
Terry Martin Mcconathy

Louisiana State University and Agricultural & Mechanical College

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The proposal in an engineering context: A field study of document development

McConathy, Terry Martin, Ph.D.
The Louisiana State University and Agricultural and Mechanical Col., 1989

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THE PROPOSAL IN AN ENGINEERING CONTEXT:
A FIELD STUDY OF DOCUMENT DEVELOPMENT

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
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in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of English

by

Terry Martin McConathy
B.A., The University of Toronto, 1969
M.A., Louisiana Tech University, 1986
May, 1989
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I would like to dedicate this document to my father who I wish could have lived to see me graduate and to George without whom I wouldn't have made it this far.
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ABSTRACT


by Terry Martin McConathy

The specific goal of this field study was to develop an empirically-based description of engineering proposals as they are developed and used in their natural context; this goal was designed to provide a data base for further study addressing the general research interest of why the descriptions of proposals in technical writing textbooks vary so significantly from the types of proposals produced and used in a nonacademic environment, specifically engineering. Using strategies borrowed and adapted from sociological and anthropological research methodologies, the study focused on collecting field-based data through interviews, field notes, questionnaires, and artifacts about the form, content, structure, and use of proposals by an engineering firm in state, federal, and municipal projects. Analysis of the data confirmed the discrepancy between the characterization of proposals in textbooks and the configuration and function of proposals in the study's context. The staging framework, taxonomy, and lexicon developed for the proposals used by the firm highlighted four major focuses for further study: (1) a correlation
between textbook and practice to develop more empirically-based guidelines for instruction; (2) a re-evaluation of the concept of audience as a fluid term that should be partitioned into more meaningful sub-categories such as user, use, function, or purpose in a specific context; (3) an analysis of the function of language in academic and nonacademic contexts to avoid arbitrary, meaningless, or unilateral labels; (4) a longitudinal study to analyze the evolution of content as controlled by form, use, and context.
CHAPTER ONE: INTRODUCTION

1.1. OVERVIEW

Recent research in composition has focused on the contextualization of the writer and the written product, especially in naturalistic studies which have moved beyond the classroom to investigate the environment and behavior of the nonacademic writer. Researchers have tended to focus on the writer more than on the document in order to develop a more useful conception of what writers do or perceive they do while writing. These studies have examined the written product in light of the writer's or reader's interaction with that text. Information gathered in this research has contributed to the ongoing evolution of composition theory and practice in academic and nonacademic settings.

Most recently, however, researchers such as Lunsford and Ede (1986) have paid attention to the nature of the writing activity as it pertains to the sources for and authorship of documents in nonacademic, job-related settings. Their work suggests that further examination of the processes involved in the structuring of complex documents in nonacademic settings would be informative to pedagogical and theoretical studies of technical and business writing activities. Traditional business and technical writing textbooks tend to present documents
typically associated with technical writing (proposals, short reports, formal reports, letters, memoranda, etc.) in isolation as autonomous units. I sense, however, that the distinctions between technical and business writing, between individual writing formats, and between writer- and reader-based writing activities that most academic curriculum planners make blur beyond recognition in the workplace. I suggest that focusing on the nature, conformation, and sources of complex documents in a nonacademic setting will yield valuable information about writers and what they write in job-related tasks. Although it is not my purpose to examine the rhetorical decisions made by writers or the protocols followed by contributors to complex documents, studying the documents themselves may suggest certain patterns of construction and production that can be identified as commonplace in similar contexts.

It is my hypothesis that complex documents produced in a natural context exhibit both normative and original segments drawn from a variety of sources. In addition, I suggest that an examination of these documents will show that conventions of style and format will usually be determined by more than one agent. Further, the proposals produced in a natural context tend to deviate in form, source, and content from the traditional or standard types
exemplified in most current technical writing texts. I anticipate that my investigation will reinforce and extend current research which posits that documents in a nonacademic environment are not produced in isolation as most current textbooks suggest. The complex proposal exists as an artifact within a larger context by virtue of the support communications (such as letter, internal memorandum, normative boilerplate, interim report, etc.) which engender, accompany, and follow the proposal.

My study, then, will focus primarily on the complex proposal as an artifact within the context of an environment in which proposals comprise a major portion of the documents produced to conduct business. Initially, this focus might seem retrograde in terms of current trends in composition theory by returning to the product rather than to the writer as primary focus; however, I believe that such a study can serve to reintegrate process and product, writer and document into a more holistic perspective of composition theory. I view the development and application of theory as evolutionary rather than tangential. Like the writing process itself, research should be recursive and cumulative, drawing historically valid factors into present investigations to consolidate and extend our comprehension of writing theory and practice.
1.2. SURVEY OF THE LITERATURE

The focus of studies of the contextualization of the writer and the written product has evolved during the past fifteen years. Until the early 1970s, writing was primarily studied in terms of the product. During that decade, researchers began to investigate writing as a process in itself and then writing as a cognitive process. Most recently, research has demonstrated a tendency to synthesize previous trends into a more comprehensive view of writing as social process, a view that contextualizes rather than isolates the writer, the product, and the environment. Researchers now use such diverse techniques as protocol analysis, which seeks the inner dimensions of the writer and the writing process, and ethnographic strategies of data collection, which embrace the outer, socially/institutionally defined context.

This evolution in composition research has broadened the parameters of traditional technical writing concerns to include rhetorical, cognitive, contextual, and sociological elements in an attempt to establish theoretical and empirical foundations for the discipline.

1.2.1. Early Theoretical Research

Early efforts to classify types of discourse, such as
those of Moffett (1968), Burke (1969), and Britton (1975), suggested that writing consists of communications shaped by such forces as subject, audience, text, and purpose. As Harris (1979) and Miller (1979) have indicated, Kinneavy's definition of reference discourse in *A Theory of Discourse* (1971) is particularly helpful in explaining why technical writing exhibits particular organizational, logical, and stylistic patterns within a scientific discourse community.

This identification of particularized modes of discourse led inevitably to broader conceptualizations about the interrelationships between the writer, the text, and the audience. Emig's seminal case study (1971) of the composing processes of twelfth graders indicated a shift away from the particularization of a document toward the perception of writing as a process. Researchers, focusing on the evolution of the text, designed specific pedagogical guidelines for the discovery and expression of ideas. Burke's pentad (1969) suggested that people organize their experience in dramatistic terms; Young, Becker, and Pike (1970) developed their tagmemic system of conceptualizing experience; and Christensen (1963) and O'Hare (1973) examined the structure and rhetoric of the sentence in discourse. Stevenson, wanting to ensure that technical writing courses addressed a cross-section of
purposes and audiences, developed a matrix (1978) to classify types of writing and outlined various activities (1981) that could be used to address these concerns in the classroom. The development of cognitive approaches to psychological theories of learning offered composition researchers provocative methods of analyzing and codifying the strategies used by writers as they composed. Flower and Hayes (1977) and Flower (1981a) suggested that writing was a form of problem-solving which could be described by using protocol analysis to discover the choices made and strategies used by the writer during the writing process. Odell (1980, 1985) examined written products to identify analytic skills writers might use to formulate their thoughts, and Larson (1983) called for further research to explore the activities of the writer's mind.

The theories and pedagogical principles which emerged from these studies served to further identify and articulate the complex interrelationships that exist among the writer, the document, and the audience. The processes involved in writing were recognized as fluid and recursive rather than linear and one-dimensional.

1.2.2. The Recognition of Context in Theoretical Research

As researchers broadened the scope of their investigations to include strategies arising from
cognitive psychology, Mishler (1979) argued that the importance of context to meaning had been ignored by education and the social sciences. Vygotsky's (1962) early position that all language (both inner and outer) was social became expanded by a number of theorists and researchers, such as Bruffee (1986) and Faigley (1985) to include the semiotics of language in composition theory.

This focus on the contextualization of writing continued as a major factor in the examination of composition and technical writing as cognitive strategies revealed the invention, writing, and revision behaviors of writers. Bauman and Sherzer (1975) and Halliday (1978) perceived language as interpersonal, relying on sociocultural information to constitute and transmit knowledge of reality. Halloran (1978) saw scientific writing not as a function of the Cartesian "solitary individual" but as "a notion of human understanding that starts with...community" (82). Bruffee in his studies of the social nature of reading and writing became increasingly committed to the communal facets of communication. In 1983, he stated, "Reader and writer become part of each other's sustaining environment. Like any other learning or problem-solving activity, writing becomes essentially and inextricably social or collaborative in nature" (166). He furthered this thesis
by suggesting in "Collaborative Learning and the 'Conversation of Mankind'" (1984) that educators must lead students beyond their individual values and skills to a "reacculturation" (652) into a "knowledge community's normal discourse" (643). In "Social Construction, Language, and the Authority of Knowledge" (1986), Bruffee contrasted cognitive theory which "is based on the assumption that writing is primarily an individual act" in favor of social constructionism which "is based on the assumption that writing is primarily a social act" where "language originates with the community to which [the writer] belongs" (784). For Bruffee, then, the specific environment of the discourse participant implicitly determines the interactive form, expression, and comprehension of the communicative act. Building on Bruffee's evidence, Park (1987) argues that "the issue of audience in writing instruction is one of social development and maturation--of student writers learning to see themselves as social beings in a social situation" (488). Faigley (1985) observed that "written texts [are] links in communicative chains with their meaning emerging from their relationships to previous texts and the present context" (235). Odell (1985) concluded from his study of workers in a state bureaucracy that researchers and educators "have scarcely begun to understand how
organizational context relates to writing" (278). He determined that the institutional or organizational context and the hierarchical nature of social/power structures in nonacademic environments explicitly directs and forms discourse. Researchers now began to examine writing from a social perspective taking into account the interactions between discourse participants within the environment of a particular institutional setting.

This heightened sensitivity to the contextualization of writing and writer was accompanied by an increasing concern with examining the contexts of the writing process and product, and with developing strategies to help writers access those contexts while translating their inner thoughts to discourse. Russell (1987) documented attempts by educators over the past thirty years to establish writing programs across institutional curricula. Awareness of the need for interdisciplinary academic discourse communities began to spread to identification of the need for effective instructional and communicative strategies within and between academic and nonacademic environments. Increasingly, researchers called for a closer correspondence between academic and nonacademic writing environments, especially in the development of the theory and pedagogy of technical writing. Several studies were conducted that demonstrated the pedagogical value of
providing scenarios, rhetorical cases, models, and empirical evidence rooted in real world contexts.

Building on earlier research (Flower and Hayes 1977), Flower (1981a) contrasted the rhetorical demands of school and professional writing and concluded that traditional classroom writing activities tend not to reflect the demands placed on the professional who writes "in the context of an authentic rhetorical situation in which writer, reader, and subject all place powerful demands on the act of writing" (119). She offered further problem-solving strategies as effective bridging devices between school and professional writing contexts in her text, Problem-Solving Strategies for Writing (1981). Flower, Hayes, and Swarts (1983) more clearly acknowledged the influence of context in their study of the processing and revising of functional documents. As a result of this study, they articulated the scenario principle "which states that functional prose should be structured around a human agent performing actions in a particularized situation" (42). Winkler (1983) acknowledged the merit of scenarios in her discussion of the role of models. She posited, however, that such scenarios should include process and product approaches in their rhetorical strategies as well as sequence them with invention models preceding structural models.
These studies acknowledged that the writer and the product have always functioned in a recognizable context; however, the researchers identified that this traditional conception of the context for the writing situation was narrow and unrealistic. They posited that studies of the writer and his or her writing should incorporate those external factors and influences which significantly affect the writing process. Accordingly, researchers began to broaden the scope of their theoretical and pedagogical investigations to include the writer's academic and nonacademic environment.

1.2.3. The Shift to Empirical and Naturalistic Studies

As researchers continued to define and redefine the contexts of the writer and the written product, they uncovered various inconsistencies or gaps between academic and nonacademic writing and among specific discourse communities within each environment.

Odell, in several of his single-authored and collaborated articles (1980, 1982, 1983a, 1983b, 1983c, 1985a and 1985b), specified the importance of contextuality as evidenced by the variety of nonacademic writing produced within an organization. He and his co-authors also emphasized the disparity between classroom writing activities and nonacademic rhetorical environments.
and demands. In the academic environment, Herrington (1985) discovered that distinct discourse communities existed even in each of two college chemical engineering courses. Mathes and Stevenson (1976a) document additional discrepancies between academic and nonacademic environments. They identified audience and purpose as two major perceptual differences between the pedagogical orientation of classroom communications and the instrumental purposes of industrial communications. Recently, Lunsford and Ede (1986) published the preliminary findings of their study of collaborative writing. They emphatically supported the existence of these discrepancies: "Underlying all these questions was our growing recognition of the dichotomy between current models of the composing process and methods of teaching writing...and the actual situations students will face upon graduation" (71).

Additional research in technical writing suggests that the writing performed in nonacademic settings is particularly context-specific and, therefore, difficult to generalize in terms of pedagogical methodology. Selzer (1983), in his study of the writing strategies used by an engineer, suggests that "technical writers should develop several composing styles that they can call upon in different composing situations" (186). Based on his
evaluation of fifty surveys of types of on-the-job writing, Anderson (1985), like Selzer, recommends that "Career-related writing courses should focus on general writing strategies that students can apply in a variety of work-related rhetorical situations" (76).

Other researchers reinforce these conclusions about preparing students for the unique writing situations they will encounter in their professional careers. Studies continue to document that the traditional types and conventions of business and technical writing being taught in the classroom do not, and cannot, accurately represent the writing processes and products that exist in the nonacademic environment. Smith (1976) called for increased training in the practical skills of what is now called desktop publishing. Mathes and Stevenson (1976) stated that "the writing most engineering students do in college bears...little resemblance to the writing required of professional engineers" (Designing xv). They also reported that problem-oriented courses, either simulated or real, address "the technical activities required of practicing engineers; however, [they] often [do] not simulate the communication activities required" ("Completing" 154). Krowne and Covington's survey (1982) found that engineering students "don't know much about the way they will be called on to perform on the job" (248),
especially in terms of the communicative demands of their profession. Paradis, Dobrin, and Miller (1985) recorded that working professionals felt their college training did not prepare them for workplace communication demands. Lehrer and Bean (1985) challenged Civil Engineering faculty to provide more realistic communication training to their students. Winkler (1985), Moran and Moran (1985), and Tebeaux (1985) concluded that business and technical writing textbooks need to reevaluate the emphasis they place on strategies and formats that do not represent actual practices. Contending that organizations shape a writer's tone and style, Lutz (1986) argued that "classroom situations should attempt to prepare future technical and scientific communicators for the socio-political aspects of the rhetorical situations they will encounter on their jobs" (188). Faigley (1986) acknowledged that process theory has drawn attention to contextual considerations, but he asserted that the process movement "must take a broader conception of writing, one that understands writing processes are historically dynamic--not psychic states, cognitive routines, or neutral social relationships" (537). Like Faigley, Hagge (1987) vividly and, at times, extravagantly urged proponents of process theory to look beyond what he felt is their narrow view of communication:
"...this insistence on writing as a self-centered, inward-turning act dependent on private, inarticulate meanings makes process pedagogy suspect, for human linguistic communication is social; it occurs as publicly observable behavior in concrete situational contexts" (113). Supporting these conclusions are studies that document the major role of written and oral communication in business and professional environments. In his survey of 245 engineers, Davis (1978) found that his respondents spent 24% of their time writing and 31% of their time working with material other people have written (214). His respondents suggested that "they are acutely conscious of the need for effective written communications...and many feel that young engineers are deficient in their ability to communicate on paper" (214). Faigley and Miller (1982) found similar emphasis on communication skills in their survey of 200 college-educated people employed in nonacademic positions. Their discussion carried a social/contextual undercurrent by urging a "semiotic view of writing, a view that incorporates writing among other forms of communication" (569). The overwhelmingly positive evidence gathered by Bataille (1982) and Spretnak (1982) in their surveys to determine the importance of writing to college graduates can best be described in Bataille's words: "If nothing else, the
responses should slay the seemingly ever-enduring myth that engineers do not have to write to be successful" (277). German and Rath (1987) cited a survey conducted by the American Society for Engineering Education which revealed "that practicing engineers rank communication skills as far more important to their career development than actual engineering knowledge" (335). German and Rath's study also found that "average employees [of the companies studied] devote more than 50 percent of their workday to communication tasks" (339).

Close examination of the structure and influence of the writer's environment on the writing process has demonstrated discrepancies not only in pedagogical techniques but also in perceptions of nonacademic communication theory and practice. Researchers and practitioners are questioning the traditional definitions of subject, audience, and purpose and calling for empirically-based data to either support these definitions or modify them to reflect the complexity, diversity, and dimensionality of academic and nonacademic writing situations.

1.2.4. The Introduction of Ethnographic/Naturalistic Methodologies into Composition Research

The discrepancies or gaps that have been identified
between classroom and real world practices have encouraged researchers to adapt investigative strategies drawn from anthropological and educational sources to their own work. To discover and document the role of the writer and of writing in nonacademic environments, some researchers have turned to ethnographic and naturalistic methodologies to document fully the contextualization of process and product and to determine more clearly the variables that can and do interact with the actual writer and the particular text. Gould (1980) moved beyond the classroom to study letter writing in a realistic setting. Selzer's observations (1983) of an engineer's composing processes suggested that nonacademic writing, unlike most process-oriented in-class writing, might be more linear than recursive. Odell et al. (1983) have adapted and developed strategies, such as the discourse-based interview, specifically for research in nonacademic settings. Paradis, Dobrin, and Miller (1985) observed in-house writing behaviors and outcomes in a research and development organization and determined that writing was a largely undocumented and unrecognized commitment in terms of function, time, and productivity. Their on-site involvement in the writing environment served not only to document actual events but also to sensitize the informants to their writing habits and performances.
Miller and Selzer (1985) analyzed successful proposals to demonstrate that Aristotle's theory of special topics of argumentation were still valid and operational in the modern workplace. Doheny-Farina (1986) observed the socio-organizational contexts of writing in the development of a business plan in a struggling company and determined that writing is highly context-based and influential in writer/respondent group configurations. Lunsford and Ede (1986) have begun to examine the communal/consensual nature of authorship in professional organizations and suggest that the individualized writing practices of classroom environments may not reflect nonacademic writing processes. Spilka (1988) argues convincingly for the use of such ethnographic strategies as methodological triangulation to achieve valid in-depth information about "how writers in the workplace compose documents" (211). By acknowledging the discrepancies between pedagogical theory and practice and between academic and nonacademic writing contexts, researchers looked beyond traditional investigative strategies to identify methodologies which would generate context-specific data and grounded theory.

Whether the heightened sensitivity in research to the social and organizational contexts of nonacademic writing can be traced to the increased use of field study
techniques derived from ethnographic and naturalistic disciplines or vice versa is irrelevant. The trends complement each other and provide valuable insights into the practice of writing beyond the classroom. These methods of research will eventually feed back into theoretical and pedagogical designs to reintegrate and refocus accumulated knowledge about inventional and structural approaches to writing.

1.3. AN INFORMAL SURVEY OF EIGHT CURRENT TECHNICAL WRITING TEXTBOOKS

Very few researchers have undertaken a comprehensive study of technical writing texts to determine the evolution of pedagogical principles and to speculate on trends and aberrations. Winkler (1985) surveyed representative technical writing textbooks published over a twenty-year period; she classifies these texts into three broad categories: general principle texts, structural models texts based on expository principles, and inventional/process texts. Her concluding remarks call for "further research into alternative modes of organization that better explain the interactive, dynamic process of writing" (47).

Haselkorn (1985) provides a more focused study of technical handbooks and textbooks; his survey, covering
the publication period 1965 to 1983, annotates several sources of advice for writing proposals. Like Winkler, Haselkorn calls for more "empirical studies that test, claim by claim, the large amount of advice [for proposal writing] already in print" (275).

My current study is not intended to be such a claim-by-claim correlation between text and practice. At this stage in my research, my priorities must lie in establishing base-line parameters of the structure, production and use of documents produced in a natural setting. Before I can undertake qualitative and quantitative comparisons between documents produced in other contexts with those presented in various technical writing texts, I must determine the processes and situations that generate such documents and identify some of the major documents themselves in a primary context. Accordingly, I believe that an informal survey of some of the most recently published technical writing textbooks would be adequate at this stage to suggest that complex documents, such as proposals, formal reports, and scientific papers, tend to be presented to the student as standardized in form, content, and use. I anticipate that my field study will demonstrate that these documents are not as isolated or predictable as the texts suggest.

Since I had identified proposals as my artifacts, I
examined those sections in eight recently published technical writing textbooks that deal with proposals to establish a sense of how these documents were characterized. My selection criteria were simple: (a) the textbooks present proposals as documents serving an identifiable function in the nonacademic environment; (b) the pedagogy reflects an awareness and/or an understanding of current writing process theory and practice; (c) the examples, models, and terminology in the textbooks adequately reflect realistic activities, situations, and vocabulary found in nonacademic settings; and (d) the textbooks are used as instructional guides in academic settings. Brusaw's Handbook, although not a textbook, is used as a reference book by students writing in nonliterary disciplines. These texts tend to present the proposals to the technical writing student as a separate and independent genre of documents usually authored by one person. The components appear to be fairly standard, and the contexts and/or agents engendering the proposals receive scanty consideration at best.

1.3.1. Technical Writing: Situations and Strategies
(Markel 1988)

In his chapter on proposals (334-66), Markel outlines external and internal proposals, with particular emphasis
Markel focuses on proposals solicited by private industry and government which rely on suppliers' responses to two types of statements: IFBs (Information for Bid statements) used for standard products and RFPs (Request for Proposal statements) used for customized products. Markel briefly acknowledges that some agencies provide IFBs, RFPs, and/or guidelines which the proposal writer should follow; however, he omits any discussion of how the proposal writer should deal with these guidelines. The one example of external guidelines he does give appears in a figure that is almost impossible to read. Markel then suggests a detailed model structure by describing proposal elements: summary, introduction, proposed program, qualifications and experience, budget, and appendixes sections. He concludes his discussion by briefly describing a group planning technique called "STOP" (Strategic Thematic Organization of Proposals) devised by Hughes Aircraft in 1962.

In his discussion of internal proposals, Markel cross-references his remarks to his sections on progress reports, completion reports, and external proposals to highlight structural elements that can be used in the shorter memorandum-type internal proposal.
1.3.2. Technically-Write! (Blicq 1986)

In this text, using models and role-plays as his primary delivery system, Blicq gives one-and-a half pages of narrative, two pages of illustrative material, and four role-play projects to his discussion of technical proposals. He focuses exclusively on internal memorandum-type proposals and overlooks longer, more complex proposals, suggesting to his reader that "formal technical proposals are prepared by companies seeking to impress or convince another company, or the government, of their technical capability to perform a specific task. They are normally impressive documents prepared under extreme pressure, and call for techniques beyond the scope of most courses [the student is] likely to encounter" (125).

1.3.3. The Technical Writing Process (Samuels 1989)

Samuels focuses on the processes involved in planning and executing short internal and external proposals for which the contracting agency or individual does not provide written instructions for preparation and presentation of the proposal (203-222). She breaks the planning stage into four steps: assembling evidence, identifying the main message, identifying readers' criteria, and analyzing information. She then examines
two sample proposals to demonstrate criteria dealing with the opening summary, the reader’s major concerns, possible objections, and style of presentation.

1.3.4. Processes in Technical Writing (McMurrey 1988)

McMurrey briefly describes sources of proposals ranging from straightforward work estimates to formal, complex solicited documents (580-90, 599-605). His primary emphasis, however, is on personal proposals (i.e. proposals submitted by an individual rather than an organization). He discusses various segments of proposals: introduction, problem review, related literature, task breakdown, feasibility statement, statement of qualifications and experience. Elements of these personal proposals could be applied to organizational submissions, but McMurrey does not elaborate on this possibility. He does, however, acknowledge external sources but gives little insight on how the writer should interpret and use the information given in those sources.

1.3.5. Reporting Technical Information (Houp and Pearsall 1988)

This text provides a more detailed description of complex proposals (389-409) and includes several concepts
and labels more closely associated with organizational rather than personal proposals. Before describing basic strategies for proposal writing, the authors provide a flowchart describing the path of a proposal from solicitation through bidders' conference, preparation, and study to award of contract. Brief mention is made of RFP guidelines; the extent of the authors' advice is to "follow the RFP directions to the letter." Again, no discussion or guidance is given to the writer about how to interpret and use these external guidelines in the preparation of a proposal. Houp and Pearsall then describe a commonly used format for proposals: project summary; project description which includes introduction, rational and significance statement, plan of work, facilities and equipment; statement of personnel qualifications; budget; and appendixes. Their examples focus primarily on personal and student proposals rather than on complex organizational submissions.

1.3.6. **Components of Technical Writing** (Feinberg 1988)

Feinberg presents a fairly extensive discussion of informal and formal proposals ranging from internal memorandum types to standard form types and full-length formal proposals (243-76). In her section on formal proposals, Feinberg briefly addresses the complex and
collaborative nature of most lengthy proposals submitted to government agencies which provide specific guidelines for preparation and presentation of the document. Of the three samples of external guidelines Feinberg provides, one is difficult to read, and the other two are not accompanied by explanations or instructions about how to interpret or use these guidelines. Feinberg's discussion of the standard elements of formal proposals is confusing. She gives three lists apparently describing these standard elements, yet the lists do not correlate with each other clearly or consistently. The lists/outlines on pages 263, 264, and 266 use different labels and different orders of presentation; Feinberg's narrative does little to clarify these figures.

1.3.7. Technical Writing: Method, Application and Management (Philbin and Presley 1989)

This text identifies three purposes for proposals: to obtain new business or upgrade existing contracts, to obtain funding, and to record transactions between clients and suppliers. The authors provide more information about complex proposals than the other texts examined and include very brief descriptions of elements not mentioned elsewhere (such as boilerplates and qualifications/experience statements). Their description of the
structure and content of typical proposals is also more comprehensive. They delineate the following elements as necessary for the effective proposal: Introduction (letter of transmittal, cover, title page, abstract, table of contents, assurances, statement of need, goals and objectives), Middle (flowchart, timeline, narrative), and Conclusion (evaluation plan, reporting and distribution plan, management plan, budget, personnel qualifications statement, preliminary agreement to hire). The examples tend to focus on individually authored proposals, but some information is given about externally imposed guidelines provided by clients.

1.3.8. Handbook of Technical Writing (Brusaw et al. 1989)

This handbook separates proposals into three types: internal proposals, sales proposals, and government proposals.

Internal proposals (307-11) are described as memorandum-type documents designed to provide a solution to an internal organizational problem.

Sales proposals are categorized as simple or elaborate, depending upon the length of the document and the complexity of the product under consideration (519-36). The authors suggest that both types of sales proposals should contain information about the project and
potential solutions, cost breakdowns, and persuasive material about the company proposing the service.

Of the eight texts, this handbook gives the most detailed description of complex documents under the heading "government proposals" (243-51). IFBs (Invitation to Bid statements) are defined as inflexible documents which specify the quantity and type of item that is being purchased. In contrast, an RFP (Request for Proposal), according to Brusaw et al., only defines a problem and leaves the definition of solution, goods, and services to the potential bidders. The handbook suggests that a proposal in response to an RFP should contain a statement of the problem, qualifications statement, proposed solutions, and cost statements.

