



2018 TIP Call for Projects

Project Development/Readiness Attachment

Project

Max Road Widening (Hughes Ranch Road to McHard Road)
MPOID 11635

Preliminary Engineering Review and Schematic Design

To identify critical path aspects of the project, a preliminary engineering review (PER) and schematic design was completed for the Max Road widening from Hughes Ranch Road to McHard Road. A copy of the **Schematic Layout** is included in this attachment.

Desktop Environmental Assessment (EA) Documentation

An environmental database search (by GeoSearch) was completed that includes a 0.25-mile radial distance along the project alignment. This report was reviewed for known and suspected contaminated sites. Where readily available, local environmental agency and other local governmental authority files were reviewed.

The report identifies and evaluates known or potential contamination concerns and discusses possible impacts to the proposed project.

Historical land uses were observed by reviewing historical aerial photographs, topographical maps, and city directories provided by GeoSearch to indicate any historic land uses that may have resulted in contamination impacts to the subject properties.

Pre-1953

The earliest topographic map and aerial photograph for the study area were dated 1930, respectively. During this time, there was an initial development of large parcels within the project corridor and surrounding area.

1953-1989

Based on aerial photographs provided by GeoSearch, the surrounding area to the proposed project was primarily associated with residential use and minimal industrial use during the time.

1989-2014

The transition during this time was most apparent in the increase of residential use. No industrial use was observed during recent site reconnaissance of the study area. In addition, one facility associated with automotive repair and/or maintenance was identified in 2013. Based upon the Radius Report, there was an oilfield products company known as Forum Technologies within the study area, but it is no longer active during recent observation of the immediate vicinity.



A preliminary evaluation was conducted along the project corridor to determine potential contamination from properties located within the locality of the project. The information generated by GeoSearch was reviewed, and each site identified was evaluated based on the risk assessment.

The current weight of the evidence indicates that the immediate vicinity of the designated project has a moderately low risk of contamination based on the juxtaposition and type of facilities listed in the **GeoSearch Radius Report**. In review of the aerial photograph, there are adjacent properties to the proposed area that have minimal industrial usage. A total of two potentially contaminated and/or known to be contaminated sites were identified along the project corridor with risk evaluation classified as Low Risk.

Based on the collective data, the facility associated with an automotive body paint and/or repair known as JM Holm & Co. Inc. is approximately 0.07 miles from the site, but is not directly in the anticipated construction area. Similarly, the facility identified as Forum Energy Technologies is located 0.86 miles within the vicinity of our construction area, but shows no probability of being in the project construction area.

Sound walls will be placed along the west ROW, adjacent to the residential properties in the Avalon Terrace development. These walls will provide noise reduction from the adjacent vehicular traffic on proposed Max Road.

Permitting Documentation

USACE Permitting: **Figure NWI** shows six locations with potential impacts to aquatic features along the proposed alignment. The National Wetland Inventory (NWI) map shows a total of six linear aquatic features that could be impacted by the proposed preferred alignment. The U.S. Geological Survey (USGS) topographic map also shows mapped linear aquatic features in the same locations. Recent aerial photographs (Nearmap Sep. 2017) show these linear aquatic features as what appear to be streams or likely roadside ditches. Two of the impact locations (on the north side of the alignment) would likely be stream crossing locations. The remaining four impact locations appear to be ditches. The two ditch impact locations in the middle of the alignment parallel linear aquatic features. The two southernmost ditch impact locations appear to be crossings.

The following USACE permitting options are available:

- **Preliminary Jurisdictional Determination (PJD)** - Under a PJD within the USACE Galveston District, all aquatic features are assumed to be jurisdictional. Another permitting option for the stream crossings on the northern side and the ditch crossings on the southern end could be a Nationwide Permit (NWP) 14: Linear Transportation Projects with a non-notification scenario (if impacts are kept to 0.1-acres or less, and 200 linear feet or less of stream impact). If 201–300 linear feet of stream are impacted, pre-construction notification is required to the USACE. Mitigation would be required if impacting over 200 linear feet of stream or impacting wetlands. Impacts over 300 linear feet require an Individual Permit.
- **Individual Permit** – At the two center impact locations where the roadway parallels the ditches, the impact threshold would likely be over 0.1-acres and require notification to the USACE.



