



14 January 2021
To: Mayor and City Council members
Combining several traffic/road improvement projects for coordination and economy of scale. Received good bid pricing and reading to recommend for construction award. Clay

Memo

To: Clay Pearson, City Manager

From: Fatema Weekly

CC: Trent Epperson, Deputy City Manager
Robert D. Upton, P.E., Director of Engineering & Capital Projects
Clarence Wittwer, Director of Public Works
Skipper Jones, Assistant Director of Capital Projects
Eric Hammond, Assistant Director of Public Works

Date: January 14, 2021

Re: Pre-award memo for the following projects
Pearland Parkway Traffic Circle
Pearland Parkway Intersection Improvements
Intersection Improvements at Windward Bay/Pearland Parkway & Oakbrook/Dixie Farm & east of Long Oak

Purpose

This memo provides information regarding the pending award of the construction contract for Pearland Parkway Circle Modification, Pearland Parkway Traffic Improvement (signal), and Intersection Improvements at Windward Bay/Broadway & Oakbrook/Dixie Farm. This contract is scheduled for presentation to Council on the January 25, 2021 meeting agenda.

Background

Pearland Parkway Traffic Circle:

The Pearland Parkway Traffic Circle Modification project is a voter approved 2019 Bond project. Anticipated changes in traffic patterns, increase in traffic volume projected in the Traffic model with the completion of McHard Road construction, numerous vehicle accidents at the multiple conflict points, and vehicles traveling at speeds higher than posted predicate the need for the proposed traffic circle improvements. The project will maintain the existing thru-lanes as dedicated free-flow bypass lanes that will allow for vehicles to avoid the roundabout and will reduce conflict points. Reducing the circle diameter by constructing a roundabout per Federal Highway Administration (FHWA) design criteria will provide the traffic calming effect needed to improve intersection safety. The new roundabout will utilize an "Inscribed Circle Diameter (ICD)" of 180 feet per FHWA Urban Double Lane criteria guidelines. The existing three-legged traffic circle at the intersection of McHard Road and Pearland Parkway has a 425-foot diameter. Each approach has two lanes but slightly different entering and exiting configurations. The reduced diameter requires the extension of all three of the existing intersection approaches. The changes are intended to reduce entering speeds and therefore reduce injury accidents without adding traffic signals.

Alliance Transportation Group was selected through the City's Qualification Based Selection process for their experience with traffic calming through design modifications to roadways and their staff's familiarity with Pearland Parkway specifically. Council approved the design contract for Alliance in July 2019 and the plans and specifications (bid documents) were completed in October 2020. The project was advertised and bid in November this year in conjunction with the following two projects as a means of gaining economies of scale.



Pearland Parkway Traffic Improvements:

The voter approved 2019 Bond project will include the installation of a traffic signal and intersections improvements to provide safe vehicular movement onto Pearland Parkway. The intersection of Pearland Parkway and Forest Park Lane/Summit Springs Lane is stop-controlled on the Forest Park Lane and Summit Springs Lane approaches. The eastbound and westbound approaches on Forest Park Lane and Summit Springs Lane each have two lanes and raised medians (boulevard sections) with monument signs and landscaping. The northbound and southbound approaches on Pearland Parkway have raised medians as a component of the boulevard cross section. Both north and south bound approaches have dedicated left-turn bays and no traffic controlling devices.

Accident reports dating back to 2013 indicated the need for the reduction of uncontrolled left turn movements along the entire corridor. The installation of a signal at this complex intersection will reduce the incidence of unprotected left turn movements and consequently reduce the number of conflicting left turn movements. Alliance Transportation Group was selected through the City's Qualification Based selection process based on their familiarity with Pearland Parkway traffic issues and historic consultation on potential solutions and the proximity of this signal installation to the modifications to the traffic circle. Council approved the design contract for Alliance Transportation Group in July 2019 and the plans and specifications (bid documents) were completed in October 2020. The project was advertised and bid in November this year in conjunction with the above and below two projects as a means of gaining economies of scale. In addition, this allows for the contractor to manage both projects eliminating the need for additional outside coordination.