1.4. SUMMARY

These eight texts consistently present the proposal as a single-authored document written for a single audience. Figure 1.1 summarizes the presentations of proposals in these texts. In each textbook, I focused on the type of proposal emphasized, the writer (individual or multiple contributors), the source of guidelines for format (textbook or client), major structural components of proposal, use of proposal, genesis (solicited or unsolicited), and audience (single or multiple).
<table>
<thead>
<tr>
<th>TEXTBOOK</th>
<th>TYPE OF PROPOSAL EMPHASIZED</th>
<th>WRITER</th>
<th>SOURCE OF GUIDELINES</th>
<th>MAJOR STRUCTURAL COMPONENTS</th>
<th>USE</th>
<th>GENESIS</th>
<th>AUDIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markel</td>
<td>Long, external proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Summary, introduction, proposed program, qualifications, budget, appendixes</td>
<td>Bid to supply products</td>
<td>Solicited</td>
<td>Purchaser of goods</td>
</tr>
<tr>
<td>Blicq</td>
<td>Internal, informal proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Summary, introduction, discussion, recommendations</td>
<td>Present new ideas</td>
<td>Unsolicited</td>
<td>Manager</td>
</tr>
<tr>
<td>Samuels</td>
<td>Short internal and external proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Problems, objectives, methods, evaluation</td>
<td>Bid or present problem/solution</td>
<td>Solicited or unsolicited</td>
<td>Decision maker</td>
</tr>
<tr>
<td>McMurray</td>
<td>Personal proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Introduction, problem review, related literature, task breakdown, feasibility</td>
<td>Propose project, recommend action, or institute research</td>
<td>Unsolicited</td>
<td>Employer, funding source</td>
</tr>
<tr>
<td>Houp &amp; Pearsall</td>
<td>Complex proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Project summary, description qualifications, budget, appendixes</td>
<td>Bid on project</td>
<td>Solicited or unsolicited</td>
<td>Purchaser of services</td>
</tr>
</tbody>
</table>

Figure 1.1. Survey of Current Technical Writing Texts
<table>
<thead>
<tr>
<th>TEXTBOOK</th>
<th>TYPE OF PROPOSAL EMPHASIZED</th>
<th>WRITER</th>
<th>SOURCE OF GUIDELINES</th>
<th>MAJOR STRUCTURAL COMPONENTS</th>
<th>USE</th>
<th>GENESIS</th>
<th>AUDIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feinberg</td>
<td>No specific emphasis</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Introduction: background, proposal, significance; plan of action; schedule; budget; qualifications</td>
<td>Offer to perform a service</td>
<td>Solicited or unsolicited</td>
<td>Purchaser of services</td>
</tr>
<tr>
<td>Philbin &amp; Presley</td>
<td>Complex proposal</td>
<td>Individual</td>
<td>Model in textbook</td>
<td>Introduction: letter, title, abstract, assurances, need, goals. Middle: flowchart, timeline, narrative. Conclusion: evaluation, plans, budget, qualifications, contract</td>
<td>Bid on project</td>
<td>Solicited or unsolicited</td>
<td>Purchaser of services</td>
</tr>
<tr>
<td>Brusaw</td>
<td>Government proposal</td>
<td>Individual</td>
<td>Model in textbook and IFB</td>
<td>Statement of problem, qualifications, solution, budget</td>
<td>Bid to supply products and services</td>
<td>Solicited</td>
<td>Government</td>
</tr>
</tbody>
</table>

Figure 1.1. Survey of Current Technical Writing Texts (continued)
These texts tend to convey the following general impressions about proposals produced in nonacademic environments:

1. Proposals are an independent genre of documents used only to persuade the reader to purchase the writer’s (or the writer’s organization’s) goods or services.
2. The most common type of proposal is informal and relatively short and is usually authored by an individual.
3. The standard elements of a proposal include a statement of the problem, presentation of possible solutions, statement of qualifications and experience, budget summary, and appropriate appendixes. The form, content, and sequence of these elements are relatively consistent and are developed by the author of the proposal.
4. A high percentage of the content of proposals changes with each project being sought by the writer.
5. Proposals can be solicited or unsolicited.
6. Formal proposals responding to external guidelines are straightforward, long, and produced collaboratively. Experience in writing these types of proposals apparently must be gained on the job, not from the texts.
7. Proposals are written for an identifiable and definable person or persons who will be purchasing the goods or services described in the writer’s document.
The information I gleaned from this informal survey, combined with my experience using texts such as these to teach technical writing, did not correlate with my experience producing and using complex proposals in a nonacademic environment. The trend in recent composition research toward entering that nonacademic environment to investigate and analyze the writer and product in situ rather than in isolation, suggested that I look to the field to begin to establish relevant taxonomies of the types of proposals that exist and of the sources, structures, and uses of those documents. These taxonomies would provide data on which I could build future longitudinal studies within the natural context, inter-contextual comparative studies, and textbook-to-document correlation studies.

1.5. PURPOSE OF STUDY

Based on my own experience in writing, receiving, and using proposals, I defined complex proposals as documents generated in response to external agencies/clients who advertised for goods and services in a competitive bidding situation. These complex proposals contained normative and original material designed to persuade the clients of the individual's or organization's ability to supply those goods and services. The technical writing textbooks I
have used in an academic environment did not include many of the normative and original components I was accustomed to seeing in actual documents. In addition, the language related to proposals in the textbooks did not correlate very closely to the language I was accustomed to using and hearing in a business environment.

My survey of the composition literature confirmed the discrepancies I had identified in my own academic and nonacademic experience with proposals. That the discrepancy exists is fact. My general research interest, then, is to determine the extent of the discrepancy and to investigate methods of moderating or eliminating that discrepancy. How do the descriptions of proposals in technical writing textbooks vary from the types of proposals used and generated in a nonacademic environment? The first step in addressing my research interest must be to pursue a specific research goal of developing an empirically-based description of proposals as they are developed and used in their natural environments. I must establish base-line parameters for the structure, production and use of proposals in a natural setting.

To accomplish this research goal, I generated the following questions about the nature and essence of proposals in their natural contexts. I anticipated that the answers to these questions would specify and clarify
the interrelationships that exist among the writer, the document, and the audience in a field-based context.

1. Why were the proposals written? Were they solicited or unsolicited?
2. Who usually wrote the proposals?
3. Where did the content of the proposals originate?
4. Who decided what content went into the proposals?
5. Who decided how to format the proposals?
6. How were the proposals assembled?
7. Who used the proposals?
8. What were the proposals used for?

I anticipate that my findings in this field study will demonstrate that the format, structure, genesis, and use of proposals in a natural context deviate significantly from those aspects of proposals presented in current technical writing textbooks. In addition, I anticipate that the information gathered during the field study will generate further hypotheses about specific discrepancies between text-based and field-based theories and practices of the writers, documents, and audiences participating in the writing process.
2.1. CHOICE OF METHODOLOGY

In recent years, researchers in composition have debated the merits of quantitative and qualitative methods of research, as evidenced by Hillock's (1986) examination of and commentary on both strategies of documenting theoretical and empirical investigations of writers and their writing. Given the exploratory nature of my hypothesis about documents produced in context, certain qualitative methods would best fulfill the generative direction of my project. I would need to describe the proposals as they were developed and produced as artifacts in the field before hypothesizing about the cognitive strategies used by the writers or before I could determine how specific external factors (such as subject, audience, or purpose) quantitatively influenced the form, content, and structure of these documents. The initial step of a longterm study (the parameters of which exceed the focus of the present project) should consist of a field study of the artifacts to establish a data base for further qualitative and quantitative investigations. The observations and artifacts I accrued during this initial stage should help clarify and situate the roles of the writers, products, and contexts. This identification and
conceptualization of interactions and interrelationships among these elements must be in place before further interpretations/comparisons of context-based and classroom-based activities could be undertaken.

Since my hypothesis precluded that these elements be examined in isolation, recent studies (such as those of Odell, Selzer, Doheny-Farina, Paradis/Dobrin/ Miller, and Lunsford/Ede) helped me identify those methods which would best help me derive base-line data by observing the artifacts in a natural setting and incorporating a sense of environment or context into the parameters of their existence. In other words, a more significant analysis of the artifacts could be generated by identifying those external factors which contributed to their creation, production, and eventual use. Examination of the documents as autonomous symbols or artifacts would distort an interpretation of their meaning. Gathering evidence about how and why they were created would provide data about the elements external to the documents themselves. Such data could lead to a more comprehensive and multi-dimensional investigation of the dynamic and organic relationships among writer, product, and environment.

Tracing these recent researchers' strategies back to their sources revealed that their methodology derived primarily from disciplines traditionally situated outside
literary research. Researchers in composition have for the last fifteen years been borrowing and adapting various strategies from these disciplines to broaden the scope of their research and to validate their findings in terms of a theoretical and, at times, a quasi-scientific foundation for their own discipline. Until recently, these strategies have derived from quantitative and sociometric methods employed in such disciplines as psychology, sociology, anthropology, and education. As the focus in composition shifted toward more cognitive and sociological concerns, however, qualitative and interpretive measures became more evident in studies designed to test hypotheses and theories in the field.

These qualitative measures have been developed and refined in "investigations described variously as qualitative research, case study research, field research, anthropological research, or ethnography" (Goetz and LeCompte 1982). The methodology has been given a number of labels: grounded theory (Glaser and Strauss 1967), symbolic interactionism and naturalistic behaviorism (Denzin 1978), ethnography (Spradley 1979), and research in context (Kantor et al. 1981). In composition research, Odell and his colleagues have popularized the term "writing in nonacademic settings" to reflect the current trend of focusing on the contextualization of the writing
process as it occurs outside the classroom.

Since my focus will be primarily on artifacts rather than on human social interactions, I borrowed and adapted various ethnographic methodologies as research strategies for this field study. My shift in focus to artifacts necessitates modifications of traditional ethnographic theory and methodologies for the purposes of this project.

Spradley (1979) offers a broad definition of ethnography as "the work of describing a culture" in order to "understand another way of life from the native point of view" (3). He further specifies that "Field work...involves the disciplined study of what the world is like to people who have learned to see, hear, speak, think, and act in ways that are different" (3). Drawing on Denzin's (1978) theory of symbolic interactionism as "the manipulation of symbols, words, meanings, and languages" (7), Spradley (1979) defines the concept of culture as "a shared system of meanings [which] is learned, revised, maintained, and defined in the context of people interacting" (6-7). The role of the researcher, therefore, is enacted not in a controlled environment but in a natural setting. Data at the collection stage tend to be more fluid than static, more unstructured than controlled, more directive than directed. The speculative and interpretive processes in ethnographic studies,
consequently, tend to be more recursive than linear.

The principles of ethnographic research, then, "demand that observations be lodged in the natural worlds of everyday life" (Denzin 1978: 21). This situating of the qualitative research focus in a natural environment or context requires strategies and behaviors of the researcher that differ markedly from those usually associated with quantitative researchers. The cultures, behaviors, symbols, and artifacts being studied ethnographically become multi-dimensional; their meanings and applications are defined by more than one agent or act. Accordingly, the researcher must become part of that multi-dimensional context in order to qualify and quantify the micro- and macro-focuses.

For this reason, the ethnographic researcher usually assumes the role of participant observer. Bogdan and Taylor (1975) define participant observation as a field strategy that simultaneously combines document analysis, interviews of respondents and informants, direct participation and observation, and introspection. The participant observer, then, must develop strategies to combine what Spradley (1979) calls the outsider's and the insider's point of view. The field investigator attempts to achieve a fine balance between subjective participation with and objective interpretation of the subjects and
their environments. Goetz and LeCompte (1982) broaden this repertoire of strategies when they characterize ethnographic research as including "participant and nonparticipant observation, focus on natural settings, use of participant constructs to structure the research, and investigator avoidance of purposive manipulation of study variables" (31-32).

This field study borrows the basic premises of ethnographic research suggested by these authors; however, it modifies these premises by taking artifacts rather than people as primary subjects. Therefore, my strategies of investigation, description, and interpretation will draw on the form, structure, and genesis of complex documents. The social interactionist perspective will be minimized in my study by logic and by purpose. The artifact, by definition, is an inorganic symbol. However, my hypothesis suggests that this supposedly static artifact is multi-dimensional; it is an integral part of a dynamic and organic interaction between the people involved with it and the circumstances surrounding its genesis and use. I do not claim that my study is an ethnography, although many of my investigative strategies (described in later sections of this report) are typically associated with ethnographic research. As investigator, I will identify a context within which I can
test my hypothesis, assume the role of participant observer, implement a variety of research strategies to triangulate my data, and select informants who will share their perceptions of the symbols and meanings associated with the artifacts.

2.2. CHOICE OF SUBJECT

By definition, an artifact is anything made by human art and workmanship, an artificial product. Although I used LeCompte and Goetz's (1984) guidelines for collecting and analyzing artifacts, I modified and restricted the use of the term "artifact" in this project to refer to any document or record related to proposals produced to secure business for or by the people employed by the firm participating in the study.

Conventional conceptions of technical writing suggest that only scientifically based and technologically oriented documents can be classified as truly technical in nature. I prefer to define technical writing as broadly and as comprehensively as possible to include those writing activities and documents that serve to analyze, synthesize, and evaluate an object, process, concept, or relationship. Accordingly, most writing that occurs in both academic and nonacademic contexts can and should be considered technical in nature and execution. The
dichotomies which abound in discussions of composition and rhetoric--dichotomies such as academic/nonacademic writing, scientific/literary writing, and expressive/transactional writing--create artificial distinctions between writing activities and products determined by contexts rather than distinguished by strategies. The cognitive skills of analysis, synthesis, and evaluation are used almost universally in any writing situation, whether academic or nonacademic.

I anticipate that the empirical evidence drawn from the field will reinforce my hypothesis that discrepancies exist between how complex documents are represented in textbooks and how they are created, structured, and used in their natural environments. As mentioned earlier, the scope of this present study does not include an exhaustive evaluation of the claims made and examples given in current technical writing textbooks. Instead, this field study focuses on examining samples of what does occur in natural settings to speculate in future studies about what should occur in textbooks.

Based on my experience in nonacademic writing environments, I selected proposals as examples of complex documents commonly known and used in a business or professional environment. During my publishing career and as part of my freelance consulting work, I have created,
produced, and received many complex proposals serving various purposes and addressing different audiences. For example, as a marketing editor for an educational publisher, I generated proposals for textbook adoption at state levels; I also received acquisition proposals from potential authors outlining their projects and their qualifications. As a freelance consultant, I produced complex bid documents for institutional furnishings, electronic systems, and library facilities. Based on this experience, I felt adequately prepared to question the configurations of complex documents in technical writing textbooks and to study proposals as artifacts in their natural contexts.

The selection of proposals as artifacts should not minimize the importance of the shorter and less complex documents usually presented in most technical and business writing texts. Correspondence (letters and memoranda), short reports, short proposals, sales documents, etc., are all integral parts of the nonacademic communication network. In terms of this project, however, these types of documents are contributory elements to the more complex proposal. My assumption is that most shorter documents serve as nodes on that network of communication. By selecting complex proposals, I hope to incorporate a larger segment of that network into the scope of my study.
so to develop a more comprehensive perspective of the artifact in its context.

There are two additional reasons for my selection of proposals as my subject. First, I am assuming, based on experience and intuition, that most nonacademic writers tend to use proposals rather than formal reports in their daily or regular business situations. Second, technical writing textbooks usually represent proposals as a genre in the traditional repertoire of the nonacademic writer. In each of the eight textbooks which I examined, proposals were presented as an identifiable type of document exhibiting standard elements determined primarily by the writer's purpose and the audience's needs. Almost exclusively, the examples given in these texts were single-authored submissions. In addition, whether the proposals were solicited or unsolicited seemed to have little relevance to the creation and structuring of these documents. Although my survey was quite informal, these examples represent the majority of technical writing texts, and I noticed discrepancies between my own experience in writing and reading these types of documents and their exemplification in such instructional texts.

In summary, then, I selected complex proposals as my subject based on the criteria of availability, familiarity, and commonality. I anticipated little
difficulty in identifying a suitable context in which to study complex proposals. My familiarity with various types of proposals minimized the necessity of spending time acquiring the linguistic and conceptual competency of my informants in their natural environment. And, the consistent presentation of proposals as typical documents in technical writing texts would, in later studies, provide an accessible and stable source of qualitative and quantitative comparison for my findings in the field.

2.3. CHOICE OF CONTEXT

2.3.1. Criteria for Selection

My selection of the context evolved as I formulated my hypothesis, and several factors influenced my final choice.

First, the general parameters of my context had been determined by my choice of research strategies; I needed to find a firm which employed people who were significantly involved in the creation, production, and use of complex proposals. My own experience in nonacademic writing and my knowledge of the most frequent majors of students enrolled in university-level technical writing classes suggested that I look at firms primarily involved in architecture, commercial/institutional sales, or engineering services.
Second, the employees of the firm should be currently involved in the creation, production, and use of one or more proposals in order to fulfill as many of the requirements of my field-based research strategies as possible.

Third, the employees of the firm should be not only cooperative but also articulate about their involvement with and perceptions of the form, structure, and meaning of the artifacts under consideration in this project.

A fourth more pragmatic than theoretical criterion stipulated that the firm be within a reasonable geographic distance of my place of employment to allow me ready access for observation and collection of data during the four-month data collection period. In addition to being able to schedule blocks of time with the informants for over twenty-five hours of on-site interviews and hands-on document examination, I required easy and ready access to my informants to cross-check transcripts, field notes, and document details.

Based on these criteria and on the information garnered during exploratory interviews with the principals (partners) of three potential sites, I selected a firm of professional engineers involved in a relatively small but prosperous consulting business.
2.3.2. Description of Selected Context

I was asked, and agreed, to keep the identity of the firm confidential and to ensure that financial and other pertinent or identifying details be deleted from my final report. To fulfill this obligation, I have removed names, figures, and site names where appropriate in the body and appendixes of my report.

The firm is a multi-disciplined engineering and land surveying firm located in central Louisiana with a branch office in north Louisiana. The firm offers clients a variety of services ranging from preliminary design concepts and specific site layouts to comprehensive engineering design and inspection of construction. The firm also offers complete surveying and drafting services. The firm's survey crews are equipped with the latest electronic equipment. Additional firm resources include a full fleet of land vehicles, water craft, and an aircraft. There are professional engineers on staff who are also licensed pilots. The firm has extensive data processing capabilities, including a fully computerized accounting system and state-of-the-art engineering computer facilities with computer-aided drafting design. The in-house disciplines include expertise in surveying, civil engineering, structural engineering, hydraulic engineering, mechanical engineering, hydrologic
engineering, and urban/regional and water resource planning.

Projects and job sites tend to be limited to within a 350-mile radius of the central office. Historically, the firm has performed engineering work involved in site selection, planning, design and specification of construction projects; stream pollution control; administration and inspection of construction projects; evaluation, appraisal, and reports; comprehensive development planning; and environmental assessment. The client list reflects a variety of income sources: commercial clients such as banks, hotel chains, farmers' co-ops, and country clubs; industrial clients such as utility companies, manufacturers, and food processors; municipal and government clients at the village, town, and parish levels; state and federal clients such as the U.S. Army Corps of Engineers, U.S. Air Force, U.S. Forest Service, and the Louisiana Department of Highways; architectural firms; engineering firms; developers; and community organizations such as churches.

The parent organization was founded in 1968 and reorganized in 1975 into its present configuration. The engineering services currently include preliminary planning, complete project design services, construction administration services, field inspection services,
facility start-up services, and operator training services. The firm maintains the engineering, drafting, and surveying capability required for a project from preliminary investigation to completion and employs external sub-consultants such as geotechnical services, architectural firms, etc. when those disciplines are required for a particular project. The firm's organizational structure reflects the comprehensive range of services. The six divisions within the firm are identified as Administrative, Civil Works Design, Utilities Design, Construction, Surveying, and Branch Office Divisions.

As of November 1, 1988, the firm employed 52 full-time personnel: 8 administrators, 5 civil engineers, 12 construction inspectors, 5 draftsmen, 1 hydrologist, 1 mechanical engineer, 1 sanitary engineer, 2 structural engineers, 1 surveyor, 3 engineering technicians, 1 petroleum engineer, 11 survey crew personnel, and 1 engineer-in-training. Of these employees, 6 worked at the branch office: 3 engineers, 1 secretary, 1 inspector, and 1 draftsman. The 17 engineers and senior land surveyor have worked from 5 to 20 years for the firm and average 11.4 years of tenure.
2.4. CHOICE OF SPECIFIC STRATEGIES

To enhance the reliability of information gathered during a field study, Denzin (1978) recommends using triangulation (the use of multiple methods to study the same object) since "all humans are involved in the process of making sense out of this social object called reality, and they do so by agreeing on the definitions attached to it" (293). Triangulation serves as a method of "checking alternative groupings and ordering of specific events" (LeCompte and Goetz 1984: 172) and "convergent validation" (Albrecht and Ropp 162) to verify the consistency of information and reliability of the informant. Denzin (1978) identifies four types of triangulation: data triangulation, investigator triangulation, theory triangulation, and methodological triangulation.

Of these four methods, I used two types of triangulation: data triangulation and methodological triangulation. According to Denzin, data triangulation involves using different data sources using the subtypes of time, space, and person. Methodological triangulation at the between-method level involves using dissimilar methods to measure the same unit. The remaining two methods of triangulation were inappropriate to my study. Since I conducted the study alone, investigator triangulation (using multiple observers) was impossible.
In addition, the scope of my research goal did not include comparing various theoretical perspectives; theory triangulation was therefore unnecessary.

To triangulate my data, I selected informants who held positions of different status within the firm. John is a principal (partner) in the firm and, in addition to being a consulting professional engineer, serves as branch office manager. Pat, as the secretary of the branch office and the only full-time clerical employee, performs various tasks beyond the preparation and production of proposals. Neil is a consulting professional engineer working exclusively with wastewater utility and environmentally sensitive projects for the past two years in the design division of the central office. Gail works in the Administrative Division of the central office and, like Pat, is also classified as a secretary, but her activities focus almost exclusively on the preparation of project submittals. The different status of each informant provides different perspectives on the same artifacts and their attendant processes.

My selection of different methods of data collection provides between-method triangulation to balance the strengths and weaknesses of the individual strategies. Data obtained in any one of the three major collection methods I selected—field interviews, artifacts, and
questionnaires--can be verified by comparison and tracking in the other two. Using three major methods of data collection also allows recursive study and further data collection for clarification and elaboration. Field notes and informant verification of data supplemented my major methods.

The fluid, recursive nature of field-based research has shown that the strategies identified prior to entry into the field may or may not be pertinent or useful to the situations encountered in the field for the duration of the study. Since much field-based research is exploratory, the researcher tends to refine, alter, and even discard strategies while adjusting focuses and adapting to unexpected circumstances. As field work progresses, the structure and focus of a strategy, such as a questionnaire, may change as the researcher identifies data that need to be verified or clarified later. The strategies outlined below were identified as potentially useful prior to entry into the field. However, their structure and content were delineated and/or refined during the four-month period of on-site data collection and off-site artifact evaluation.

2.4.1. Participant Observer

My strategies of obtaining information about my
primary focus, proposals in their natural contexts, necessitated my involvement in the context itself. During my initial interview with John, I discovered that the majority of the projects which used complex proposals were active over long periods of time. He described two projects that his firm was still involved with: one project was instituted in 1984 and, at the time of the interview, had just reached the construction stage; a second project, after two years, had just reached the application-for-funding stage. Because of the complexity and duration of these jobs, investigating the human sociology of the site while developing taxonomies to classify the artifacts was beyond the scope of this exploratory stage of my research. A longitudinal study of the cognitive and social participation of my informants seemed more appropriate after I had characterized the artifacts themselves. Establishing a comprehensive rapport or personal relationship with my informants beyond that required for effective and productive interviews focused on the artifacts was expedient for this particular study. In addition, the artifacts were my primary focus and, by definition, did not require a sociological or behavioral interactive stance.

However, my previous experience with similar artifacts and comparable contexts required that I monitor
observer and informant translations closely. Denzin (1978) suggests that "The investigator must take the perspective or role of the 'acting other' and view the world from the subject's point of view" (20). Since my active participation in the field was to be limited to discourse-based interview encounters, I did not need to assume the role or perspective of my informants beyond adopting what LeCompte and Goetz (1984) call "a studied naivete" (168) or what Spradley more bluntly terms "a conscious attitude of almost complete ignorance" (4). I therefore incorporated strategies to address this potential observer bias into the scripts of my discourse-based interviews as indicated below.

2.4.2. Informants

Zelditch (1962) defines key informants as "individuals who possess special knowledge status, or communicative skills and who are willing to share knowledge and skill with the researcher" (569). Since my purpose was to describe proposals as they were developed and produced as artifacts in a natural context, I chose informants who could accurately and, hopefully, articulately describe the processes involved in creating and structuring the documents from their own personal experience. Therefore, during my initial interview with a
principal of the firm, I asked him to identify those people who were most actively involved in producing and using proposals. This discussion revealed that, because of the organizational structure of the firm--a central office and a branch office--and the consequent variations in the nature of the projects handled by each office, I would need informants in both offices in order to investigate the varieties of proposals generated and used by the total organization.

Consequently, in addition to the principal who agreed to become an informant, I contacted three of the people he identified as potential informants. The principal expressed enthusiasm and interest in my project. He stated his pleasure about my addressing an area, the work an engineer does beyond practicing his engineering speciality, that he felt has been either neglected, overlooked, or misunderstood by those responsible for the undergraduate training of engineers. He conveyed his enthusiasm and approbation of the project to the employees he had identified as worthwhile informants who subsequently consented to participate in my study. John, a principal in the firm and a practicing Professional Engineer, and Pat, a secretary, work in the branch office. Neil, a practicing Professional Engineer, and Gail, a secretary, work in the central office.
John is 39 years old and has been a practicing engineer for seventeen years, sixteen of which have been with the firm. During his tenure with the firm, he has spent four years as a design engineer, four years as a project engineer, and eight years as branch office manager. He stated that he wrote 20% of his time while a design engineer, 20% of his time while a project engineer, and 10% of his time while a manager. He vaguely recalls taking a technical writing course during his undergraduate years but states that the course probably did not help him. He gained most of his knowledge about writing technical documents from colleagues, similar documents, trial and error attempts, and a few two-hour short courses in writing. In spite of his experience, he still does not feel confident about his writing abilities. Of the thirteen traditional types of technical documents I identified (see Appendix B), John identified the following documents as those he uses most frequently (they are listed in the order of most frequent to least frequent): external letter, internal memo, letter of transmittal, external proposal, quick-memo, progress report, recommendation report, completion report, formal report, instructions/manuals, and internal proposal. He identified two additional documents he produces: specifications telling how a job is to be constructed and
contracts between clients and the firm.

Pat is 53 years old and has been in the workforce for twenty-two years, over nine of which have been with the firm as a secretary performing such duties as general office work, typing, filing, photocopying, and answering the telephone. The only formal writing course she took as an undergraduate focused on writing television scripts.

Neil is 52 years old and has been a practicing Professional Engineer for twenty-nine years, fifteen of which have been spent with the firm. He has had thirteen years experience in research development, design, project management and coordination of utilities systems (natural gas, wastewater, and water systems). For the last two years, he has had extensive planning and studies experience with wastewater utility and environmentally sensitive projects. He reported that he wrote documents 50% of his time during his first thirteen years with the firm and 100% of his time during the past two years. His formal training in writing and composition include basic composition, theme writing, and English for engineering uses at the undergraduate level. He also stated that the courses, combined with experience gained during ten years of active military service, were instrumental in providing him with extensive planning and studies experience. Of the thirteen traditional types of technical documents I
identified (see Appendix B), Neil identified the following documents as those he uses most frequently (the percentage in parentheses indicates the frequency of his use):
letter of transmittal (10%), internal memo (5%), quick memo (5%), progress report (5%), recommendation report (10%), formal report (10%), external proposal (10%), and internal proposal (10%). Neil identified two additional documents: specifications and contract documents (25%) and contract plans (10%).

Gail is employed as a secretary in the administrative division of the central office. She has been working in her current position for just over a year and is still learning the terminology and procedures for her job. She is also trying to establish data-base files and a data-retrieval system for the information required in the qualifications and experience statements.

2.4.3. Field Interviews

In forming, scripting, and conducting these interviews, I relied heavily on the guidelines and caveats suggested by Denzin (1978) and Spradley (1979).

Denzin (1978) identifies three types of interviews:
1. The schedule standardized interview "in which the wording and order of all questions are exactly the same for every respondent, the purpose being to develop an
instrument that can be given in the same way to all respondents...[so that] each respondent will be presented with the same stimuli and that these will elicit the same range of meanings for each" (113).

2. The nonschedule standardized interview in which "the interviewer works with a list of the information required from each respondent...[and] in which certain types of information are desired from all respondents but the particular phrasing of questions and their order are redefined to fit the characteristics of each respondent" (115).

3. The nonstandardized interview in which "no specified set of questions is employed, nor are questions asked in a specified order...[thereby giving] the interviewer a great deal of freedom to probe various areas and to raise and test specific hypotheses during the course of the interview" (116).

Based on Denzin's recommendation that the third type of interview is "best suited for exploratory studies" (117) and on LeCompte and Goetz's (1984) assertion that open-ended questions are preferred for qualitative analysis (127), I selected the nonstandardized interview as my participatory field strategy. My purpose for using this type of interview was to elicit from my informants how they perceived proposals were created, structured,
produced, and used in terms of their own participation and experience in the process. Since each of the informants held a different status in the firm, he or she would probably provide a slightly different perspective about certain steps or stages in the process. However, since the informants were all involved in the same context, their perceptions would probably prove to be relatively consistent among the four reports.

