



CITY OF LA PORTE DRAINAGE AND FLOODING COMMITTEE MEETING AGENDA

Notice is hereby given of a meeting of the Drainage and Flooding Committee of the City Council of the City of La Porte, to be held March 9, 2020, in the City Hall Council Chambers, 604 West Fairmont Parkway, La Porte, Texas, beginning at 5:30 pm to consider the following items of business.

1. **CALL TO ORDER**
2. **CITIZEN COMMENT** *(Generally limited to five minutes per person; in accordance with state law, the time may be reduced if there is a high number of speakers or other considerations.)*
3. **STATUTORY AGENDA**
 - (a) Approve minutes of the meeting held on February 10, 2020. [Chairman Martin]
 - (b) Presentation, discussion, and possible action in connection with receipt of a report regarding the Harris County Flood Control District's (HCFCD) and Harris County Precinct 2's current and future plans relating to flooding in the City of La Porte. [Lorenzo Wingate, Assistant Director of Public Works]
 - (c) Presentation, discussion, and possible action regarding the Bayside Terrace Subdivision Improvements Project. [Lorenzo Wingate, Assistant Director of Public Works]
 - (d) Presentation, discussion, and possible action regarding the status of current drainage projects. [Lorenzo Wingate, Assistant Director of Public Works]
 - (e) Presentation, discussion, and possible action to provide staff with direction, if necessary, regarding additional drainage concerns. [Lorenzo Wingate, Assistant Director of Public Works]
4. **SET NEXT MEETING**
5. **COMMITTEE COMMENT** *Hear announcements concerning matters appearing on the agenda; items of community interest; and/or inquiries of staff regarding specific factual information or existing policy from the Committee members and City staff, for which no formal action will be discussed or taken.*
6. **ADJOURN**

If, during the course of the meeting and discussion of any items covered by this notice, the Drainage and Flooding Committee determines that a Closed or Executive Session of the Committee is required, then such closed meeting will be held as authorized by Texas Government Code, Chapter 551, Section 551.071 - consultation with counsel on legal matters; Section 551.072 - deliberation regarding purchase, exchange, lease or value of real property; Section 551.073 - deliberation regarding a prospective gift; Section 551.074 - personnel matters regarding the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee; Section 551.076 - implementation of security personnel or devices; Section 551.087 - deliberation regarding economic development negotiation; Section 551.089 - deliberation regarding security devices or security audits, and/or other matters as authorized under the Texas Government Code. If a Closed or Executive Session is held in accordance with the Texas Government Code as set out above, the Drainage and Flooding Committee will reconvene in Open Session in order to take action, if necessary, on the items addressed during Executive Session.

Persons with disabilities who plan to attend this meeting and who may need auxiliary aids or services are requested to contact the City Secretary's office (281-470-5019), two working days prior to the meeting for appropriate arrangements.

Councilmembers may attend in numbers constituting a quorum. This is a Drainage and Flooding Committee Meeting at which there will be no deliberation or formal action taken by City Council as a governmental body.

CERTIFICATE

I, Lee Woodward, City Secretary, do hereby certify that a copy of the March 9, 2020, Drainage and Flooding Committee agenda was posted on the City Hall bulletin board, a place convenient and readily accessible to the general public at all times, and to the City's website, www.LaPorteTX.gov, in compliance with Chapter 551, Texas Government Code.

DATE OF POSTING _____
TIME OF POSTING _____
TAKEN DOWN _____

Lee Woodward

Lee Woodward, City Secretary

JAY MARTIN
Chairman

DANNY EARP
Vice-Chairman



CHUCK ENGELKEN
Member

STEVE GILLETT
Alternate Member

MINUTES OF THE DRAINAGE AND FLOODING COMMITTEE MEETING FEBRUARY 10, 2020

The Drainage and Flooding Committee of the City of La Porte met on Monday, February 10, 2020, at the City Hall Council Chambers, 604 West Fairmont Parkway, La Porte, Texas, at 5:00 p.m. to consider the following items of business:

Committee Members present: Jay Martin, Chuck Engelken, Danny Earp, *(Alternate Gillett available if needed)*

Committee Members absent: None

Council-appointed officers present: Corby Alexander, City Manager; Lee Woodward, City Secretary

1. **CALL TO ORDER** - Chairman Martin called the meeting to order at 5:00 p.m.

2. **CITIZEN COMMENT** (Generally limited to five minutes per person, in accordance with state law, the time may be reduced if there is a high number of speakers or other considerations.

Kevin Lewis spoke about issues in the watershed around his home in Bay Harbor.

3. STATUTORY AGENDA

(a) **Approve minutes of the meeting held on January 13, 2020. [Chairman Martin]**

Committee member Engelken moved to approve the minutes; the motion was adopted, 3-0.

(b) **Presentation, discussion, and possible in connection with receipt of a report regarding the Harris County Flood Control District's (HCFCD) and Harris County Precinct 2's current and future plans relating to flooding in the City of La Porte. [Lorenzo Wingate, Assistant Director of Public Works]**

Mr. Wingate said he expected there would be HCFCD action by March.

(c) **Presentation, discussion, and possible action regarding the Bayside Terrace Subdivision Improvements Project. [Lorenzo Wingate, Assistant Director of Public Works]**

Mr. Wingate provided a proposal for engineering services regarding the Bayside Terrace Subdivision from Half Associates, chosen via RFQ and expected to be on the February 24 City Council agenda.

(d) **Presentation, discussion, and possible action regarding the status of current drainage projects. [Lorenzo Wingate, Assistant Director of Public Works]**

Mr. Lewis was allowed to speak about the experience in his neighborhood. Mr. Wingate reported on the work being done and Chairman Martin let Mr. Lewis know that there would be an update at next month's meeting. Committee Member Earp requested an update on the desilting for the Lomax/F101 area. Ray Mayo, Public Works Director, said work was being done on approximately 2000' of ditch at the airport.

(e) **Presentation, discussion, and possible action to provide staff with direction, if necessary, regarding additional drainage concerns. [Lorenzo Wingate, Assistant Director of Public Works]**

Committee Member Earp asked that the additional work on the north side of the airport consistently be included in and discussed with the monthly report. Mr. Wingate said a resident had requested for F216 (Little Cedar Bayou) from Fairmont to Broadway to be selectively cleared and desnagged, so staff was going to do a visual inspection initially. Chairman Martin confirmed that the drainage, less detention ponds, at Morgan's Landing, was overseen by the City and that now the development was only finishing up internal drainage, and that staff had no concerns.

4. Set next meeting - The next meeting date was set for March 9.

5. Committee Member Comments – There were no comments.

ADJOURN – The meeting was adjourned without objection at 5:27 p.m.

Lee Woodward, City Secretary



REQUEST FOR DRAINAGE & FLOODING COMMITTEE AGENDA ITEM

Agenda Date Requested: <u>March 9, 2020</u>
Requested By: <u>Lorenzo Wingate, P.E., C.F.M.</u>
Department: <u>Public Works</u>
<input checked="" type="radio"/> Report <input type="radio"/> Resolution <input type="radio"/> Ordinance

Appropriation	
Source of Funds:	_____
Account Number:	_____
Amount Budgeted:	_____
Amount Requested:	_____
Budgeted Item:	<input type="radio"/> Yes <input type="radio"/> No

Exhibits: HCFCD Drainage Network Map

SUMMARY

Receive report regarding Harris County Flood Control District's (HCFCD) and Harris County Precinct 2's current and future plans relating to flooding in the City of La Porte.

RECOMMENDED MOTION

Approved for Drainage Committee Agenda

Corby D. Alexander, City Manager

Date



REQUEST FOR DRAINAGE & FLOODING COMMITTEE AGENDA ITEM

Agenda Date Requested: <u>March 9, 2020</u>
Requested By: <u>Lorenzo Wingate, P.E., C.F.M.</u>
Department: <u>Public Works</u>
<input type="radio"/> Report <input type="radio"/> Resolution <input type="radio"/> Ordinance

Appropriation	
Source of Funds:	_____
Account Number:	_____
Amount Budgeted:	_____
Amount Requested:	_____
Budgeted Item:	<input type="radio"/> Yes <input type="radio"/> No

Exhibits: Consultant Proposal

SUMMARY

Half Associates, Inc. prepared a proposal to provide engineering services for preliminary engineering, final design, bidding, construction phase services for the Bayside Terrace Subdivision Improvements Project. The proposal was presented to Council at the February 24, 2020. Staff will provide an update on Council's decision and the current project status.

RECOMMENDED MOTION

Approved for Drainage Committee Agenda

Corby D. Alexander, City Manager

Date



January 29, 2020

Mr. Lorenzo Wingate
City Engineer
2963 N. 23rd Street
La Porte, TX 77571

RE: Engineering Services Fee Proposal
Bayside Terrace Subdivision Drainage Improvements
Revision 3

Dear Mr. Wingate:

Halff Associates Inc. (Halff) is pleased to submit our proposal to provide engineering services for the Bayside Terrace Subdivision Drainage Improvements project for the City of La Porte. The purpose of the project is to increase capacity and address existing flooding issues within the subdivision by regrading roadside ditches and upsizing the existing storm sewer system. The project area is generally bounded by Pine Bluff Drive to the north, S. Broadway Street to the west, Dwire Drive to the south, and the San Jacinto Bay to the east. This proposal will address development of a preliminary engineering report (PER), final design plans, and construction phase services. Additional services include geotechnical analysis and environmental analysis.