Intersection Improvements Windward Bay/Pearland Parkway/Dixie Farm:

The project was based on the 2015 Traffic Management Plan, speed study and crash data, and a traffic signal warrant study identifying the Windward Bay (East) at Broadway intersection as meeting warrants for signalization. The project includes the construction of a left turn and storage lane and commensurate traffic control to allow this work to be performed within the busy corridor.

The original construction bid for the Windward Bay project was advertised multiple times in September 2019 and in December 2019 and included left turn lanes at the intersection of Pearland Parkway and Oak Ridge Drive and at Dixie Farm Road east of Long Oak Drive. When bids were opened on October 2019 and December 2019, the lowest bid was 22% and 13%, respectively, above the engineer's estimate and Staff recommended Council reject all bids for construction at subsequent meetings. It was recommended that the project be shelved and combined with a comparable project at a later date. The opportunity to include the project with the Pearland Parkway Circle Modification and Pearland Parkway Traffic Improvement was done to secure more competitive bids.

Project Scope

Pearland Parkway Traffic Circle:

The project will entail the construction of a "roundabout" in place of the existing traffic circle at the intersection of Pearland Parkway and McHard Road. The work includes the addition of a combination acceleration and dedicated right turn lane along Pearland Parkway between the University of Houston Clear Lake Campus driveway and the new roundabout. Besides the proposed roadway construction, the project will entail the extension of an existing storm sewer system, relocation of street illumination, relocation of an electric service, the demolition of 2 monument signs and the extension of existing sidewalks.



Pearland Traffic Improvements:

This project includes the construction of a traffic signal for Pearland Parkway & Forest Park Lane/Summit Springs Lane, including construction of the extension of left turn bays. The project also includes installation and testing of fiber optic cable along McHard Road & Pearland Parkway from Old Alvin Road to Barry Rose Road/Hughes Road to bring these signals into the traffic management network.

Intersection Improvements Windward Bay/Pearland Parkway/Dixie Farm:

The project will entail the construction of intersection improvements for Windward Bay Drive and Broadway including construction of a traffic signal, extension and widening of existing eastbound and westbound left turn lanes, traffic signage, and pavement markings. Left turn bays will be constructed on Pearland Parkway and Oak Ridge Drive and on Dixie Farm Road east of Long Oak Drive. The project also includes installation and testing of fiber optic cable, connecting the new signal, ground boxes, and fiber markers along Broadway Street from Shadow Creek High School to Windward Bay Drive. Fiber extension will bring an additional three traffic signals along Broadway Street (including Windward Bay Drive signal). Most importantly, the strategy Staff employed seek economies of scale with this work by combining it with the Traffic Roundabout and Signal on Pearland Parkway worked saving the City approximately \$589,000 from the two previous bids on the Windward Bay project.

Contract Award

Advertising for the project commenced on October 21, 2020 and concluded on October 28, 2020. Bids were opened remotely on November 12, 2020 the results of which were made available to all interested participants via a City provided conference call. A total of five contractors submitted competitive bids with the apparent Lowest Responsible Bidder being Teamwork Construction Services, Inc. with a submitted bid of \$4,115,299.92 which is approximately 8% below the Engineer's estimated cost of construction.

Bid Tabulation:

Name	City	Response Total
Teamwork Construction Services, Inc.	Houston	\$4,115,299.92
Main Lane Industries, Ltd. (MC2 Civil, Inc.)	Houston	\$4,645,745.71
Triple B Services, LLP	Huffman	\$4,852,245.35
Jerdon Enterprise L.P.	STAFFORD	\$5,459,459.59
SpawGlass Civil Construction, Inc.	Houston	\$5,772,390.51

Teamwork Construction has completed both sidewalk reconstruction and roadway reconstruction jobs for surrounding areas such as League City and City of Baytown among others. The reference contacted indicated they were very pleased with the quality of work performed by Teamwork Construction. Staff conducted their own due diligence by contacting several sources to inquire about the contractor's character and ability to perform the proposed work. Each reference endorsed the contractor as an overall capable firm to complete the job and would not have any hesitation to select them on any of their projects.