Impacts could be over 0.5 acres (and well over 300 feet for streams) to the longest ditch within the alignment, which would not be authorized under a NWP and would require an Individual Permit. Individual Permits within the Galveston District are very time consuming and can take well over 14 months.

- **Approved Jurisdictional Determination (AJD) within the USACE Galveston District** - This option requires the impacting party to submit a request to the USACE for a formal determination of features that are jurisdictional, according to USACE. Permitting would be required on the jurisdictional features, but would not be required on any features that the USACE does not assert as jurisdictional. Based on past submittals with the Galveston District, there are examples of when ditches have been called jurisdictional on one site and non-jurisdictional on another site. If the ditches were not determined to be jurisdictional by the USACE, the only permitting that would be required is for the two stream crossings, which could be permitted under a NWP 14. AJDs can take ten months or more to get a final determination from the USACE.

Brazoria Drainage District #4 Permitting: Due to the location of proposed Max Road and the proposed outfall of the internal storm drain system and detention facility into a roadside ditch along existing Max Road, the construction plans will be required to be submitted to Brazoria Drainage District #4 for permitting. The construction plans shall be submitted to Brazoria Drainage District #4 concurrently with the City of Pearland throughout the design process to ensure their design criteria is met. Permitting through Brazoria Drainage District #4 is anticipated to take six to eight months.

FEMA Permitting: According to the FIRM maps, the proposed area is within Federal Emergency Management Agency (FEMA) flood zone X. Construction activities will not be required within zone AE, and will occur entirely within zone X. We do not anticipate the need to provide FEMA permits or make revisions to the effective FIRM or Pre-FIRM to account for floodplain fill mitigation.

ROW Acquisition

The Max Road widening limits are within Brazoria County and the City of Pearland. Within the study area, Max Road is a local road and does not intersect any railroads. The realignment and widening of Max Road has the potential to impact 14 parcels. The majority of the proposed realignment runs through undeveloped parcels and will not have any direct impact on existing structures in the area. Existing ROW limits and ROW to be acquired is shown on the attached **ROW Exhibit**.

