
IMPACTED JURISDICTIONAL OPEN WATER	4.30 AC

Kimley»Horn

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TBPE FIRM REGISTRATION F-928

**PREFERRED
ALTERNATIVE**







METROPARK SQUARE
PREPARED FOR
MOON REAL ESTATE
HOLDINGS, LTD.

TEXAS

SHENANDOAH

SHEET
1

Legend

-  Impacted Jurisdictional Perennial Stream, 1,320-linear feet
-  Impacted Jurisdictional Emergent Wetland, 22.33-acres
-  Impacted Jurisdictional Linear Emergent Wetland, 0.13-acres
-  Impacted Jurisdictional Forested Wetland, 3.16-acres
-  Impacted Jurisdictional Open Water, 4.30-acres
-  Study Area, ~90-acres



METROPARK

SCHEMATIC DESIGN
APRIL 11, 2016

CALLISON

SHEET

1

OF 1 SHEET

DATE:	07/26/2017
DESIGN:	AMB
DRAWN:	AMB
CHECKED:	LDC
KHA NO.:	064471000

Onsite Alternative 2
Aerial Source: TNRIS 2014

MetroPark Square












Shenandoah
Montgomery County, Texas



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Legend

-  Avoided Jurisdictional Perennial Stream, 785-linear feet
-  Impacted Jurisdictional Perennial Stream, 535-linear feet
-  Avoided Jurisdictional Open Water, 2.23-acres
-  Impacted Jurisdictional Open Water, 2.07-acres
-  Avoided Jurisdictional Emergent Wetland, 14.27-acres
-  Avoided Jurisdictional Linear Emergent Wetland, 0.05-acres
-  Impacted Jurisdictional Emergent Wetland, 8.06-acres
-  Impacted Jurisdictional Linear Emergent Wetland, 0.08-acres
-  Avoided Jurisdictional Forested Wetland, 2.05-acres
-  Impacted Jurisdictional Forested Wetland, 1.11-acres
-  Study Area, ~90-acres