Staff has received a positive Engineer's Recommendation and plans to present the construction contract to Council on January 25, 2021 along with a recommendation to award. Staff's review of the proposal has determined that the construction bid is complete, and pricing is reasonable.

Staff will include a recommendation to award a material testing contract to Geo Science associated with the above projects in the amount of \$125,000 during this same agenda.

Budget Info

Pearland Parkway Traffic Circle:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
General Obligation Bonds	2020	1,272,000		1,272,000
General Obligation Bonds	TBS 2021	2,000,000		2,000,000
W/S Revenue Bonds				-
Impact Fee - Debt				-
Other Funding Sources				-
Total Funding Sources		3,272,000	-	3,272,000

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	392,649		392,649
Construction	31,629	2,694,313	2,725,942
Construction Management/Inspection			-
Construction Materials Testing		85,000	85,000
FF&E			-
Total Expenditures	424,278	2,779,313	3,203,591

Project Balance/Contingency	68,409
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Pearland Parkway Traffic Improvements:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
General Obligation Bonds	2020	1,124,000		1,124,000
General Obligation Bonds				-
W/S Revenue Bonds				-
Impact Fee - Debt				-
Other Funding Sources				-
Total Funding Sources		1,124,000	-	1,124,000



Expenditures	To Date	Future	Total
PER			-
Land			-
Design	128,006		128,006
Construction	2,465	624,692	627,157
Construction Management/Inspection			-
Construction Materials Testing		15,000	15,000
FF&E			-
Total Expenditures	130,471	639,692	770,163

Project Balance/Contingency	353,837
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Intersection Improvements Windward Bay/Pearland Parkway/Dixie Farm:

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation	2018	750,000		750,000
Certificates of Obligation	2020A	555,000		555,000
Certificates of Obligation			220,000	220,000
General Obligation Bonds				-
General Obligation Bonds				-
W/S Revenue Bonds				-
Impact Fee - Debt				-
Fund Balance				-
Total Funding Sources		1,305,000	220,000	1,525,000

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	114,206		114,206
Construction		796,295	796,295
Construction Management/Inspection			-
Construction Materials Testing		25,000	25,000
FF&E			-
Total Expenditures	114,206	821,295	935,501

Project Balance/Contingency	589,499
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Schedule Info

Upon Council approval and award, Staff will hold the **preconstruction conference in early February** and issue the **Notice to Proceed in March 2021**. Each project within the proposed single contract for construction has



a separate completion schedule. The modification to the Traffic Circle has a total of 534 days for completion. While the overall circle improvements are anticipated to take 1 ½ years to complete, the traffic control plan will comply with City standards designed not to impact am/pm peak traffic times identified as 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on major arterials.

The Traffic Signal at Pearland Parkway and Forest Park Lane/Summit Springs and the Intersection Improvements at Windward Bay and Broadway have a completion schedule of 310 days each. Staff anticipate these projects working simultaneously.