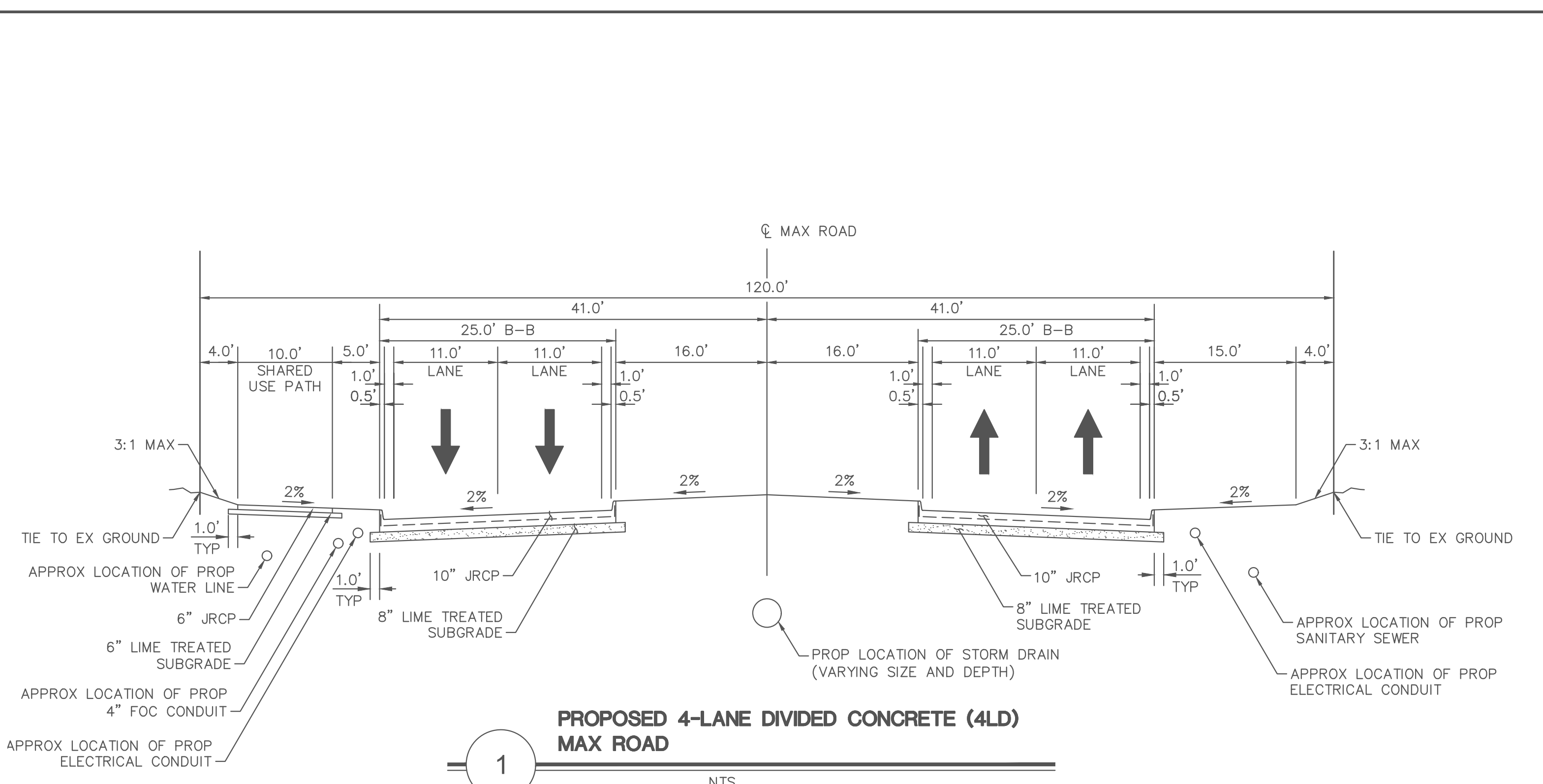
Completed and Planned Improvements

The committed future projects near Max Road in the H-GAC 2040 Regional Transportation Plan include the extension of four-lane, east-west Hughes Ranch Road from Max Road to Garden Road, the extension of four-lane, divided, east-west McHard Road from Cullen Boulevard to Mykawa Road, and improvements along the proposed Max Road corridor upstream and downstream of the proposed project.

The widening and extension of Max Road from Broadway Street (FM 518) to Hughes Ranch Road has been designed, and construction is underway. The proposed project will be a continuation of this widening and will extend Max Road from Hughes Ranch Road to the future extension of McHard Road.

