

Civil Engineering Proposal
Rienzi / North Canal Drainage Area Study
City of Thibodaux, Lafourche Parish,
Louisiana
August 7, 2017
DDG #17-398



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August 7, 2017

Dwayne Bourgeois, Executive Director
North Lafourche Conservation Levee & Drainage District (NLCLDD)
P.O. Box 309
Thibodaux, LA 70302-0309

RE: Rienzi / North Canal Drainage Area Study
City of Thibodaux, Lafourche Parish, Louisiana
DDG Project No. 17-398

Dear Mr. Bourgeois:

Please allow this letter to serve as our proposal to provide engineering support and analyses for the development of a Drainage Study for the Rienzi / North Canal Drainage Area, located in Lafourche Parish, Louisiana. DDG proposes to conduct the services described herein on a time and materials basis with a not to exceed limit. The not to exceed limit is based on various assumptions regarding the level of effort required for survey and modeling. Once the initial data gathering tasks are complete, the scope of the surveying and modeling effort may need to be adjusted in coordination with the NLCLDD. Fees for the project are detailed within the scope of work on pages A-1 through A-4.

The proposed engineering services contained herein are based on the information provided through phone calls, email correspondence, a meeting held with NLCLDD and David Duplantis on July 13, 2017, DDG's existing knowledge of the Basin based on previous work in the area, and the following attachments:

Attachment A – Scope of Work and Cost Proposal
Attachment B – Rate Sheet
Attachment C – Drainage Basin Exhibits

DDG appreciates the opportunity to provide these services to the NLCLDD. If the services described in this proposal are acceptable, DDG will assist the NLCLDD in completing and executing NLCLDD's standard letter agreement for professional services.

This proposal shall be considered valid for sixty (60) days from the proposal date.

Sincerely,
Duplantis Design Group, PC

A handwritten signature in cursive script that reads "Heather R. Klingman".

Heather Klingman, PE
Principal

Attachment A – Project Background, Scope of Work, & Project Assumptions

Project Background

The Rienzi / North Canal Drainage Basin includes approximately +/-1900 acres of land at the northern tip of Lafourche Parish as shown in Exhibit 2 (included under Attachment C). The Basin is generally bounded by St. Patrick Hwy to the West, Bayou Lafourche to the South, natural ridges and man-made canals to the east, and the Eighty Arpent Canal to the north. The Basin is comprised of a mixture of land uses, including commercial, residential, and agricultural. The Basin generally drains north to the Eighty Arpent Canal, which is located at the northern end of the Basin.

Due to drainage issues encountered within the Basin, NLCLDD has requested that DDG investigate the existing conditions to determine areas of deficiency that can be identified, studied, and subsequently addressed to improve the overall efficiency of the drainage system within the Basin. The investigation will focus on the existing conveyance systems out to the Eighty Arpent, the Eighty Arpent Canal, and the existing subsurface drainage systems throughout the Basin as needed to identify specific problem areas.

The Basin is located mostly within the limits of the City of Thibodaux, but the northernmost portion of the basin is located outside of the City limits. This study will evaluate the drainage basin as a whole without regard to the municipal boundaries so that the recommendations included in the study area are based on their effectiveness at improving the drainage within the overall basin as opposed to jurisdictional boundaries.

DDG proposes to take a step-by-step approach to this investigation. A detailed scope of work and the proposed phases are included in the next section of the proposal

Scope of Work

Phase 1 – Information Gathering

The following activities are included with this phase:

- Gather existing Lidar information available
- Set up an existing conditions exhibit showing all major drainage features, developed areas, and main drainage routing
- Gather all known studies completed for the Basin and evaluate as it relates to future planned improvements
- Meet with NLCLDD, City of Thibodaux, Lafourche Parish government, and large land holding companies within the study area to gather any reports that DDG may not have copies of, thoughts and experience on specific problem areas/issues, and knowledge of any future large-scale developments within the study area
- Review additional information gathered at meetings and establish a scope of work for any necessary topographic survey and field investigations
- A memo will be submitted to the NLCLDD outlining the existing drainage basin conditions and the established scope of work moving forward into the next task. Any modifications to the proposed scope of work will be addressed prior to commencing with Phase 2.

DDG Phase 1 Fee: \$13,000

Phase 1 Duration: 3 weeks

Phase 2 – Field Investigation / Survey

The following activities are included with this phase:

- Commence topographic survey work and field investigations to evaluate the accuracy of lidar information and to evaluate the existing conditions of the drainage conveyance systems.
- The extent of the survey work that will be required will not be known until the end of Phase 1 / beginning of Phase 2, as such, DDG has assumed a not to exceed fee of \$8,000 for topographic survey work. If it is determined during the course of the investigation that the required survey will exceed the \$8,000 limit, DDG will coordinate with the NLCLDD for additional services.
- Evaluate information obtained from survey and field investigations and generate an initial list of recommended improvements. The initial list of recommendations will be determined through observation and an understanding of the hydrology and drainage in the study area based on previous reports and interviews of individuals with direct knowledge of the Basin.
- A memo including the initial list of recommendations will be prepared and submitted to the NLCLDD for review and comment. This list of improvements will be evaluated to determine their effectiveness based on modeling to be conducted in Phase 3. Any modifications to the initial list of recommended improvements will be addressed prior to commencing with Phase 3.