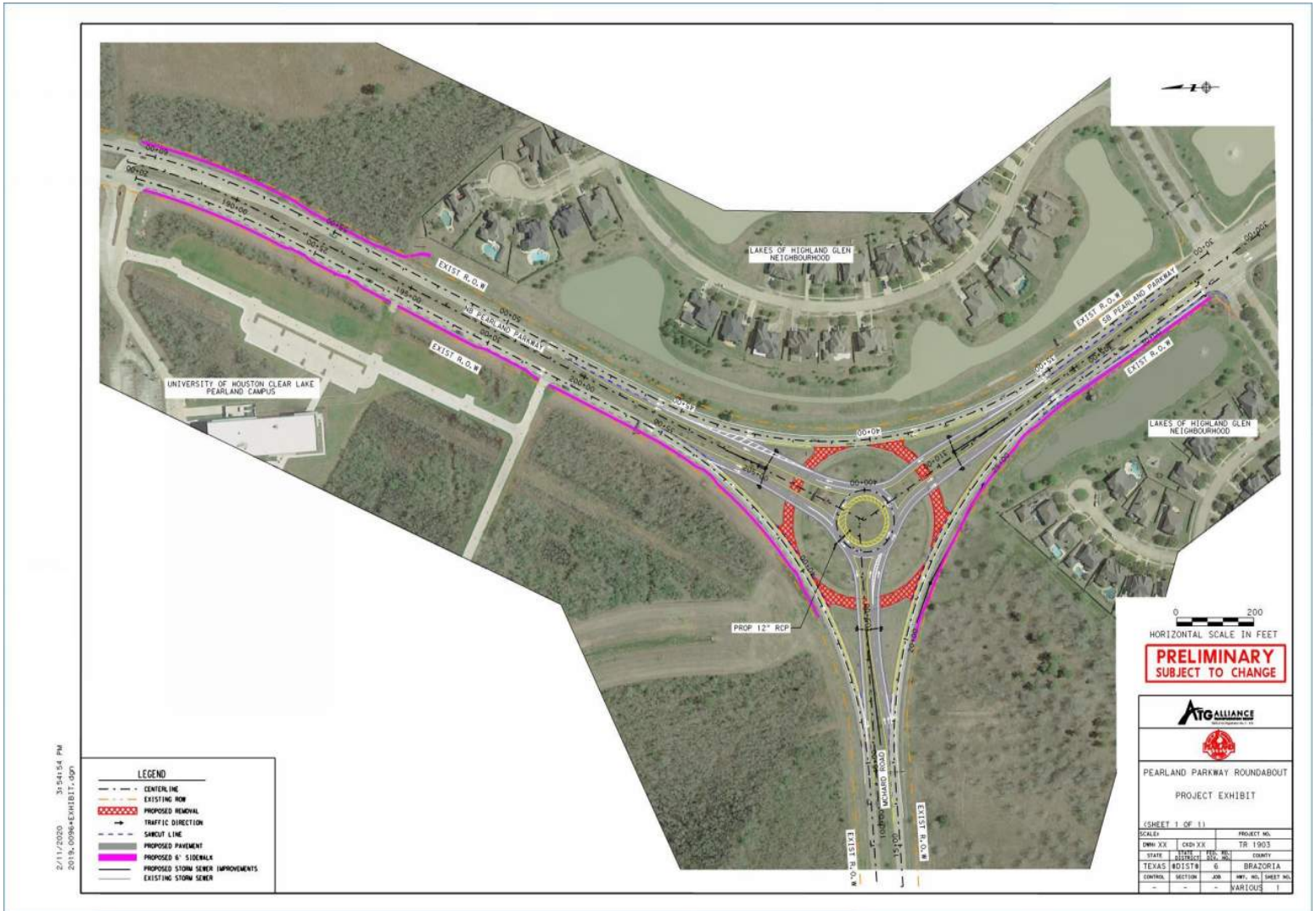
Recommendation

Staff will recommend Council approve the bids and award the contract for construction to Teamwork Construction Services, Inc. in the estimated amount of \$4,115,299.92 and the contract for Construction Materials Testing to GeoScience in the amount of \$125,000 during the January 25th Council meeting.



Project Location Maps

Pearland Parkway Circle



2/11/2020 3:54:54 PM
2019-0094-EXHIBIT-001

LEGEND

- CENTERLINE
- - - EXISTING ROW
- PROPOSED REMOVAL
- TRAFFIC DIRECTION
- - - SMOOT LINE
- PROPOSED PAVEMENT
- PROPOSED 6' SIDEWALK
- PROPOSED STORM SEWER IMPROVEMENTS
- EXISTING STORM SEWER