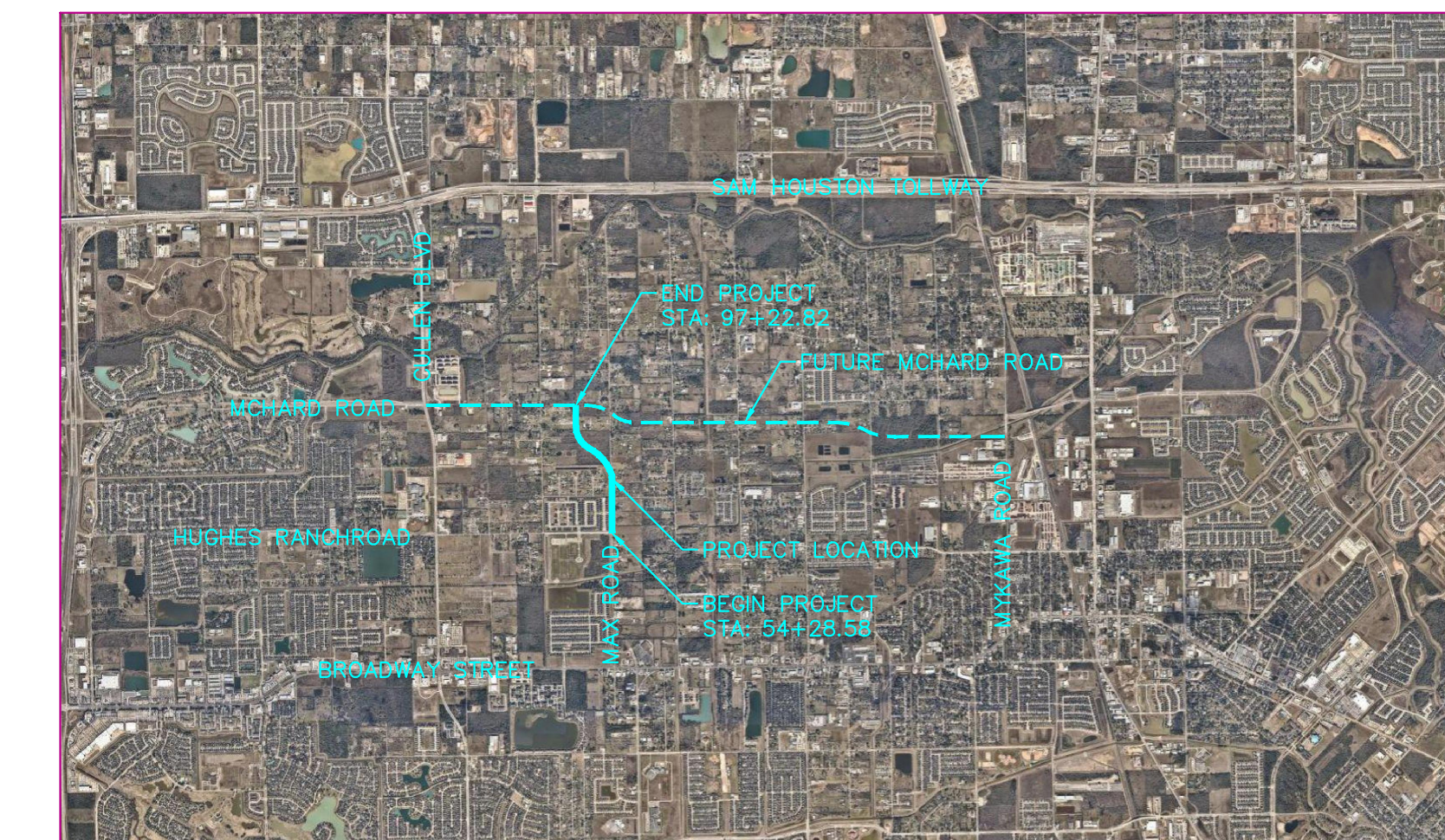


As shown in the H-GAC 2040 Regional Transportation Plan, Max Road is planned to be extended beyond McHard Road to Beltway 8. This project is integral for north-south connectivity within Pearland as a major part of the planned Max Road alignment.

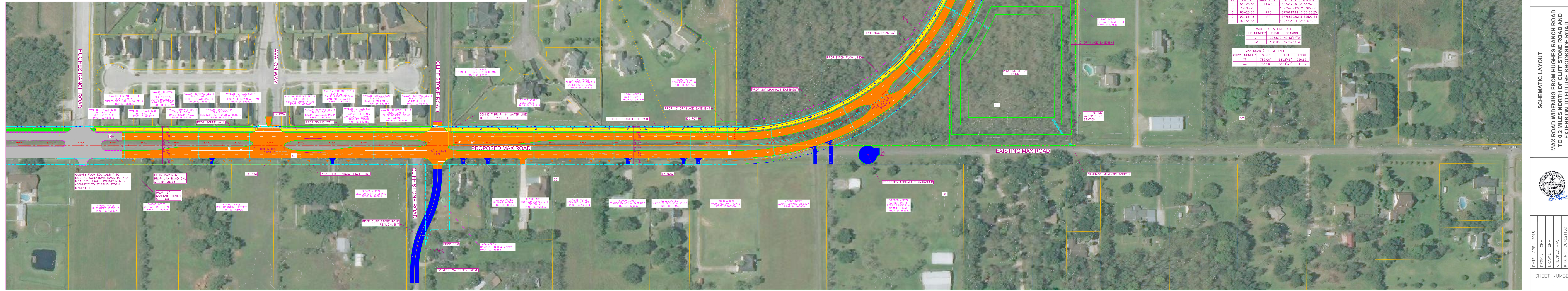
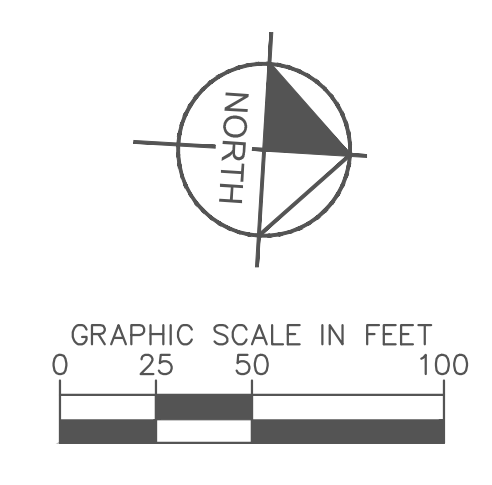