In the PER, Halff will analyze existing conditions and evaluate proposed alternatives to recommend the most feasible design based on various factors including estimated construction cost, available right-of-way and easements, constructability, conflicts with existing utilities, and inconvenience to residents. Alternatives will be presented to the City of La Porte for determination and approval of the final design. The purpose of the final design phase is to develop signed and sealed construction plans based upon findings in the PER.

Existing Conditions:

There are approximately 227 total structures within the "At-Risk" project area, including 206 residential homes and 21 commercial structures. All 227 structures exist within a FEMA designated Special Flood Hazard Area. Approximately 17 structures were damaged from Hurricane Harvey in 2017, resulting in over \$1.1 million dollars in damages.

The existing stormwater collection system is comprised of roadside ditches and underground reinforced box culvert storm sewer to convey flow to two outfall points: an underground collection system along Bayside Drive at the center of the subdivision, and a secondary collection system running along the southeastern boundary of the subdivision. Both outfalls terminate at San Jacinto Bay. Access to the southeastern collection system is limited; the system is located within fenced-in backyards of properties within the subdivision and does not exist within a utility easement nor public right-of-way.

During intense rainfall events, the capacity of the southern system is exceeded, and the backwater condition inundates sections of the neighborhood upstream.



Proposed Conditions:

Based on 1D hydrologic and hydraulic modeling efforts, Halff will determine and evaluate cost-effective solutions to provide relief to drainage areas within the neighborhood. Modifications may include roadside ditch regrading and upsizing the existing storm sewer system to increase its capacity.

The basic services are divided into the following tasks:

Basic Services

1. Preliminary Engineering Report	\$ 29,844.00	(Lump Sum)
2. Design Phase Services	\$ 192,297.00	(Lump Sum)
3. Construction Phase Services	\$ 10,242.00	(Lump Sum)
Total Basic Services:	\$ 232,383.00	

Additional Services:

4. Geotechnical Analysis	\$ 10,000.00	(Lump Sum)
5. Environmental Analysis	\$ 10,000.00	(Lump Sum)
Total Additional Services:	\$ 20,000.00	
Total Basic & Additional Services:	\$ 252,383.00	

Line items are intended to be authorized and released contingent on available funding.

We appreciate the opportunity to be of service to you and the City of La Porte. Please feel free to contact me if you have any questions or comments concerning this proposal.

Sincerely,
Halff Associates, Inc.

Approved by:

Long Nguyen, P.E.
Public Works Team Leader

Corby D. Alexander
City Manager

Attachments:

- Attachment "A": Detailed scope of services
- Attachment "B": Detailed level of effort
- Attachment "C": Vicinity map
- Attachment "D": Project schedule

Cc. File

Attachment “A”

The purpose of this proposal is to develop a PER, final design plans, and construction phase services for the Bayside Terrace Subdivision Drainage Improvements project. The proposed project area can be seen in Attachment “C”.

SCOPE OF SERVICES

Preliminary Design Phase Services:

Task 1 – Preliminary Engineering Report (PER)

The Preliminary Engineering Report will summarize findings from the drainage analysis and present alternative options to the City of La Porte for their approval. The PER may consider presenting the project in multiple phases based upon available funding. Preliminary Engineering Report services include:

- a) Reviewing all available record drawings and drainage reports to determine potential utility conflicts and constraints.
- b) Performing existing conditions hydrologic analysis and delineate existing drainage basins to determine drainage boundaries, flowrates, and outfall locations. Existing conditions hydraulic analysis will quantify water surface elevations of roadside ditches.
- c) Evaluating three proposed alternatives:
 - Concrete or asphalt with curb and gutter/storm sewer
 - Concrete or asphalt with roadside ditch system
 - Concrete or asphalt with combination storm sewer and roadside ditch system
- d) Providing estimated construction costs for each alternative developed.
- e) Providing provide a final recommendation to the City of La Porte for their approval in the form of a report.
- f) Prepare presentation and attend Drainage Committee meeting to present findings and recommendations.

Final Design Services:

Task 2 - Topographic Survey

Topographic survey will be delivered in AutoCAD Civil 3D format with field notes and ASCII files of all points obtained. A DTM will be created to generate 1-foot contours.

- a) Full topographic survey from ROW to ROW with cross-sections at 100-ft intervals, including: all existing appurtenances, water meters, valves, valve boxes, fire hydrants, improvements within the ROW (landscaping, mailboxes, etc.), trees, driveways, storm and sanitary flowlines, ditch and culvert flowlines, pipe sizes and materials, power poles, fences, etc. Obtain private utility records and incorporate into base drawing. Delineate public ROW based on land property monuments and deed records. Provide RPLS signed and sealed survey control maps in PDF format

Task 3- Project Management for Final Design

Project management services include:

- a) Project progress meetings, design review meetings, and conference calls
- b) Project site visits
- c) Coordination and communication with private utility owners to resolve conflicts

Task 4: Civil Design Services

All design work will be completed using AutoCAD Civil 3D and will adhere to City of La Porte standards found in Chapter 5 of the PICM Stormwater Design Criteria Manual. Plans, specifications, and estimates will be submitted in three phases: 60%, 90%, and final. The drainage design will be based upon decisions approved by the City of La Porte in the PER phase. Civil design services include:

- a) Development of general project drawings: cover sheet, sheet index, legend, general notes, existing and proposed typical sections, and project layouts
- b) Development of paving and drainage, and utility drawings: utility plan and profiles and paving/drainage plan and profiles. Paving and drainage plan and profile sheets will contain all roadway design and drainage design, including ditches, storm sewer, and cross culverts. Utility plan and profiles will contain proposed water line and all related appurtenances.
- c) Development of miscellaneous drawings: drainage area maps, hydraulic computations, SWPPP layouts, traffic control plans, traffic control details; modification of City of La Porte water line details, SWPPP details, and storm sewer details as needed.
- d) Preparation of engineer's estimate of probable construction cost at each submittal. Quantities will be verified prior to each submittal. Halff will prepare the cost estimate and quantities using City of La Porte pay items and specifications.
- e) Assist with preparation of project manual including applicable technical specifications, general provisions, special specifications, and bid items with each submittal. The City of La Porte will provide front end documents.

Task 5: Bid Phase Services

- a) Attendance at the pre-bid meeting and compilation of notes for distribution.
- b) Preparation of pre-bid responses and responding to questions.
- c) Attendance at the bid review meeting and providing input on the selection process.
- d) Preparation of bid recommendation letter and bid tabulation summary.

Construction Phase Services

Task 6: Construction Phase Services

- a) Responding to submittals as requested by the City of La Porte
- b) Responding to RFI as requested by the City of La Porte
- c) Design changes/plan revisions as requested by the City of La Porte
- d) Preparation of record drawings, maintenance of RFI and submittal log

Additional Services:

Task 7: Geotechnical Analysis

- a) Geotechnical analysis services include: evaluating the soil and groundwater conditions along the project alignment and providing geotechnical recommendations for proposed utility construction. Pavement recommendations will also be provided.

Task 8: Environmental

- a) Prepare a desktop environmental constraints analysis to provide supporting documentation for and complete the EHP Checklist. This does not include agency coordination or consultation, permitting, or NEPA environmental document preparation and clearance.

Services Not Included:

- Reviewing change orders or pay estimates
- Level of service verification in modeling efforts
- Construction staking
- Analysis of detention facilities

List of Assumptions:

1. All consultant fees shown on are considered to be lump sum unless otherwise noted.
2. The City of La Porte will provide any procedures, policies, data collection systems, engineering guidelines, standards, and design criteria that will be required for this project.
3. The City of La Porte will retain ownership of any deliverables and electronic files created for this project but will not be supplied with software applications or licenses as part of this project.
4. The scope of services does not include any preparation or attendance at any public meetings pertaining to the project design or construction.