SHEET

1

OF 1 SHEET

DATE:	07/26/2017
DESIGN:	AMB
DRAWN:	AMB
CHECKED:	LDC
KHA NO.:	064471000

Onsite Alternative 3

Aerial Source: TNRIS 2014

MetroPark Square

Shenandoah
Montgomery County, Texas



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Wetland Types

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

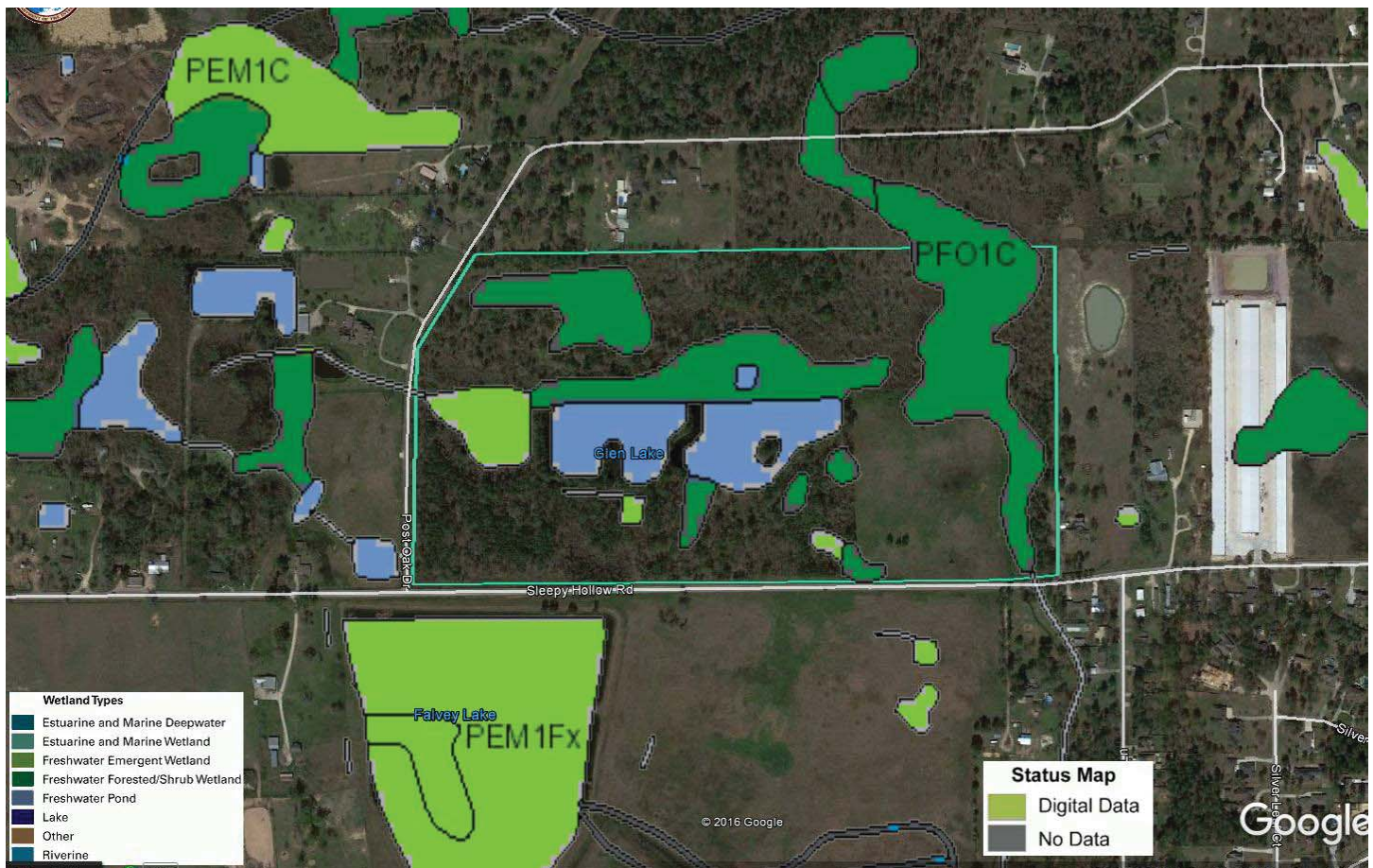
Status Map

- Digital Data
- No Data

Freshwater Emergent Wetland - 13.6-ac.
Freshwater Forested/Shrub Wetland - 29.7-ac.
Riverine - 0.6-ac.

*Not ground truthed

(2) Sleepy Hollow Road (~61-ac.)



Estimated Acres*:

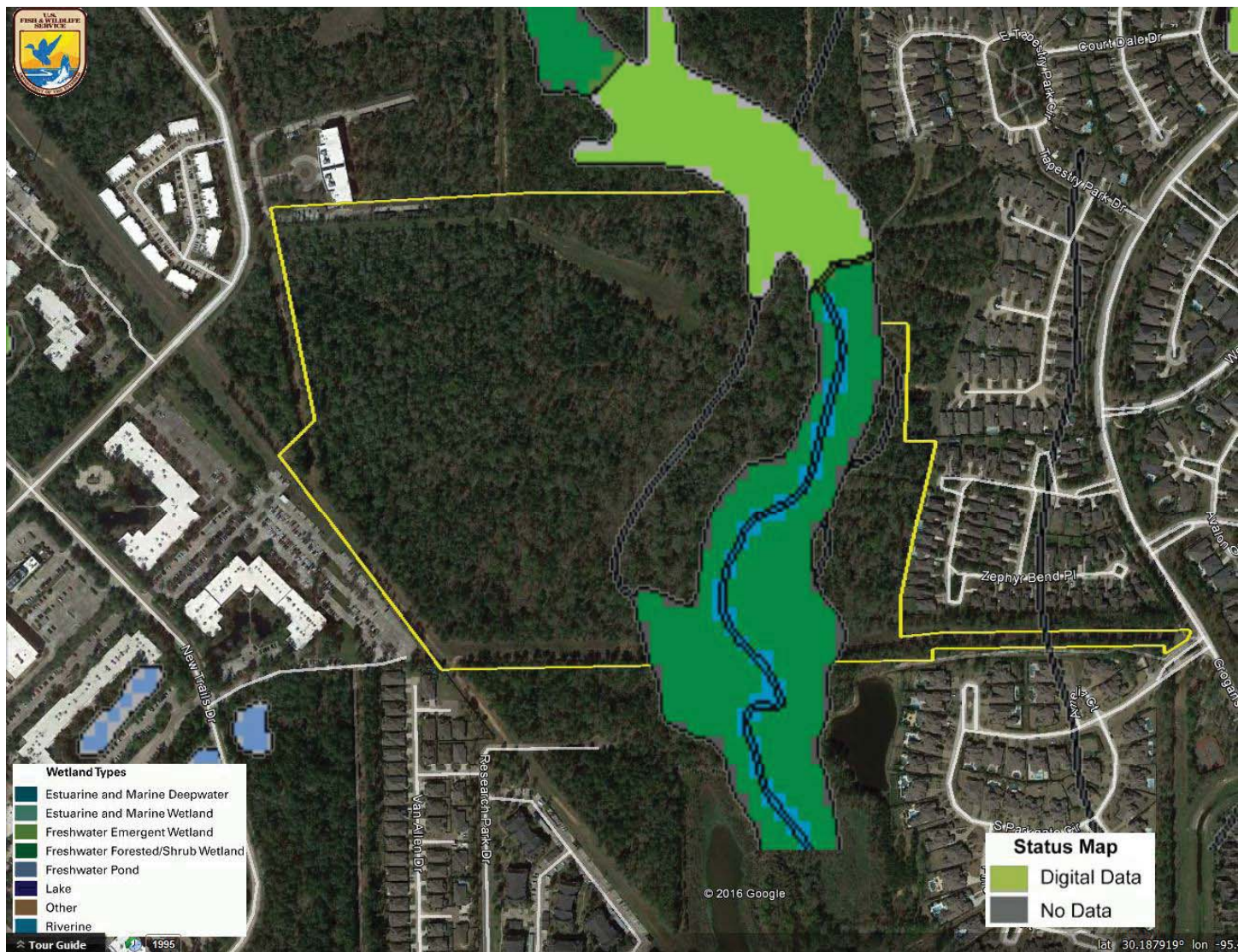
Freshwater Emergent Wetland - 2.7-ac.