The characteristics of the nonstandardized interview also allowed me to present my questions in a flexible sequence designed to encourage the respondents to include any and all information they could relate about the process of generating proposals. Freedom from overt interviewer control would stimulate associative thinking and reporting by the informants and opportunity-taking by the interviewer.

Since the nonstandardized interview does not require a schedule or pre-determined script, I relied on Spradley's (1979) extensive taxonomies to formulate the scope, parameters, and nature of my interview questions. (I have reproduced Spradley's taxonomies for field interviews (67), descriptive questions (86), structural questions (126), and contrast questions (160) in Appendix A: Spradley's Taxonomies for Ethnographic Interviews.) With the exception of card sorting structural questions,
triadic contrast questions, contrast set sorting questions, and the twenty questions game, questions asked during the field interviews were constructed according to Spradley's taxonomies.

Because I wished to remain unencumbered from notetaking, with my informants' consent, I recorded the interviews. This technique freed me to concentrate on the content of my informants' responses; I anticipated that their responses would lead to unexpected topics, unscheduled show-and-tell incidents; and undiscovered dimensions of the discussion and topic. Having to listen and write simultaneously would only serve to distort the accuracy of my record of the interview and diminish the rapport between informant and interviewer. Soon after the interviews, I listened to the tapes, noted questions, and wrote supplemental field notes to accompany and amplify the printed transcriptions.

2.4.4. Artifacts

Although the artifacts, the proposals, were my primary focus, they also served as non-interactive or inobtrusive data collection strategies. The artifacts collected during the field study should verify the products and, to a certain extent, the processes described by the informants.
For the purposes of this study, I defined proposals as those documents designed for the purpose of soliciting business from sources outside the firm or responding to solicitations for service or merchandise from businesses, organizations, or individuals positioned outside the firm. The primary audience, then, would be external to the immediate writing environment. These proposals should also be complex documents. To be called complex, the proposals should include more than one document genre; these genres would include memoranda, letters, short reports, etc. I specifically wanted to study those types of proposals that were generated to address complex situations or projects requiring multi-dimensional goods and/or services to an agent or agency external to the firm.

2.4.5. Questionnaire

I selected the questionnaire as a strategy after transcribing and evaluating the major ethnographic interviews. The transcripts suggested certain areas of confusion and concepts, words, or procedures that needed clarification. Throughout the study, I addressed these situations by contacting the informants by telephone or in person to seek answers to specific questions about what we had discussed or to verify that I had transcribed garbled
sections on the tapes correctly. However, I developed a questionnaire to verify that the information accumulated during the interviews was not idiosyncratic to the interview itself. The questionnaire was left with each informant so that he or she could complete it without the pressure or influence of my presence.

In addition to fulfilling my purpose of data and method triangulation, the questionnaire investigated a problem I identified in the transcripts of the taped interviews. The transcripts revealed several instances in all the interviews where I try to establish a lexicon for the types of documents that fell under the term "proposal" during the conversations. As well, I noted some inconsistencies in labelling among the informants and wished to clarify the definition of some of the terms. Since I did not plan to use the information gathered on the questionnaire in a quantitative analysis or comparison of informants' answers, I included several questions designed to identify possible areas for future research. A copy of the questionnaire is in Appendix B.

2.5. RELIABILITY OF STUDY
2.5.1. External Reliability

Goetz and LeCompte (1982) identify five potential problems with the external reliability of a field study
which uses research strategies borrowed and adapted from ethnographic principles of data collection: researcher status position, informant choices, social situations and conditions, analytic constructs and premises, and methods of data collection and analysis.

I identified my status as researcher as a participant observer insofar as I participated in the field-based interviews with the informants. I carefully avoided using my experience with proposal writing to translate my informants' comments or hurry them along in their descriptions. I clearly stated to the informers at the outset of each interview that some of the questions might seem simplistic to them, but that I needed to hear the answers from them rather than from me.

Potential informants were identified for me by my principal informant, John, and selected after I had contacted them to explain the parameters and purpose of my research. I ensured that my informants' roles were varied in their status and tasks; in addition, I selected informants from both the central office and the branch office to ensure that I had more than one organizational perspective on the artifacts. The different organizational and performance structures of the two offices provided additional depth and perspective to the informants' data; the physical contexts are clearly
delineated in the study. I did not, however, attempt to or intend to address the social and interpersonal contexts during the study.

My analytic constructs and premises may be idiosyncratic to this study since my research at this stage is predominantly exploratory. I intended that this study provide the foundation for a series of longitudinal and trans-contextual studies to address additional research goals designed to answer my general research question. Since my intent was to analyze the forms, contents, and uses of proposals, I feel justified in using low-level constructs and terms at this exploratory stage. Traditional investigative protocols require that the researcher acknowledge and follow the principles and instruments established for reliable and valid research projects within his or her discipline. However, since there were no standard typologies, checklists, or precedents I could use to collect, categorize, and code my data, I designed my own strategies prior to and during my field study. In addition, my taxonomies were derived from my data rather than from a standardized lexicon or theory extant in the discipline's research canon. My comparison of my taxonomy and staging framework to those presented in current texts is necessarily informal. My initial examination of technical writing texts in this report is
by no means exhaustive and, accordingly, neither permits
nor warrants a claim-by-claim comparison with the study's
findings.

My methods of data collection and analysis are,
admittedly, idiosyncratic to the study. In keeping with
traditional problems of replicability of ethnographic
research, my methods might or might not be useful in a
similar situation or context.

2.5.2. Internal Reliability

Goetz and LeCompte (1982) also identify five
strategies that can be used to reduce problems with
internal reliability: low-inference descriptors, multiple
researchers, participant researchers, peer examination,
and mechanically recorded data. Of these five, I relied
on low-inference descriptors, mechanically recorded data,
and an additional strategy, triangulation of data.

I relied heavily on the information and descriptions
provided by my informants and found in the documents
collected from the site. I analyzed the transcripts of
the ethnographic interviews closely to identify and
synthesize coherent and comprehensive descriptions of the
documents produced and used by the firm. I also tape-
recorded the major interviews with my informants so that I
could concentrate on the type, sequence, and purpose of my
questions and, in addition, attend closely to my informants’ conversation. As soon as possible after these major interviews I annotated the transcripts. During informal conversations, telephone calls, and incidents of examining documents, I relied on field notes to record my impressions and observations. Since I conducted this research alone, I attempted to triangulate my data by using ethnographic interviews, questionnaires, field notes, and artifacts; the bulk of my data is derived from the interviews and the artifacts.

2.6. VALIDITY OF STUDY

Denzin (1978) repeatedly asserts that ethnographic research demonstrates strong internal validity because of the methods of collecting data and the strategies of analysis used by ethnographic researchers. The researcher’s entry into the field and use of the natural context as a factor in his or her participation in and observation of behavior suggest the empirical basis for Denzin’s claim.

2.6.1. Internal validity

Since I focused primarily on artifacts rather than on human social behavior, few of the problems of internal validity (such as history and maturation, selection and
regression, and mortality) can be applied in my study. Although my prior experience and knowledge about certain aspects of the artifacts and the contexts within which they were produced and used might have contributed to observer effects, I took great care to distance myself from this prior experience and let my informants provide the descriptors and data to me. I detected few instances in the transcripts where I led my informants or asserted my prior knowledge or experience.

2.6.2. External Validity

Since my study was intended to be exploratory, generative, and descriptive from the outset, principles of statistical generalization should probably not be applied to this study. The idiosyncratic nature of my selection criteria, the unique characteristics inherent in a natural context such as an engineering firm, and the degree to which my methodology relied on my context, all serve to limit comparison to other contexts. However, the strength of my study lies in the identification of the highly significant role of the client, funding agency, and job (all agents external to the immediate context of the writers of the proposals in my study) in the form, content, and use of complex proposals. This information suggests that studies conducted in contexts where similar
firms interact with similar agencies would reveal a
similar degree of external influence.
CHAPTER THREE: DESCRIPTION OF PROPOSALS

To identify and describe the artifacts, I analyzed the information gathered during the field-based interviews and in the questionnaires to develop a taxonomy for the types of documents described by my informants. I also used the interviews and questionnaires in conjunction with the artifacts themselves to describe the structure, form, sources, and uses of the proposals. This method of analysis provided information about the subject, audience, and purpose of the documents.

In this chapter, I describe the documents as the informants perceive them and as they appear as artifacts. I have used selected excerpts from the field-based interviews to illustrate my narrative. Expanded excerpts, giving these selected excerpts a fuller context, are in Appendix C (Chapter Three) and Appendix D (Chapter Four). In addition, I have included complete and excerpted samples of the documents where appropriate in the appendixes.

The following descriptions are ordered according to each document's position in the project staging sequence. For ease of reference, I divided the documents into two sections: pre-award proposals and post-award proposals. The point of award is defined as that point in the staging
sequence where the engineering firm is hired as the primary provider of services or as the prime contractor to the client.

3.1. PRE-AWARD PROPOSALS

3.1.1. Qualifications and Experience Statements

The Qualifications and Experience Statements developed and described by Gail are produced in response to state and federal advertisements in the Commerce Business Daily to identify firms which possess the capabilities, personnel, and equipment necessary to provide goods and services to the clients. The advertisements describe projects under the jurisdiction of state and federal agencies throughout the United States. Although Gail admitted she was inexperienced in producing these documents (she stated she has been working in this position for about a year), she gave a reasonably coherent description of what steps she performed while preparing a Qualifications and Experience Statement.

Federal and state projects are advertised in a weekly newspaper, Commerce Business Daily, available through subscription to organizations and individuals wishing to bid on projects related to their professional discipline or expertise.

Gail receives the Commerce Business Daily weekly on
Tuesday mornings. The projects in the newspaper are categorized by discipline; Gail identifies those projects categorized under the heading "Architects and Engineering Services" (A/E). Depending on the major emphasis of the project's scope, the firm will bid as prime contractor or as sub-contractor to an architectural firm. A further identifying feature is the inclusion of Note 19 in the project's description. This annotation defines the project as a set-aside project for a small business concern. As a small business concern, the firm's average annual sales or receipts for the previous three fiscal years must not exceed $2.5 million.

A third feature Gail uses to identify projects for the firm consists of the district identified in the advertisement. The firm has limited its scope to the following districts: Vicksburg, MS; New Orleans, LA; Fort Worth, TX; Charleston, SC; Galveston, TX; Mobile, AL; Houston, TX; and East Texas Area.

Since Gail uses the Architects and Engineering Services section as her source, she determines the type of Qualifications and Experience statement to be prepared for a specific project by identifying whether the architectural or the engineering firm will be the prime contractor. The specific project she described to me required architectural services with supplementary
Engineering services. (See Appendix C: Excerpt 3.1.)

G: Because of that we have to have an architectural firm. So, [name of architectural firm] is the architectural firm that we use the most in this area. We do use others but we act as their sub sometimes and they act as ours. In this particular instance, they're going to be the prime contractor and we're going to be their sub to supply the surveying discipline and the civil discipline. [...] I: Now, when you say "prime," the architectural firm would be the prime. [...] G: They would be the main contractor. [...] He would get the most percentage of the job.

I: So you would go in as a sub on his prime submission.

G: Yes.

The Qualifications and Experience Statements, then, can be divided into two types: those written to fulfill the requirements of a sub-contractor and those written to fulfill the requirements of a prime-contractor. The sub-contractor's Qualifications and Experience Statements are appended to the prime contractor's submission to the client. In either case, the statement must reflect the expertise of the firm and its employees in the disciplines described in the client's scope statement as published in
I questioned Gail further to determine the characteristics of the qualifications demanded by the client (see Appendix C: Excerpt 3.2). The advertisement in the Commerce Business Daily that she was working on (see Appendix E) contained pre-selection criteria which specified the kind of information she needed to provide in the Qualifications and Experience Statement. Since this project required surveying services, Gail had to provide information that included the firm's certification and qualifications as a surveying company, the firm's professional surveying associations, the engineers' advanced degrees, the firm's personnel and equipment capacity, and surveying orders of work and of accuracy.

When Gail has thoroughly critiqued the advertisement to verify that the firm possesses the personnel and expertise described in the project's scope statement, she prepares an outline for her superior highlighting the pertinent details of the project. Mr. M. will decide whether to proceed with the preparation of the appropriate documents. Gail keeps a copy of the outline in her office for tracking purposes. The outline (see Appendix E) contains the following sections:

1. Identification information: in the top right corner, Gail lists the date of advertisement, the
date the article was read, and the due date for the documents specified in the advertisement.

2. She then lists the project name and solicitation name (if applicable) given in the advertisement.

3. The scope of the work is then identified.

4. She then lists the basic requirements described in the advertisement. She gave the following examples of possible requirements for this section:
   a. Adhere to procedures outlined in Note 62.
   b. Indicate in Block 3 of SF255 if firm is large, small, or woman-owned business.
   c. In Block 4 of SF255, list only personnel employed by office submitting form, exclusive of any branch office or subcontractor.
   d. List advertised in-house capabilities.
   e. List other required capabilities involved, for example: architectural, mechanical, geotechnical, electrical, landscape architecture, etc.
   f. List solicitation number in Block 1 of the SF255.
   g. Include a Design Quality Control Plan.
   h. Include a Safety Plan.

5. Gail then extracts any special requirements outlined in the advertisement. She gave the following two examples of special requirements:
a. Firm must have in-house civil capability with extensive experience in the design of water distribution and sanitary sewage systems.

b. Firm must have either in-house expertise or access to appropriate expertise through association with other consultants in the following disciplines: structural, mechanical, electrical, civil, fire protection specialist, architectural hardware specialist, life safety specialist, estimators, drafting, surveying, etc.

6. Gail then lists the anticipated starting date and completion date of the advertised project.

7. She notes pricing information.

Gail's analysis of these advertisements is key to the success or failure of the Qualifications and Experience Statement. Competition among suppliers to federal and state projects is fierce. When suppliers demonstrate equivalent levels of personnel and expertise, the award is based on the bidder's adherence to the guidelines outlined in the advertisement for the production of the Qualifications and Experience Statement. Gail emphasized that precision and accuracy are paramount (see Appendix C: Excerpt 3.3):

G: And I try to follow that format so if they come
back and...say, select three firms, OK. Any one of these things could be out of order and they could say, "Well, I don't choose you because you didn't follow the format." So, I'm very careful about doing that.

Gail then submits the outline to her superior asking if he wishes the firm to submit a proposal for the bid. He critiques the advertisement criteria and returns it with his decision. If a decision is made to prepare a submittal, then Gail has specific guidelines which she follows.

A Standard Form (SF) 255 must be completed with appropriate resumes for each key person employed by the firm to be assigned to the project. If outside sub-consultants are to be used, resumes of each of their key personnel must be included on a SF254 which will be included as part of the firm's submittal. Although the SF255 and SF254 are standardized forms, the information beyond basic identifying data (such as name, degrees earned, etc.) can change according to the emphasis of the advertised project (For example, if the key person has a dual-discipline, the appropriate discipline and related experience will be highlighted.) and to the time limitation on how far back in the past the firm may go to
identify relevant projects and experience. Gail maintains separate folders for the key personnel in the firm outlining their disciplines and their past experience.

SF255 and SF254 (see Appendix F) are designed to provide information detailing the qualifications of the firm. This information should include a breakdown of the firm's personnel, a description of the firm, and a brief background of the particular division and its key personnel who will be assigned to the project. The firm's overall capabilities and experience relevant to the advertised project work should also be included. Especially relevant are any special recognitions or awards received by the firm. The list of recent projects is limited to the previous five years.

Gail indicated that her superior sometimes recommends that an organizational chart be provided in the SF255 to illustrate the overall management configuration of the service groups which would be involved in the project.

The intent of the sections listed on the SF255 is as follows:

Section 1: This section should give the name and location of the project for which the form is being submitted.

Section 2: This section should provide appropriate data from the Commerce Business Daily identifying the
particular project for which the form is being submitted.

Section 2A: This section should give the date of the Commerce Business Daily in which the project announcement appeared or indicate "Not Applicable" if the source is other than the Commerce Business Daily.

Section 2B: This section should indicate the Agency identification number or contract number as provided in the advertisement.

Section 3: This section should show the firm's name, address, DUNS number, and certification of the firm being a small business concern.

Section 3A: This section should show the name and title of the individual contact person at the firm, and telephone number.

Section 3B: This section should indicate the number of personnel employed by the firm by discipline.

Section 5: This section should be answered only if the firm is submitting with a joint venture. Then the names and addresses of all organizations should be included along with the area of anticipated responsibility for each participating firm.

Section 5A: If the submittal is a joint venture, the appropriate box should be checked indicating if
the firms have worked together on other projects.

Section 6: If the firm uses outside consultants, names and addresses of all such individuals or firms as well as their particular area of professional/technical expertise should be entered here. If the firm has worked with this consultant before, this information should be included.

Section 7: This section should provide a brief resume of key personnel expected to participate in the project. Resumes should be limited only to those personnel and specialists who will have major responsibilities. Each resume should include the following:

a. name and title of each key person;

b. project assignment role which each person is expected to fulfill in connection with the project;

c. name of the firm with whom that individual is presently associated;

d. years of pertinent experience with the present firm and other firms;

e. academic achievement earned and discipline;

f. whether the person is registered in his or her discipline;

g. a brief synopsis of the experience, training, or other qualities which reflect the individual's
potential contribution to the proposed project work. Include such data as familiarity with government agency procedures, similar type of work performed in the past, and management capabilities.

Section 8: This section should include projects performed during the previous five years only. These project descriptions are sometimes tailored to the specific advertisement. If this is the case, one of the firm's engineers will revise the project description using appropriate technical diction. The information provided in this section should demonstrate the firm's capability for performing work similar to that being sought. Pertinent information should include the following:

a. name and location of the project;

b. a brief description of the type, scope, and complexity of the services provided for each project;

c. name and address of the owner of the project;

d. actual or projected completion date of the project;

e. actual or estimated cost of work performed and that portion of cost of the project for which the firm was/is responsible.

Section 9: This section describes any current and on-going project work with the Department of Defense
at the time of the solicitation for the proposed project work. Any grant or loan projects being performed under contract to other non-federal entities are excluded. The information provided under each heading is similar to information requested in Section 8 of SF255.

Section 10: This section differs for each project. Resumes should always be tailored to the particular project requirements. This section is usually comprised of, but not limited to, the outline described in Note 62 of the Commerce Business Daily. This should be a narrative demonstrating why the firm is specifically qualified to undertake the project advertised. Information in this section should include the following:

a. a coordinated management approach and a wide range of in-house capabilities developed by the firm relevant to the proposed project;
b. specialized capabilities and technical competence of the firm necessary to meet requirements of the advertised project;
c. specialized equipment available for project;
d. professional qualifications of the firm necessary to meet requirements of the advertised project;
e. past performance on government contracts and
private industry in terms of cost control, quality of work and compliance of performance schedules. Give the contract number if it is available;
f. volume of work previously awarded to the firm by the Department of Defense. List the contract number, issuing agency, and total amount of contract.

Closing: the form should be signed by the chief executive officer of the prime firm.

A completed example of a Qualifications and Experience Statement for a federal project is provided in Appendix G. Pertinent identifying and financial information has been deleted to fulfill my promise of confidentiality to the firm. I have also included representative sections of a completed SF255 and SF254.

I questioned Gail about how she accumulated the information for these statements (see Appendix C: Excerpt 3.4). I anticipated that she would have much of this information on a boilerplate; however, she was just beginning to develop a normative data base as she worked through each Qualifications and Experience statement. Knowing the hardware and engineering and accounting software available in the firm, I was surprised that this information, so amenable to such a systematic data retrieval system, was scantily archived in a vertical file
When Gail's superior approves a federal or state advertisement for submission, she proceeds to prepare her Qualifications and Experience statement according to the pre-selection criteria and scope statement contained in the Commerce Business Daily. If she has prepared a Qualifications and Experience statement for a similar project (i.e. a project requiring similar personnel and expertise), she is cuts and pastes appropriate sections of the engineers' resumes and the firm's experience with related projects as long as these related projects fall within the five-year limit prescribed by the advertisement.

I: So, you already have pre-set sections that you can cut and paste and then add additional information to the batch.

G: Right. On a lot of different types. I don't have them on every job. We do water, sewer, gas, and utilities [...] but I don't have them on everything. I've been trying to get to the point where I can have them and [...] could quickly put one together....

I: So you are just developing, what could we call it, a standard file of information? [...] 

G: That's correct.
Gail keeps current resumes for each of the firm's engineers and surveyors which contain project descriptions for every job the engineer has been associated with as a key participant. Since federal and state advertisements place a five-year limit on prior or on-going experience, Gail keeps the resumes updated by obtaining a job description from each engineer containing the job owner's name, the firm's fee, the year the job was completed, and the scope of work. Gail determines how much detail of these project descriptions to include in the Qualifications and Experience statement by critiquing the scope statement of the advertisement in *Commerce Business Daily*.

In those situations where the firm must submit costing information with a Qualifications and Experience Statement, Gail prepares the statements, and an engineer prepares the costing documents. An example is given in Appendix G. Again, I have deleted pertinent identifying information and included only a representative portion of the SF255. This example demonstrates how the firm, acting as a sub-contractor, must supply budget information to assist the prime contractor in estimating total job costs. Gail mentioned this type of submittal briefly to indicate that her portion of the preparatory work included compiling only the qualifications and experience segment.
of the proposal. The engineers provide the cost information for inclusion in this and any other submittal she contributes to.

3.1.2. Verbal Proposal

The verbal proposal used in a pre-award context is as idiosyncratic as the individuals involved and can originate either will the client or the engineer. Its purpose is to initiate the preliminary stages of municipal projects when the client and the engineer meet face to face. As a verbal utterance, the interchange between client and engineer is transient and does not become part of a permanent record. The validity of the utterance relies entirely on the trust relationship that may or may not exist between the two participants in the proposal. The accountability factors associated with a verbal proposal, however, are determined by the relationship between the engineer and the client. According to John, he experiences this type of proposal in situations where the client and he have established a history of reliable and trustworthy interchange in terms of personal and professional performance. He cited an example for me.

J: My proposal for this A---- water system was going to them and appearing to them in private. You know, looking them in the face and saying "I can help you.
We have the expertise. We know what we're doing."
And they say, "OK." Just a verbal presentation.

This type of proposal, by circumstance, cannot be
described in a fashion that lends itself to being
reproduced. However, verbal proposals play a key role in
the preliminary phase of many of the firm's municipal and
private projects.

3.1.3. Preliminary Engineering Report

The preliminary engineering report can take two
forms: the informal, short, general report; or the
detailed, formal report. The form, content, and use of
the preliminary engineering report is determined by one or
all of the following: the client, the funding agency, the
client/engineer relationship, and the stage of the
project.

The informal report tends to be used at the very
outset of the project; it is usually produced to
acknowledge a verbal proposal or to initiate the
preliminary phase of an overhead project. They may be
generated as the result of a verbal proposal or verbal
interchange between the client and the engineer, a give-
me-an-idea-about-what-you-mean report. The short report
could also function as a solicitation tool either for the
firm or for the client; in either case, the engineer prepares technical information to assist in persuading an agency, organization, or individual to respond positively to the proposal. An example of a short, general report is given in Appendix I. In this case, the engineer has provided the client, the municipality, with information that can be used to persuade an industry to consider relocating to the municipality's industrial park. Should the industry agree to relocate, both the industry and the municipality become eligible for agency funding to improve the water and sewage systems for the whole park, thereby permitting the municipality to expand their revenue base by persuading additional industries to relocate to the park. The engineering information incorporated in the report is technical, but it is neither detailed nor exhaustive. The engineer has provided the user of the proposal with evidence to support the purpose of the project and with procedures that can be following to optimize the funding application.

Pat was able to clarify the distinctions between a short, general report and a longer, more detailed engineering report (see Appendix C: Excerpt 3.5). She identified the document shown in Appendix I as a proposal, what has been identified more specifically as a general preliminary engineering report, which appears at the
initiation stage of a project when the client and the engineer have agreed, probably during a verbal discussion, that goods or services are needed. This document leads to the client's decision to proceed to the search-for-funding stage. When the client and/or the engineering firm identify potential funding sources, the engineer will produce the longer, more detailed preliminary engineering report.

The formal preliminary engineering report is produced after the firm has been hired to perform engineering services to demonstrate the need for funding. The contents are flexible and depend on the funding agency. The engineer provides specific information (such as engineering, financial, feasibility, environmental, archeological, historical, socioeconomic, etc.) about the project depending on the requirements and guidelines of the funding agency. This preliminary engineering report is a much more detailed document giving a municipality or utility system guidelines on how and where to obtain funding for an identified need while specifying the nature of the services and materials required to successfully and effectively address that need. An example of this type of preliminary engineering report is given in Appendix J and is described in detail by Pat in Appendix C: Excerpt 3.7. This report is prepared specifically by the firm for the
directors of the water system and is designed to become part of the grant application sent to Farmer's Home Administration. Note that the pre-application and regional clearing house approval documents are appended to the proposal to the client. The preliminary engineering report, considered a proposal by the client and the engineer, follows the format specified by the funding agency. The technical and site-specific information is segmented into the following sections: Purpose and Scope; Organization; Location; Economy; Existing System; Customers, Rates, Revenues; Financial Condition; Proposed System; Design Criteria; Cost Estimate; Operating Cost; Revenue Requirements and Financing; Proposed Rates and Revenues. The engineering firm has provided the financial, technical, and graphic expertise to the client by preparing the information in the form, structure, and style required by the funding agency for an equitable appraisal of the merits of the client's request for assistance and the feasibility of the proposed solution.

The content and position of a preliminary engineering report can be determined by the funding agency or agencies guidelines and/or by the needs of the client. John explained the diversity of form, structure, content, and use of this type of document (see Appendix C: Excerpt
3.6). The detailed preliminary engineering report is prepared for each municipal project applying for agency funding. However, the format and the content of each preliminary engineering report is determined by the guidelines set forth by the funding agency. If the client is applying for assistance to more than one funding agency, each technical or research engineering submittal must conform to each agency's format. In other words, the kind of technical information and the format of the submittal is determined by the agency; the engineering report is not duplicated and appended repeatedly to different agency submittals. For example, the information required by Farmer's Home Administration differs from that required by the Environmental Protection Agency, an Urban Development Action Grant, or a Community Development Block Grant.

John described various contents and formats for detailed preliminary engineering reports:

J: We have to do the technical research, that's right. [...] That's the engineering portion. Then, we have to come up with a way of financing it. As a part of the way of financing it, we have to complete whatever the people funding it, well in this case, Farmer's Home requires as far as an engineering report. [...]

I: So, another project would have a different type of engineering report.
J: That's right. [...] 
I: So an engineering report doesn't necessarily just mean engineering. [...] 
J: There's financing, costing, finance...it all changes every time. If it's an EPA-financed project, we have to [...] complete a facility plan and a separate environmental assessment, each of which are about that thick [2"].
I: So, virtually, then, the job...the nature of the job, who's financing it, determines the documentation, [...] the format, [...] the content, [...] the scope, length...
J: Correct.

According to John, then, the preliminary engineering reports vary widely according to the form, content, and intended use of the document. If a funding agency becomes involved in the project, preliminary engineering reports can be used at more than one point in the funding process and in more than one format. John confirmed that the more detailed preliminary engineering report (shown in Appendix J) is used after the engineering firm has been selected by the client to perform the engineering services required to
obtain funding.

Pat, who assembles and mechanically produces John's documents, gave a more succinct description of the types of engineering reports that John was referring to (see Appendix C: Excerpts 3.7 and 3.8). As she described the preliminary engineering report contained in Appendix J, she positioned it clearly in the staging framework of the project. This particular project, a water system for a small community in north Louisiana, was initiated by a conversation between John and the water system's board in which the client identified the need, and John undertook to identify a potential funding source. Based on his knowledge of funding availability, he determined that the client was eligible for Farmer's Home Administration (FmHA) assistance. A pre-application for federal assistance is submitted to the FmHA regional clearing house to obtain approval in principle of the project's suitability for formal application at the state or federal level. The approval of the pre-application at the regional level does not predict the successful award of monies for the project. At this juncture the preliminary engineering report is researched and assembled according to FmHA guidelines governing formal application for assistance. For this particular project, the firm researched the socioeconomic status of the water system's
clients, prepared plans of the site, provided maps of the vicinity, and prepared a budget statement as part of the preliminary engineering report. This report is appended to the FmHA's application form and submitted for evaluation. If the FmHA approves the project, the client is awarded the grant or the loan, and the project proceeds to the design phase of the staging sequence.