Attachment "B" Bayside Terrace Subdivision Drainage Improvements

Date: 11/27/2019
 Revision 1: 1/20/2020
 Revision 2: 1/27/2020
 Revision 3: 1/29/2020

	Principal / Managing Director	Project Manager	Project Engineer	Senior CADD Technician	Admin	Total Hours	Total Cost
HOURLY RATE	\$ 210	\$ 165	\$ 114	\$ 75	\$ 60		
ITEM 1: PRELIMINARY DESIGN PHASE SERVICES:							
Task 1 – Preliminary Engineering Report							
1.A Review record drawings and drainage reports		2	8				\$ 1,242
1.B Existing Conditions Hydraulics and Hydrology		8	40				\$ 5,880
1.C Proposed conditions analysis		16	40				\$ 7,200
1.D Develop alternative and estimated construction costs		8	40				\$ 5,880
1.E Preliminary Engineering Report	1	16	40				\$ 7,410
1.F Prepare presentation and attend Drainage Committee meeting to present findings and recommendations		8	8				\$ 2,232
Subtotal Hours	1	58	176	0		0	
Subtotal Fee	\$ 210	\$ 9,570	\$ 20,064	\$ -			\$ 29,844
TOTAL FEES: PRELIMINARY DESIGN PHASE SERVICES:							\$ 29,844
ITEM 2: FINAL DESIGN SERVICES:							
Task 2 – Topographic Survey Services							
2.A Topographic Survey of Project Area							\$ 51,000
Subtotal Hours							
Subtotal Fee	\$ -	\$ -	\$ -	\$ -			\$ 51,000
Task 3 – Project Management							
3.A Project Progress Meetings		8	8				\$ 2,232
3.B Project Site Visits		8	8				\$ 2,232
3.C Coordination with private utilities		8					\$ 1,320
Subtotal Hours	0	24	16				
Subtotal Fee	\$ -	\$ 3,960	\$ 1,824				\$ 5,784
Task 4 - Civil Design Services							
4.A General Project Drawings							
Title Page		1	2	2		5	\$ 543
Index of Sheets		1	2	2		5	\$ 543
Legend & Abbreviations		1	2	2		5	\$ 543
General Notes		1	2	2		5	\$ 543
Existing and Proposed Typical Sections		1	4	12		17	\$ 1,521
Project Layouts		1	4	12		17	\$ 1,521
4.B Plan and Profile Drawings							
Paving and Drainage Plan and Profiles (approximately 28 sheets)	4	56	160	360		580	\$ 55,320
Utility Plan and Profiles (approximately 28 sheets)	4	56	160	360		580	\$ 55,320

Attachment "B" Bayside Terrace Subdivision Drainage Improvements

Date: 11/27/2019
 Revision 1: 1/20/2020
 Revision 2: 1/27/2020
 Revision 3: 1/29/2020

	Principal / Managing Director	Project Manager	Project Engineer	Senior CADD Technician	Admin	Total Hours	Total Cost
HOURLY RATE	\$ 210	\$ 165	\$ 114	\$ 75	\$ 60		
4.C Miscellaneous Drawings							
Drainage Area Maps		2	12	16		30	\$ 2,898
Traffic Control Plan		2	12	24		38	\$ 3,498
Traffic Control Details		2	4	4		10	\$ 1,086
SWPPP Layout		2	12	16		30	\$ 2,898
Modification of SWPPP Details		1	2	4		7	\$ 693
Modification of Water Line Details		1	2	4		7	\$ 693
Modification of Storm Sewer Details		1	2	4		7	\$ 693
4.D Estimate of Probable Construction (60%, 90%, and Final)		4	16			20	\$ 2,484
4.E Technical Specifications/Project Manual (60%, 90%, and Final)		4	16			20	\$ 2,484
Subtotal Hours	8	137	414	824		1383	
Subtotal Fee	\$ 1,680	\$ 22,605	\$ 47,196	\$ 61,800			\$ 133,281
Task 5: Bid Phase Services							
5.A Attend pre-bid meeting & compile notes		2	2			4	\$ 558
5.B Prepare pre-bid responses & respond to questions		2	2			4	\$ 558
5.C Attend bid review meeting		2	2			4	\$ 558
5.D Prepare bid recommendation letter & bid tabulation		2	2			4	\$ 558
Subtotal Hours	0	8	8	0		16	
Subtotal Fee	\$ -	\$ 1,320	\$ 912	\$ -			\$ 2,232
TOTAL FEES: FINAL DESIGN SERVICES							\$ 192,297
ITEM 3: CONSTRUCTION PHASE SERVICES:							
Task 6: Construction Phase Services							
6.A Respond to submittals		2	16			18	\$ 2,154
6.B Respond to RFI		8				8	\$ 1,320
6.C Revisions		4	16			20	\$ 2,484
6.D Preparation of Record Drawings, RFI Log, and Submittal Log		4	16	24		44	\$ 4,284
Subtotal Hours	0	18	48	24		90	
Subtotal Fee	\$ -	\$ 2,970	\$ 5,472	\$ 1,800			\$ 10,242
TOTAL FEES: CONSTRUCTION PHASE SERVICES							\$ 10,242
TOTAL FEES: PER, FINAL DESIGN, & CONSTRUCTION PHASE							\$ 232,383

Attachment "B"
Bayside Terrace Subdivision Drainage Improvements

Date: 11/27/2019
 Revision 1: 1/20/2020
 Revision 2: 1/27/2020
 Revision 3: 1/29/2020

	Principal / Managing Director	Project Manager	Project Engineer	Senior CADD Technician	Admin	Total Hours	Total Cost
HOURLY RATE	\$ 210	\$ 165	\$ 114	\$ 75	\$ 60		
ADDITIONAL SERVICES:							
Task 7: Geotechnical Analysis							
7.A Geotechnical Analysis							\$ 10,000
Subtotal Hours	0	0	0	0		0	
Subtotal Fee	\$ -	\$ -	\$ -	\$ -			\$ 10,000
Task 8: Environmental Analysis							
8.A Environmental Analysis							\$ 10,000
Subtotal Hours	0	0	0	0		0	
Subtotal Fee	\$ -	\$ -	\$ -	\$ -			\$ 10,000
TOTAL FEES: ADDITIONAL SERVICES							\$ 20,000
TOTAL FEES: PER, FINAL DESIGN, CONSTRUCTION PHASE SERVICES, AND ADDITIONAL SERVICES							\$ 252,383



REQUEST FOR DRAINAGE & FLOODING COMMITTEE AGENDA ITEM

Agenda Date Requested: <u>March 9, 2020</u>
Requested By: <u>Lorenzo Wingate, P.E., C.F.M.</u>
Department: <u>Public Works</u>
<input checked="" type="radio"/> Report <input type="radio"/> Resolution <input type="radio"/> Ordinance

Appropriation	
Source of Funds:	_____
Account Number:	_____
Amount Budgeted:	_____
Amount Requested:	_____
Budgeted Item:	<input type="radio"/> Yes <input type="radio"/> No

Exhibits: Project map
Project update chart
Harris County Drainage Network Map
Airport Drainage Improvements

SUMMARY

Refer to attached exhibit(s) for updates on various drainage projects throughout the City.