Freshwater Forested/Shrub Wetland - 17.0-ac.

Freshwater Pond - 6.4-ac.

*Not ground truthed

(3) Grogans Mill Road (~82.4-ac.)



Estimated Acres*:

Freshwater Emergent Wetland - 1.9-ac.

Freshwater Forested/Shrub Wetland - 11.6-ac.

Riverine - 1.0-ac.

*Not ground truthed

(4) Gosling and Research (~128.2-ac.)



Estimated Acres*:

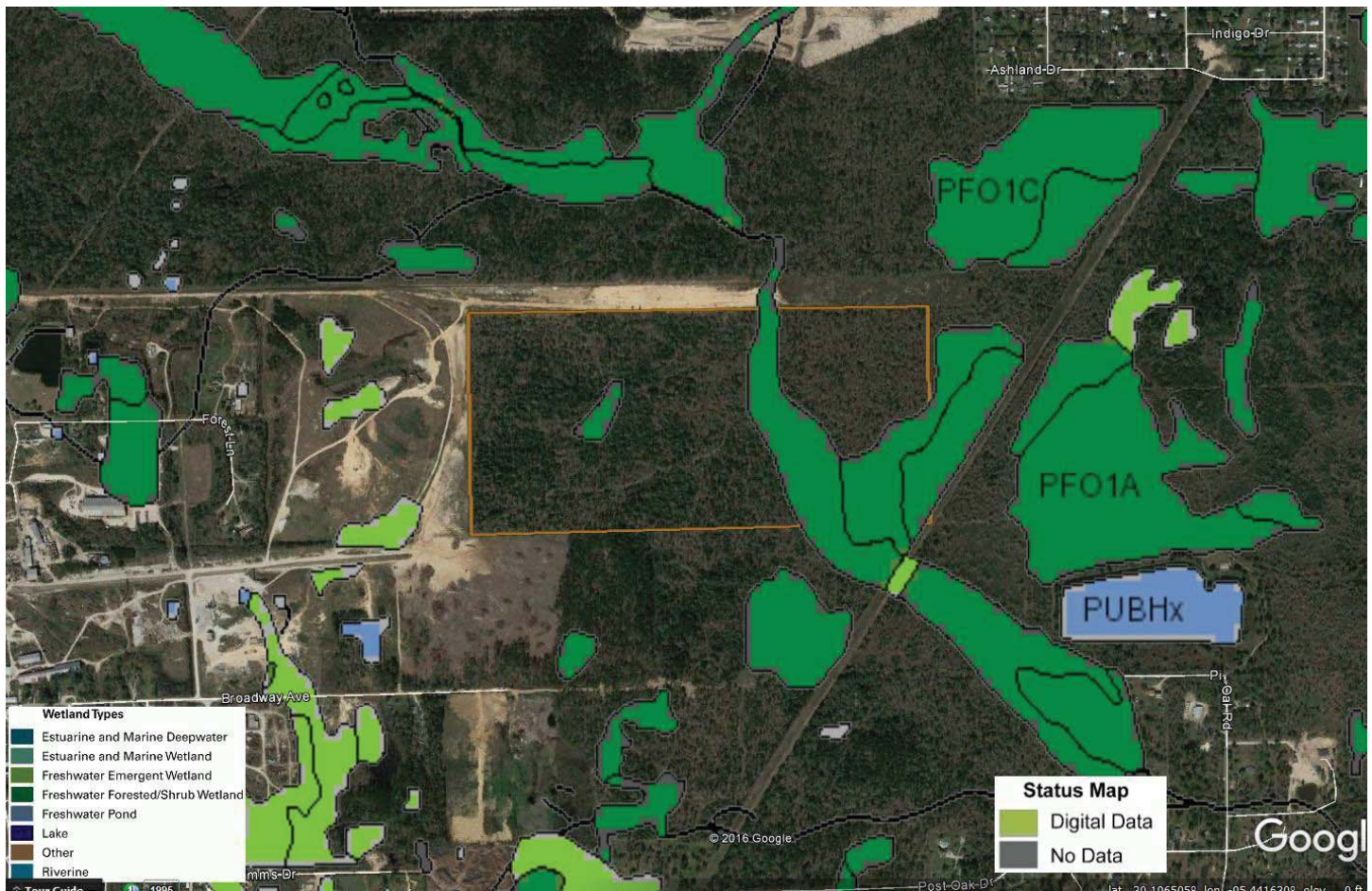
Freshwater Emergent Wetland - 0.1-ac.

Freshwater Forested/Shrub Wetland - 0.1-ac.

Riverine - 2.4-ac.

*Not ground truthed

(5) Montgomery County Schools (3 parcels) (~132-ac.)



Estimated Acres*:

Freshwater Forested/Shrub Wetland - 25.4-ac.

*Not ground truthed