Pat described the process from verbal proposal to agency approval:

P. ...it’s not always a written proposal. A lot of times, [...] John] tells them, "OK, this is what you need to do. If you want, we can do this, this and this. But in order to do these things, we have to get started on getting your funding. We have to do your pre-app, get your clearing house comments, do your applications, we have to do the preliminary engineering report. All of which we do at no charge. And then once we get into it, then we send the engineering report to Farmer’s Home, we send them a signed contract between us and the water system. And then [the agency] approves it or disapproves it.

As the project moves closer to the funding award stage and to the design phase, the level of technicality, complexity, and length of the proposals increase
significantly. The level of commitment between the client and the firm also affects the degree of involvement of the firm's time, personnel, and resources. It appears that more overhead (i.e. pro bono) projects exist for the municipal projects than for any of the other, suggesting that the firm's and the engineer's credibility with the client contributes to the firm's willingness to provide pre-contract services to the municipal client.

3.1.4. Proposal to Provide Engineering Services

Not all funding agencies require that the municipality pre-select the engineering firm prior to the grant award. Farmer's Home Administration and EPA do require this pre-selection to ensure continuity in personnel and quality of service. Other funding agencies such as the Community Development Block Grant (CDBG) agency do not. As John mentioned earlier, however, he offers pre-award services to the municipality by helping them secure the funding and by providing them with general engineering expertise. In his terms, he says this gives his firm "an in" when the funding has finally been awarded to the municipality. At this point, the firm submits a proposal to provide engineering services in response to a published advertisement describing the job and announcing the funding." A sample of this proposal is included in
Appendix K. Note that the letter provides information similar to, but in a much more abbreviated form than, that included on SF255 and SF255, the qualifications and experience documents submitted to state and federal agencies.

3.1.5. Agreement for Engineering Services

In our discussion of the preliminary writing and planning that is involved with municipal projects involving the firm in developing proposals directed at funding agencies, Pat described the function of a pre-award engineering contract (see Appendix C: Excerpt 3.9). This document is required by both FmHA and EPA prior to their approval of funds and issuance of a notice to proceed with construction. We discussed the procedures involved in submitting a pre-application for funding to the funding agency (as shown in Appendix J). When the agency, in this case FmHA, approves the pre-application, the client and the engineering firm must complete a contract.

P: ...there is a contract that is signed by the water system. It's a Farmer's Home standard contract between the engineer and the water system where they are agreeing to pay us. You see, up until now, we have been doing this without being paid. [...] they
will start paying, but it will be with Farmer's Home funds which they will pay back through the years.

[...] And then John will start the design process.

An example of an Engineering Agreement required by FmHA is provided in Appendix L. Note that this Engineering Agreement is almost entirely boilerplated. This formalized contract, a legal document when properly executed, shares many of the characteristics of the boilerplated segments of bid documents. The pages and sections are used repeatedly but are necessary to maintain the integrity and legality of the document.

3.1.6. Funding Agency Proposal

The form and structure of a funding agency proposal depends entirely on the rules and regulations specified by the funding agency or agencies involved in a particular project. The rules and regulations of the funding agency can also determine the sequence of pre-award and post-award activities. The funding agency can prescribe whether the specifications of a project's engineering report and/or bid document need to be approved by a secondary external agency such as the Sanitation Department, the Health Department, or the Fire Department. The funding agency can also dictate the methods and personnel used to approve a contractor's or sub-
contractor's adherence to the specifications contracted for upon accepting a bid document. In addition, the guidelines set forth by the funding agency also determine the necessity of providing and the positioning of a preliminary engineering report, proposal to provide engineering services, and engineering contract (if the funding agency requires pre-selection of the engineering firm who will provide the services after funding has been awarded to the client).

John described a particular example of the stages involved in preparing proposals for funding agencies (see Appendix C: Excerpt 3.10). He stated that he prepared these documents only as a service for his municipal clients. The clients were solely responsible for the contents and fulfillment of these proposals; John's professional reputation in the field as being trustworthy and reliable depended on his abilities to identify potential funding sources for appropriate projects and to reflect the circumstances and probable outcomes of the project accurately and adequately for the client submitting the proposal. Legally, the client is accountable to the funding agency for appropriate disbursement of the loan or grant obtained in the funding award. John is accountable to the client for providing accurate and reliable research and physical plans.
John's description of the nature and genesis of funding agency proposals revealed the extensive time frames typically involved in agency-funded municipal projects. The project he cited had been at the pre-application stage for two years before the client received approval to prepare and submit a preliminary engineering report describing the proposed improvements to the site, the client's budget proposal, and the preliminary technical specifications for the project.

An example of a funding agency proposal is provided in Appendix M. This document is submitted after the preliminary engineering proposal (shown in Appendix J) has been sent to the funding agency at the pre-application stage. The funding agency proposal is required after the funding agency, in this case FmHA, has pre-approved the client's application for funding, and after the client has contracted the engineering firm to provide appropriate services. Note that this funding agency proposal contains much of the information provided in the preliminary engineering proposal (Appendix J). The format and execution of this proposal, however, is controlled entirely by the funding agency to provide them with a consistent presentation of information that will enable them to evaluate the request for funding. A high percentage of this document is either boilerplated or
requires minimal narrative input (with the exception of site-specific descriptions at the end of the report).

Pat described this funding agency proposal (see Appendix C: Excerpt 3.11) that demonstrates how engineering information was incorporated into the proposal rather than situated as a separate entity in the preliminary or pre-award stage of municipal projects. This discussion clearly confirmed the position of a preliminary engineering report in the pre-award stage of a municipal project requiring outside agency funding.

The funding agency proposal is the final document prepared by the engineering firm in the pre-award stage of the project. Elements of all previous documents are amplified and incorporated into this formal application for federal assistance. Of the documents identified during this pre-award stage of municipal or private projects, the funding agency proposal is the most complex in form and content. When the client is notified by the funding agency that monies have been awarded for the project, the project moves to the design phase of the staging process. If the funding agency requires pre-selection of the engineering firm, the firm proceeds to provide the goods and services specified in the agreement for engineering services. If the firm has not been pre-selected for the project, the client advertises for engineering services
and awards an agreement (or contract) to the qualified engineering firm who submits a proposal to provide engineering services. This firm then proceeds to the design stage as well.

3.2. POST-AWARD PROPOSALS: SUB-CONTRACTOR BID PROPOSALS

The sub-contractor bid proposal is prepared at the second point of award in a project where the firm is hired to provide engineering services which include preparing bid documents for distribution to potential sub-contractors for work that cannot be performed by in-house personnel. The firm is contracted to design the on-site project and situate sub-contractors to provide services and materials according to the specifications derived from the project's scope and the client's intention. In some cases, such as particular federal and state projects, the firm may produce only the bid documents. In these cases, the firm's contract limits its involvement to the design phase. The client, a federal or state agency, may choose to advertise, contract, and supervise the project to completion. In other cases, the firm may be contracted to act as liaison or prime contractor for the client, whether at the state/federal or municipal/private level. In these cases, the firm moves beyond the design stage to the construction administration stage and, possibly, to the
inspection and completion stages. The firm's involvement beyond the first award stage depends entirely on the parameters delimiting the type and scope of engineering services required from the firm set forth in the documents contracting the firm at this first stage.

Regardless of the firm's involvement in the project beyond developing and producing the bid documents, these proposals reflect a consistent structure and content. Neil described bid documents prepared during the design phase of a project (see Appendix C: Excerpts 3.12 and 3.13) as word pictures of whatever is shown on the plans (blueprints, or drawings). He identified three standard sections of bid documents: general specifications, technical specifications, and special provisions. Each section narrows the previous section and focuses the document on increasingly site-specific and client-specific details.

N: We have general specifications that cover [...] things that would be applicable to any job. Then we have technical specifications that arise only for the particular job that would be of a general nature. In a way, but they're technical in the sense that you do a street job: you need something in there dealing with right of way clearing, you need something in there dealing with concrete, you need something in
there dealing with, maybe, painting. [...] If you're doing a water project, you need something in there dealing with just water distribution. In other words, we write the technical specs that deal with whatever the major idea of the design is about. [...] We modify the technical specs in an area we call special provisions [...] that clean up, in a way, things that you can't specify on the drawings [...] or in the technical specs.

The general specifications describe procedures to be followed in every project dealing with the same or similar goods and services. These specifications include descriptions of activities such as hiring practices, wage and salary policies, insurance requirements, supervision and management plans, and communications procedures.

The technical specifications describe physical aspects of the goods and services to be provided. For example, if the project required the installation of an above-ground water tank, the technical specifications would describe standard components and processes used in the manufacture and construction of any above-ground water tank. These specifications include descriptions of such aspects as relevant safety or construction codes, tolerances for materials used in the tank walls,
appropriate interior tank coatings, foundation
configurations and parameters, etc.

The special provisions describe modifications to the
general and technical specifications required by the
particular site. These provisions would include
descriptions of such unique site-specific aspects as local
drainage or water table patterns, unusual topography,
anomalous usage requirements, environmental contaminants
peculiar to the area, etc.

The general and technical specifications are
boilerplated and are used repeatedly in bid documents
addressing similar projects. The special provisions,
however, are idiosyncratic to the specific project being
addressed in a particular bid document. This section is
adapted by the engineer to each project and each site if
the project involves multiple installations.

Pat, as secretary for the branch office, is closely
involved with all stages of preparation of bid documents.
She described how information was identified for inclusion
in the document and where she found that information. The
engineer acting as project manager during the design phase
of the project provides the draftsman with details
specific to the site and supervises the preparation of the
plans (blueprints or drawings) which will complement the
bid document. At the same time, he or she identifies by
number those general and technical specifications and special provisions applicable to the parameters of the goods and services required. Pat described this process (see Appendix C: Excerpt 3.14) as follows:

P: Our [general] specifications contain a lot of standard forms. We have a standard payment bond, performance bond, information for bidders page. [...] For the technical specifications] we have two big books that contain all of our technical construction specifications. [...] The engineers will] give me a list of what technical specs they're going to use and I go pull them out of the book and run a copy which serves as the original for that project. In the books that we keep the originals filed in, they are filed numerically and they start with the [...] first letter of the alphabet [...] then it goes all the way through numerically so that [...] when they want the W-200, or the S-260, which is a sewer specification for sanitary sewer systems... then I just go through the books numerically. Now, in the special provisions [...] I'll say, "OK, well what project have we done recently that this is similar to?" And they'll tell me. Well, I just pull the disk on that project, copy it onto another disk, and then all I have to do is change the bid proposal, the special
provisions, the bid advertisement, anything peculiar to the new project.

The bid proposal contains standard forms and sections that are consistent. According to Neil and Pat, 75% of the material in a standard bid proposal is boilerplated; John states that 80% is boilerplated. The following sections describe a bid proposal for a water well prepared by the firm and released for bid to appropriate sub­contractors. Representative excerpts from each section have been included in Appendix N.

3.2.1. Bidding Forms

The first section of a bid document usually contains the forms required to advertise the bid to the contractors and the forms the bidders must fill out to submit their pricing to the client.

The bid advertisement gives the date and time for the bid opening for a specified project. The engineer's name is provided so the bidder may obtain a copy of the plans and specifications for the project. Other elements required by state bid law include a statement of conditions of award (usually to the lowest bidder if the client is a public agency or is being funding by a public agency), a statement of preference for locally produced
goods and services, and a prescribed site for the bid opening itself.

The Notice to Bidders informs the prospective contractor of the rules and regulations controlling the bid opening. This notice also informs the bidders of bid bond requirements and award procedures.

The Bidder's Proposal is project-specific. The proposal opens with a statement of compliance which the bidder must sign; here the bidder attests to the integrity and validity of the bid, provides the bid bonds, agrees to the time limitations set by the client for completion of the work outlined by the bid document, and agrees to complete the proposal forms as instructed. Following this statement, the bidder provides the prices for the materials and/or services specified in the bid document. The final page of the bidder's proposal acknowledges the bidder's receipt of any addenda issued by the engineer or client about the bid document. Here, in compliance with state bid law, the bidder must include his or her contractor's license number. Appended to the bid proposal will be copies of the bid bond certificates.

3.2.2. Contract Forms

The second section of a bid document usually contains the contract documents which must be completed by the
successful qualified bidder and the client after the notice of award has been released. This section of the bid document becomes the legally binding contract between the contractor and the client. The contractor agrees to abide by the rules and regulations and specifications set out in the bid document and contract; the client agrees to the payment schedule outlined in the contract forms.

3.2.3. General Conditions

The third section of a bid document usually contains a sub-section which provides definitions for the legal, technical, and organizational acronyms, words, and phrases used throughout the document. The second sub-section contains the general conditions which govern all portions of the contract, job performance, completion, payment, insurance, indemnity, employment, etc.

3.2.4. Special Provisions

This section is completely project- and site-specific. Here the design engineer specifies those conditions, materials, documents, procedures, etc. that are particular to that project. Any amendments to be made to the standard technical specifications in the fifth section of the bid document or to the plans are specified in the special provisions.
3.2.5. Technical Provisions

In this section, the standard technical specifications are provided to the bidder to define terminology peculiar to any job of the same type as the project. Also, specifications for the materials and services which are included in any job of the same type as the project are listed. Any amendments to the standard technical specifications are made in the special provisions section.

4.3. SUMMARY

The bid document is the last major document produced for a project by the firm. At this point in the staging process, the project moves to the bidding phase where the job is advertised, potential sub-contractors submit their proposals, and a successful qualified bidder is awarded the contract. At this point, the project moves to the construction stage.

The following documents have been identified as contributing to the initiation, acquisition, and provision of services to a client by the firm: qualifications and experience statements, preliminary engineering reports, proposals to provide engineering services, agreements for engineering services, funding agency proposals, and bid documents. Although their genesis, structure, content,
and use are significantly different, these documents fall under the general classification of proposals by virtue of their primary purpose: to secure business for the firm.
CHAPTER FOUR: CLASSIFICATION OF PROPOSALS

As explained in Chapter Three, the informants provided comprehensive descriptions of the form, content, and structure of the various documents associated with projects awarded to the engineering firm from federal/state and municipal/private clients. These documents were classified according to whether they appeared before or after the engineering firm took the project to the design phase. This point of the process was called the point of award.

However, the information gathered during the field-based interviews and from the questionnaires indicated that a more sophisticated staging process existed at the pre-award and post-award stages. As suggested in the analysis presented in Chapter Three, the documents do not function as isolated units; they demonstrate a fluidity of form and a transformation of function as the project moves from inception to completion. In this chapter, I will examine data obtained from the informants about the function of the documents in the complete staging process. Expanded transcript excerpts appear in Appendix D to provide a fuller context for the excerpts included in this chapter.
4.1. OVERVIEW OF THE TAXONOMY OF PROPOSALS

Based on the analyses given in later sections of this chapter, I developed the following taxonomy derived from the proposal's position in the staging sequence of a project. Basically, the proposal's position can be identified as either pre-award or post-award, defining the point of first award as the juncture in the staging process where the engineering firm proceeds with the preparation of the bid documents in the design phase. It appears that the post-award proposals are prepared, structured, and used similarly in state-federal and municipal/private projects. At the pre-award stage, however, the proposals vary significantly in form, structure, content, and use. The distinction between point of first award and point of second award indicates the extent of the firm's involvement with both the client and the project. The point of first award in state/federal and municipal projects is identical; it is the point at which the firm is hired to proceed with the design phase and preparation of bid documents. The point of second award occurs when the prime and/or sub-contractors are contracted to proceed with the construction phase. In municipal projects, a preliminary point of award occurs when the firm is pre-selected as the engineering firm before the client submits a formal
application for financial assistance to the funding agency. This preliminary point of award is considered by the firm to be part of the preliminary process leading to the point of first award. The documents that could be considered representative of the preliminary point of award, the agreements for engineering services, serve as part of the client's proposal to the funding agency and appear consistently in the preliminary phase of municipal projects. The client, at this point, has not received the funding agency's approval to proceed with the project.

The following charts classify the types of proposals identified by my informants for the pre-award and post-award stages of state/federal and municipal/private projects.

Figure 4.1 classifies those proposals used in state and federal projects contracting the firm either as sole provider of services (i.e. the firm is contracted to provide only design services, including preparation of the bid document) or as prime contractor of services (i.e. the firm is contracted to act as liaison between the client and sub-contractors).
<table>
<thead>
<tr>
<th>Pre-Award</th>
<th>Design Phase Only</th>
<th>Prime Contractor</th>
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<tbody>
<tr>
<td></td>
<td>*Qualifications</td>
<td>*Qualifications</td>
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<td></td>
<td>and Experience</td>
<td>and Experience</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>Statement</td>
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</table>

*** POINT OF FIRST AWARD ***

<table>
<thead>
<tr>
<th>Post-Award</th>
<th>Design Phase Only</th>
<th>Prime Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*Preparation of</td>
<td>*Preparation of</td>
</tr>
<tr>
<td></td>
<td>Bid Proposals</td>
<td>Bid Proposals</td>
</tr>
<tr>
<td></td>
<td>*Bid is awarded</td>
<td>*Bid is awarded</td>
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<td>to qualified</td>
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<td></td>
<td>bidder</td>
<td>bidder</td>
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</tbody>
</table>

*** POINT OF SECOND AWARD ***

<table>
<thead>
<tr>
<th></th>
<th>Design Phase Only</th>
<th>Prime Contractor</th>
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<tbody>
<tr>
<td></td>
<td>*No firm</td>
<td>*Firm acts as</td>
</tr>
<tr>
<td></td>
<td>involvement</td>
<td>liaison between</td>
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<td>client and sub-</td>
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<td></td>
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<td>substantial</td>
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<tr>
<td></td>
<td></td>
<td>completion</td>
</tr>
</tbody>
</table>

Figure 4.1. Classification of Proposals in State/Federal Projects

Figure 4.2 classifies those proposals used in municipal projects involving funding agencies requiring pre-selection of the engineering firm before funding is awarded to the client.
Classification of Proposals

Pre-Award

• Verbal Proposal (optional)
• General Preliminary Engineering Report
• Agreement for Engineering Services

*** PRELIMINARY POINT OF AWARD ***

• Detailed Preliminary Engineering Report
• Funding Agency Proposal

*** POINT OF FIRST AWARD ***

Post-Award

• Preparation of Bid Documents during Design Phase
• Bidding Phase: Bid is awarded to qualified sub-contractor

*** POINT OF SECOND AWARD ***

• Construction Phase: Firm acts as liaison between sub-contractor and client until substantial completion

Figure 4.2. Classification of Proposals When Funding Agency Requires Pre-Selection of Engineer

Figure 4.3 classifies those proposals used during a project when a funding agency does not require pre-selection of the engineering firm.
Classification of Proposals

Pre-Award
- Verbal Proposal
- General Preliminary Engineering Report
- Detailed Preliminary Engineering Report
- Funding Agency Proposal
- Proposal to Provide Engineering Services
- Qualifications and Experience Statement
- Agreement for Engineering Services

*** POINT OF FIRST AWARD ***

Post-Award
- Preparation of Bid Documents during Design Phase
- Bidding Phase: Bid is awarded to qualified sub-contractor

*** POINT OF SECOND AWARD ***

- Construction Phase: Firm acts as liaison between sub-contractor and client until substantial completion

Figure 4.3. Classification of Proposals When Funding Agency Does Not Require Pre-Selection of Engineering Firm

Although each municipal project may not include every pre-award document listed, the documents are selected according to the requirements of the job and of the funding sources.

These taxonomies are based on the requirements of the client and/or the funding agencies involved in the
project. In state and federal projects, the client is responsible for initiating the project through publicly advertised solicitations for Qualifications and Experience Statements. In municipal and private projects, either the client or the engineer may initiate the project by soliciting bids or by receiving unsolicited information from the firm designed to initiate a project focused on the client's need. At the preliminary stages of municipal projects, the engineering firm initiates and develops original documents to situate funding. Once the project proceeds to the stage requiring formal application for federal assistance, the form, structure, and the content of documents produced by the firm are dictated by guidelines imposed by external agencies. The type of content is specified by the external agencies, but the actual original input, in terms of the details pertinent to the client, the site, and the project, is developed by the engineering firm.

The following sections of this chapter describe and analyze the evidence provided by the informants about the form, structure, content, and use of each of these documents.
4.2. THE RELATIONSHIP BETWEEN THE CENTRAL OFFICE AND THE BRANCH OFFICE

I initially focused on the relationship between the central office and the branch office to determine if the documents produced in these sites were independent, interdependent, super- and subordinate, or sequential in terms of the staging process of projects handled by the firm. In addition, I needed to situate my informants according to the roles they played within the central office and between the central and branch offices. Based on my own experience in corporate environments, I knew that a branch office is often an appendage of a strong centralized structure with the central office initiating, directing, and controlling the activities of a branch office located in a smaller, less densely populated area. I wondered whether the lack of many heavy industries or visible government projects in the region served by the branch office would limit the extent of business solicited by the branch office. I also wanted to find out if, indeed, the branch office was merely a service-oriented outlet providing a broader geographic scope for on-site availability of technical and professional support personnel.

I questioned my informants about the firm's organization to determine the nature of the relationship
between the central office and the branch office. John, the branch office manager, indicated that the central office and the branch office operated as interdependent entities (see Appendix D: Excerpt 4.1). Each office initiated projects that either remained the responsibility of the initiator, were shared between the two offices, or shifted to the other office if time and manpower loads required such a move. Gail amplified on John’s description of this relationship by situating the branch office within the infrastructure of the firm (see Appendix D: Excerpt 4.2). She clarified how the two offices operated and cooperated in their functions. The branch office served as a division within the corporate structure. However, the branch office division exhibited more autonomy than any of the other divisions in that the branch office performed services found in several of the other divisions (such as clerical, engineering, surveying, design, etc.) into its functions. Each of the five divisions located at the central office provided services for various stages of a large project, and the administrative division provided clerical service for the other four divisions.

The firm is structurally organized into six divisions; five are physically located in the central office with the sixth, the branch office, located
approximately 120 miles away. The internal organization of the branch office mirrors the structure of the central office by having a division manager and by having branch office personnel functioning in roles distributed among the five divisions of the central office. The two offices function interdependently and independently in terms of project allocation, fiscal accountability, and use of personnel and resources. Information collected in both offices, then, would be comparable in the form, content, source, and use of documents generated for joint and independent projects. Figure 4.4 shows the organizational structure of the firm.

Since the central and branch offices functioned in dependent and independent roles determined by the scope of the project and by the personnel available, I focused on classifying the types of projects handled by both entities.

4.3. CLIENT AS CRITERION FOR CLASSIFICATION

Although the branch office appeared to be a microcosm reflecting the functions and structures of the other five divisions located in the central office, John indicated that some of the preparatory work on projects was allocated to Gail based on the source of the project. Gail prepared proposals for the branch office for projects
CONSULTING ENGINEERS

Organized as small business partnership

Four partners

Project allocation
Fiscal accountability
Personnel
Resources

Administrative Division
Head: Partner
Provide all clerical for Central Office
Provide Q & A to

Branch Office Division
Head: Manager
Clerical, design, drafting, construction, inspection

Surveying Division
Head: Partner
Surveyors and crews

Construction Division
Head: Manager
Construction administration

Civil Division
Head: Partner
Design
Civil
Drafting

Utilities Division
Head: Partner
EIT
Technicians

Labor Board Group
Quality assurance inspection

Figure 4.4. Organizational Chart of the Engineering Firm
and for other divisions at the central office. At this point, I realized that the term I was using to label my artifacts, proposals, was an umbrella term rather than a term that exhibited a one-to-one correspondence with a typical document. A complex system of categorization for proposals was beginning to emerge.

John described the types of jobs the branch office handled, but he clearly specified that the nature of the project, the source of the funds, and the infrastructure of the client's organization determined the nature of the documents required to obtain the client's business (see Appendix D: Excerpt 4.3).

J: The Corps of Engineers has certain rules and regulations in the selection of engineers. So does these other funding agencies, but the state and Corps come up with the projects--they have the in-house capability of describing the project. [...] Whereas, [a small town] has no in-house capability to even describe what has to be done. They just know there is a need.

I: So, it's [...] completely [...] different. You're providing for your municipal and private people the expertise that the government, in these state and federal [projects], do themselves.

J: Right.
I: So, the nature of the jobs, the preparation for the jobs and the proposals is completely different.

J: Um-huh [yes].

He drew a significant distinction between projects originating with state and federal agencies and projects associated with municipal agencies. Responding to solicitations for goods and services from state and federal agencies fell within Gail's function at the central office. John emphasized that he had nothing to do with those projects; the decision to submit Qualifications and Experience Statements to secure business with these state and federal agencies was made by the head of the administrative division. John also specified that the types of submittals required for municipal projects were significantly different from the state and federal submittals since the scope of goods and services required by the clients differed.

The federal and state agencies, such as the Corps of Engineers or the National Guard, possessed in-house engineering capabilities to identify and articulate needs which are contained in the scope statements of advertisements appearing in Commerce Business Daily. They solicited professional services of such disciplines as architecture and engineering to produce specific technical
documents at the design phase which were incorporated into the bid documents produced prior to the point of second award. Whether the engineering firm was hired to act as prime contractor at the point of second award was determined by the nature of the professional services required by the project. For example, the firm might be hired to provide on-site surveying and inspection services; in this case, the firm would participate in the post-award construction phase of the project.

Municipal agencies usually do not possess the in-house capabilities to articulate the general requirements of a project. Consequently, the engineering firm becomes involved in municipal projects at the preliminary stages where the scope of a project is identified and external funding is pursued. This early involvement in municipal projects requires that the engineering firm initiate and develop several types of documents to address the submittal requirements occurring during pre-award activities, such as identification and situation of funding sources:

Since John had specified that Gail worked on a particular kind of document that he never handled, I asked her to clarify the difference between John's proposals and hers. Gail confirmed that she produced the Qualifications and Experience statements for John's division; however,
her duties in the central office also included preparing non-financial portions of submittals to municipal agencies (see Appendix D: Excerpts 4.4 and 4.5). Focusing on the characteristics of the Qualifications and Experience Statements and the proposals produced by John in the branch office, Gail confirmed that she provided the Qualifications and Experience statements. She emphasized that the engineers were responsible for producing any documents or portions of documents that required financial information, such as cost proposals, bid documents, budget statements, cost estimates, etc.

At this point, based on John's and Gail's information, I identified the client as a criterion for the classification of proposals. Proposals submitted to state and federal agencies differed in form, content, and position in the staging sequence from those submitted to municipal agencies and private clients. In addition, proposals prepared for state and federal agencies were solicited; those prepared for municipal clients could be solicited or unsolicited. These client-based differences did not appear to be idiosyncratic to the firm; the categories were determined by agents and agencies external to the firm.
4.4. POSITION IN SEQUENCE AS CRITERION FOR CLASSIFICATION

Gail's and John's comments suggested that this distinction between the form and content of the documents produced for state/federal and municipal/private projects had an additional criterion: position in the pre-established sequence of pursuing the project and performing the stages involved after the project was awarded to the firm.

4.4.1. Pre-Award Sequence of State and Federal Projects

Gail described the staging of state and federal projects from the point of solicitation (in the Commerce Business Daily) to the point of second award (see Appendix D: Excerpt 4.6) as follows:

1. The Qualifications and Experience Statement is prepared and submitted according to the guidelines contained in the client's (agency's) advertisement.

2. The client evaluates the submittal and awards the contract according to the qualifications of the bidder and the accuracy of the contents and format of the Qualifications and Experience Statement.

3. The successful bidder is notified by letter of the award and proceeds to the design phase where the bid documents are prepared according to the client's specifications.
4. When the client approves the bid documents, the project is advertised to situate appropriate and qualified sub-contractors to perform the actual construction of the project.

Apparently, then, the order of appearance in state and federal projects of the Qualifications and Experience Statement and the bid document is determined by the staging sequence; the Qualifications and Experience Statement is designed to secure the contract to perform design services for the client. The bid document is produced during the design phase to secure qualified sub-contractors for the client to proceed to the construction phase. The sequence and format of these documents are established by the agents or agencies soliciting the firm's services, not by the firm itself.