DESIGN SPEED: 40 MPH

- LEGEND**
- EXISTING RIGHT OF WAY
 - EXISTING PROPERTY LINE
 - PROPOSED ROADWAY RIGHT OF WAY
 - PROPOSED PROPERTY ACQUISITION
 - PROPOSED DRAINAGE AREA
 - PROPOSED OFFSITE AREA
 - PROPOSED ROADWAY CENTERLINE
 - PROPOSED EASEMENT
 - W-W PROPOSED WATER LINE
 - S-S PROPOSED SANITARY SEWER
 - E-E PROPOSED ELECTRICAL CONDUIT
 - PROPOSED CONCRETE PAVEMENT
 - EXISTING CONCRETE PAVEMENT
 - PROPOSED CONCRETE SIDEWALK
 - PROPOSED ASPHALT PAVEMENT



VICINITY MAP
NTS



Kimley-Horn

SPECIALISTS IN TRANSPORTATION, WATER RESOURCES, ENVIRONMENTAL, AND LAND DEVELOPMENT

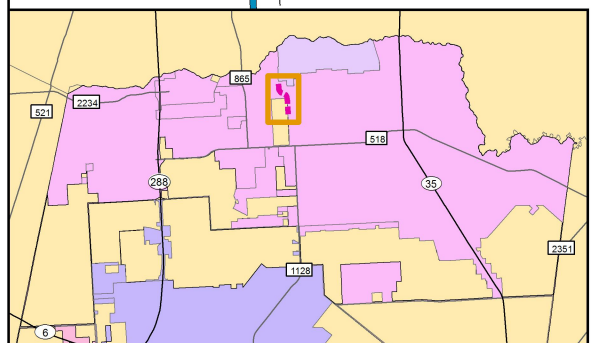
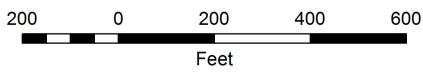
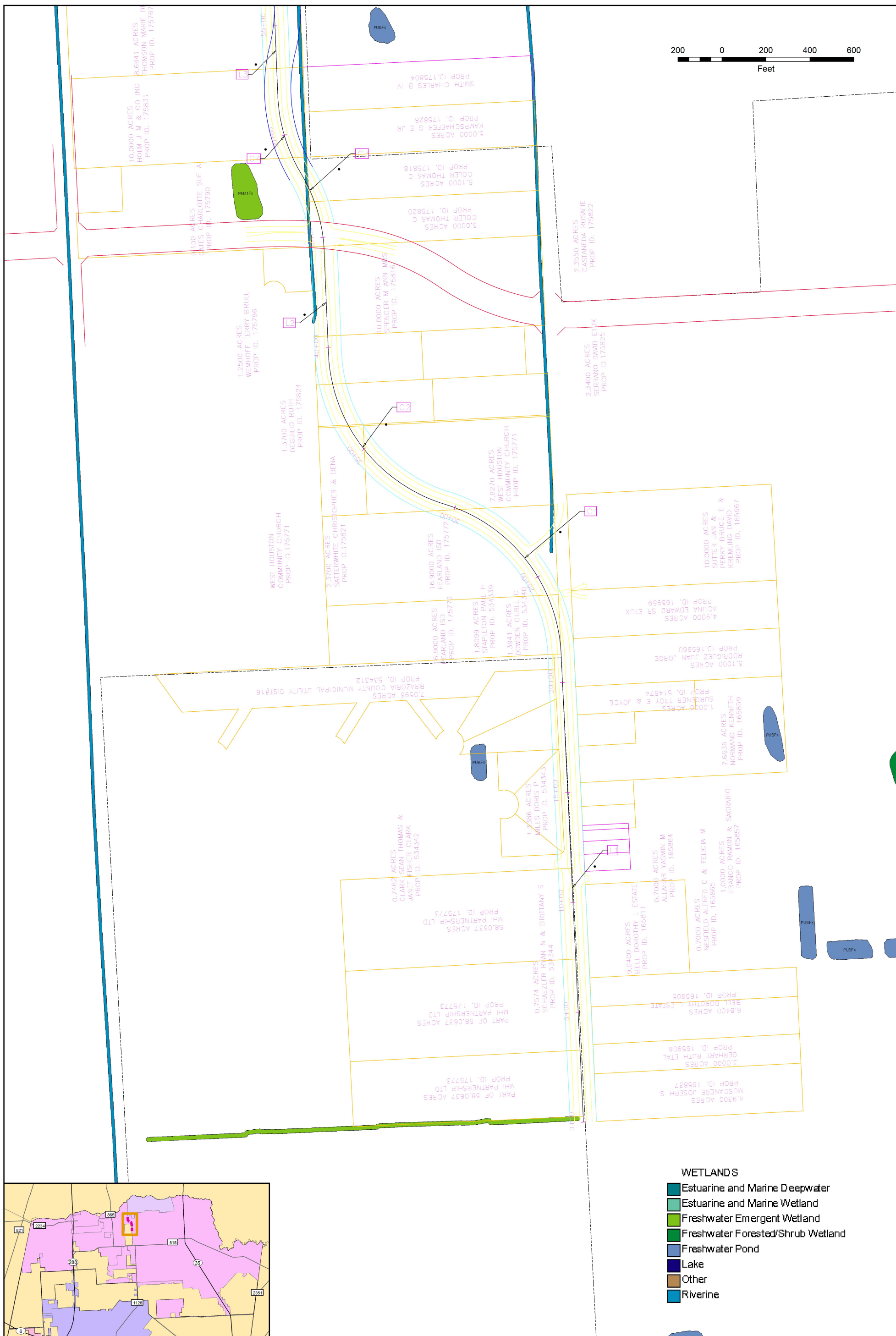
PEARLAND TEXAS