0 100 200
HORIZONTAL SCALE IN FEET

PRELIMINARY
SUBJECT TO CHANGE



PEARLAND PARKWAY ROUNDABOUT
PROJECT EXHIBIT

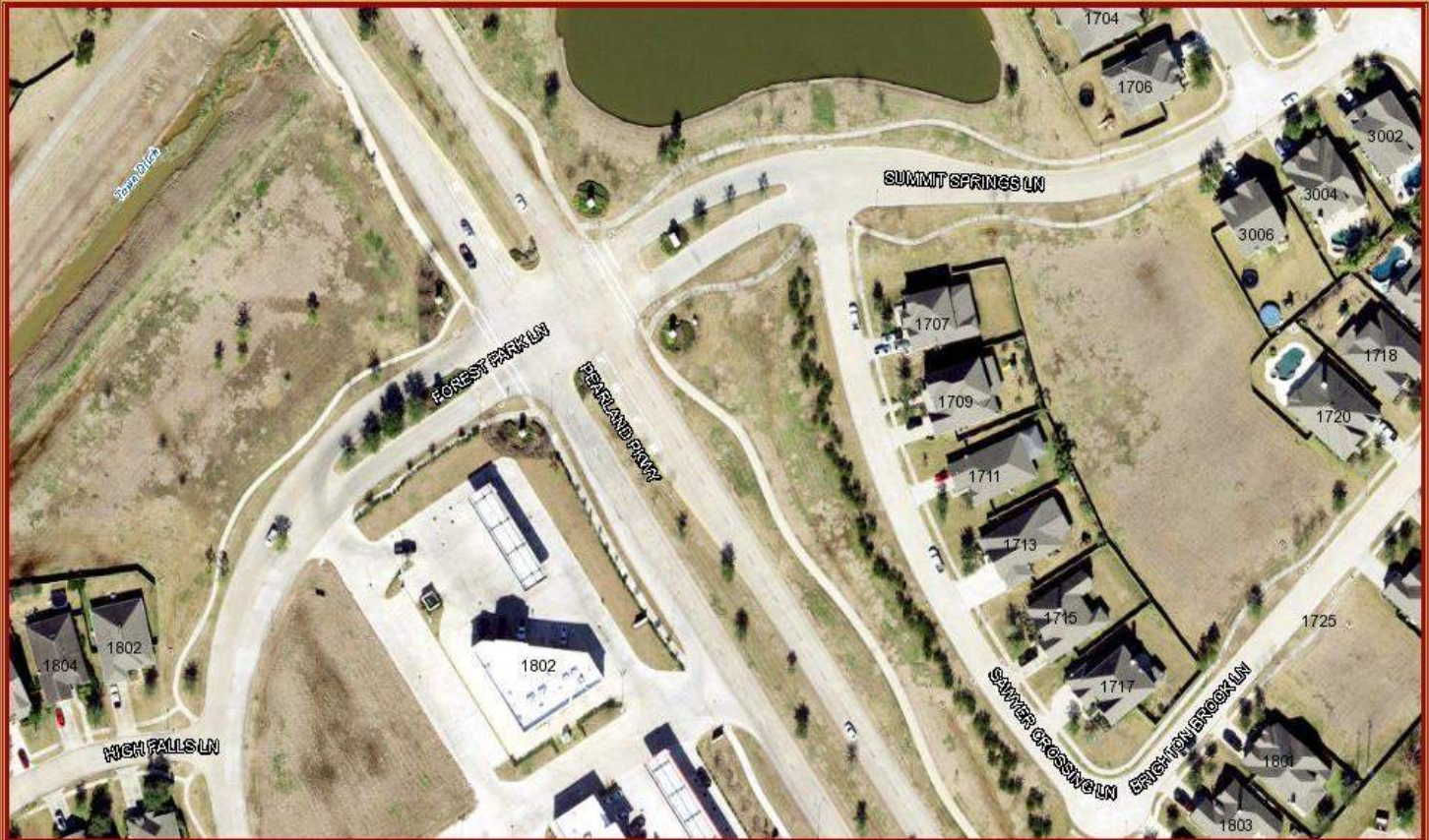
(SHEET 1 OF 1)

SCALE:		PROJECT NO.	
DRAWN BY	DATE	TRF	1-003
STATE	TITLE	SEC	COUNTY
TEXAS	RD1517B	6	BRAZORIA
CONTROL	SECTION	JOB	IMP. NO. SHEET NO.
-	-	-	VARIOUS 1