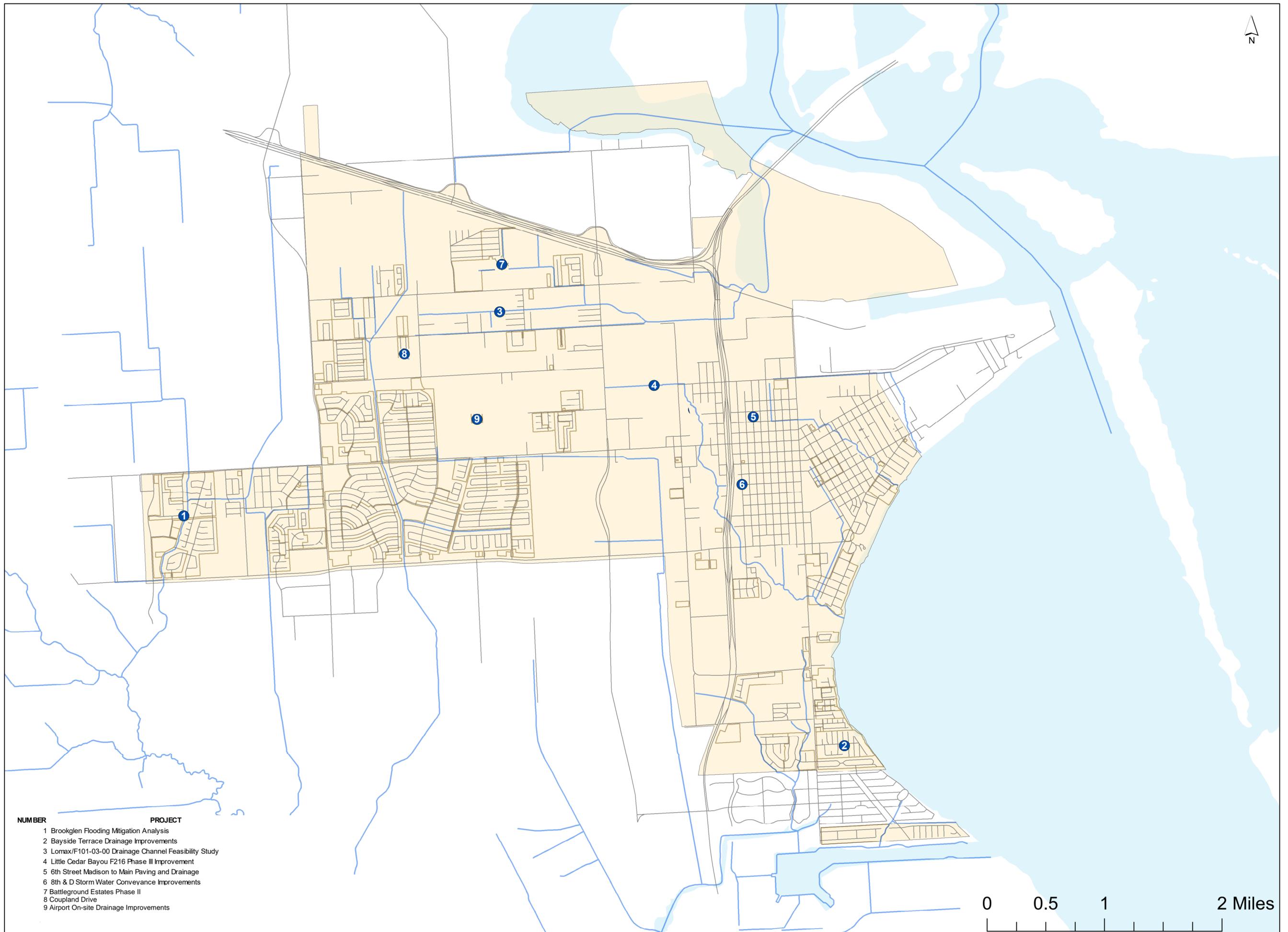
RECOMMENDED MOTION

Approved for Drainage Committee Agenda

Corby D. Alexander, City Manager

Date

The City of La Porte Drainage Projects 2019



DRAINAGE PROJECTS

NO.	PROJECT	PROJECT MANAGER	DESCRIPTION	PROJECT PHASE (Feasibility/Preliminary Design/Final Design/Bidding/Construction)	Status	Potential Grant Funding	Potential COLP Cost Share	COLP Budgeted Amount	Estimated Completion Date	% Complete	On Schedule
1	Brookglen Flooding Mitigation Analysis	Public Works	The 2009 City-wide Drainage Study identifies the Brookglen subdivision as an area with significant drainage/flooding problems, attributed to a mixture of inadequate sewerage and insufficient channel capacity within the B112-00-00 Channel. Compounded improvements recommended within the City-wide Drainage Study could reduce the flood risk within the Brookglen area. This analysis would expand upon the recommendations provided within 2009 study.	Feasibility	Staff working with HCFCD to develop regional solution. HCFCD currently finalizing Technical Update. Staff submitted HMGP grant application for supplemental funding on October 17, 2018. Application pending TDEM selection. Awarded projects are anticipated to begin as early as January 2020.	\$4,000,021.50	\$1,000,005.38	\$275,000.00	March 2022	10%	No
2	Bayside Terrace Drainage Improvements	Public Works	Approximately 800 linear feet of RCP pipe, ranging in size from 15" to 24", exists within the Bayside Terrace Subdivision, which has not been properly maintained due to access issues attributed to limited access to infrastructure, provided within a five foot utility easement. Portions of Hamilton Street and Fondren Street utilize this system to convey stormwater to its outfall point of Galveston Bay. The system fails to function properly, causing flooding within the adjacent portion(s) of the subdivision. A proposed drainage study would discuss feasibility of rerouting this flows from the 800 feet of RCP, towards Bayside Dr. and utilizing the existing system within Bayside Dr. to convey the storm water within the existing system.	Feasibility	Staff submitted HMGP grant application for supplemental funding on November 26, 2018. Application pending TDEM selection. Awarded projects are anticipated to begin as early as January 2020.	\$2,200,000.00	\$550,000.00	\$100,000.00	March 2022	0%	No
3	Lomax/F101-03-00 Drainage Channel Improvements	Public Works	Harris County Flood Control District's (HCFCD) F101-06-00 Channel system conveys storm water runoff from the Lomax area and ultimately outfalls into Lower San Jacinto Bay. The downstream section of the channel has been improved to ultimate capacity. An existing pipeline corridor, containing several pipelines located at depths ranging from approximately 2' to 18', cross the channel, limiting the depth of potential channel improvements. Moderate/heavy rain events, compounded with backwater conditions from this section of the channel, contributes to wide-spread flooding within the Lomax Area.	Feasibility	Staff submitted HMGP grant application for supplemental funding on November 26, 2018. Application pending TDEM selection. Awarded projects are anticipated to begin as early as January 2020. HCFCD has completed Technical Update and is in procurement phase for PER. Request to award engineering contract is anticipated to be placed on Januray 2020 Commissioner's Court meeting agenda by HCFCD.	\$3,200,155.00	\$800,038.75	\$150,000.00	March 2022	10%	No
4	Little Cedar Bayou F216 Phase III Improvements	Public Works	Phase I and Phase II Improvements to Little Cedar Bayou, from Hwy 146 to Madison, have either been completed or are currently awarded for construction. Phase I and Phase II improvements include, but are not limited to, excavating and disposing off- site soil as required for the new channel alignment, clearing and grubbing, demolition of existing structures, erosion control, and site restoration for approximately 5,533 LF of channel. Approximately 4,680 LF of channel remains unimproved upstream, with those improvements slated to be included within this project, to be considered Phase III. Survey data has been collected on this most upstream section. Routine maintenance of clearing overgrowth, trees, and obstructions; minor erosion control and slope stabilization; and desilting is planned to maintain existing conveyance capacity. Those maintenance operations are projected to begin late 4th quarter 2018 or early 1st quarter 2019 (calendar year). The following Phase III mitigation action is proposed, as recommended within the Hydraulic Analysis for Little Cedar Bayou Watershed HCFCD Unit F216-00-00: lowering the flow line of the Bayou 1 - 2 feet, from W. Madison to Sens Rd. Current channel side slopes would be modified to achieve 3:1 side slopes from W Madison St. to Sens Rd. An estimated 200,000 cubic yards are to be excavated from the channel. Over excavation is provided to yield sufficient storage volume in the pond after siltation and build-up in the pond bottom.	Feasibility	Staff submitted HMGP grant application for supplemental funding on December 20, 2018. Application pending TDEM selection. Awarded projects are anticipated to begin as early as January 2020. Staff has requested a budgetary proposal from consultant for Phase III improvements, including consideration of H Street drainage issue. Proposal expected week of Thanksgiving 2019.	\$2,500,000.00	\$625,000.00	\$825,000.00	March 2022	0%	No
5	6th Street Madison to Main Paving and Drainage	Public Works	The segment of 6th St from W. Madison St to W. Main St is considered part of Old La Porte, which was generally noted in the City-Wide Drainage Study as not having sufficient storm sewer capacity due to undersized storm sewer, undersized storm inlets, or not enough storm inlets. RPS-Klotz provided an analysis of the existing storm sewer system and identified problem areas within the project limits. Additional analysis is required to determine most efficient improvement alternative.	Feasibility	Executed contract with GLO effective March 9, 2019 through August 5, 2021. Consultant discussed preliminary modeling results with staff on 10/28/2019. Consultant proceeding with finalizing draft of PER. Staff received preliminary draft agreement for review from Harris County for \$3.4M allocation on 10/25/2019.	\$3,798,532.30	\$125,000.00	\$1,140,000.00	August 2021	3%	Yes
6	8th & D Storm Water Conveyance Improvements	Public Works	The area generally bounded by 8th Street to the west, Main Street to the north, 5th Street to the east, and D Street to the south experiences flooding during heavy rain events due to undersized culverts within the area. Increasing culvert sizes within the area will provide additional conveyance capacity within the existing open ditch system.	Preliminary Design	This project has been incorporated into the 7th Street Rehabilitation Project. Survey and PER authorized by council on June 10, 2019.	N/A	N/A	\$139,340 / \$1,850,000	June 2021	10%	Yes
7	Bob's Gully	Public Works	Obtained drainage easement along East B Street ROW in Morgan's Point from Boys and Girls Harbor. Coordinate with Harris County Flood Control & the Army Corp of Engineers to determine maintenance responsibilities. Consultant to provide technical memo analyzing channel capacity.	Feasibility	Analysis completed. Concluded that existing channel has capacity for current conditions.	N/A	N/A	\$50,000.00	September 2019	95%	Yes
8	Battleground Estates Phase II	Public Works	A proposed conditions hydraulic model was developed during the preliminary design for the N P Street Culvert Improvement Project, which recommended replacing the upstream portion of the existing composite structure at N P Street, with structures matching the downstream portion of the composite structure. That project allows for full utilization of the structure's capacity, as well as protect the channel during rainfall events that produce higher amounts of runoff. Per the recommendations of the Phase 1 report, a more detailed Phase 2 engineering analysis of segments F101-00-00 and F101-08-00, that are upstream of N P Street, as well as an evaluation of the roadside ditch drainage conduits within Battleground Estates should be performed to identify necessary improvements to address structural flooding within the area. The more detailed study would evaluate the impacts of culverts located upstream of N P Street, along F-101-00-00 resulting from the 10-, 50-, and 100-year rain event. Channel improvements, and increasing culvert sizes to provide sufficient capacity within culverts along the roadside ditches are the anticipated mitigation efforts.	Feasibility	Staff submitted HMGP grant application for supplemental funding on December 20, 2018. Project is on hold; awaiting supplemental grant funding.	\$880,500.00	\$220,125.00	\$65,000.00	August 2022	0%	No
9	Coupland Drive	Public Works	The proposed storm sewer improvements include re-sloping Coupland Drive to drain towards inlets located throughout the subdivision. The inlets will drain into proposed storm sewer ranging in size from 24" to 30" RCP. This storm sewer will then flow underneath the existing roadside ditch along L Street to a combined outfall with the existing roadside ditch to Big Island Slough. The proposed storm sewer underneath the existing ditch on L Street will be 42" RCP and the combined outfall will need to be a 60" RCP. These improvements will result in no net fill within the Big Island Slough 100-year floodplain. The proposed storm sewer was sized for the 5 year storm event, per the City of La Porte drainage criteria.	Preliminary Design	HDR is awaiting comments from TWDB before beginning 60% design. Construction to be incorporated into Lomax Lift Station Consolidation Project.	N/A	N/A	\$1,110,000.00	July 2022	30%	Yes