MAX ROAD
PREPARED FOR
CITY OF PEARLAND

SCHEMATIC LAYOUT
MAX ROAD WIDENING FROM HUGHES RANCH ROAD
TO 0.2 MILES NORTH OF CLIFF STONE ROAD AND
EXTENSION TO FUTURE BROOKSIDE ROAD

DATE: APRIL 2018
DESIGN: GRM
DRAWN: GRM
CHECKED: MAS
444A NO. 084521100

SHEET NUMBER
1



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

FIGURE NWI	DATE: SEPT 2017	NWI EXHIBIT	MAX ROAD (HUGHES RANCH ROAD TO THE NEW EXTENSION OF MCHARD ROAD)	THIS DOCUMENT IS INCOMPLETE AND RELEASED TEMPORARILY FOR INTERIM REVIEW ONLY. IT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.	Kimley»Horn			
	DESIGN: GRM				No.	Revision	By	Date
	DRAWN: RME							
	CHECKED: MAS							
	KHA NO.: 061018052							

FIRM
FLOOD INSURANCE RATE MAP

BRAZORIA COUNTY,
TEXAS AND
INCORPORATED AREAS

PANEL 30 OF 850
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BROOKSIDE VILLAGE, CITY OF PEARLAND, CITY OF UNINCORPORATED AREAS	485458	0030	1
	485458	0030	1



PANEL LOCATION
MAP NUMBER
48039C0030 1
MAP REVISED:
SEPTEMBER 22, 1999



Federal Emergency Management Agency

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for more detailed data on BE's, and for any information on floodway delineations, prior to use of this map for property purchase or construction purposes.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, A1-A30, AH, AO, A99, V, VE, and V1-V30.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For community map revision history prior to countywide mapping, see section 6.0 of the Flood Insurance Study Report.

For adjoining panels, see separately printed Map Index.

Elevation reference marks are described in the Flood Insurance Study Report.

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF
COUNTYWIDE FLOOD INSURANCE RATE MAP:
JUNE 5, 1999

EFFECTIVE DATE (S) OF REVISION (S) TO THIS PANEL:

Map revised September 22, 1999 to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to change zone designations, and to reflect updated topographic information.

LEGEND



SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding; velocities also determined.

ZONE A99 To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.



FLOODWAY AREAS IN ZONE AE



OTHER FLOOD AREAS

ZONE X Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.



OTHER AREAS

ZONE X Areas determined to be outside 500-year floodplain.

ZONE D Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS†



Identified 1983



Identified 1990



Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

— Floodplain Boundary

- - - Floodway Boundary

--- Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 Base Flood Elevation Line; Elevation in feet*

D D Cross Section Line (EL 987)

RM 7x Base Flood Elevation in Feet Where Uniform Within Zone*

•M1.5 Elevation Reference Mark

•M1.5 River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.



APPROXIMATE SCALE

1000 0 1000 FEET