Pearland Parkway Traffic Improvements

VICINITY MAP



Legend/Notes

Addresses

1:1,492

1 inch = 124 feet



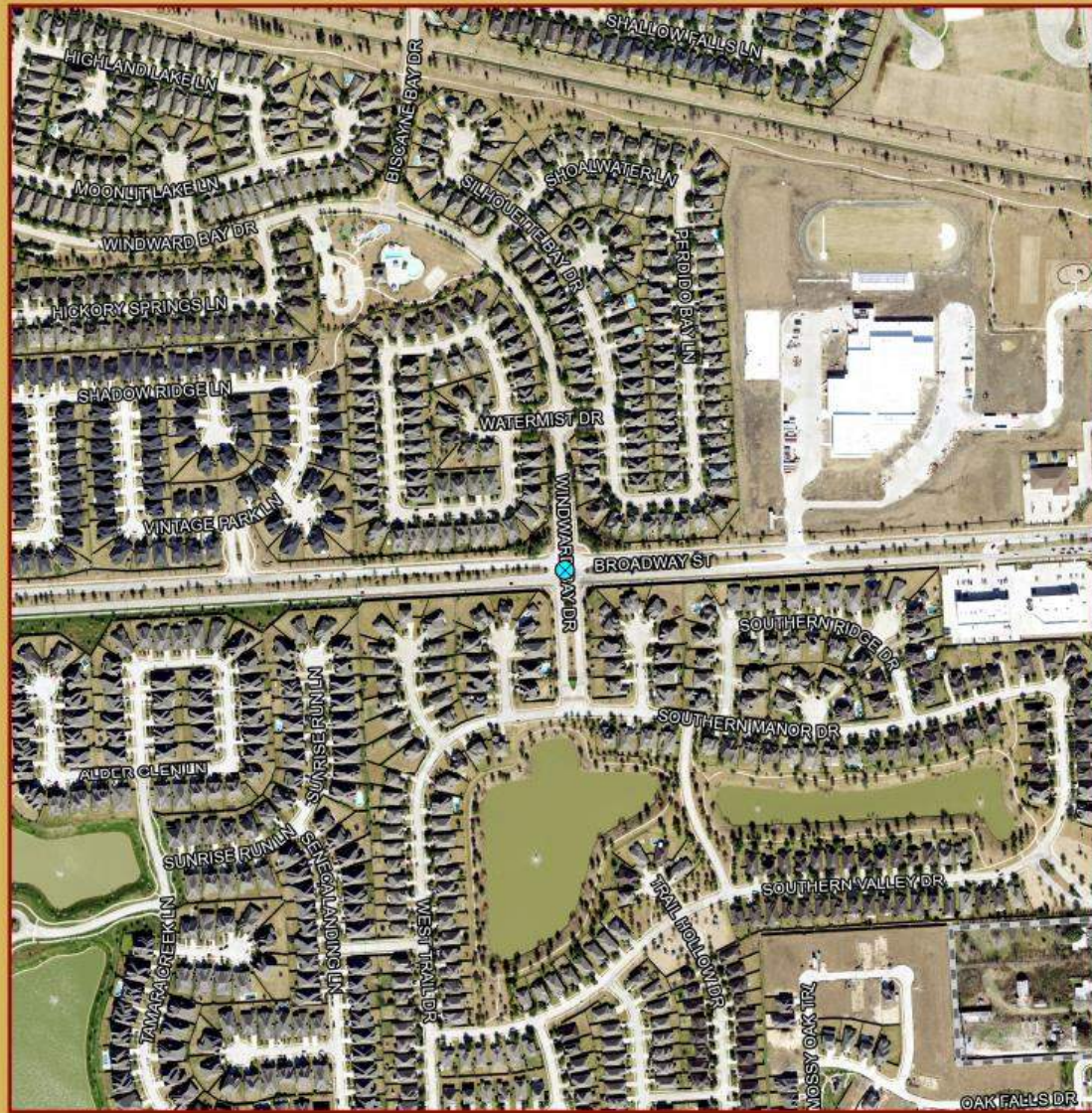
NORTH

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MAP PREPARED: OCTOBER 28, 2014