DDG Phase 2 Fee: \$20,000

Survey Cost: \$8,000 subject to change based on actual data needs

Task Duration: 8 weeks

Phase 3 – Hydraulic & Hydrologic Modeling

- At this time, the exact scope of the modeling effort has not been determined in detail. The level of modeling effort will depend on the details that are required to evaluate the existing drainage issues and recommend solutions. The fee below assumes that modeling will be somewhat limited to the main conveyance channels within the Basin. If the initial phases of this investigation show that a more detailed level of hydrologic and hydraulic model is required to represent infrastructure at the individual pipe, manhole, smaller laterals, etc., then a more detailed modeling effort will be required. In this instance, DDG will negotiate with the NLCLDD for additional fees required to develop this more detailed model.
- Generate an existing conditions model based upon the information gathered in Phases 1 and 2. DDG will utilize either HEC-RAS or SWMM. Model selection will be coordinated with the NLCLDD.
- Study results of the existing conditions model as it relates to the initial list of recommendations.
- Refine initial list of recommendations based on results of existing conditions model.
- Incorporate proposed improvements in the existing conditions model to generate a proposed conditions model.
- Study results of the proposed conditions model and refine recommendations as needed to optimize results.
- Present model results to NLCLDD in memo form for review and comment prior to preparation of final report.

DDG Cost: \$25,000

Task Duration: 10 weeks

Phase 4 – Report Preparation and Presentation to NLCLDD

- DDG will prepare the final deliverable in the form of a written report that outlines the proposed improvements.
- The report will include a description of the existing drainage facilities with supporting exhibits, a summary of the proposed improvements, anticipated costs, and recommended phasing of the proposed improvements
- The results of the modeling analysis will be presented in terms of flow rates and water surface elevations at defined locations.

DDG Cost: \$12,500

Task Duration: 3 weeks

Project Summary

Phase	Phase Description	Task Duration (weeks)	Cumulative Duration (weeks)	DDG Fee	Survey Fee	Total
1	Information Gathering	3	3	\$13,000		\$13,000
2	Field Investigation / Survey	8	11	\$20,000	\$8,000	\$28,000
3	Hydraulic & Hydrologic Modeling	10	21	\$25,000		\$25,000
4	Report Preparation	3	24	\$12,500		\$12,500

Project Assumptions

The project assumptions below are believed to be reasonably accurate at the time this proposal was prepared based on the information available. These items are not to be deemed as statements of fact but only assumed parameters used in the preparation of the fees associated with this project. Changes to these parameters during the course of the project may result in decreased or increased fees.

- DDG will be provided any and all existing data relevant to the Basin for review and incorporation into the study.
- Cost of surveys described in phase 2 will be updated based on an actual proposal from a survey subconsultant once the detailed scope of survey work is determined. The increase or decrease of the fees associated with this phase will be coordinated with the client and will be included in a formal contract amendment. Any fee increase will be coordinated with the client prior to commencement of the work.
- Detailed design of proposed improvements is not included in the scope of this work.
- Wetland delineation, environmental permitting, and consultation with the U.S. Army Corps of Engineers/DNR is not included with this scope of work. If the client would like DDG to provide these services, an additional services request can be submitted.



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Attachment B – Rate Sheet
(Effective 2/27/16)

Executive.....	\$155.00 - \$170.00/hour
Principal.....	\$145.00 - \$155.00/hour
Senior Associate.....	\$135.00 - \$145.00/hour
Associate.....	\$130.00 - \$140.00/hour
Business Unit Leader.....	\$130.00 - \$140.00/hour
Senior Project Manager.....	\$120.00 - \$140.00/hour
Senior Design Professional.....	\$120.00 - \$140.00/hour
Project Manager.....	\$100.00 - \$135.00/hour
Assistant Project Manager.....	\$85.00 - \$110.00/hour
Construction Manager.....	\$100.00 - \$130.00/hour
CAD Designer.....	\$85.00 - \$95.00/hour
CAD Technician.....	\$55.00 - \$85.00/hour
Project Representative.....	\$45.00 - \$65.00/hour
Administrative Assistant.....	\$45.00 - \$60.00/hour

Reimbursable Items

Vehicle Travel for Projects.....	\$0.54 per mile
Transportation, Lodging, and Subsistence for out of town travel.....	Cost
Printing Cost	
Bond.....	\$0.25/s.f.
Vellum.....	\$0.65/s.f.
Mylar.....	\$1.90/s.f.
Color Bond.....	\$6.50/s.f.
Color Photo.....	\$11.00/s.f.
Photographs, Telecopier, Shipping, and Materials.....	Cost
Filing/Recording/Permitting Fees.....	Cost
Deposition/Trial Testimony by Principal, P.E., or AIA.....	Rate x 1.5
Subconsultant Services.....	Cost + 10%

*Rates are subject to change. DDG reserves the right to change the rate sheet periodically. If DDG is being compensated based on an hourly agreement, DDG will bill the client based on the new rates established on the modified rate sheet.

Client's Initials _____

ATTACHMENT C – Drainage Basin Exhibit