NO.	PROJECT	PROJECT MANAGER	DESCRIPTION	PROJECT PHASE (Feasibility/Preliminary Design/Final Design/Bidding/Construction)	Status	Potential Grant Funding	Potential COLP Cost Share	COLP Budgeted Amount	Estimated Completion Date	% Complete	On Schedule
10	Airport On-site Drainage Improvements	Public Works	On-site and offsite study determined there is no impact from airport drainage run off to the area north(Lomax) of the airport. The study determined there is impact to the Glen Meadows Subdivision. Onsite detention and increased capacity will be designed to mitigate the impact on Glen Meadows.	Bidding	Design phase has been completed. Bid opening held August 29, 2019.	\$2,200,000.00	\$244,500.00	\$248,467.00	March 2020	0%	Yes

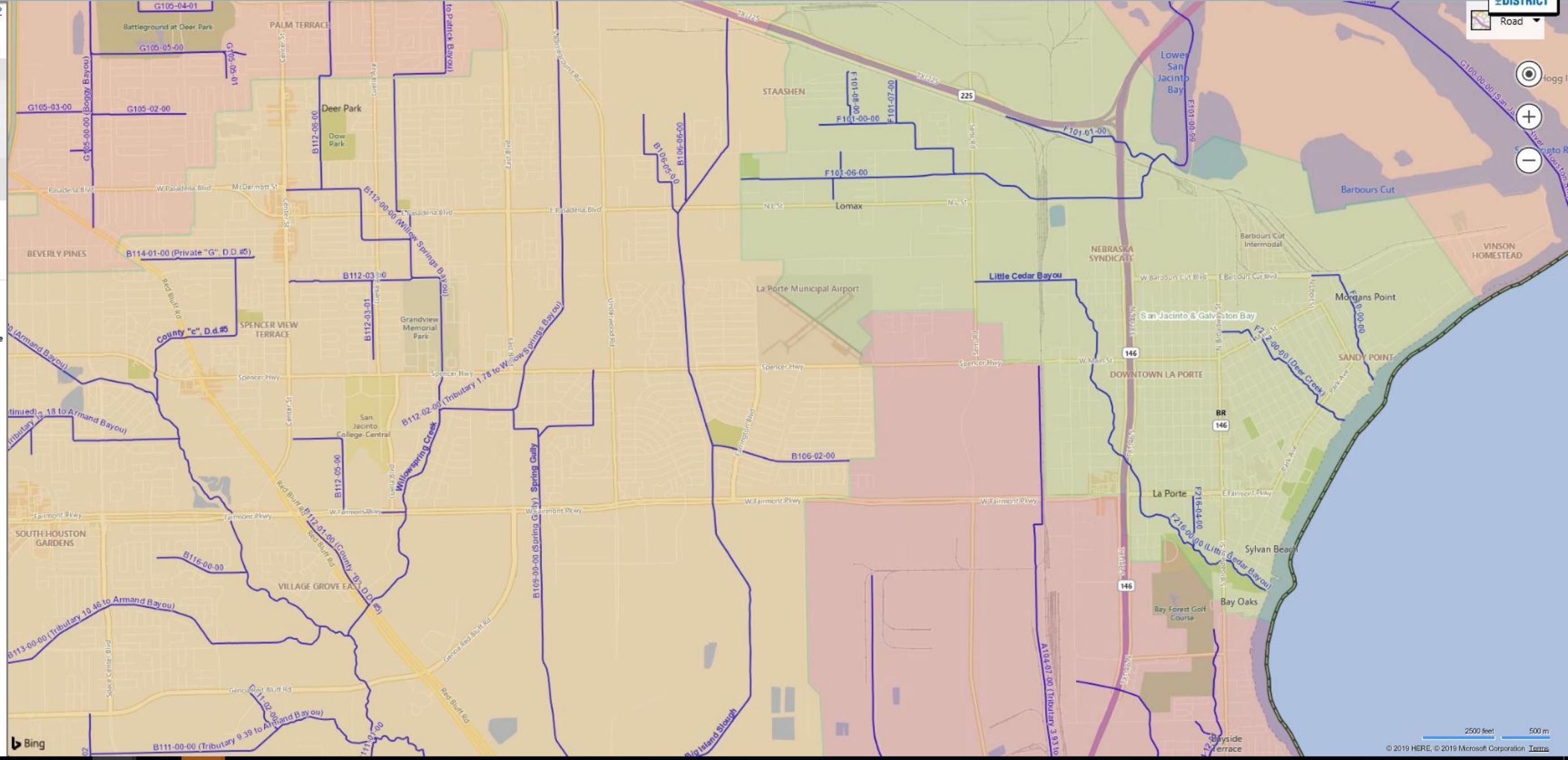
ADDRESS SEARCH [HELP](#)
Street Address, City, State, Zip Code
e.g. 9900 Northwest Fwy., Houston, TX 77002

MAP VIEW OPTIONS - Select One

- Mapped Floodplains
 - Floodway
 - 1% (100-year) Floodplain
 - 0.2% (500-year) Floodplain
 - 1% (100-year) Coastal Floodplain
- Watersheds (color-coded)
- Ponding
- Channels (Bayous and Creeks)
 - Open Channels
 - Enclosed Channels
- Harris County Boundary

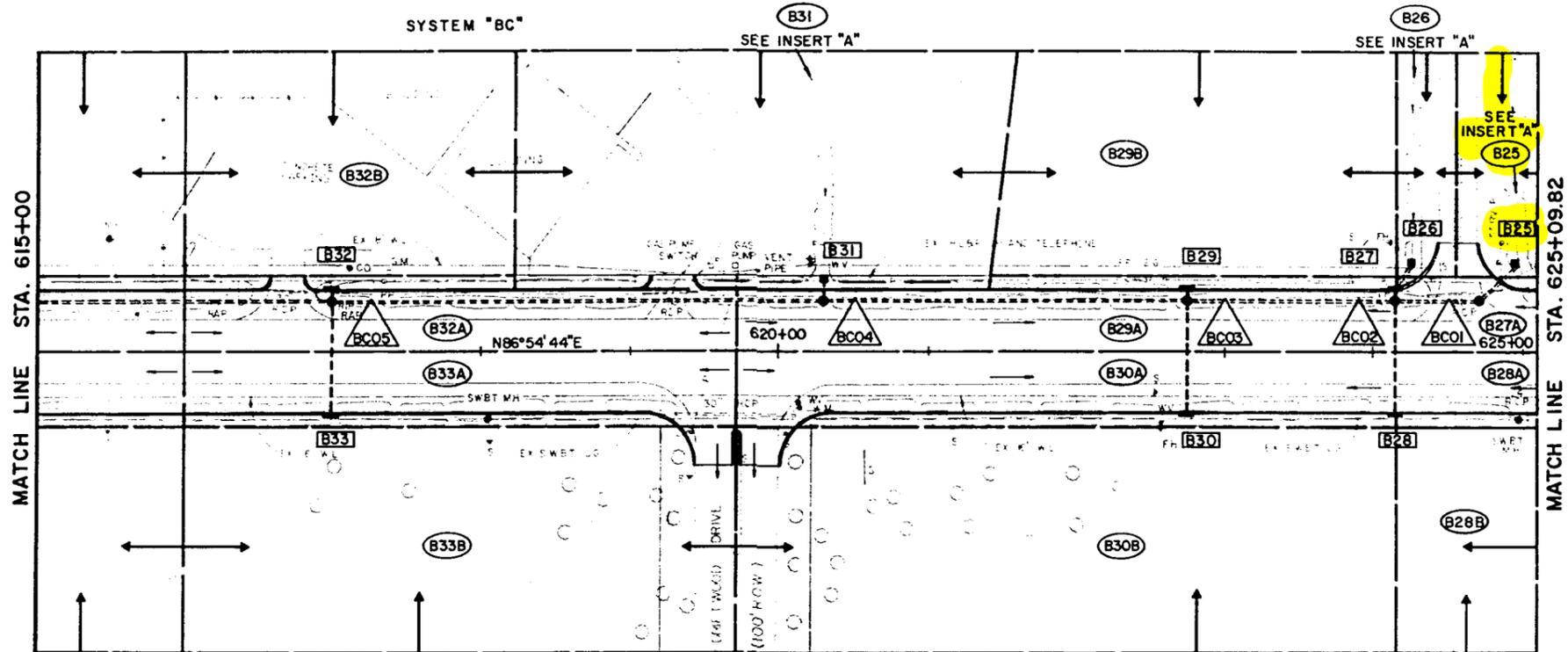
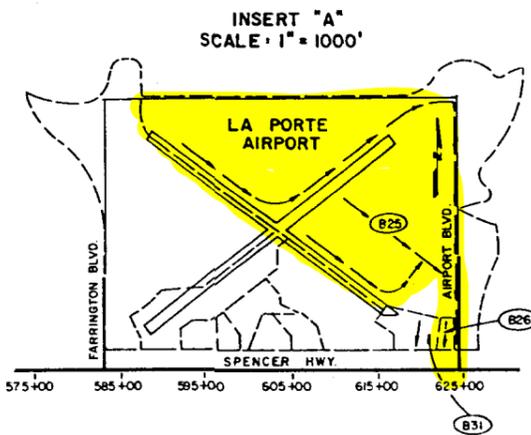
[Reset to County-Level View](#) [Disclaimer](#)