Intersection Improvements Windward Bay/Pearland Parkway/Dixie Farm



ROAD CONSTRUCTION

Broadway & Windward Bay
- traffic signal

● Road Improvements

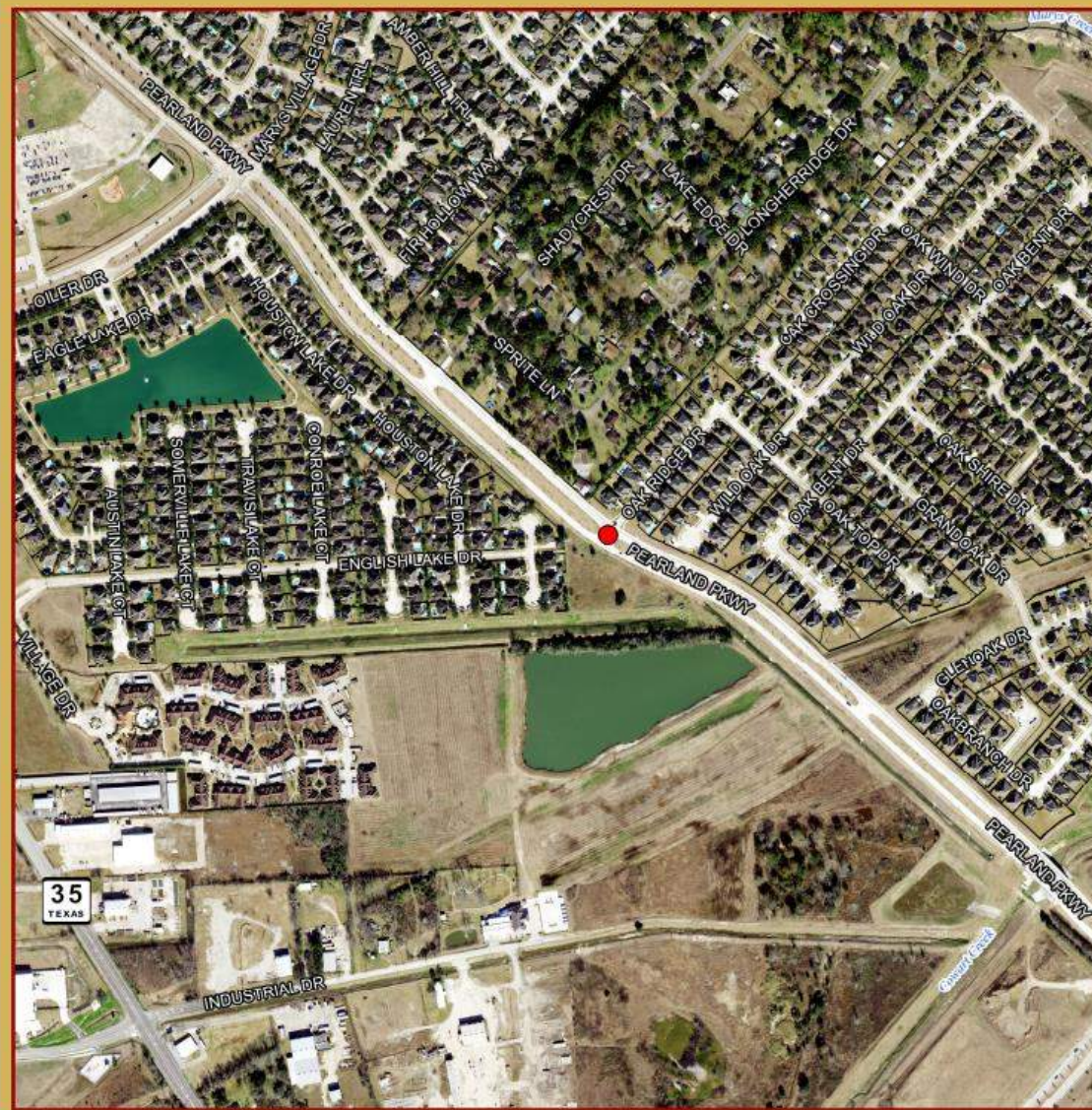


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1 inch = 500 feet

SEPTEMBER 2018
GIS DEPARTMENT





ROAD CONSTRUCTION

Pearland Pkwy. &
Oak Ridge Dr.
- left turn bay