In projects for state and federal agencies, therefore, there are two distinct documents that can be categorized as proposals: the Qualifications and Experience Statement and the Bid Proposal. In the advertisements for these projects, the agencies ask for a statement from the bidders indicating how and why that bidder is qualified to perform the tasks involved in the project. Gail prepares these documents in what the informants term the preparatory stage of the process of
acquisition and performance of the project. Once the job has been awarded, based on the agency's evaluation of the Qualifications and Experience Statements submitted to them, the successful bidder then becomes the primary contractor for the client and prepares bid documents to identify appropriate sub-contractors through a second bidding stage. In the firm, these bid documents are prepared by the engineer who becomes the project manager for the particular job.

The steps involved in state and federal projects appear to be consistent. State and federal agencies have standardized regulations for the submission and evaluation of proposals and require strict adherence to the pre-established procedures. The preparation of bid documents by the firm after it has been awarded the job by the agency becomes more job-specific in certain sections of the bid document, such as in the special provisions section of the bid document.

4.4.2. Pre-Award Sequence of Municipal Projects

At the municipal and private level, however, the steps involved in the advertisement of the project, preparation of the proposals, and submission of the proposals become idiosyncratic to the client, to the relationship between the client and the employees of the
firm, and to the project itself.

John's description of some typical municipal projects provided evidence that the procedure involved at this level is, indeed, complex (see Appendix D: Excerpt 4.7). He described the staging process of a project from identification of need to point of first award for a small town whose administrators identified a need for a sewer system as follows:

1. The client identifies the need.
2. The engineer approaches the client and verbally proposes to prepare a general preliminary engineering report to append to a pre-application for federal assistance to a funding agency the engineer has identified as having grant or loan monies available for sewage systems.
3. With the client's approval, the engineer prepares the preliminary engineering report and fills out the pre-application on behalf of the client and submits it to the funding agency's clearing house.
4. If the funding agency approves the application, the client is notified of the award of funding by letter.

In several of our conversations, John emphasized the importance of his relationship with potential and repeat municipal clients (see Appendix D: Excerpts 4.7. and 4.8
for examples). In situations where the municipality does not possess the capabilities to go much beyond being able to identify and articulate a need, John relies on the firm's reputation and his own familiarity with the region, its population, and its needs to solicit business for the firm. Of primary importance, too, is his ability to stay current with the various funding agencies' policies and budgets. His knowledge of the client's need and of the system's actual and potential performance contributes to the completeness of the application for funding, and, no doubt, to the favorable outcome of the submittal.

In rare cases, private clients will approach and hire the firm based on someone's recommendation. However, the usual procedure John follows in identifying potential clients involves sales and public relations strategies.

J: All life is sales. Everything is people. [...] People don't call here and say, "Hey, come design this for me." [...] We've had a couple of people just actually walking in the door. [...] That's the unusual...that's what you'd like to have happen all the time. But normally we have to go to council meetings, and we have to go visit with mayors and say "Do you have any needs out there? Do you have people that need better water? Do you have people that don't have fire protection? Do you need a sewer
system? a park? The other thing is repeat business. If we do a good job and people are happy, and they trust us. Trust is everything in this business too. [...] I: Then, you're saying this, S---- [a town], would be a typical example. The municipal official would ask you, "We would like to do this"? J: No, usually we go to them and say "Would you like to do this?" [...] They don't even know enough about it to ask us. Until we get into a community, and they know us. S---- [a town], we had to go to them the first time. Now, if anything comes up, they would ask us. It depends on what stage your relationship was. I: So, in some cases, you would initiate or identify the needs. So you need to keep track of what's going on not only in the funding agencies but in the communities themselves. J: That's right. I: That gives you... J: ...an in.

At the municipal and private level, then, solicitation of business can originate with the client or with the firm. The solicitation can occur as a result of
the client identifying a need or service; the client could then advertise in a local or regional newspaper or approach the firm directly. In some cases, both methods are employed but at different stages during the evolution of a project. For example, the client could approach the firm with a problem and ask for the firm's expertise or direction in articulating the problem and obtaining appropriate funding. The solicitation can also occur as a result of the engineer's familiarity with funding agencies and/or client needs. In these cases, the engineer would identify client needs and approach the client with possible solutions and funding sources. The source of the solicitation and the nature of the project influence the form and content of documents used to initiate and perform the project.

John emphasized that the form, content, and use of the pre-award documents are determined by agents and agencies external to the firm (see Appendix D: Excerpt 4.9).

I: You use client-specific guidelines [that] could change from client to client?
J: From project to project for the same client! It can change, depending upon what they're trying to do. [...] Then there's a set format that you have to give to whoever you're applying for the funding. [...]


Sometimes we have three funding agencies dealing with one project. [...] And each one has their requirements before they approve funding which you have to pass.

In addition, the funding agency will determine the sequence of the proposals in the pre-award stage. This order is determined by whether or not the funding agency requires that the client pre-select an engineer before funding is released at the point of first award. Some agencies, such as FmHa and EPA, require that an engineer be under contract to the client before the formal application for funding is submitted with a preliminary engineering report to the funding agency. In these cases, the Agreement to Provide Engineering Services is executed before the Funding Agency Proposal is prepared and submitted for consideration. These agencies prefer pre-selection to ensure that the performance of the engineering work correlates closely to the parameters and intentions provided in the preliminary engineering report. Other agencies, such as the Community Development Block Grant, do not require pre-selection of the engineer. In these cases, the client receives notice of the award of funding, publishes an advertisement soliciting Qualifications and Experience Statements, and hires a
qualified engineering firm to take the project through the design, bidding, and construction phases.

J: So, Farmer's Home Administration wants you to submit your engineering services agreement with the preliminary engineering report. But...in your Community Development Block Grants, there's no preliminary engineering report, there's just an application which includes cost estimate, map of the proposed project which would include in all kinds of assurances that this is going to take care of it—it's a mini-engineering report. But their rules and regulations do not allow the pre-selection of the engineering firm. And if they would fund the project, they require that [the client] advertise for engineering services, to accept proposals.

In those cases where the funding agency requires pre-selection of the engineer, the firm receives a contract at the preliminary point of award. The point of first award occurs when the funding agency awards the funds to the client; the firm proceeds with the design, bidding, and construction phases. In those cases where the funding agency does not require pre-selection of the engineer, the firm is awarded the contract at the point of first award (i.e. at the same point in the process where the client is awarded the funding) and proceeds with the design,
bidding, and construction phases.

J: Once they get funded, we don't have any more proposals to do. [...] Then we have to do a bid proposal for a contractor to build the project.

4.4.3. Summary of Pre-Award Sequence

The documents identified by the informants as bid proposals for the state/federal and municipal/private projects are very similar in form, content, and use. The documents produced prior to the award of the project to the firm, however, vary significantly between the types of funding sources. For state and federal projects, pre-award documents consist of Qualifications and Experience Statements. The state and federal agencies possess the in-house capabilities of identifying and specifying goods and services required. The bidders at this stage of the project acquisition stage submit documents proposing by demonstration their ability to provide the personnel and services required for the particular projects. These pre-award proposals use pre-set forms and formats which determine their structure and the parameters of their content.

For municipal and private projects, however, pre-award proposals consist of an open-ended number of job-specific, client-specific, and funding-specific documents
ranging from verbal request to written documents.

In classifying proposals into pre-award and post-award categories, I must clarify that there are three points of award in the process of job acquisition and job performance. The preliminary point of award occurs in municipal projects where the funding agency requires pre-selection of the engineer. The client hires the engineer to prepare the preliminary engineering report and funding agency proposal. This preliminary award may require the firm to provide other services such as feasibility studies, preliminary on-site engineering reports, and surveying services. The first point of award occurs when the client, whether state-federal or municipal/private, executes a contract with the firm stating that the firm will provide the client with specific types of design engineering services. For federal and state projects, these services would include providing engineering services such as on-site analysis, surveying services, inspection services, or design services. At this point, the firm prepares the bid documents for the bidding phase of the project. For municipal projects, the first point of award occurs when the funding agency approves the grants or loans for the project and gives a notice to proceed to the design stage. The design phase produces the bid document in both state/federal and municipal
projects.

The second point of award occurs after the firm has contracted to provide the client with engineering services. In some state-federal projects, the firm could be contracted to provide services that are available completely in-house. In these cases, the firm is not involved in any activities following the second point of award. However, in state-federal and municipal/private projects, if the first award requires services beyond the firm's in-house capabilities or requires the firm to sub-contract or joint-venture any of the services to complete the job, the firm would prepare bid documents and send them to prospective bidders. The second point of award occurs when the firm awards the sub-contract(s) according to the successful bidder's ability to meet the specifications and bonding requirements of the project and the state bid law (where applicable). The first point of award marks the division between pre-award and post-award documents.

4.4.4. Post-Award Documents

After the first point of award, the firm follows pre-established procedures using standard forms and documents to complete the design and bidding phases and to proceed to the construction stage. An exception to this procedure
occurs when the client is a private company or an individual; in these cases, the client is not subject to state bid law and sub-contracts either through public bid or private contract. In state/federal and municipal projects, the funding agency determines the specific rules and regulations of bidding and approval. In state/federal and municipal projects involving multi-disciplinary services beyond those available in-house, the firm becomes the agent or primary contractor for the client and acts as liaison between the client and the successful bidders for sub-contracted services and materials. At this stage, usually called the design stage, the firm prepares and produces bid proposals based on site-specific, funding-specific and task-specific requirements for distribution to potential sub-contractors. The sub-contractors, following the regulations and specifications set out in the bid documents prepared by the firm, submit their proposals to the firm for evaluation and subsequent award based on the bidder's ability to provide the services and materials specified for the particular project. The successful bidder is awarded the contract at this second point of award, and the bid proposal then becomes a bid contract for the performance and completion of the project by the sub-contractor.

This transformation in the use of the bid document
from bid information document to bid proposal to bid contract is significant; the content of the document (with the exception of the bidder filling in boilerplated forms) does not change. However, the document's function changes dramatically as the staging process advances. The steps in the transformation are identified as follows (see Appendix D: Excerpts 4.10, 4.11, 4.12, and 4.13).

1. The bid document is generated after the point of first award. The firm is contracted to provide services during the design phase of the project. The design phase includes on-site inspection, evaluation of needs, preparation of plans (blueprints), and compilation of bid documents. The bid documents include standard sections: general specifications, technical specifications, special provisions, bid advertisements, bid documents, and bidder's proposals, etc.

2. During the bidding phase, this bid document is either sent out to prospective bidders or kept in the office for public reference. While the project is advertised publicly by the client, the bid is an informational document; the contents, especially the special provisions section, provide prospective bidders with data on which they can calculate their bidding price on providing the goods services specified in the bid document.
3. Immediately prior to the second point of award, the bidders use the bid document as a proposal in which they record the price they will offer to the client for providing the goods and services specified in the document.

4. At the second point of award at the end of the bidding phase, the bid document becomes a legally binding contract between the client and the successful qualified bidder. When both parties have signed the legal documents contained in the bid document and when the successful bidder provides a notarized bid bond, the document is filed as a binding contract.

5. During the construction phase, the bid document/contract becomes a sourcebook for the subcontractor; he or she must adhere to the specifications prescribed in the bid contract and the bid plans.

6. The client and the firm's inspectors use the bid document/contract as a base-line document to measure performance and quality of materials. The subcontractor must provide the services specified to pass substantial completion when the client, the funding agency, the firm, and any other agency involved in approving the project give final approval and release the subcontractor's retainage after receiving a lien-free certificate from the Clerk of Courts office.
7. After substantial completion, the bid document/contract becomes a warranty against the quality (or lack of) of the sub-contractor’s goods and services. The document becomes, in essence, a paper trail of accountability.

The bid document at the point of second award becomes a contract between the client and the successful bidder and serves as a measure of performance. Once the project has been awarded to the sub-contractor, the construction phase begins. The writing and the preparation of the various proposals involved with the project ceases. If the firm has been contracted to provide post-bid or construction administration services, its employees become involved in such activities as resident inspection, accounting services between the funding agency and the sub-contractors, layout construction or surveying, or review of shop drawings (see Appendix D: Excerpts 4.13, 4.14, and 4.15). Documents, such as inter-office memoranda, inspection reports, financial reports, change orders, external letters of confirmation, etc., are produced during the construction stage after the business has been secured by the firm. This correspondence becomes a permanent part of the project’s record. All of the documents produced and/or
received by the firm relating to the particular project are monitored and filed according to an elaborate numerical coding system so that all correspondence, including memos, reports, and plans, can be retrieved for review or accountability purposes. John emphasized the importance of this retrieval system (see Appendix D: Excerpt 4.16):

I: Everything that goes with a specific project is grouped under that system?
J: That's right. Everything. The first three numbers say what it's for; the last four numbers say what the project is. What it's for, with any first three numbers, it can be for any of the projects and the last four are just for the job. So, I could look at this, "010" is for construction, it goes with construction account 3434.
I: Now, this is designed for accountability?
J: This was designed so we could find things. We always want to know, where is something? And, where do you look for it? We use documents, and really there's a lot of legal ramifications for everything we do, a lot...you have the potential of ending up in court on anything. So you have to have a way of finding things.
The post-award document, the bid document, is a standard feature in state/federal and municipal projects. Its form and content stay the same, but its purpose and use alter significantly as the staging process evolves. The document can serve multiple functions at a single point in that process. For example, the bid document can serve at the same point in time as a guideline for the sub-contractor to fulfill his or her obligation, as a base-line for inspection for the client or the inspecting agency, and as a legally binding contract with warranties between the client and the sub-contractor. The notion of audience in this situation becomes seriously blurred.

4.5. SUMMARY

My definition of proposals as documents produced to solicit business for the firm, then, holds true insofar as the documents described by my informants all contribute in varying degrees to the affirmation of the firm as a contractor or as purveyor of services and/or materials for a client. However, the term "proposal" is an umbrella term for a genre of documents that exhibit a variety of forms, structures, contents, and purposes. The parameters of many of these documents are determined by client-specific, job-specific, and funding-specific criteria. In other words, these documents are primarily shaped by
forces external to the firm and its employees. A few, such as the verbal proposals, preliminary engineering reports, and some documents designed for private clients, are totally idiosyncratic and determined by the relationship between the firm's engineer and the client.

The forms of the proposals can range from the verbal proposal and the one-page, purposely vague document to the two-inch thick bid document. The structures can range from solicited to unsolicited; proposals to federal and state clients are solicited, and proposals to municipal clients can be unsolicited, solicited, or mutually generated. The contents can range from totally original (as in a preliminary engineering report) to 75-80% boilerplated (as in standard bid documents) or to fill-in-the-blanks documents (as in the bidder's proposal section of a bid document). And, the purposes and uses of these documents cover a broad spectrum; the parameters of each document's function, use, and audience are determined by the client's need, the funding agency's requirements, and the site-specific data.
CHAPTER FIVE: SUMMARY

5.1. THE ARTIFACTS IN THEIR NATURAL CONTEXT

The forms, contents, and uses of the various proposals described by my informants and collected as artifacts appear to be primarily funding-specific, client-specific, and job-specific. Although I did not perform a quantitative analysis of the actual word-for-word input into the documents, a general observation based on my findings is that the writers of proposals in this particular context, the engineering firm I studied, make very few decisions beyond those made at the very preliminary stages of a municipal or private project about the form or uses of the proposals they assemble and produce. Verbal proposals and correspondence initiating and/or acknowledging preliminary discussions of potential projects appear to be entirely idiosyncratic to the people involved and the work projected. The form, content, and use of these early communications are determined by a combination of a number of factors. They can be determined by the nature of the communication (verbal or written), its purpose (to acknowledge, to initiate, to provide general technical information), and its use (internal communication, paper trail, initiation of funding process, documentation for further planning and
development). The amount of boilerplated content also varies according to the document's function. For example, an engineer would originate a larger percentage of the content of a preliminary engineering report than he would of an agreement to provide engineering services. The original content is determined by client-specific, funding-specific, and site-specific needs.

Although I did not formally analyze the rhetorical decisions made by the writers through protocol analysis, based on my findings in those sections of proposals where the writers provide original or adapted material, it appears that their primary concerns are clarity and specificity; the services and materials described in their documents will be provided to the client according to the specifications set out in the firm's documents, thereby rendering the firm legally and ethically accountable for the accuracy of the documents produced by its employees. In addition, the accuracy of non-bid documents determines the success of the firm's proposals to federal and state agencies.

A synthesis of the information gathered during field interviews, from the questionnaires, and from the artifacts themselves provides a lexicon of terms used during the phases of an engineering project and a staging framework for the various proposals produced and used by
the engineering firm.

5.2. LEXICON OF ARTIFACTS

To cross-reference this lexicon to the staging framework described in section 5.3, I have divided the lexicon into two sections: section 5.2.1. lists the terms in order of appearance during the staging framework; section 5.2.2. lists the terms and their definitions alphabetically.

5.2.1. Lexicon in Order of Staging Framework

I have listed the documents under the project phases they are associated with. Elements of documents are listed under the appropriate document label.

TYPES OF PROJECTS OR SOURCES OF FUNDS

FUNDING AGENCY
MUNICIPAL PROJECTS
PRIVATE PROJECTS
STATE AND FEDERAL PROJECTS
PRESELECTION CRITERIA
QUALIFICATIONS AND EXPERIENCE STATEMENT
PRELIMINARY PHASE
VERBAL PROPOSAL
OVERHEAD PROJECTS
PROPOSAL TO PROVIDE ENGINEERING SERVICES
AGREEMENT FOR ENGINEERING SERVICES
PRELIMINARY ENGINEERING REPORT

DESIGN PHASE

PLANS
BID DOCUMENT

ADVERTISEMENT FOR BIDS
BIDDER'S PROPOSAL
PERFORMANCE BOND
PAYMENT BOND
GENERAL CONDITIONS
TECHNICAL SPECIFICATIONS
SPECIAL PROVISIONS

BIDDING PHASE
BID DOCUMENT

CONSTRUCTION PHASE

LAYOUT CONSTRUCTION
CONSTRUCTION ADMINISTRATION
SUBSTANTIAL COMPLETION

INSPECTION PHASE

5.2.2. Lexicon in Alphabetical Order

In this lexicon, I provide the most common label or name used by my informants and by the artifacts themselves for documents or activities associated with those
documents identified regularly and frequently in the data. Next, I list alternative or equivalent labels or names used by the informants for the document (AKA:). I then provide a description (Description:) of the document or activity. If appropriate, I then identify who usually produces the document (Producer:) and who usually uses the document (User:).

ADVERTISEMENT FOR BIDS Description: This advertisement is used to announce publicly the time and place of a bid opening and is run for a period of time specified by state bid law. A copy of the advertisement for bids is included in the bid document prepared by the engineering firm. Producer: It is usually prepared by the client or the engineering firm. User: The client uses the advertisement to comply with state bid laws and to seek potential bidders to supply the goods and services advertised.

AGREEMENT FOR ENGINEERING SERVICES AKA: Contract. Description: This document is a contract between the municipal client and the engineer specifying the services the engineer will provide at the pre-award and post-award stages of a project. Some funding agencies specify that this agreement be executed prior to the funding award, and
other agencies do not require pre-selection of the
ingineer. **Producer:** The client and/or the funding agency
produces this contract. **User:** The client and the
engineer use the document as a legal contract between the
two organizations.

**BIDDER'S PROPOSAL** **Description:** This proposal is part of
the bid document. The goods and/or services specified in
the special provisions and technical specifications
sections of the bid document are listed in this section by
category or by item name. **Producer:** The engineer
identifies the goods and services required by the project,
the client, and the funding. **User:** The bidder uses this
proposal to list his or her prices for the goods and
services specified in the bid document.

**BIDDING PHASE** **Description:** The bidding phase begins
after the design engineer has prepared the bid document
and the bid document has been approved by the client
and/or the funding agency. During this phase the bid is
advertised, the pre-bid conferences are held to determine
if addenda are needed, and the bid is awarded. When the
notice to proceed is given by the client and/or the
funding agency, the contract is signed by the client and
the successful qualified bidder. The bidding phase is
completed, and the construction phase begins.

**BID DOCUMENT AKA:** Bid Proposal, Specifications, The Book, Contract. **Description:** The bid document is prepared during the design stage of a project after the engineering firm has been hired by the client and if the engineering firm requires sub-contractors to fulfill the requirements of the project. The bid document delineates the specific legal, financial, and construction parameters of the goods, services, materials, etc. required by a client and/or funding agency for a specific project. **Producer:** The engineer who is the project manager for the job at the design stage collects, prepares, and produces the bid document. **User:** The client uses the bid document to obtain a qualified sub-contractor to perform the work specified in the document. After the bid has been awarded, the bid document becomes the binding contract between the client and the contractor.

**CONSTRUCTION ADMINISTRATION Description:** This service is performed by the engineering firm when the client has contracted the firm to supervise and/or inspect the performance of the sub-contractors during the construction phase. The firm acts as liaison between the client and the sub-contractor(s). Activities include billing
services and resident inspection.

CONSTRUCTION PHASE Description: The construction phase begins when the client and the contractor have signed the bid contract forms and the funding agency (where applicable) issues the notice to proceed. During this phase the project is built or constructed according to the specifications contracted in the bid document.

DESIGN PHASE Description: The design phase of the stage development of a project begins either when the state/federal agency hires the firm to perform specific engineering services or when the municipal client receives funding for a project. During the design phase, the engineer inspects, surveys, and evaluates the site and the client's requirements. Based on the monies available, the engineer specifies the goods and services required for completion of the project and supervises the production of plans and specifications for the bid documents. The design phase is finished when the bid is let during the bidding phase.

FUNDING AGENCY Description: The funding agency is a state or federal agency that has been established to provide grant or loan funds to projects which meet
stringent guidelines and criteria established by the agency or by the government. Funding agencies frequently involved in the firm's projects include Farmer's Home Administration (FmHA), the Environmental Protection Agency (EPA), the Louisiana Community Development Block Grant Agency (CDBG), and the Louisiana Department of Transportation and Development (DOTD).

GENERAL CONDITIONS AKA: Contract Requirements, Contract Documents, Contract. Description: This section of the bid document outlines standard policies, conditions, relationships, conventions, and laws pertaining to the project. These conditions pertain to any bid document being published according to state bid laws. This section of the bid document usually contains the following items: Notice of Award, Form of Contract, Certificate of Insurance, Performance Bond, Power of Attorney, Notice to Proceed, and Change Order. Producer: These documents are boilerplated and included by the engineer in the bid document. User: The client uses these general conditions to comply with state bid laws and to keep the successful bidder accountable to those laws after the bid has been awarded.

INSPECTION PHASE Description: If the engineering firm
has been contracted by the client to inspect the performance of the sub-contractor, this inspection occurs during this stage. In large projects, the firm keeps a resident inspector at the site. The inspection phase is completed when substantial completion has been reached and the project has been approved by the client, the funding agency, and the firm's inspector.

LAYOUT CONSTRUCTION AKA: Surveying. The firm is contracted by the client to survey, test, and analyze a site prior to or as part of the design phase.

MUNICIPAL PROJECTS AKA: Public Projects. Description: Municipal projects are identified by either the client or the engineer; they are publicly funded by bond issues or by funding agencies. They usually exist at the parish, city, village, or utility levels of service and government. Usually municipal clients do not possess the capability, expertise, or personnel to procure funding or to produce appropriate funding application and bid documents.

OVERHEAD PROJECTS Description: The work performed in an overhead project is done prior to the engineering firm being hired by the client. Usually, the firm performs
this work to initiate and/or solicit business and does not receive payment for these services.

PAYMENT BOND  **Description**: The payment bond is a boilerplated form included in the bid document. It outlines the method and timing of payment by the client or the funding agency to the contractor after the bid has been awarded. **Producer**: The engineer uses a boilerplated form. **User**: The client uses the payment bond as part of the contract documents with the successful qualified bidder.

PERFORMANCE BOND  **Description**: The performance bond is included in the bid document and is the bidder's financial commitment to performing the services outlined in the bid document. **Producer**: The performance bond is boilerplated, and the insurance bonding company usually provides a copy of their certificate of bond with the bidder's proposal. **User**: The client uses the performance bond as assurance of the bidder’s performance during the construction stage.

PLANS  **AKA**: Blueprints, 24 x 36s, Drawings.  **Description**: These 24 x 36 plans are prepared by the draftsman from design sheets prepared by the engineer at the job site and
according to the specifications of the materials, services, and construction required to meet the needs of the client. The special provisions and technical specifications provide a word picture of the plans. 

**Producer:** The engineering firm produces the plans at the design stage and keeps copies on file for prospective bidders. **User:** The engineer uses the plans as inspection checks. The contractor uses the plans as specifications for the site. The client uses the plans as assurances of quality and performance. After the project has been completed, the plans are placed on microfilm and/or archived.

**PRELIMINARY ENGINEERING REPORT AKA:** Engineering Report, Proposal. **Description:** The preliminary engineering report can take two forms: the informal, short general report; or the detailed, formal report. The form, content, and use of the preliminary engineering report is determined by one or all of the following: the client, the funding agency, the client/engineer relationship, and the stage of the project. The informal report tends to be used at the very outset of a project; it is usually produced to acknowledge a verbal proposal or to initiate the preliminary phase of an overhead project. The formal preliminary engineering report is produced after the firm
has been hired to perform engineering services to demonstrate the need for funding. The contents are flexible and depend on the funding agency. The engineer provides specific information (such as engineering, financial, feasibility, environmental, archeological, historical, socioeconomic, etc.) about the project depending on the requirements and guidelines of the funding agency. **Producer:** The engineer produces these reports. **User:** The client uses the short reports to determine whether or not to seek funding for a project. The client submits the formal reports with the application for funding from the state or federal agency.

**PRELIMINARY PHASE** **Description:** This phase of the project's stage development occurs after the client has been hired to perform engineering work (i.e. after the overhead project stage). During this phase, the firm is selling a project to a client and helping to obtain funding by producing preliminary engineering reports and applications to funding agencies. The preliminary phase ends when the design phase begins.

**PRESELECTION CRITERIA** **Description:** These criteria are specified in state and federal job advertisements to describe those facilities, capabilities, and personnel the
firm must have in-house or through sub-consultants in order to be awarded the contract. In some agency-funded projects, the funding agency may stipulate preselection criteria before funding is awarded. **Producer:** The client or the funding agency determines these criteria. **User:** The firm uses these criteria to identify and bid on appropriate projects.

**PRIVATE PROJECTS Description:** Private projects are those jobs which are not subject to state bid laws. Private clients may include developers, private businesses, private corporations, etc.

**PROPOSAL TO PROVIDE ENGINEERING SERVICES Description:** This document is used to respond to advertisements placed by municipal clients asking for engineers to submit qualifications and experience statements. The municipal client selects the engineer based on his or her familiarity with the project and technical expertise in the related discipline. **Producer:** The engineering firm produces the proposal. **User:** The client evaluates the firm on the basis of the document's contents.

**QUALIFICATIONS AND EXPERIENCE STATEMENT Description:** This statement is produced by the firm in response to
state and federal advertisements for services. The form and content of the statement is specified in the individual advertisement according to the guidelines of the agency advertising for the services. **Producer:** The engineering firm produces the statement. **User:** The client evaluates the form and content of the statement to identify a firm which possesses the capabilities, personnel, and equipment necessary for the job.

**SPECIAL PROVISIONS AKA:** Special Conditions.
**Description:** These are written to modify the technical specifications included in a bid document to agree with the specific project and the specific site. The conditions of the job site, the unique characteristics of the project, its materials, and its services determine the scope and content of this section of the bid document. The special provisions supercede any other specifications in the document. **Producer:** The engineer produces these special provisions during the design phase after conducting appropriate surveys, on-site inspections, and materials/facilities designs required specifically for the project. **User:** The sub-contractor uses these specifications to determine the bidding price. The successful qualified bidder uses these special provisions as guidelines for the provision of contracted goods and
services.

STATE AND FEDERAL PROJECTS  Description:  State and federal projects are advertised publicly and involve various agencies, such as the Corps of Engineers, the National Guard, or the Military Services, asking for proposals from architects, engineers, etc. to perform services specified in the scope statement of the advertisement. These agencies evaluate the proposals, also called Qualifications and Experience Statements, using stringent guidelines and criteria. The successful firm is contracted to perform design work up to the bidding phase or, if specified, through the design and construction phases.