 An interactive mapping tool of the Harris County Flood District



Drainage Areas	"C" Factor			Total CA	Rain Frequency (Years)	Time of Concentration (Min.)	Intensity (In./Hr.)	Flow (CFS)	Total Flow (CFS)
	No.	Acres							
B25	180.00			180.00	2	41	3.03	191.00	33.9 *
B26	2.07			2.07	2	10	6.76	4.90	4.90
B27A	0.27	0.27		0.24	2	10	6.76	1.62	3.72
B27B	0.48		0.48	0.31	2	10	6.76	2.10	
B29A	0.48	0.48		0.43	2	10	6.76	2.91	6.90
B29B	0.91		0.91	0.59	2	10	6.76	3.99	
B31	7.15			7.15	2	10	6.76	16.90	16.90
B32A	0.40	0.40		0.36	2	10	6.76	2.43	
B32B	0.77		0.77	0.50	2	10	6.76	3.38	5.81

* TOTAL FLOW LIMITED BY DITCH CAPACITY OF 33.9 C.F.S.



Drainage Areas	"C" Factor			Total CA	Rain Frequency (Years)	Time of Concentration (Min.)	Intensity (In./Hr.)	Flow (CFS)	Total Flow (CFS)
	No.	Acres							
B28A	0.27	0.27		0.24	2	10	6.76	1.62	5.20
B28B	0.82		0.82	0.53	2	10	6.76	3.58	
B30A	0.51	0.51		0.46	2	10	6.76	3.11	9.80
B30B	1.53		1.53	0.99	2	10	6.76	6.69	
B33A	0.43	0.43		0.39	2	10	6.76	2.64	8.31
B33B	1.29		1.29	0.84	2	10	6.76	5.67	

121



2-26-91

SCALE: 1" = 50'

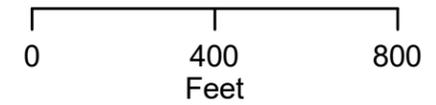
STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
SPENCER HIGHWAY

DRAINAGE SYSTEM MAPS
STA. 615+00 TO STA. 625+0982

SHEET 15 OF 25

FED. RD. DIST. NO.	FEDERAL AID PROJECT NO.	SHEET NO.
6	CDP 21(20)M, ETC.	121
STATE	DIST. NO.	COUNTY
TEXAS	12	HARRIS
CONT.	SECT.	JOB HIGHWAY NO.
8020	12	011 MH

ETC.

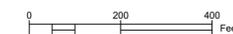


- Structure Type**
- == Circular Pipe
 - == Box Culvert
 - Ditch
 - == Improved Culvert
 - - Lowered Ditch
 - + + Linear Detention
 - - Widened Ditch

**City of La Porte
La Porte Municipal Airport
Storm Water Drainage Improvements**

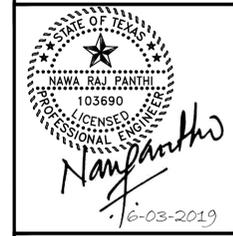
**Exhibit 9
Proposed Drainage
Improvements**