- Road Improvements

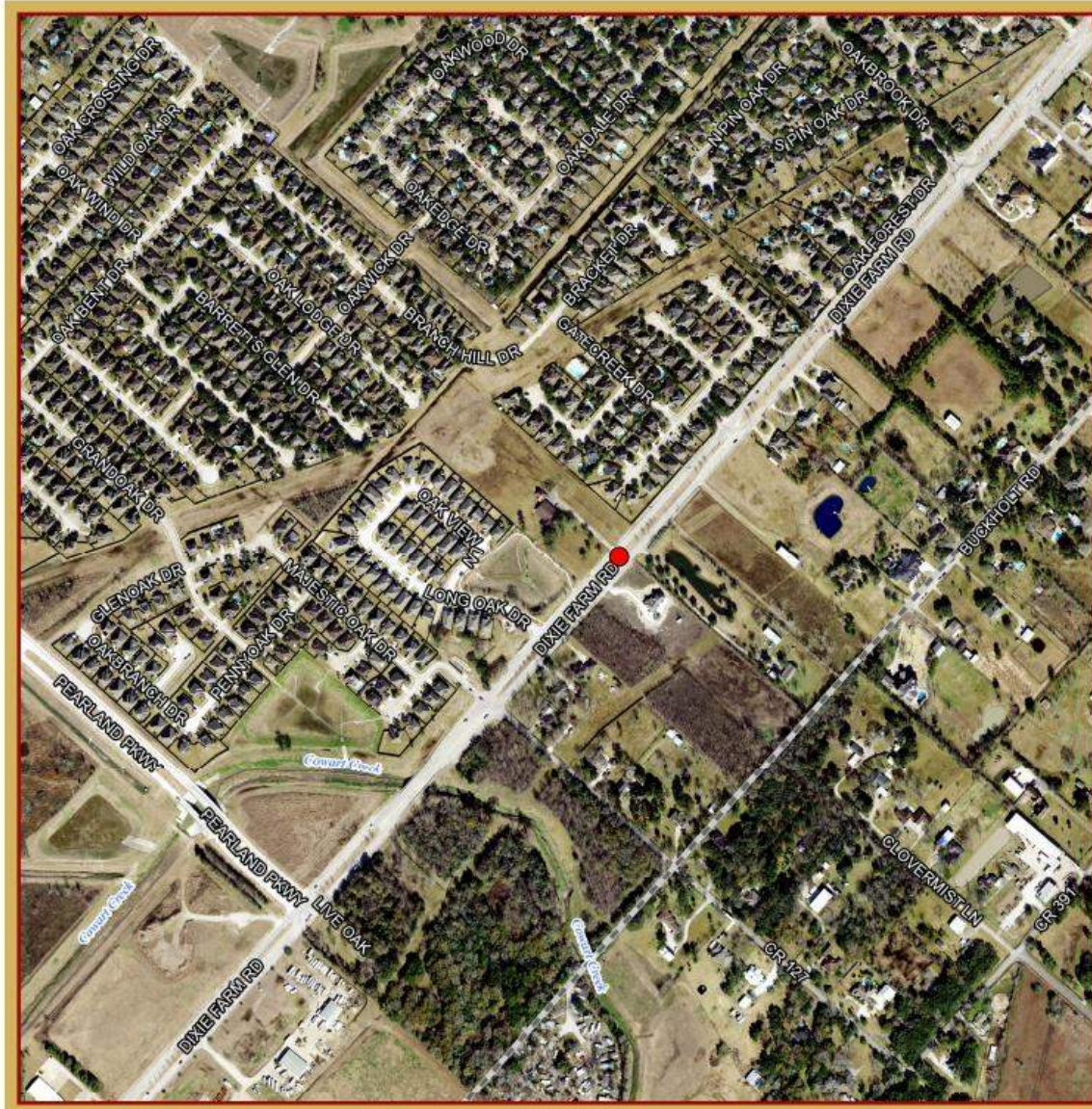


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1 inch = 605 feet

AUGUST 2018
GIS DEPARTMENT





ROAD CONSTRUCTION

Dixie Farm Rd. and
Long Oak Dr.- left turn bay

● Road Improvements



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1 inch = 605 feet

AUGUST 2018
GIS DEPARTMENT