SUBSTANTIAL COMPLETION  Description:  This point in the stage development of a project occurs when the client, the funding agency, and the firm's inspector (if contracted for this service) agree that the contractor has substantially fulfilled the contracted portions of the project. At this point, the contractor applies for a lien-free certificate from the Clerk of Courts' office to obtain final retainage from the client and/or the funding agency.
Description:  These documents are found in bid documents, usually in a separate section. Their purpose is to provide general descriptions of all conditions, services, and materials that will or could arise during a project. They are called standard because they are used for any job of the same type as the project being let for bid.
Producer:  The engineer acting as project manager for the project identifies and selects the technical specifications pertinent to the broad parameters of the project from a boilerplated collection of pre-existing documents. User:  The client uses these technical specifications as guidelines to the bidder and as contracted conditions of performance for the successful contractor after the bid has been awarded.

VERBAL PROPOSAL  Description:  The verbal proposal can originate with either the client or the engineer. The form and content are determined by the nature of the relationship between the two participating in the verbal exchange. If work is to proceed based on a verbal proposal, usually a written acknowledgment or confirmation is produced as a record of the agreement.
An analysis of the information provided by my informants and in the questionnaires suggests a staging framework for the positioning of the artifacts in the evolution and execution of projects. A staging framework correlates the various documents with the stages typically identified during a project involving the engineer as a primary contractor. Based on my findings, the documents listed in the following staging frameworks tend to become longer and more complex as the project progresses toward the onset of the construction phase. After the bid has been awarded and the notice to proceed has been issued, the documents generated by the project tend to be inter-office memoranda, external letters, and short pre-formatted forms.

5.3.1. A Staging Framework for State/Federal Projects

The following sequence (Figure 5.1) demonstrates the position of various proposals in the evolution of state and federal projects. Note that the firm's post-award involvement in the project is determined by the nature of the contract obtained from the client (i.e. the state or federal agency). Should the project require sub-contractors, a second point of award occurs at the end of the bidding phase.
Client advertises scope of work

Client requests proposal (Qualifications and Experience Statement)

Engineer evaluates advertisement and decides to submit proposal

Firm prepares Qualifications and Experience Statement according to client's specifications

Client evaluates capabilities, personnel, and related experience of firm

Client awards contract to qualified firm

If firm requires sub-contractors, firm enters design stage

If contracted, firm provides layout construction

If firm is contracted to provide services completely available in-house, firm performs job as specified in contract. These tasks may consist of surveying, inspecting, or design services

Engineer prepares bid documents and plans

Client approves bid documents and plans

Bid is advertised publicly according to state bid laws

Bid is awarded to successful qualified low bidder
If contracted, the firm provides construction administration and/or inspection services during construction phase.

Firm follows project to substantial completion and procurement of subcontractor’s lien-free certificate.

Figure 5.1. A Staging Framework for State/Federal Projects

5.3.2. A Staging Framework for Municipal/Private Projects

In municipal/private projects, the firm plays a much larger role during the preliminary or planning phase prior to the second point of award (i.e. when the successful qualified bidder is awarded the contract/bid document prepared by the engineer for the client). In these projects, the documents appear to be generated according to terms, conditions, and guidelines specified and required by the funding agency providing financial assistance to the client with loan or grant monies (see Figure 5.2.).
Client identifies need

Engineer identifies need

Verbal proposal between client and engineer

Engineer produces informal engineering report to identify general scope of need and possible sources of funding

Client agrees to seek and procure funding

If funding agency requires pre-selection of engineer, client and firm sign an agreement to provide engineering services (i.e. a contract)

If funding agency does not require pre-selection of engineer, firm proceeds with preparation of funding documents on an overhead project basis.

Firm completes funding agency application forms for client’s signature and submittal to agency

Funding agency approves funding

Engineer proceeds to design phase under contract

Client advertises for proposals from engineers. Firm submits proposal to provide engineering services. Client hires firm to proceed to design phase.

If firm requires sub-contractors, firm enters design stage

If contracted, firm provides layout construction

Engineer prepares bid documents and plans

Client approves bid documents and plans
Bid is advertised publicly

Bid is awarded to successful qualified low bidder

If contracted, the firm provides construction administration and/or inspection services during construction phase

Firm follows project to substantial completion and procurement of sub-contractor's lien-free certificate

Figure 5.2. A Staging Framework for Municipal/Private Projects

This staging framework demonstrates the complexity of the processes and documents involved in a state/federal or municipal project. The firm's progress through the staging framework depends on several factors: (a) if the Qualifications and Experience Statement is prepared precisely according to the agencies' guidelines; (b) if funding is available for a project; (c) if the funding agency approves the client's application for assistance which relies on the accuracy of the firm's preliminary engineering report; (d) if the firm has the design capabilities for preparing the bid documents; and, (e) if the firm has the expertise to control construction administration. During this staging process, the firm must rely on external agents and agencies for the form and structure of its documents. To a great extent, the client
and the job determine the content of many of the proposals. And the document's use is determined by where the project is in the staging framework, who is involved in that stage, and what purpose the document serves in terms of the interrelationship between the funding agency, the sub-contractor, the firm, and the site itself.

5.4. IMPLICATIONS OF THE STUDY

5.4.1. Implications for the General Research Interest

To determine the implications of the study, I return to my general research interest: what is the nature and extent of the discrepancies that exist between the presentation of proposals in technical writing textbooks and those proposals I have produced and used myself in a natural setting? My findings confirm that significant discrepancies do, indeed, exist between the types and characteristics of proposals in textbooks and those proposals I analyzed in the context of this engineering firm's process of conducting business with its clients. A preliminary implication, then, is that I have evidence, rather than speculation, to support my research interest. The data produced by this field study will refine the focus of my activities to specific characteristics, discrepancies, or anomalies pertaining to proposals that I have identified in the study. Possible avenues of
qualitative and quantitative investigation include the role of audience in the writer's formulation of proposals, source and use of taxonomic labels for the components and processes associated with proposals in the field, and longitudinal study of the evolution of the content, format, and revision of preliminary proposals from verbal proposals to formal funding agency proposals.

5.4.2. Implications for the Specific Research Goal

More specific implications, however, can be derived from analyzing my success at achieving my research goal for this field study. The research goal was to develop an empirically-based description of proposals as they are developed and used in their natural environments. To accomplish this research goal, I generated the following eight questions about proposals in a natural setting. Following each question, I will provide a brief answer based on the evidence collected during this study.

1. Why were the proposals written? Were they solicited or unsolicited?

   In every instance during my field study, the proposals were written to address a need identified by either the firm or the client; this need existed outside the firm in terms of focus and outcome. From a marketing
and fiscal perspective, all of the proposals served the necessary function of procuring income-generating business for the firm. However, in terms of the projects themselves, the impetus for the production of the proposals arose from client-specific, funding-specific, or site-specific needs.

Proposals for state and federal projects were all solicited. These agencies possess the in-house capabilities to identify and articulate project scope statements and to inspect and budget projects to the substantial completion stage. At the municipal and private level, however, the proposals were both solicited and unsolicited. I question, however, whether any proposal I examined was truly unsolicited. For example, the verbal and general preliminary proposals could be considered as unsolicited proposals; however, this distinction may be superfluous since the production of these two types of proposals is idiosyncratic to the relationship between the client and the engineer and was generated by needs external to the firm.

2. Who usually wrote the proposals?

In every instance, the engineering firm wrote all proposals pertaining to any project in which they functioned as the primary consultant or contractor. Even
when the firm functioned as a sub-consultant for another
discipline, the firm provided the information for the
SF254 form required by the Qualifications and Experience
Statements submitted to state and federal agencies.

In proposals for state and federal agencies, the
firm’s participation in the project was limited by the
parameters set by the client agency. However, the
proposals produced by the firm incorporated service-
specific information determined by the nature of the
project and the needs of the client.

In municipal projects, the firm wrote the proposals
in overhead projects where they did not receive immediate
payment for the time and effort involved and in contracted
projects where the firm had been hired to produce the
documents. In both cases, however, the firm provided the
discipline-based expertise and knowledge of funding
sources to the client; this information, again, was
generated based on the client’s, funding agency’s, and
project’s needs.

3. Where did the content of the proposals originate?

In the majority of the proposals analyzed during this
study, the bulk of each proposal was pre-determined or
pre-existing. In the most complex documents, funding
agency proposals and bid documents, over 75% of the
material included in each document was boilerplated. In funding agency proposals, the agency provided standard forms to the client which required only fill-in-the-blanks or word- and phrase-level answers. In bid documents, the boilerplated material originated either in legal contract documents, standard insurance and compliance forms, or in archived standard specifications. In both cases, the balance of the material was produced by the firm but was staged exclusively on client-specific, funding agency-specific, or project-specific needs.

4. Who decided what content went into the proposals? This decision was made according to the same three criteria: the needs of the client, the funding agency, and the project. In addition, the purpose and the uses of the document determined the decision-maker. For example, in a bid document, the engineer decided which boilerplated general and technical specifications pertained to the project; the engineer adapted special provisions from similar jobs and originated provisions that pertained to the unique characteristics of the specific site; the engineer supervised the production of plans to accompany the bid document; the engineer also determined the framework and breakdown for the bidder's proposal. In other sections of the bid document, state bid law
determined legal and contractual documents. The bidder decided what information should be inserted into the bid proposal. The client and the funding agency determined the overall parameters of the project and determined the bid timing and award procedures.

5. Who decided how to format the proposals?

The complexity and the rigidity of the format (i.e. the overall organization, sequence, and content) increases as the project proceeds through the staging framework. In other words, the closer the project approaches the point of second award, the more complex and rigid is the format.

An additional distinction must be made. State and federal project proposal formats are pre-determined and standardized. Explicit guidelines are set forth in the advertisements placed in Commerce Business Daily for the format of Qualifications and Experience Statements. The firm hired to produce the bid documents during the design phase follows the scope and specifications provided by the client agency.

In municipal projects, the complexity and rigidity of proposal formats evolve as the project proceeds to the point of second award. The staging of preliminary proposals moves from idiosyncratic verbal proposals to formal funding agency proposals which contain a high
percentage of boilerplated and pre-formatted forms provided by the funding agency. Bid documents for municipal projects demonstrate similar levels of complexity and rigidity as those used in state and federal projects.

6. How were the proposals assembled?

The answer to this question overlaps with the answers to questions 3 and 4. The source of the information determined the assembly process. Boilerplated data were photocopied or electronically reproduced. Adapted data were copied and altered to fit the project guidelines and scope. Original data were produced according to the needs of the client, the funding agency, and the project itself.

7. Who used the proposals?

The most obvious use of the proposals was made by the firm: to secure profit-making business for the firm. However, my findings indicate that use is another umbrella term. Each document, including the verbal proposal, demonstrated multiple uses and multiple users. For example, the preliminary engineering report was partitioned into two categories: general and detailed. The data base for both is the same. However, the format, content, and use of the preliminary engineering report
were determined by its position in the staging framework, its primary, secondary, and multiple uses (e.g., the general report provided to a municipal official to be used to persuade an industry to relocate), and its evolution from a general to a detailed report.

8. What were the proposals used for?

This distinction must be made between the user and the use. Proposals can be used by one participant in the project for multiple purposes. The bid proposal is the most compelling example of this phenomenon. The client can use the bid document as contract and warranty. The firm can use the document as a source of revenue, a baseline for inspection, and an archive for accountability and future adaptation in other projects. The sub-contractor can use the document as a bid proposal, a work order, and a contract for recompense and accountability.

The answers to these questions have implications for this particular study and for future research.

5.4.3. Implications for the Specific Study

My goal-related questions were designed to specify and clarify the interrelationships that exist among the writer, the document, and the audience in a field-based
context. The study accomplished its goal of describing the proposals which were produced by the engineering firm to obtain revenue-producing income. In addition, the findings of the study challenge several widely-held perceptions of particular phenomena such as audience, purpose, and single-authored texts.

Although I have not included a survey of theoretical and practical approaches to audience in technical writing contexts in this study, my survey of several current textbooks indicates that the concept of audience is controlled by restrictive and one-dimensional descriptors. In addition these texts suggest that the relationship between writer and audience is usually identifiable and definable. My findings, however, demonstrate that the term "audience" is a problematic label at best. In the context of the engineering firm, the labels "user," "use," "function," and "purpose" splinter the audience into multiple interactive agents and agencies.

This blurring of the concept of audience effects a blurring of traditional notions of purpose for proposals. The overriding purpose of any proposal for the firm must be the acquisition of profit. However, the definition of proposals as documents designed to obtain recompense for goods and services rendered becomes meaningless if analyzed in terms of the purposes demonstrated for the
proposals generated and used by the firm in this study.

Purpose, like, audience, becomes a generality with several
sub-headings. A proposal's purpose can be generative,
confirmative, ethical, legal, monetary, etc. Often, the
proposal's purpose is determined by its position in the
staging process and the goals of the various participants
in the project.

A third commonplace in current composition research,
single-authored texts, becomes problematic when analyzed
in terms of my findings. The textbooks analyzed in
Chapter One overwhelmingly use an individual writer as the
generator of a proposal addressed to an individual reader
(user, audience, etc.) for a specific purpose (to obtain
funding, to offer a solution, to gain personal
recognition, etc.). My findings provide evidence that
agents and agencies external to the writer play
significant directive roles in the genesis, format, and
use of the proposals studied.

Figure 5.3. summarizes my findings about the various
proposals identified in this study. A comparison with
Figure 1.1. (Survey of Current Technical Writing Texts)
reveals major discrepancies in several areas:
1. The textbooks present one or two types of proposals
which are classified according to length and position of
audience. The field-based proposals represent a variety
<table>
<thead>
<tr>
<th>Type of Proposal</th>
<th>Writer</th>
<th>Source of Guidelines</th>
<th>Source of Content</th>
<th>Genesis</th>
<th>Used By</th>
<th>Used For</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Proposal</td>
<td>client &amp; engineer</td>
<td>situation</td>
<td>client &amp; engineer</td>
<td>solicited &amp; unsolicited</td>
<td>client &amp; engineer</td>
<td>-identify and articulate need</td>
</tr>
<tr>
<td>General Engineering Report</td>
<td>engineer</td>
<td>client, funding agency, site</td>
<td>engineer, site</td>
<td>solicited</td>
<td>client</td>
<td>-decision to proceed -seek joint participation</td>
</tr>
<tr>
<td>Detailed Engineering Report</td>
<td>engineer</td>
<td>funding agency</td>
<td>engineer, boiler-plate</td>
<td>solicited</td>
<td>client: funding agency:</td>
<td>-obtain funding -grant funding</td>
</tr>
<tr>
<td>Proposal to Provide Engineering Services</td>
<td>engineer</td>
<td>client</td>
<td>boiler-plate</td>
<td>solicited</td>
<td>engineer: client:</td>
<td>-secure contract -advertise bid</td>
</tr>
<tr>
<td>Agreement for Engineering Services</td>
<td>engineer &amp; client</td>
<td>client</td>
<td>boiler-plate</td>
<td>solicited</td>
<td>engineer: client:</td>
<td>-contract -liability</td>
</tr>
<tr>
<td>Funding Agency Proposal</td>
<td>engineer</td>
<td>funding agency</td>
<td>boiler-plate &amp; engineer</td>
<td>solicited</td>
<td>engineer: client: funding agency:</td>
<td>-obtain funding -obtain funding -grant funding</td>
</tr>
<tr>
<td>Qualifications &amp; Experience Statement</td>
<td>engineer</td>
<td>client</td>
<td>engineer &amp; boiler-plate</td>
<td>solicited</td>
<td>engineer: client:</td>
<td>-obtain contract -identify qualified provider of services</td>
</tr>
<tr>
<td>Type of Proposal</td>
<td>Writer</td>
<td>Source of Guidelines</td>
<td>Source of Content</td>
<td>Genesis</td>
<td>Used By</td>
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</tr>
</tbody>
</table>
| Bid Document     | engineer | state bid laws       | engineer, boiler-plate, client, site, funding agency | solicited | client: | - advertise job  
|                  |         |                      |                   |          |         | - identify contractor  
|                  |         |                      |                   |          |         | - legal contract  
|                  |         |                      |                   |          |         | - warranty  
|                  |         |                      |                   |          | engineer: | - specify project  
|                  |         |                      |                   |          |         | - inspection base-line  
|                  |         |                      |                   |          |         | - fulfill contract with client and funding agency  
|                  |         |                      |                   |          | sub-contractor: | - bid proposal  
|                  |         |                      |                   |          |         | - legal contract  
|                  |         |                      |                   |          |         | - performance base  
|                  |         |                      |                   |          |         | - payment schedule  
|                  |         |                      |                   |          | funding agency: | - performance base  
|                  |         |                      |                   |          |         | - payment schedule  
|                  |         |                      |                   |          |         | - warranty  

Figure 5.3. Summary of Findings Describing Field-Based Proposals
of types classified according to use and user.

2. The textbook proposals are written by an individual who generates each unique document. The field-based proposals are generated primarily by the engineer, but the amount of boilerplated information increases proportionately with the length and complexity of the document.

3. The textbooks consistently present models for the writer. The guidelines for field-based proposals derive from agents and agencies external to the engineering firm.

4. The textbook proposals typically have one user and one use. The field-based proposals have multiple users and uses depending upon the type of proposal and the stage at which the proposal appears in the project.

5.5. IMPLICATIONS FOR FUTURE RESEARCH

I have identified four major focuses for future research: a correlation between textbook and practice, the concept of audience, the function of language, and the longitudinal evolution of documents.

5.5.1. The Correlation Between Textbook and Practice

This focus raises questions about theoretical and practical implications for the comparison of what happens in the field and what is represented in textbooks. A
claim-by-claim correlation between textbooks and empirical evidence seems practicable. Yet, given the complexity and variety of proposals I identified and the long timeframes for most of the projects undertaken by the firm, I question whether a compromise can be reached. Perhaps an analysis of the theory underlying the selection and presentation of characteristics of typical proposals might yield valuable base-line data for a textbook/field comparison. What I discovered about the form, structure, content, and use of proposals in the field is valuable; however, can this information about proposals be distilled effectively with many other genres of documents into a textbook designed for a ten- or sixteen-week instructional period? Will I be able to identify principles of process and product that can be universalized?

5.5.2. The Concept of Audience

The function of audience in the traditional composition triad of subject, audience, and purpose continues to be the focus of many theoretical and empirical studies. My findings suggest that audience is a vague and confusing concept when dealt with unilaterally. My data suggest that the concept of audience involves complex and fluid interrelationships between the purposes and uses associated with the writers, the documents, and
the users of the documents. While one element may remain static, the others are dynamic, resulting in even more complex interactions, causes, and effects. While one element is evolving, the others may alter radically. Perhaps a systematic case study might reveal further partitions of audience.

5.5.3. The Function of Language

Taxonomies insist on denotative naming of the components of a process, concept, or object. In the context of my study, I question whether creating a taxonomy was a function of my research goal or a result of my field-based investigations. While I observed and interviewed my informants in their natural environment, I questioned them closely about the names they used for specific processes and documents. When I analyzed the transcripts, I questioned whether I was forcing them to provide labels that were meaningless to them. The document was, indeed, an artifact. Whenever we discussed a specific document, the informants invariably produced a sample and referred to it repeatedly during their responses to my probes. The names varied among the informants, but the document remained as a concrete referent. The implications of this inconsistency in labelling within a defined context suggest that research
in other contexts using similar documents may reveal that labeling is an insignificant goal. Where, then, would a textbook's author find consensual labels for documents?

5.5.4. The Longitudinal Evolution of Texts

The evidence provided by my informants and by my analysis of the documents themselves suggests that the data accumulated by the proposal writer in a complex project duplicates, amplifies, and adapts those data to address the needs of clients, funding agencies, and specific projects throughout the staging process. For example, the information included in the resume section of SF255 of Qualifications and Experience Statements is adapted to the project being advertised. Other evolutionary evidence exists in my findings, suggesting that a longitudinal study of related proposals over the duration of a project would yield valuable information about revision strategies, audience analysis, and writer-based strategies of composition.

5.6. CONCLUSION

The field study of proposals in an engineering context yields empirical evidence suggesting that the discrepancies that exist between the textbook presentation and practice of proposals and the form, content,
structure, and function of proposals examined in the engineering firm are significant; of special interest are the relationships among writer, audience, purpose, and source. Since the guidelines for all proposals investigated in the study (except the verbal proposal) are derived from agents and agencies external to the engineer and the engineering firm, studies conducted in similar contexts where proposals are written to the same agents and agencies would reveal similar findings.

In addition, the field study's findings which reveal the problematic nature of the traditional concepts of audience and purpose suggest that technical writing educators and theorists reconsider their perceptions of who uses documents, how documents evolve, what function documents serve, and when documents are used. Further field-based research will help stabilize these confusing concepts by delineating specific claim-by-claim discrepancies between text and context.


APPENDIXES
APPENDIX A: SPRADLEY'S TAXONOMIES

FOR ETHNOGRAPHIC INTERVIEWS
APPENDIX A: SPRADLEY'S TAXONOMIES
FOR ETHNOGRAPHIC INTERVIEWS

Taxonomy #1: Elements in the Ethnographic Interview

1. Greetings
2. Giving ethnographic explanations
   2.1. Giving project explanations
   2.2. Giving question explanations
   2.3. Giving recording explanations
   2.4. Giving native language explanations
   2.5. Giving interview explanations
3. Asking ethnographic questions
   3.1. Asking descriptive questions
   3.2. Asking structural questions
   3.3. Asking contrast questions
4. Asymmetrical turn taking
5. Expressing interest
6. Expressing cultural ignorance
7. Repeating
8. Restating informant's terms
9. Incorporating informant's terms
10. Creating hypothetical situations
11. Asking friendly questions
12. Taking leave

Taxonomy #2: Kinds of Descriptive Questions

1. Grand Tour Questions
   1.1. Typical Grand Tour Questions
   1.2. Specific Grand Tour Questions
   1.3. Guided Grand Tour Questions
   1.4. Task-Related Grand Tour Questions
2. Mini-Tour Questions
   2.1. Typical Mini-Tour Questions
   2.2. Specific Mini-Tour Questions
   2.3. Guided Mini-Tour Questions
   2.4. Task-Related Mini-Tour Questions
3. Example Questions
4. Experience Questions
5. Native-Language Questions
   5.1. Direct Language Questions
   5.2. Hypothetical-Interaction Questions
   5.3. Typical-Sentence Questions
Taxonomy # 3: Kinds of Structural Questions
1. Verification Questions
   1.1. Domain Verification Questions
   1.2. Included Term Verification Questions
   1.3. Semantic Relationship Verification Questions
   1.4. Native-Language Verification Questions
2. Cover Term Questions
3. Included Term Questions
4. Substitution Frame Questions
5. Card Sorting Structural Questions

Taxonomy # 4: Kinds of Contrast Questions
1. Contrast Verification Questions
2. Directed Contrast Questions
3. Dyadic Contrast Questions
4. Triadic Contrast Questions
5. Contrast Set Sorting Questions
6. Twenty Questions Game
7. Rating Questions

Questionnaire S-1

Thank you for taking time to answer these questions for me. This questionnaire represents the final phase in my research project and your answers will be very helpful to my study. Please be assured that your identity will remain confidential in my report. I would appreciate your answering the following questions as openly and completely as possible. When you have finished, please return the completed form to me in the attached stamped and addressed envelope. Again, thank you for your help.

1. Name: ____________________________


4. Last year completed in school or diploma/degree attained: ______________

5. Total number of years in workforce: _________________________________

6. Number of years with present employer: _____________________________

7. Describe the positions you have held with your present employer by providing the job title (if applicable), length of tenure in each position, and a brief statement of your major responsibilities. Include an approximate percentage (if applicable) of the time you spent preparing written documents. Please start with the most recent position first.

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

8. Have you ever taken any formal writing or composition courses?  
   _____ No  _____ Yes. If yes, please provide the name of the course, the school or institution which offered it, the year you took it, and a brief
description of the nature of the course.

If yes, please comment on whether you feel the course prepared you for the type of writing you do in your job.

If you did not take a formal writing course or if you did not feel your writing training prepared you for writing in your job, please describe how you learned to write for your current job. For example, were you taught by a colleague? Did you learn from similar documents already completed? Did you learn by trial and error? Did you learn how to write through a combination of sources?

9. How long did it take you to feel confident about your on-the-job writing skills?
10. Does a colleague or co-worker proofread or edit your writing?

11. Do you proofread or edit your colleagues' or co-workers' writing?

12. Approximately how much time do you spend per day or per week actively writing documents?

________ hours per day OR _________ hours per week.

13. In an average writing situation, which stage in the writing process do you spend most of your time performing?

___ planning ___ researching ___ drafting ___ revising/editing ___ proofreading ___ other (Specify: ___________________)

14. The following list contains the names of several traditional types of technical documents. Please place a check mark in Column A beside each type of document you write in the normal course of your job. In Column B, please prioritize the documents according to how frequently you write them. Please use # 1 for the most frequent usage. In Column C, please indicate whether you usually write the document entirely by yourself (insert "S") or with someone else (insert "C").

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Column A (usage)</th>
<th>Column B (frequency)</th>
<th>Column C (# of writer/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>external letter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>letter of transmittal</td>
<td></td>
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<tr>
<td>internal memo</td>
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<tr>
<td>quick-memo (handwritten)</td>
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<td>progress report</td>
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<td>recommendation report</td>
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<td>completion report</td>
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<td>lab report</td>
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<tr>
<td>formal report</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. The list in #10 is not exhaustive. If you write documents not included in the above list, please describe them briefly (giving their name and primary function) below:


16. What types of documents do you usually originate (i.e. write entirely in your own words)?


17. What types of documents do you usually write that contain boilerplated sections (i.e. sections that have been used in other documents, sections that are standard elements in every other similar document)?


18. In an average bid document for a government agency (for ease of calculation, let's assume this document has 100 pages), how many pages (i.e. what percentage) of the total document is usually boilerplated (i.e. duplicated as-is)?

What percentage is usually adapted from previously used documents (i.e. borrowed with minor changes)?

What percentage is usually created specifically and exclusively for this document?

In this document, what are the names of the sections usually included? Please place an asterisk beside the names of those sections that are usually boilerplated, a check mark beside the names of those sections that are usually borrowed, and a circle around the names of those sections that are usually created for this document.

19. What would the average length be (in pages) of a typical bid document for a municipal project?

Of these pages, how many would usually be boilerplated?

20. What sources do you use for boilerplated sections?
21. The term "proposal" is often used as an umbrella term to include many different types of documents. Please indicate below the types of documents you would consider to be subcategories of "proposals." (For example, one-page, non-specific documents--i.e. containing little or no technical specifications, little or no financial information, etc.; qualifications statements; bid documents; oral proposals, etc.) Please name these sub-types and give a brief description of their function and/or their content.

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

22. Please indicate which one of the following situations most closely resembles your participation in the writing process of the documents involved in your job. If more than one situation occurs in your job, please indicate which type of documents are specific to each situation.

___ a. you usually originate most documents and mechanically produce them (e.g. on a typewriter or word processor) yourself.

Types of documents: ______________________________________________________

___ b. you usually originate most documents, and a co-worker mechanically produces the document for your revision and approval.

Types of documents: ______________________________________________________
c. you usually research and compile information for documents or portions of documents under a co-worker's supervision and direction.

Types of documents: __________________________________________

___ d. you usually research and compile information for your own documents.

Types of documents: __________________________________________

___ e. you usually mechanically produce most documents produced by co-workers and make corrections in grammar, mechanics, and content where appropriate.

Types of documents: __________________________________________

___ f. you usually mechanically produce most documents produced by co-workers and do not initiate corrections as you produce the documents.

Types of documents: __________________________________________

23. What methods/materials do you use during the following stages in the writing process? (e.g. pen/pencil and paper, electric typewriter, electronic typewriter, computer, etc.)

planning __________________________________________

researching __________________________________________

drafting __________________________________________

revising/editing __________________________________________

proofreading __________________________________________

24. Do you use graphics in your written documents (please exclude architectural/drafting plans)? For example, do you use tables, graphs, or other visual aids to supplement or complement your narratives?

___ Yes ___ No
If yes, please indicate how frequently you use them:

______ in all documents
______ in at least 75% of documents
______ in at least 50% of documents
______ in at least 25% of documents
______ in less than 25% of documents.