LEGEND

- EXISTING STORM WATER INFRASTRUCTURE
- EXISTING DITCH
- EXISTING FLOW OF DITCH
- EXISTING DITCH



HT&J LLC
 10351 STELLA LINK RD
 HOUSTON, TEXAS 77025
 (O) (832) 767-0090
 TBPE FIRM No. F-14087

CML PE's
 Professional Engineers
 TEXAS FIRM F-18997

LA PORTE MUNICIPAL AIRPORT

AIRFIELD PAVEMENT REHABILITATION AND DRAINAGE IMPROVEMENTS 2019

PROJ MGR Panthi

DRAWN BY Murphree

CHECKED BY Panthi

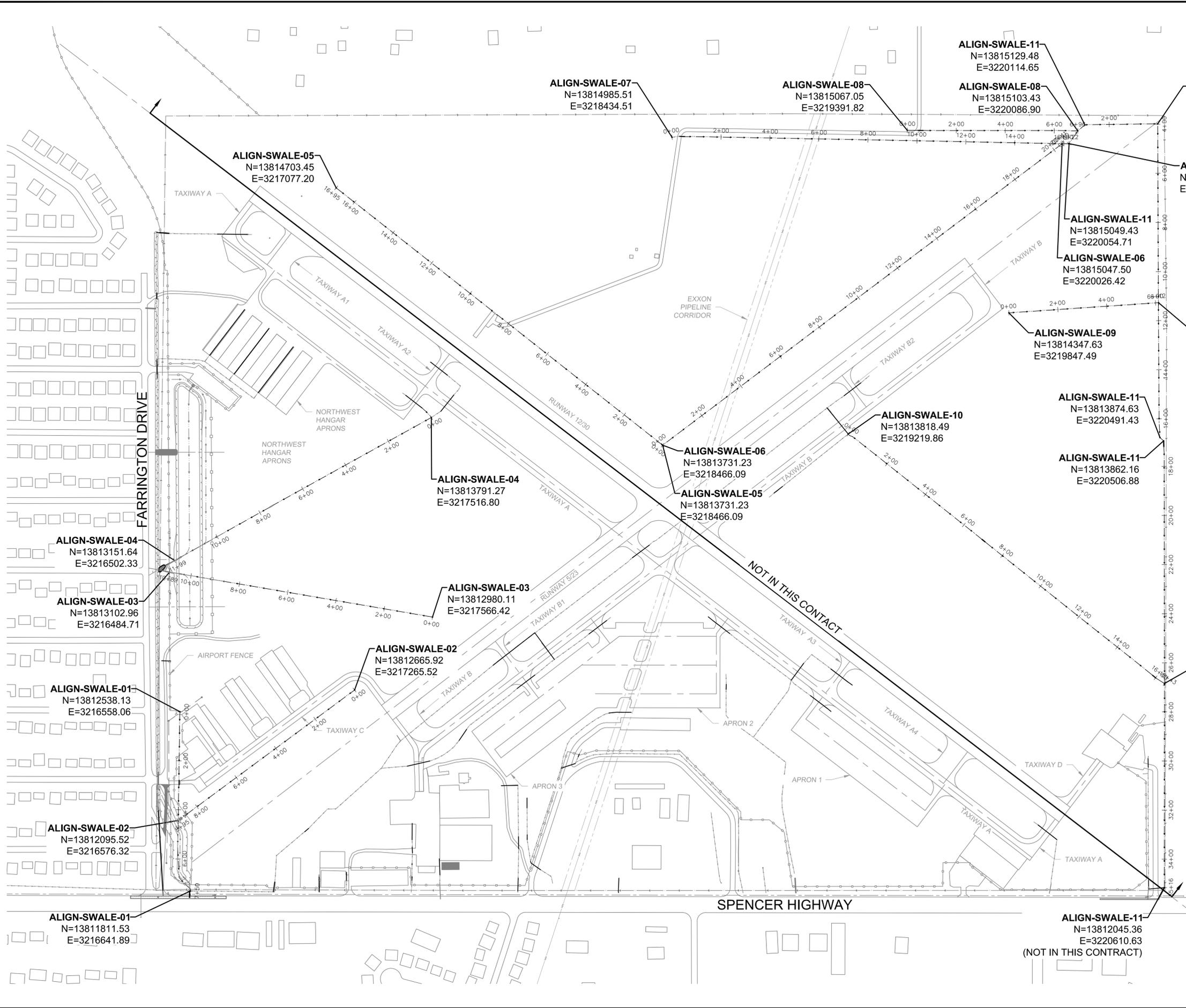
PROJ NO 1912LP RTE

CIVIL PE's PROJ NO 1712LP RTE

TITLE DRAINAGE IMPROVEMENTS

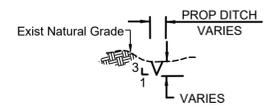
OVERALL EXISTING DRAINAGE DITCHES

SHEET C-301

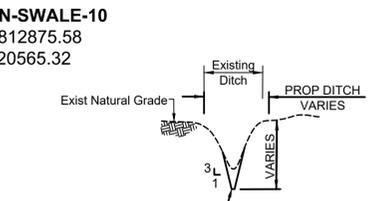


NOTES

1. FOR SURVEY CONTROLS (SEE SHEET G-003)
2. THE CONTRACTOR MUST MAINTAIN POSITIVE DRAINAGE AND AVOID ANY STANDING WATER DURING CONSTRUCTIONS.
3. THE CONTRACTOR MUST MAINTAIN PORTABLE STORMWATER PUMP AVAILABLE ON-SITE ALL TIME TO REMOVE ANY STANDING WATER NOT DRAINED BY GRAVITY.
4. THE CONTRACTOR MUST EXERCISE CAUTION WHILE EXCAVATING AND NOT DAMAGE ANY UNDERGROUND UTILITIES.
5. THE SIDE SLOPES SHOULD NOT BE STEEPER THAN 3:1 SLOPES.



TYPICAL PROPOSED SWALE



TYPICAL REGRADING DITCH

REGRADING SOME DITCHES AND SWALES IS NOT A PART OF THIS CONTRACT. IT WILL BE A SEPARATE CONTRACT.

SPENCER HIGHWAY

NOT IN THIS CONTACT

ALIGN-SWALE-11
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 E=3220610.63
 (NOT IN THIS CONTRACT)

ALIGN-SWALE-01
 N=13811811.53
 E=3216641.89

ALIGN-SWALE-02
 N=13812095.52
 E=3216576.32

ALIGN-SWALE-01
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ALIGN-SWALE-03
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 E=3216484.71

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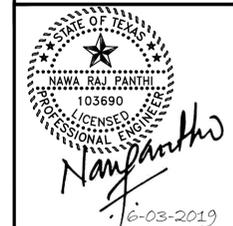
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ALIGN-SWALE-05
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 E=3217077.20



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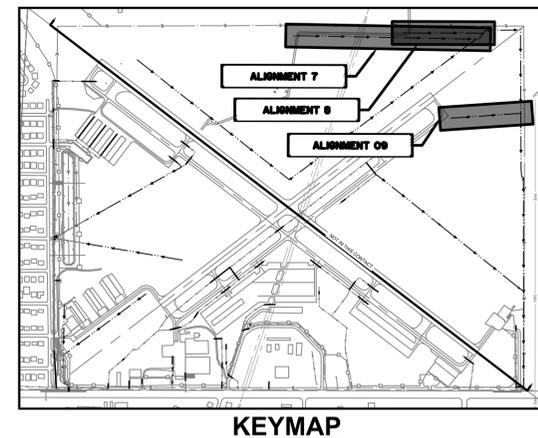
LA PORTE MUNICIPAL AIRPORT

AIRFIELD PAVEMENT REHABILITATION AND DRAINAGE IMPROVEMENTS 2019

PROJ MGR Panthi
 DRAWN BY Murphree
 CHECKED BY Panthi
 PROJ NO 1912LP RTE
 CIVIL PE's PROJ NO 1712LP RTE
 TITLE **DRAINAGE IMPROVEMENTS**

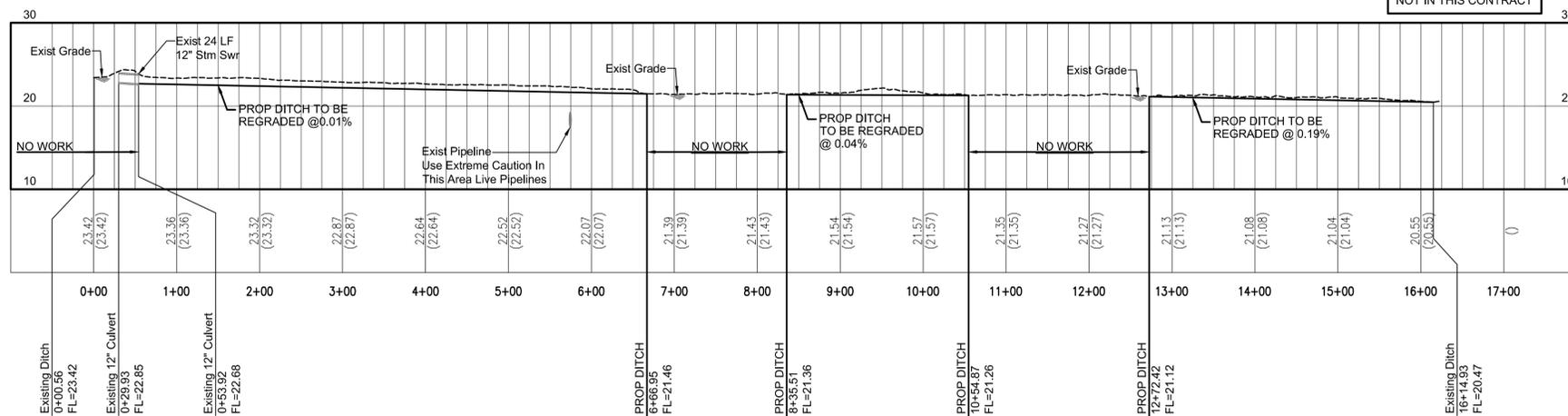
INFIELD DRAINAGE DITCH (SHEET 3)

SHEET **C-304**

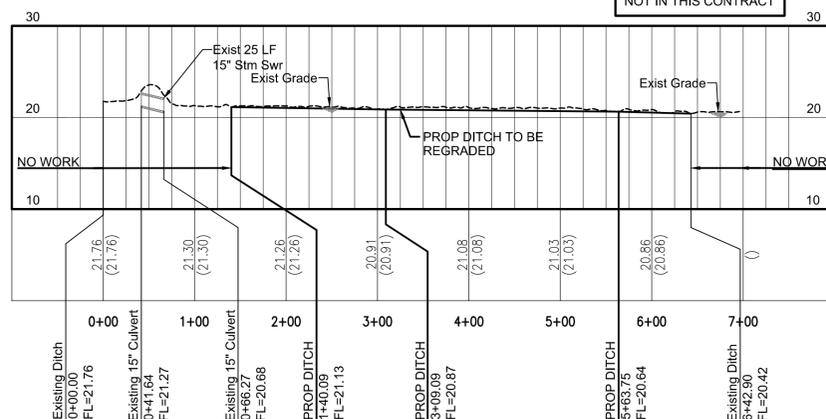


KEYMAP

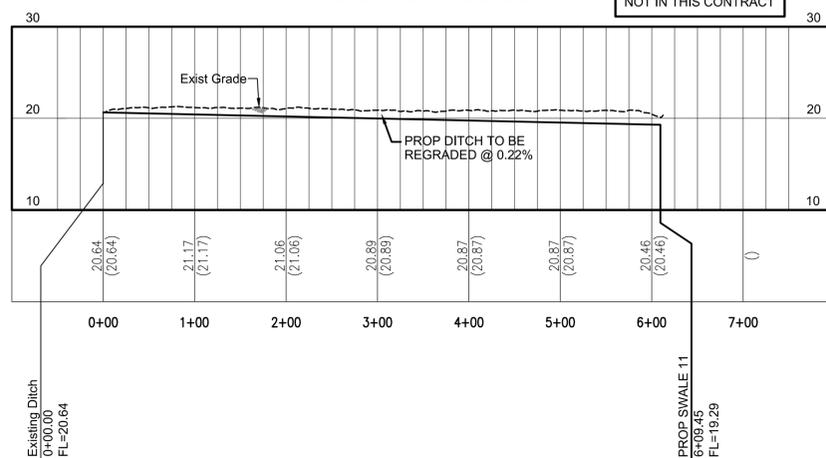
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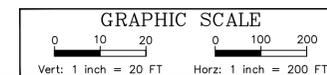
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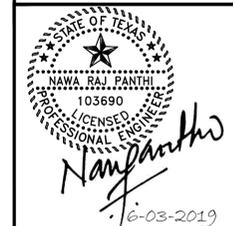


ALIGN-SWALE-09



REGRAIDING DITCHES AND SWALES SHOWN ON THIS SHEET ARE NOT A PART OF THIS CONTRACT. IT WILL BE A SEPARATE CONTRACT.