If yes, do you prepare the graphics yourself? ______________________

If no, who or what is your usual source for graphics? ________________

25. In this final section, I would appreciate your comments on any section of this questionnaire, on any aspects of your writing activities that you feel I have overlooked, or on any topic related to technical writing (e.g. formal courses, preparation of newly graduated employees, etc.).
Questionnaire S-1

Thank you for taking time to answer these questions for me. This questionnaire represents the final phase in my research project and your answers will be very helpful to my study. Please be assured that your identity will remain confidential in my report. I would appreciate your answering the following questions as openly and completely as possible. When you have finished, please return the completed form to me in the attached stamped and addressed envelope. Again, thank you for your help.

1. Name: ____________________________


4. Last year completed in school or diploma/degree attained: ____________________________

5. Total number of years in workforce: ____________________________

6. Number of years with present employer: ____________________________

7. Describe the positions you have held with your present employer by providing the job title (if applicable), length of tenure in each position, and a brief statement of your major responsibilities. Include an approximate percentage (if applicable) of the time you spent preparing written documents. Please start with the most recent position first.

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

8. Have you ever taken any formal writing or composition courses?  
   _____ No  _____ Yes. If yes, please provide the name of the course, the school or institution which offered it, the year you took it, and a brief
EXCERPT 3.1: Gail describes preparation of Qualifications and Experience Statements

I: Now, this Commerce Business Daily is a weekly newspaper that advertises jobs?

G: Yes.

I: Would that be something like the Dodge Reports?

G: That's exactly right. This...we used to...I used to get the daily but now we get a weekly and it looks like this. It's from the 7th to the 17th [of November]. And I go through it and look at the areas that I think would be of interest to Mr. M. and then I...what I actually do is that I type up an outline of this and let him know the requirements and the scope of work, the requirements for the job, uh, the disciplines that are necessary. And then he...I put it on his desk and he advises me as to whether or not we could submit on this particular type job.

I: OK. You've underlined here [in the ad]...is that how you determine who...what disciplines are involved?

G: Right here? Uh, OK. This is from the building architectural [section of the newspaper]. Because of that we have to have an architectural firm. So, [name of architectural firm] is the architectural firm that we use the most in this area. We do use others but we act as their sub sometimes and they act as ours. In this particular instance, they're going to be the prime contractor and we're going to be their sub to supply the surveying discipline and the civil discipline. And anything like this would have to be supplied by a geotechnical firm here. So they would go out and get someone to handle this portion here.

I: Now, when you say "prime," the architectural firm would be the prime. So they would...

G: They would be the main contractor.

I: ...the main contractor.

G: Uh-huh [yes]. He would get the most percentage of the
I: He'd be the one, then, who would submit the bid proposal?

G: Yes. He would put that...

I: Bid documents? Do you call them bid proposals?

G: Well, this is what we call a Qualifications and Experience Statement. That's what we call it.

I: So you would go in as a sub- on his prime submission.

G: Yes.

EXCERPT 3.2: Gail describes contents of Qualifications and Experience Statements

I: So do they specify the format and what format it should follow? Like, sub-categories, sub-titles?

G: Yes, they tell you...like for instance, this one that I'm putting together here [shows a foolscap pad with cut-and-paste on several pages]. What they do is they have a pre-selection criteria. OK? And that...they have sub-items that they want you to tell your qualifications. Like on this one, we have to list our certificate number and what qualifies us to be a surveying company because our primary is civil but we're also a land surveying firm. And I have to give them...in this particular one, I have to give them the professional associations that we're associated with. I'm having to furnish them...which is the first time I've had to do this...with advanced degrees that our engineers have. And so I'm having to research our personnel files for that. I haven't done that before, but...that's my problem! And then, you have to tell the capacity of personnel and equipment that we have to accomplish...what makes us unique to do this particular work.

I: Now, by capacity do you mean capabilities, training, services?

G: Right. And we have to list the personnel by name. We have to list the type work that they do. Like, on this particular survey in [section] E, they're asking...we have
to tell what accuracy...what order of accuracy a job was performed as far as the surveying. There's first, second, third, and fourth. I don't even know what fourth is. No-one around here seems to know what fourth is. But they said we can do first, second, and third--surely we can do fourth. And so, we have to list our equipment. In this particular one, we have to list all the equipment, the serial numbers, and models. Which I've never had to do that before. We are allowed to...on this particular one, we have a survey crew that can field three foremen and survey crews. We are allowed to furnish additional staff that we have available...that we can call because they're going to need five. So we've got to furnish those people and tell what job they'll do. And also, here, we are required to tell the specific type survey...we have to list what types they are...

I: What they've done?

G: What order of accuracy they've performed.

I: These orders of work and orders of performance are pre...

G: Right. It is set up in their outline. They ask for the disciplines...if you want, I've got the outline here. This is the outline that I made for the one that I'm doing here now.

I: This is what the government sends you?

G: I get an advertisement like this and then I make an outline like this.

I: Oh, that's right.

EXCERPT 3.3: Gail describes accuracy for Qualifications and Experience Statements

G: And it [the advertisement] tells you what all the steps...I follow these steps because they say...

I: This is what you have to write?

G: They say you will be selected on the following basis. Sometimes they have pre-selection criteria, sometimes they don't. And sometimes they have basic requirements and
sometimes they don't. Sometimes they just say selection will be made on the following: "A" and "B" being of equal importance and "C," "D," and "E" being of equal importance. And I try to follow that format so if they come back and we...say, they select three firms, OK. Any one of these things could be out of order and they could say, "Well, I don't choose you because you didn't follow the format." So, I'm very careful about doing that.

I: It's very specific. So you draw this outline from their...

G: Yeah, their ad.

EXCERPT 3.4: Gail describes her data base

I: And then, you have these sheets [in cut-and-paste] with the pre-printed...

G: This is work that I've done before. Because of time limitations, I'm pasting them in.

I: So, you already have pre-set sections that you can cut and paste and then add additional information to the batch.

G: Right. On a lot of different types. I don't have them on every job. We do water, sewer, gas, and utilities...well, uh...but I don't have them on everything. I've been trying to get to the point where I can have them and put them together where I could quickly put one together. I have done a lot of surveying. That's why I happen to have this one that I can take and do. And then, perhaps, someone else can help me type if it gets to that point.

I: So you are just developing, what could we call it, a standard file of information where you can draw...

G: That's correct. And insert. I have all of the engineers...I have typed a resume of all of the engineers that tells me all of the jobs that they've worked on. I've tried to keep them current for the last five years because these government jobs will only let you use the last five years of their work. So we try to keep the projects updated. If they close out a project, they write up a section and give it to me and I type it up and I keep
it on file here.

I: A project description?

G: A project description of everything that went on in that job. That includes who the owner was, what percentage of fee that we had, the year it was completed, and the scope of work. And we try to make a detailed description. Sometimes we just put in portions of that in here.

I: That is not...you haven't got that on computer yet?

G: No.

I: You're just starting to get...

G: I don't have a computer as you see. I have a mag card, which I do have a lot of this on mag cards. But eventually this [the typewriter] will play out and I think I'll get a computer.

I: Won't that be helpful!

G: Yes, it will. John keeps saying we're going to get one.

I: So then this would become the qualifications...

G: Right.

I: That...this is your first step. Writing the outline. No, you write the outline from the newspaper. Then you get the advertisement and you write an outline. Then you go...

G: I pass this on to Mr. M. He decides if we're going to submit on it or not. He gives it back to me and then I start on the actual work.

I: And each one seems to be unique.

G: Each one is different.

I: And they probably end up...you couldn't say that "a typical document like this would take me three days." Every document just...

G: We do have...we do have some, like the work that we do
for the city. I'm able to use a lot of that. It's repetitious and I can just pull from one and use it for another one that advertises similar work.

EXCERPT 3.5: Pat describes short and long engineering reports

I: So, a preliminary engineering report, then, would obviously go with the pre-funding stage...

P: Right. It shows the need for the funding.

I: Then what would an engineering report be? After the funding?

P: Well now, I don't know if I...he may have...when he said "engineering report," the only thing I can think that he was referring to was a preliminary engineering report.

I: That's what I'm trying to clarify. I don't know whether he's used two or three different names for the same document, or...because there's a proposal...

P: Right.

I: Would that qualify as a... that's a bid document?

P: This...we've already...when you get to this point [the bid document], you've already done your proposal. Now, he showed...he gave you a copy of the S-... one [see Appendix I]. That's a proposal.

I: OK.

P: It's not much. I mean, you know, it's just...

I: It's a two-page...well, it ended up one page.

P: One page. I mean, it's proposing to do this. Then, if, say, they decide they want to try to do this, then they will look for funding.

I: That's where...

P: And then you will do the preliminary engineering report.
I: OK, now I understand the sequence.

P: Yes. Yeah. But as far as an engineering report, I think he really was probably using it interchangeably with a preliminary engineering report.

EXCERPT 3.6: John describes funding agency proposals

J: We have to do the technical research, that's right. We have to do the technical research to figure out, to make a determination what design do they need. What will serve these customers and give them a safe, potable water.

I: That's the strictly engineering...

J: That's the engineering portion. Then, we have to come up with a way of financing it. As a part of the way of financing it, we have to complete whatever the people funding it, well in this case, Farmer's Home requires as far as an engineering report.

I: And that's what you would call an engineering report?

J: There's many types. This type is what we submit to the Farmer's Administration.

I: So, another project would have a different type of engineering report.

J: That's right.

I: So an engineering report is kind of an umbrella term, then.

J: That just...eh...you can have...in fact, this other deal I have here is a two-page engineering report.

I: So an engineering report doesn't necessarily just mean engineering; it can be a financial...it can incorporate anything from just a report, two-page report, to a complete financial breakdown plus an engineering analysis...if that's the correct term?

J: No, we don't have the engineering design part in here. It will be part of it. We're still fine tuning it [at this stage]. We know close enough.
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I:
So, you can br ea k do wn an e n g in ee r in g report into m a n y
d i f f e r e n t s u b - c a t e g o r i e s and, d e p e n di ng on the n at u re of
the p r o j e c t ...
J:
T h e r e ’s financing, costing, fi na n ce .. . it all chan ges
e v e r y time.
If i t ’s an E P A - f i n a n c e d project, we have to
do, to c om pl et e a f a c i l i t y plan and a se parate
e nv i ro n me nt a l asses sm en t, each of which are about that
thick [2"].
I:
So, virtually, then, the j ob .. .t he na t ur e of the job,
w h o ’s f inancing it, d e t e r m i n e s the do cu me nt at io n. ..
J:

Correct.

I:

... the f o r m a t ...

J:

T h a t ’s correct.

I:

... the c o n t e n t .. .

J:

Correct.

I:

...scope,

length...

J:
U m- h uh [yes].
If a muni ci pa li ty , l e t ’s say the City
of R
wants to finan ce s om e th in g on their own, the heck
w ith any other f ede ra l agency, they just w an t to go out
and sell bonds and do it on their own, sell b onds on the
open market.
The b o n d i n g a t t o r n e y needs an e ng i ne e r i n g
r ep or t that says t h es e i mp r ov e me nt s are n e e d e d to
a c c om p l i s h this.
The fina nc ia l b en e fi t of this b e in g
a c c o m p l i s h e d offsets the cost b y this much.
And, the
p r o p o s e d m et h o d of f i n a n c i n g these bonds is this.
Plus,
you have all this o t he r o u t s t a n d i n g debt that you h av e to
cove r your tracks with.
It can get compli ca te d.
We also
d o ...I me an t h e r e ’s so m a ny d i f f e r e n t t yp es .. . we also do
grant a p pl ic a t i o n s for o ther t y pe s. . .o r from oth er types
of funds.
We do g r a n t a p p l i c a t i o n s from UDAG, c al l ed
U r b an D e v e l o p m e n t A c t i o n Grant;
CDBG, C o m m un i ty
D e v e l o p m e n t Blo ck Grant.

E X C E R P T 3.7:

Pat d e s c r i b e s p r e l i m i n a r y e ng in e er i ng
reports

I : Wh en John has t al k e d abou t e n gi n ee r in g repo rt s and
p r e l i m i n a r y r e p o r t s . ..


I: ...is there a differentiation between the two, or are they just umbrella terms, or...

P: Well, a preliminary engineering report is the beginning of a project. Once you talk, like the one we just put out for a little water system, A---- Water System near C----, Lousiana. OK, they called and said, "We have a problem. We need a water well, we need...whatever." So John went up and talked to them. And he said, "Well, we have to see, you know, what avenues of funding are open--Farmer's Home, or EPA, or whatever." So, as it turned out, they were eligible for Farmer's Home funding and there was a good chance they could get it if they put together this engineering report. So that's when we started doing the preliminary work. We have a pre-application, or an application for federal assistance we have to fill out. Those people have to sign...they have to...we have to plot on a plan sheet, a blueprint, where the water system is, uh, where the different houses are. So that means somebody has to go out and do that. Then we have to have a map showing the vicinity that it's in. In the preliminary engineering report, you're telling where this is, the type of typography, what the...sometimes they ask for the socioecomonic group it's going to cover, why they need it, you know, what their problems are, the water rates if it's a water system--this is--the water rates the people are paying, what they possibly might have to pay with such-and-such a loan at so much percentage, and that kind of thing. And then you get all this together in a...it's in a specification book very similar to this [a bid document], except of course it's a lot smaller. And we send this to, uh, Farmer's Home Administration. C.P. [man's name] is the one we deal with in C--- for this area. And we send him and then he will review it and, if it's OK, if it does qualify for Farmer's Home funding, then he will OK it. Then we go into the design part of it.

EXCERPT 3.8: Pat describes staging of pre-award proposals

I: So then, there's an implied sequence?

P. Um-huh. Your proposal would really come before anything else. And, as far as...I guess they're different. The proposals don't stick in my mind like the
preliminary engineering reports do. Because, normally your first contact from a water system is they call you and say, "so-and-so told me y'all did a good job for them on their water well or on their tank. And we need so-and-so. And we'd like to talk to you about it." And so John will go meet...they'll have say, a water system meeting of the whole water system. And John'll go and he'll listen to what they need. Then he would do a proposal for them. He would write back, say, to the president of the water system what he thinks could be done for the water system. And if the water system thinks, "Well, hey, that sounds like exactly what we need." Then he would call John and say, or write John a letter and say...and John would tell them exactly what steps they have to go through, and how long it's going to take. But if they wanted, they need to start now.

I: Like, for example, the funding you need to do...

P: Right. Right.

I: I see.

P: And then, they would accept...and it's not always a written proposal. A lot of times, it's just he tells them, "OK, this is what you need to do. If you want, we can do this, this and this. But in order to do these things, we have to get started on getting your funding. We have to do your pre-app, get your clearing house comments, do your applications, we have to do the preliminary engineering report. All of which we do at no charge. And then once we get into it, then we send the engineering report to Farmer's Home, we send them a signed contract between us and the water system. And then he approves it or disapproves it as the case may be.

I: And that's when you get into the...

P: And that's when we start into the actual design.

EXCERPT 3.9: Pat describes pre-award engineering contracts

P: Oh, and there is a contract that is signed by the water system. It's a Farmer's Home standard contract between the engineer and the water system where they are agreeing to pay us. You see, up until now, we have been
doing this without being paid. And, so, once the contract is signed, then, of course, you know they will start paying, but it will be with Farmer's Home funds which they will pay back through the years.

I: So, this is when...this is after the project has been funded.

P: Right.

I: And therefore...and then they hire you as the engineering...

P: That's correct, yes. And then John will start the design process where, you know, he will go out and actually see where the lines need to go, if they need a new well, if they need a new water tank, or what they call a ground storage tank. Just exactly what the needs are that can be built with the amount of money that they're getting.

EXCERPT 3.10: John describes funding agency proposals

I: So all of this, you would develop and write yourself.

J: That's right.

I: [reading] Budgeting...

J: Place the project budget in there, existing system, proposed system, schematics, and...that's just some attachments. That's...let me give you an example. This is a pre-application. In order to submit an application, you have to do a pre-application and submit it to the regional and state clearing house. Then the regional and state clearing house will approve it and give you an SSA number here. Only then can you submit the full application. And you can't submit this until you submit this to Farmer's Home and Farmer's Home says, "OK, now we will accept this.

I: It's quite a complex...

J: ...and long, drawn out. It could take two years to get a project approved.

I: And, you have to pre-apply, and then apply, and this
would take two years just to get this this far?

J: Mmmmm, no. Two years to get it funded to where Farmer's Home...the next step in this particular project is Farmer's Home is going to write back and say, "You do this, and we'll fund your project like this." So much loan, so much grant, with so much loan...whatever.

I: And, then they would come back. Is it always 75% and you would...

J: This is Farmer's Home Administration. EPA is 75%. And EPA's changed, and they're going to a loan program. They don't have any more grants. And Farmer's Home changes. They'll have up to 75% grant one year and they'll have no grant the next.

I: So, you have to keep...

J: You have a moving target!

I: My goodness! Well, then you have to keep up constantly with all of the requirements. Do they let you know, or must you go and dig it out, dig out the specifications?

J: We have to call them and ask.

I: And it changes. It can change for every project, then. So there isn't a standard format?

J: Well, what's happened is that Farmer's Home finally said, "Give us an example, and then we'll make the final determination." We can't really finalize financing in here. All we can say is the project costs this much, and it costs this much to operate and maintain it. If they [the client] would charge this much, they would have this much available to fund, to finance part of the loan. And they would need this much grant. Basically that's said back here [shows in sample document]. "Available"; see, we end up...they're...come up [in document] like...here's their present operating cost.

I: Here's number of hours, operating cost...oh...

J: Income and expenses to date. OK, they bring in about $60,000, spend $58,000. Very little in surplus! So we say, "OK, we add so many customers, and their present income is $60,000, and they add two hundred and, or 80% of
287 customers that their average bill for twelve months will give them a total of this much. So their total income would be this. Their present operating cost is this. Their additional O&M cost for these additional customers is this. Total expenses, forty-three.

I: "O&M," that's Operation and Maintenance?

J: Right.

I: OK.

J: And then we go on through and say, well, we'll finance this...and then we say, based upon this, they can get so much loan, so much grant. But, that has to be determined by Farmer's Home. We can't, you know...we can't tell Farmer's Home what to do because they have a very complex rule on even if someone can get a grant, first of all. That, if they can get a grant for what they're financing right now. It goes on and on.

I: So, that project virtually then would have started just when the municipality of S---- came to you and said, "We want a water system. We don't know..."

J: ...what to do...

I: ...what to do." And then you...

J: We would say, "You do this."

I: ...and do the research, do the finance...

J: Well, we'd come up with a way of financing it.

I: Well, the financial research. You...

J: We have to do the technical research, that's right. We have to do the technical research to figure out, to make a determination what design do they need. What will serve these customers and give them a safe, potable water.

EXCERPT 3.11: Pat describes funding agency proposals

P: Look, I'll show you what the preliminary engineering report looks like. After we do this...see, this is the application that we sent in [to the funding agency]...this tells what the project will do, and all this is just...
I: Well, these are copies of all the forms you filled out.

P: Right. This is one form, this is the application for federal assistance from the Department of Agriculture, Farmer's Home. OK, then you list what each item, see, what...see, they're asking for $1,690,000 to do this project. [turning pages] And then you get into Request for Environmental Information. OK, this just...you just have to answer questions like, "Will any of the following land uses or environmental sources either be affected by the proposal or located within or adjacent to the project site?" So, you mark "yes" or "no" for each one. And then, again this is just telling you what you had to fill out on the form. When you get into your engineering report, then you are addressing some of these...[reading]...this is Exhibit One...I'm sorry...to this form. And you address the different things that they ask for in here. In other words, you answer, "Industrial...there is not anticipated commercial, residential, school"...and then it shows what attachments you have to put in the USGS survey map, a flood plain map, and you also, if you can, have site photos showing the area or what they need to have done.

I: "US"...just for a matter of record...USGS is United States Geological...

P: Survey...

I: ...Survey.

P: That's right. OK, now this is the engineering report [Appendix J], a preliminary engineering report where you tell about what you want to do, what type of organization this is, where it is. OK, what they have as far as the existing system, the rates, what the financial condition is. You have to have a financial report from the city, town, water system. Then this is the proposed project. This is what we feel like they need at the A---- water system.

I: Now, this proposed project section would come directly from the engineer, then.

P: That's right.

I: That can't be pre-...
P: Um-um [no]. No, no. It's strictly because every project, it may be similar to another project. But every little water system, or every town, whatever it is, has its own little whatever it needs. You know, it's not exactly the same as...some water system might need only a new well. So, you'd only address that aspect of what they need. Most of them need everything, you know. I mean, people just don't realize...it's sad sometimes. And, how much it would cost. A lot of this stuff I'm not real familiar with, but...anyway. Then this shows what their operating budget would be after the completion of the proposed improvements. And this is based upon this estimated rate, 5% interest this system would finance. It shows how the system could pay back the money that they want to borrow. Used to you could get grants, but most of it's loans now. And then, this just shows what the existing water...what the existing system is...this is the project file.

[interruption]
And, then this would be the project budget. And then here's the different, see, the proposed system and what they are talking about they feel like they need, and where they would put it. The existing system, what they have now. And this is a vicinity map showing the project area that it would encompass. And then, this is a letter from the clearing house...

EXCERPT 3.12: Neil describes bid documents

I: If you're identified or accepted as the engineering firm, then it would move to the design stage and the design people are the people responsible for preparing the specifications.

N: Yes, well...basically, what the design people do, they not only prepare the specifications but they prepare the drawings. The drawings identify what the job entails. The specifications give a word picture or a backup to whatever is shown on the drawings.

I: Some of the jobs that John has talked to me about...he has, in some of his jobs which are primarily municipal, they have general specifications that are what he calls boilerplated. And then he has a section of modifications that become modifications to, as you say, the word pictures of the specific job. Is that a similar...
N: Well, that's essentially what it is. We have general specifications that cover...they cover things that would be applicable to any job. Then we have technical specifications that arise only for the particular job that would be of a general nature. In a way, but they're technical in the sense that you do a street job: you need something in there dealing with right of way clearing, you need something in there dealing with concrete, you need something in there dealing with, maybe, painting. You may have to paint stripes. If you're doing a water project, you need something in there dealing with just water distribution. In other words, we write the technical specs that deal with whatever the major idea of the design is about.

I: For example, if you're talking about putting in an elevated water tank, the technical...there are general specifications, and then there's a...

N: Technical specification that deals with...something that deals with that water tank.

I: The specific one, or...

N: Specifically, that water tank. We modify the technical specs in an area we call special provisions. Every job usually has special provisions. It goes...the technical specs are really for all...

I: Would apply to any water tank?

N: Any water tank. And it may get in and have some language in it that's specific to that particular water tank we put in. The special goes a little further. It cleans up, in a way, things that you can't specify on the drawings, like you don't have particularly delineated in the technical specs. And then you have paragraphs in the special provisions that take up all that slack.

I: So, it's a three stage...

N: And also emphasize things you want to emphasize in the technical specs. You may read the technical specs and not put emphasis on the pilings or the foundation.

I: ...water distribution, or...

N: Well, some of the peculiar things. You may have, uh, special permits that are required at your site. You have
to cross a railroad track with a line or cross a highway. You might want to emphasize to the contractor that the owners are going to get those permits for him and he doesn't have to worry about it; or you may have to get them before you start the job.

I: So each one then is more or less an amplification...

N: Um-huh [yes].

I: And, I guess, by virtue of definition much more specific.

EXCERPT 3.13: Neil describes general specifications and special provisions

I: So you have...would that be considered the boilerplate with all the affidavits?

N: Uh...it'd be easier to show you one than it would be to describe one. It's hard to explain. All right. Here are all these technical specs I'm talking about.

I: Um-huh.

N: They deal with how you want things done and not necessarily talking...in other words, all the stuff dealing with gas that could be done on this job is most of the stuff is covered in there. If you have something in a gas distribution project that's not in these general technical specs, then you have a special provision section that will allow you to add or subtract from those technical specs.

I: Now, these would be standard.

N: These are standard technical specs that deal with a job like this. This job happens to be a gas distribution transmission line.

I: Conceivably, those general specs could be used in different jobs.

N: Oh, yes. Yes, that's right.
EXCERPT 3.14: Pat describes bid documents

P: Well, as far as project specifications, the engineers decide which technical specs they're going to use. OK, that pertains to technical aspects like concrete, painting, that kind of thing. Construction, actual construction. Then we have a section in our project specifications called "Special Provisions" where a lot of it is standard, but a lot of it may change to match each project. Our specifications contain a lot of standard forms. We have a standard payment bond, performance bond, information for bidders page; we have the bid proposal that the engineer also writes; and then, a lot of times, his special provisions will refer back to his bid proposal, or his bid proposal will refer to his special provisions, because in the special provisions there'll be something saying such-and-such a bid item, and then he'll list what's different about that bid item from what might be in the standard construction specifications that are in there. Um, normally, I mean, I just type whatever they hand me. I mean, you know, I don't have...as far as, like routing, is that what you're looking for?

I: Well, I was thinking...you say that the construction specifications...is there a source or do you have a standard file that if they say, "We need these standard construction specifications..."?

P: Right.

I: ...that is a standard that you would photocopy?

P: That's correct. We have two big books that contain all of our technical construction specifications. And they'll say...they'll give me a list of what technical specs they're going to use and I go pull them out of the book and run a copy which serves as the original for that project. Um, very seldom...now where these technical, these standard construction specs came from originally, I really don't know. They've been here since before I was, and I've been here nine years. I'm assuming they were written either by maybe some of the engineers in the [central] office or they were gotten from other engineering firms and just collected over the years that the firm's been in existence.

I: Are they kept numerically? Or is there...

P: Yes, they are...they're kept...they start with, first
of all there's a letter, like "W" would stand for water, dash [-] 200. OK, that's water distribution systems, W-200. In the books that we keep the originals filed in, they are filed numerically and they start with the lowest, the first letter of the alphabet...I think the first spec is a D-100 spec. Now don't ask me what it is--'cause I don't think they've ever used it in this office. But then it goes all the way through numerically so that I...when they give me...they want the W-200, or the S-260, which is a sewer specification for sanitary sewer systems...then I just go through the books numerically. I have the books, oh, you can't see this on the tape! [indicates a thickness]

I: About six inches.

P: Yeah, just about that thick. Two books. And so I just go through the books, 'cause they are put in there numerically, and pull out whichever technical specs that they want to use and then Xerox them. Now, in the special provisions...since I have the 640 MemoryWriter with the disks, then I'll say, "OK, well what project have we done recently that this is similar to?" And they'll tell me. Well, I just pull the disk on that project, copy it onto another disk, and then all I have to do is change the bid proposal, the special provisions, the bid advertisement, anything peculiar to the new project. And it saves me from having to retype everything each time I do a project. So that's where this typewriter has really come in handy because I used to type all the special provisions from scratch, all the bid proposals, the bid app...anything new about a project that was not on the standard forms, I had to type from scratch. So now, all I do is just go in and change it to fit.
APPENDIX D: EXPANDED TRANSCRIPT EXCERPTS
FROM CHAPTER FOUR

EXCERPT 4.1: John describes relationship between central office and main office

I: Do you work closely with the main office, or do you work as an independent entity? What kind of association do you have?

J: We're an independent association, really, except that we're all one company. I mean, we're not a separate company. We communicate very freely, and I think it's quite an advantage. If they have a question, they'll call here; if we have a question, we'll call there. It gives you a bigger base to explore possible avenues to different projects, different cost estimates for projects...whatever we need to do.

I: Then the projects are shared, or do you originate projects?

J: We do both. We originate some, and we do them here, the ones we originate. Others are originated in [the central office], and they can't handle them because of manpower assignments, and they say, "This is yours" and we go ahead.

I: Do you do joint ventures, where you and the people in the branch office would do part of the job and the people in the [central] office would do part of the job?

J: We sure do. And, from the financial aspect, sometimes we count the project as [a central office] project, and other times we break it into two projects and we each have a financial accountancy.

EXCERPT 4.2: Gail describes division of services in central and branch offices

I: So, then, the company has different divisions.

G: Right, we have six different divisions.

I: And what are they?
G: We have...[looks for a document]

I: Oh, that would be in that document?

G: We have a construction division which is...well...right here. We have a surveying division, and we have a civil division, we have the (branch office) division, we have the utilities division, we have an administrative division...uh...

I: Design?