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LA PORTE MUNICIPAL AIRPORT

AIRFIELD PAVEMENT REHABILITATION AND DRAINAGE IMPROVEMENTS 2019

PROJ MGR Panthi

DRAWN BY Murphree

CHECKED BY Panthi

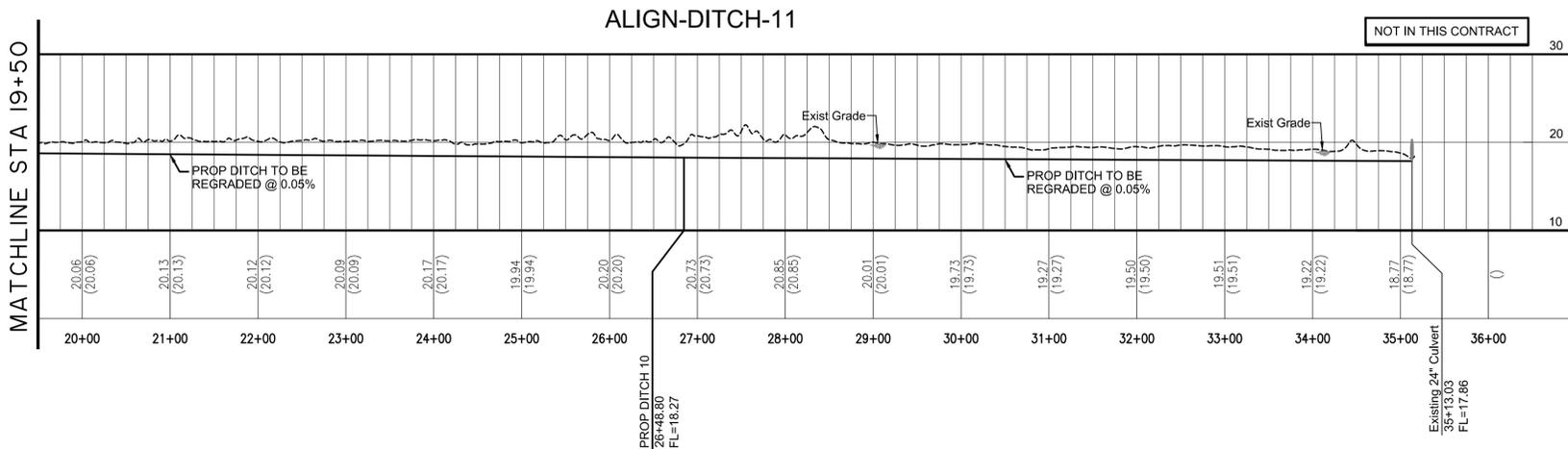
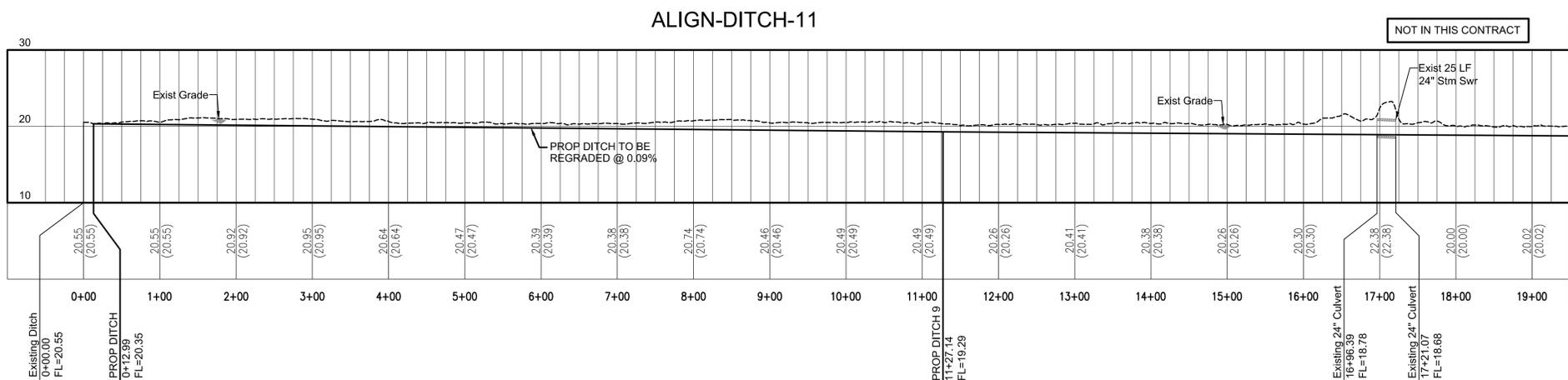
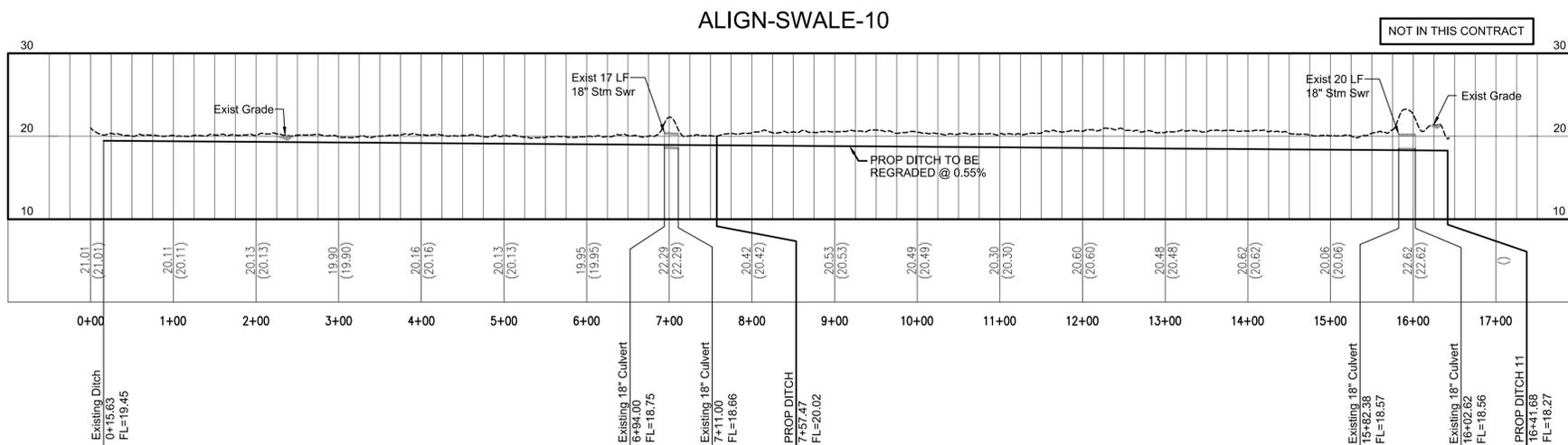
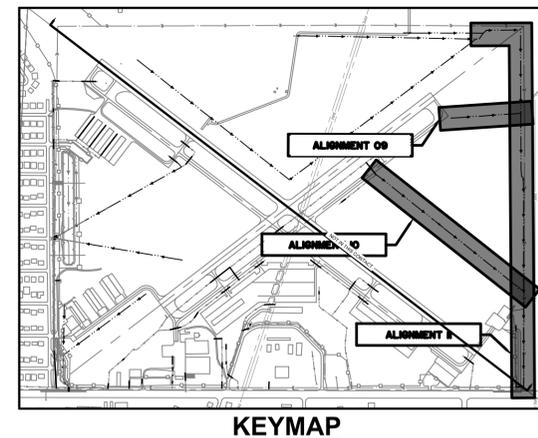
PROJ NO 1912LP RTE

CIVIL PE's PROJ NO 1712LP RTE

TITLE DRAINAGE IMPROVEMENTS

INFIELD DRAINAGE DITCH (SHEET 4)

SHEET C-305



REGRADING DITCHES AND SWALES SHOWN ON THIS SHEET ARE NOT A PART OF THIS CONTRACT. IT WILL BE A SEPARATE CONTRACT.



MATCHLINE STA 19+50

MATCHLINE STA 19+50



REQUEST FOR DRAINAGE & FLOODING COMMITTEE AGENDA ITEM

Agenda Date Requested: <u>March 9, 2020</u>
Requested By: <u>Lorenzo Wingate, P.E., C.F.M.</u>
Department: <u>Public Works</u>
<input checked="" type="radio"/> Report <input type="radio"/> Resolution <input type="radio"/> Ordinance

Appropriation	
Source of Funds:	_____
Account Number:	_____
Amount Budgeted:	_____
Amount Requested:	_____
Budgeted Item:	<input type="radio"/> Yes <input type="radio"/> No

Exhibits: Bay Harbor Drainage Improvements

SUMMARY

Opportunity to discuss any drainage concerns not covered by previous items.

Bay Harbor Drive to Oakhurst Follow-up

At the February 10th Drainage Committee meeting, we discussed the in-house drainage maintenance project being performed on Bay Harbor Dr. Construction efforts are complete. See attached photos of completed improvements. Staff initiated coordination efforts with TxDOT on February 11th, for maintenance of the roadside ditches along Broadway. At the time of the agenda request, TxDOT was still attempting to coordinate the requested work. Staff will provide an update to the Drainage Committee at the time of the meeting.

RECOMMENDED MOTION

Approved for Drainage Committee Agenda

Corby D. Alexander, City Manager

Date