G: Right. Yes. That's part...that comes under the civil. We have an administrative division which takes care of all the clerical. And the main principal is the man you just met. And then we have the civil division which is Mr. M.'s brother, and the civil engineers and the drafting goes in there. Then we have the utilities division which is headed up by Mr. H. who is also a principal, and then we have those engineers and the engineers in training, and engineering technicians--that falls under Mr. H. Then we have the surveying division, which is Mr. L. heads that, and he's also a principal. And we have all the surveyors and the surveying personnel crew. We have a construction division which was a large division, but at this point there's not a lot of construction going on. There isn't a lot of work because of the economy and the state that it's in. At one time we had twelve people here; you see we're down to four. We have the main division head and then three people under him. Then we have the (branch office) division that John heads up, who's also a principal division head and the engineers. His is separate because he takes care of the clerical, the inspectors, drafting...uh...and all that. We also have a group, what we call the Labor Board group for doing like, the Corps of Engineers inspection, quality assurance inspection of construction on the Red River. And we have a group that actually are our people but they're hired by the Corps of Engineers to oversee this work. So that's how many divisions we have.

EXCERPT 4.3: John describes types of jobs branch office handled--nature of project, funds, client

I: As far as the scope of projects, I'm just beginning to understand what's going on here--would the length of a two-page document reflect the scope of the project, like
that engineering report? The larger the project, the longer the proposal?
J: It depends on what stage you’re in. This is a proposal [a two-page document] submitted to a potential industry. It’s very sketchy, very vague, purposely, but enough to say we want the industry here, we’re going to do something to help you get here at the lowest cost.

I: So, you’re submitting proposals right from the word “go” of various kinds.
J: That’s right. All the time. And if...then, we also have all the proposals that I never fool with, that Gail does, and that is federally- and state-funded projects, Corps of Engineers, State DOTD, or other state agencies, where they say, “We want proposals from engineering firms to do these projects. And if the project fits into our area of expertise technically, and if it fits into our locality...you know, if we can be competitive on it, and we think we can, we’ll spend the time to complete the proposal and submit it, and that’s what Gail does. See, that’s another whole area.

I: Then, you’re...the distinction you’re making then is the state and federal. Yours is more task specific--could I say that?
J: Not "task"...
I: "Project" specific?
J: Yeah, project specific...I guess a project is a task. "Client-specific"--that’s the better word. Depends on the client.

I: What the client needs?
J: If it’s the state that needs something, they require certain proposals. If it’s the client, if it’s the Police Jury, that needs something, they require a different type of submittal.

I: Because of the nature of the funding?
J: Correct. And the rules and regulations by which the funding comes out. The state has certain rules and regulations they have promulgated on the selection of engineers. The Corps of Engineers has certain rules and regulations in the selection of engineers. So does these other funding agencies, but the state and Corps come up
with the projects—they have the in-house capability of describing the project...

I: I see.

J: ...and saying "We need this." And they'll say, "We want to build a road beginning here and ending here." And they have engineers in-house, capability in staff to say "It's going to take approximately this to do it. But we need final plans and specifications, can't do it in-house; ask Mr. Engineer, do you want to do it? Or, which of the engineering firms out there would be interested in doing it? If you are interested, tell us your strong points, and we're going to grade you on a system we have to determine whether or not you can get the job." Whereas, [a small town] has no in-house capability to even describe what has to be done. They just know there is a need.

I: So, it's almost, as you say, it's two completely different ball games. You're providing for your municipal and private people the expertise that the government, in these state and federal [projects], do themselves.

J: Right.

I: So, the nature of the jobs, the preparation for the jobs and the proposals is completely different.

J: Um-huh [yes].

EXCERPT 4.4: Gail describes her job

I: And this, then...does this weekly list just government contracts...state and federal contracts?

G: Yes. Yes.

I: So, primarily...the [central] office works primarily on state and federal projects.

G: No, not necessarily.

I: Not necessarily?

G: A lot of city and parish-wide and state-wide. We do highway work for the state. I've got one of those here
that I'm going to...but this includes...
I: [reading] State project...

G: This one is a state project here. This one involved some surveying and some highway work here that I submit on a totally different...from this. But it's also considered a Qualifications and Experience Statement.

I: So, who determines the format? The person that is advertising?

G: Right. The state is doing this one [points to a pile of papers] and the government is doing this [points to another pile of papers].

I: So they...

G: This is for the National Guard right here [picks up several pages].

I: So do they specify the format and what format it should follow? Like, sub-categories, sub-titles?

G: Yes, they tell you...like for instance, this one that I'm putting together here...

EXCERPT 4.5: Gail describes differences between Q&E and bid proposals

I: But this [pointing to a cut-and-paste document she was working on] is not what you would call a boilerplate? This is a unique document.

G: These particular ones are, yes.

I: And these are what you call the...uh...

G: ...qualifications...

I: ...qualifications and experience statements. Well, would these include sections...John was showing me a submission to, I think it was S---- [a town], and it had different sections. It had...it was an actual bid document that he prepared for a client.

G: OK. Probably with the cost and all the dollars.
I: All the dollars, and had all the contract and the affidavits in it. And it had specifications, and then it had modifications to specifications. This [the document she was working on] is not that type of document?

G: No.

I: So, are you involved in preparing bid documents, as such?

G: No.

I: Does the company?

G: Yes, they do. Most of our engineers do those.

I: Oh, the engineers prepare them.

G: Most of the engineers have them. Any monetary thing, I don't have anything to do with anything involved in any way that they write...they actually decide what cost they're going to put in there. What they're going to have the engineer's salary, or the actual cost of the job itself. But the design phase itself, I don't have anything to do with that. All I've done is just type those.

I: So they...they prepare all of the...oh, what would you call it?

G: The cost proposals.

I: The cost proposals. As far as putting together the actual bid document with the specifications and the modifications. Is that done by the engineer?

G: Yes.

T: And that's considered as part of the design phase?

G: Yes.

EXCEPRT 4.6: Gail describes sequence of projects and documents]

I: So, since there are those divisions [in the firm], do you do work that goes...that crosses those lines?
G: Yes.

I: ...into other divisions?

G: Yes, I have two projects here right now for John and they will be handled out of the [branch] office. I prepare it here [telephone interruption].

I: OK. These documents, then...you're in the administrative [division]. The administrative then provides preliminary work that will eventually...if this [the Qualifications and Experience Statement she is preparing] is accepted, where would it go...what would happen to the project after this?

G: OK. We get a letter back...we would get a letter back from the Corps of Engineers informing us...saying that we had been accepted for this work. Then, at that time, the design people go to work designing the project according to the specifications that have been set up by the Corps of Engineers.

I: Oh, so the specifications...that's where I was getting confused. So the specifications come from the Corps.

G: They [the firm's engineers] would get the criteria for setting up the specifications.

I: And then that's when the engineers start to work and give the specifics. So this [the Qualifications and Experience Statement] is really, then, a preliminary for the bid.

G: Right.

I: So this would be submitted and the Corps of Engineering would evaluate everybody's submission and turn around and say, "OK, [you, the firm], we'll hire you as the engineer..."

G: Contractor or engineer.

I: Contractor?

G: Well, they'd say engineer or contractor, either one.

I: So, then this would come back into the design department...
G: What it would actually do, I think I'm telling you this correctly. It would actually come back in then to the design phase and then it would go out for bids. They will actually set up the bid document and the specifications which we send out. We advertise it. The design people will actually handle the bidding phase and the design phase.

I: And then it goes out to the contractors.

G: Right.

I: So you've become...there's the Corps. And then they hire you to prepare the bid documents. You advertise to the contractors.

G: That's correct.

I: And then, do you hire the contractors, or do the contractors...

G: It goes on low bid.

I: It goes on low bid. So then, do the contractors work for you or do they work for the Corps?

G: No, they work for us.

I: I see.

G: We represent the con-...we represent the owner. We are the liaison between the Corps and the contractor.

I: Then that's where the difference that John was talking about. Then, in the municipal, they [the firm] prepare the documents but the client is the principal. OK, that's clarifying that for me then. So you work then as the liaison...

G: Right.

EXCERPT 4.7: John describes municipal projects

J: Most of our work is municipal and our strength, our firm's strength, I think, is the fact that we know how to find funding, which is usually a lot of paperwork. We know where to go, and how to fund projects, where the money is.
I: I didn't realize that...that you were...I had understood that the municipal people would be the source of funds.

J: They have to generate it. I mean, they have to come up with the financing. But a lot of our clients do not have the in-house expertise to even know where there is money to finance a project. Well, look at S---- [a town] as an example. They have a mayor that is a super person, like, she's great. They have a council that cares. But the only full-time person they have is someone who answers the phone and keeps books and sets the books and that kind of thing. That's it. See? And they have a maintenance man that checks the water and sewage system. And they say, "Hey, we want a sewer system." They don't know...they can't take the first step. They don't even know who to call. Now they could, I guess, do a lot of the work themselves. But normally they...what we did is we went in and we said, "We know how you can get 75% financing for this project, federal grants for 75% of the project. Let us do a preliminary engineering report and you're going to have to pay us X number of dollars for the report. The federal government'll pay 75% of the cost of that. Once you get funded, the project can be constructed, all the eligible costs, 75%, will be paid by the federal government. We'll do the engineering for you." That's just one example. But in some cases, they...like specifically S---- [a town]...they have money that is grant money to pay 75% and we have to know how to get that grant money, how to make the application, how to meet the rules and regulations, how to keep them from being in trouble and having to pay back this grant. Because they get upset whenever they have to pay it back! We have to know that, then we have to come up with a way to finance the other 25%, which, that's another federal agency, Farmer's Home Administration.

I: Former's?

J: F-A-R-M-E-R.

I: Farmer's, sorry.

J: My accent that bad?

I: No, no, no! I had never heard of it.

J: FmHa
I:  FmHa. And...

J:  So we go to them and they have a public facility for approving projects, and we have to put the application in, and we have to make sure that the two monies come available at the same time, and...you know. Towns do not have that expertise.

I:  I did not realize that.

J:  In fact, the city of R--- doesn't understand it. And they have some real good folks. But they don't have to, 'cause we do. I mean, they could if they had to in R---- because they have the capabilities. But I started trying to explain it to a reporter one time what I was trying to do. And I said, "If this was easy, anyone could do it!"

I:  Is this a standard part of a consulting firm?

J:  I don't know. I know it's a standard part of ours, and I think that's why we're here. A lot of firms have changed drastically or been decimated or gone out of business because they don't have any work. And, if you think about it, there's not too many people that come and say, "Hey," you know, "I need a sewer system. Here's the money to build it. You design it." That doesn't happen.

I:  Was this something that is part of the company's policy, or did it develop over time, or...

J:  That's the way we first started, some twenty years ago. We went out and found a group of people in a rural area who wanted a water system. We said, "We'll get you a water system"...well, JM [an engineer] at the time said, "I'll get you a water system. I'll come up with the financing for it. All you have to do is go get the people to commit to it, become a customer and pay the water bill."

I:  Now, if you...as you develop these proposals to get the financing, are they submitted from your company or are they submitted from the town.

J:  They're submitted...what do you mean?
I:  Well...

J:  We prepare everything and all they do is sign it. Here's an example...in fact, I have to meet somebody at
noon. We prepared this [shows document], that's the engineering contract--that's very important. Look, this is a preliminary engineering...it's an application for assistance to the Farmer's Home Administration for a 1.69 million dollar project. And I have a signature here, and I took the other one off...and I'm going to bring this to the president of the water system and I'm going to ask him to sign it today.

I: You do all of the work and they just...

J: We type everything. All he has to do is sign where it says "signature" there and there.

I: I didn't even realize [reading document]... environmental information, all of these forms. You follow it right through then. Now if you do all of this, this is considered part...an initial part of the project? If they get the funding, then you would go ahead?

J: They get a letter, in this case, from Farmer's Home Administration. You know, we wrote all that, it's answers to questions that were asked in the environmental.

I: Um-hum.

J: Keep going back [in the document], and there you have the engineering report. And all that, that is where I said we have boilerplate only in outline. We had to fill in the blanks completely whenever we want a project.

I: So, each project is unique because of the specific environment...

J: ...and financing, and need, and what's needed, and what they have. Some of them have nothing, some of them have something they need to improve.

I: So all of this, you would develop and write yourself.

J: That's right.

EXCERPT 4.8: John describes relationships with clients

I: Now, they would be applications [to funding agencies] on your behalf or on your client's?
J: Oh no, no! Never on our behalf. We don't apply for us. We always do applications for our clients. And we'll go to someone and say, "There is an application that is going to be due in six months, and it will fund these types of projects, fund water improvements, sewer improvements; and the requirements for it is it has to affect low to moderate income people and if you don't have at least (and we will make a determination based upon our experience and rules that are available, that we know) if you don't have 75% of the people who fit into a low to moderate income area...in this project area, don't...there's no use in your even applying. But if you have a project area that endangers the health or safety of residents of your community, and if you want to apply for a project, we'll do the application up, no problem. Then, turn it in. If the project gets funding, you can't guarantee you're going to hire us---'cause that's one of the rules--but, we'll do it for you, get the funding."

And then, of course, they have to go through a selection process; and we feel our credentials, we can show proven past experience...we can show knowledge of what's needed on this particular project. And so, we'd be one up on anyone else submitting a proposal to do the project.

I: So, in a way, just based on my experience, it's a bit of sales as well. You're finding the projects, and then...

J: Selling...

I: ...selling the project to a customer.

J: That's right. All life is sales. Everything is people.

I: I didn't realize that that was such an integral part...

J: People...people don't call here and say, "Hey, come design this for me."

I: That's a misconception that's quite common, I would think.

J: Sure, sure. People have no idea. Even people associated with the work we do don't understand and, like, the contractors business. They don't really know how our clients choose us.

I: A letter doesn't appear on your desk saying, "We want
you to do this, do something."

J: We've had a couple of people just actually walking in the door. One example was the mayor of the community P--- carried...said, "Look, here's so-and-so, he's formerly in industry, and he wants to...they want to build an anhydrous ammonia plant somewhere in this area. And I told him you did all the engineering for our little community here, and you were aware of how they could get water and dispose of their waste." And JM [an engineer] looked at the guy and said, "Well, how much water do you need?" And the guy says [how much he needed]. "Well, if you want to be in this area, and you know about where (it was the P---- airport), your wells need to be so many feet apart, and each well should produce about so much, and you need so many wells, and that will cost so much per well, and the total line transmission time would be about this." You know, just sitting across from the guy just like this. And Jim said, "You're probably talking X dollars per gallon for water, approximately, to get it delivered for you in this area." And the guy says, "OK, we'll, you know, we're going to want y'all to do the engineering part." That was one that just kind of walked in. And they formed that industry, spent like 78 million dollars. I: My goodness!

J: Now that...we only were responsible for maybe $10 million as far as billing the engineering. But that's still a big project.

I: That's rare, though.

J: That is, that's the unusual...that's what you'd like to have happen all the time. But normally we have to go to council meetings, and we have to go visit with mayors and say "Do you have any needs out there? Do you have people that need better water? Do you have people that don't have fire protection? Do you, umm, need a sewer system? a park? The other thing is repeat business. If we do a good job and people are happy, and they trust us. Trust is everything in this business too. As soon as you lose trust, they don't care...they're not going to call you back. They'll call anybody. But, if they trust you and they get a letter from the EPA [Environmental Protection Agency] saying, "You're violating standards, you have to do something." They don't know what to do, usually they don't even understand the letter. They'll call us and they'll say, "Look, I got this letter. What do I do?" They send us a copy of the letter, and we take
care of it. Usually, we'll contact, in that example, we'll contact EPA, see what's exactly the scoop, and what's the time limit, what's going to satisfy you, and we'll prepare documentation for the council members. And they'll say, "Oh, yeah, sounds good. That's what we're going to do." And then it carries through, you know. It then comes to trust, or they're leading us down the right path. 'Cause you're talking millions of dollars. And these people are usually elected officials, and they'd better spend that money wisely or they're not going to get re-elected.

I: Then, you're saying this, S--- [a town], would be sort of a typical example. The municipal official would ask you, "We would like to do this"?

J: No, usually we go to them and say "Would you like to do this?"

I: Oh, I see.

J: See, they don't even know enough about it to ask us. Until we get into a community, and they know us. S--- [a town], we had to go to them the first time. Now, if anything comes up, they would ask us. It depends on what stage your relationship was.

I: So, in some cases, you would initiate or identify the needs. So you need to keep track of what's going on not only in the funding agencies but in the communities themselves.

J: That's right.

I: That gives you...

J: ...an in.

EXCEPRT 4.9: John describes pre-award documents in municipal projects

I: I didn't realize that all this preliminary documentation and writing goes on. How...your proposals would be client...much more client-specific, much more unique rather than the state and federal--they have pretty set guidelines, don't they, on what goes into a proposal sequence? Yours...
J: We get some state ones in. Gail, of course, she can show you all the different ones she's familiar with. I just mentioned two, the Corps and the state. There are probably another couple of those.

I: I can work with you tomorrow to work on the specific formats, but...you use client-specific guidelines; they could change from client to client.

J: From project to project for the same client! It can change, depending upon what they're trying to do.

I: It seems to me it's a much more flexible presentation than what Gail would be involved in...or am I using the wrong term? It changes, you don't have a set format for every single proposal.
J: True.
I: You just change according to the client and the job.

J: At times.
I: At times?

J: There are, even when we go to S---- [a town] and we say "you should apply for this grant." Once we get to that point and they say, "OK," then there's a set format that you have to give to whoever you're applying for the funding. There is a specific, like this, there is a set format. But, we might apply like this [Farmer's Home Administration], plus another one, plus another one to get the one project funded. Sometimes we have three funding agencies dealing with one project.

I: And each one has their specifications.

J: And each one has their requirements before they approve funding which you have to pass.

I: Once you get to the funded stage, now let's say this one is the Fm...

J: Farmer's Home Administration...

I: Farmer's Home Administration, let's say they come back and say "Yes, we will fund." Then the process...you aren't automatically pre-selected as the engineering firm.

J: Well, yes, because we have an engineering agreement on this.
I: Oh.

J: They require the engineer to be selected when you submit this. They do that for a reason, because it takes a lot of work and time and effort to do this and they know it, and they don't want...they've had the experience where one engineer will come in and write a report, then another engineer somehow or another would come in and do the engineering. And it wouldn't gee-haw with the report. You know, the intent, and the research and everything that went into it, and some of it's going to change; and then they have problems funding it. So, Farmer's Home Administration wants you to submit your engineering services agreement with the preliminary engineering report. But, like on your Community Development Block Grants, there's no preliminary engineering report, there's just an application which includes cost estimate, map of the proposed project which would include in all kinds of assurances that this is going to take care of it--it's a mini-engineering report. But their rules and regulations do not allow the pre-selection of the engineering firm. And if they would fund the project, they require that you advertise for engineering services, to accept proposals.

I: And that would encompass submitting...

J: No, not this, that would encompass...

I: ...an engineering services...

J: ...proposal...

I: ...proposal...

J: Right. We do other things...I do ours for us out of here. In [the central office], Gail would do both types. She would do the ones for the federal and she would do the rest of them.

I: So that is another different type...

J: ...sure...

I: ...of proposal.

J: Um-huh [yes]. You could consider it a proposal, correct.
I: OK, so when I ask you to describe proposals, then "proposal" is another umbrella term?

J: Very.

I: And there are different types of proposals that you would just call, "Well, that's an engineering proposal."

J: My proposal for this A---- Water System was going to them and appearing to them in private. You know, looking them in the face and saying "I can help you. We have the expertise. We know what we're doing." And they say, "OK." Just a verbal presentation.

I: So, that would be an engineering proposal, as well.

J: It was. Yeah.

I: So, then...

J: Or, it can be a very detailed, certain-way-you-have-to-do-it, with all kinds of references. Yeah. You've got from one to the other.

I: Face-to-face to volumes.

J: If it was easy, anyone could do it.

I: So, once you get, let's say...getting back to this one...you are pre-approved on the S---- job as the engineer if they get the funding. Does that stop the proposal stage? The pre-job...hm, I'm not using the right terms here. Once you...

J: Once...once. This is A---- [a town project]. This is Farmer's Home. If it's a Farmer's Home project where you've already been selected to be the engineer, and they've authorized you to write a report, OK. By resolution, the board or the council or whatever it is, the governing body says, "Write a report," they've hired you. So, you write the report. The proposal in this case is a presentation for funding on behalf of the agency. It's not for the engineering company to do that. It's just an agency to get funding from. That's all it is. For the community, for our client to get funded. Once Farmer's Home, in this particular type project funding scope, very job-specific and funding-specific. Once they get funded, we don't have any more proposals to do. Then it gets strictly down...eh, well, for us...then we have to
do a bid proposal for a contractor to build the project. And we write the technical specifications, we modify them, and we have our standard technical specifications. And we draw one of those big sets of plans, and say "This is what we want, this is where we want it," and draw on the specifications and say, "These are the materials we want, this is the workmanship we want, and this is the installation we want. This is how you test it, and this is what is going to take to get it approved. By us, to get you paid." We put that out. That's another separate document.

EXCERPT 4.10: John describes the bid proposal/contract

I: In this particular case you have an agreement that you are the engineering firm. Then you would turn and ask for bids from contractors.

J: To do the construction.

I: To do the construction. Would you write the specifications?

J: Um-huh [yes].

I: Send them out?

J: Um-huh [yes].

I: So that is done by the engineering firm. Specifications are...is this what they call "putting up for bid"...is that the term?

J: That's it.

I: Do you pre-select contractors? Or advertise?

J: Well, it really depends upon the rules and requirements of the funding agency, of...let's just say the funding agency. Whoever's funding the project sets the rules. So, you've got to follow those rules, or else your client's...you're jeopardizing your client. They'll have to pay the money back if they find out you broke the rules, or they won't get the money. You've got to know the rules and follow them. And, one type of deal is you advertise formally in accordance with the state bid laws. Most of our clients have to do that. Private clients
don’t. They can do it any way they want. They can put it out for bids and take the high bidder if they want. Public contract law states that you have to take the low bid unless there’s some caveats in there.

I: So the specification document produced by you, the engineering firm, is that subject to the approval of the funding agency?

J: ...the funding agency.

I: ...before it can go...

J: In some cases. Usually the funding agency, either they have to approve it or they want other people to approve it. And, even when they don’t want other people to approve it, sometimes it has to be approved by others in order to follow the rules and regulations of the state.

I: When the...

J: So, there’s usually people like the Board of Health, Office of Health Services and Environmental Quality...we call it the Board of Health...it used to be called that years ago. They have to approve just about anything built that affects the public health which can be water and sewer systems. Uh, the State Fire Marshall has to approve anything, any building that’s occupied by a person. So, you have those two people that have to approve it in accordance to state law basically to follow the rules and regs. Now, with some funding, Like Farmer’s Home Administration has to...they have to see it, they have to approve it. EPA, the state has just taken that over. They have to approve it. The Department of Administration, which is the CDBG, they don’t care. But, if you apply for a project that would help the safety and sanitation of someone, someone had to say that, other than the engineer, [phone interruption] that this is needed to protect the health and safety, and it might have been the local sanitarian; it might have been someone that does the fire rating, the fire protection; it could have been someone with the gas line, safety, gas systems; it could have been the State Department of Transportation and Development for drainage. So, if you were funded based upon one of these agencies saying that there was a safety and sanitary need, then that agency has to say that these plans and specifications will eliminate the need, or it will take care...satisfy the need. It’s...there is no typical...heh, that’s the best thing I can tell you if you
haven't understood that yet.

I: I'm beginning to realize that. OK, then, those specifications would go...

J: They have to be approved by somebody.

I: ...somebody, and then they would be...you would advertise for contractors in specific areas so there's...

J: No. Let me add in another thing. Sometimes we would do that process. If we're doing the job for the Corps or the state, we don't. All we do is we submit this [specifications] to them, to those clients. And they take care of the advertising. We don't have a thing to do with it.

I: Except perform the...

J: We don't even do inspections. They do it. See, they have some technical capabilities.

I: So that would be the extent of your participation...

J: We'd be finished.

I: ...in the project? In a...

J: But in a municipal market, we would make sure the advertisement was prepared properly by the rules. Then go to the council to get authorization to advertise. Make sure it appeared in the paper within thirty days from the first date of publication at least three times. We, in addition, send out copies of this advertisement to contractors that bid that type of work to let them know what's going on. Public bid law's a joke as far as getting the information out to the contractors. It follows...it meets...it serves a good purpose. It keeps you from being covert. But, it doesn't accomplish anything other than what we do...what you want is you want a lot of bids. You want a lot of people to give you proposals to get a good...hopefully a good price. And the only requirement of public law, of public bid law is the contractor has to be able to put up a bid bond. Anybody can bid it. You asked about restrictions. We don't restrict anyone. If they can put a bid bond up, they can bid it. Now, if they get awarded the contract and they can't put a performance payment bond up, they lose the bid bond. And then you go to the next bidder.
I: So a bid bond is...

J: The document that the contractor submits...

I: To the engineer or to the client?

J: This contract, there's no...[gets a piece of paper and draws diagram]. The client, and the engineer, and once you get construction, you have the contractor. There is no direct link between these two [the engineer and the contractor]. This contract...these contract documents in here are executed. They go this way only [contractor to client]. We have a contract with the client. It goes this way only [engineer to client].

I: You prepare the documents, but the contractor is obliged to the client.

J: That's right.

I: ...to fulfill the...

J: It's the client's responsibility to do everything as far as meeting all the rules and regulations. They're at risk. All we do is assist them. We probably do more than a lot of people do, but that's one reason I think we've been able to stay in business.

I: So, the client is responsible for inspecting...

J: Um-huh [yes].

I: ...and approving...

J: Um-huh [yes].

I: ...in most cases you end up...

J: Usually what they'll do is, in this contract here with them [engineering contract] they will assign us tasks and responsibilities which includes inspection...if it's S----[a town]...[puts broken line between engineer and contractor on diagram]. Now if this client here is the state of Louisiana, this line [the broken line between engineer and contractor] never exists--this little "dash" line. We never fool with the contractors.

I: So, if it's the state, you're much less involved with service?
J: We don't do anything. Very seldom.
I: But in municipal, you're probably involved...
J: We do it all.
I: ...much more...quite heavily.
J: Sure. They don't have the capabilities, the expertise, the manpower.

EXCERPT 4.11: Neil describes the bid proposal/contract

N: Well, the specifications as such is a book like this that allows you to bid the job...there's contract documents dealing with the construction of the job; and those bid documents allow the contractor to give you a price through a formal bidding process...give the owner a price by which he's going to do what the other parts of the specifications require him to do. It's all bound in one set and becomes the contract for the work.

I: So, it initially serves as a bid document to state the specifications, state the special conditions; but once the bid is let--is that the right term?

N: Uh-huh [yes].

I: Once the bid is let and you've hired a contractor it becomes the contract document.

N: Right.

EXCERPT 4.12: Neil continues his description of the bid proposal/contract

N: ...This whole document...this whole book is available...in other words, it includes the advertisement for bids, the notice to the bidders, telling how he can get a set, and when the bids are going to be accepted by the owner. It gives him instructions of what he has to do. If he wants to come and look at the job. And it has a bidder's proposal in it where he's...where all the quantities of the job are identified and he has to...if he's going to bid on the project, he has to give unit
prices on all these items that make up the job. And he has to tell...and it gives him so much time that it's going to take to do the job; and if he doesn't do it in that amount of time, then it gives the penalty, so much a day it's going to cost him. The bid bond, and all that kind of stuff is in these documents. How he's going to...what he's going to receive in the form of a notice if he gets the job, if he's the successful qualified low bidder. The form of the contract that he's going to have with the owner. How the performance bond, payment bond—all those things. How he's to fill out that. What he gets...proceed with the work and how the job can be changed while it's being constructed. If he successfully gets the job, he fills out a lot of those other forms. But this whole book is available to him to look at and to make sure that he understand what the job entails. Plus a set of plans.

I: And these are prepared by you.

N: Prepared by the engineers. The drawings and the specifications all become part of the contract. Once he...if he is a qualified successful bidder.

EXCERPT 4.13: Neil describes the bidding phase

I: And your responsibility to the client is to ensure that he performs according to the plans.

N: Once he is into construction, that's...

I: That moves out of the design.

N: It moves out of design into, well...we go through the design to prepare this document and those plans. Then we go into what is called the bidding phase. That's where the contractors are made aware that this is available. Ads are put in Dodge Reports, the local newspapers, and some other official-type publications like, uh, Association of General Contractors, things like that. The ad usually runs thirty days or so to give them plenty of time to get the documents. They have to pay for these documents through the engineer usually. They pay about $50, whatever. And they can pick up a set of that and this [specs and plans] and take it and do, you know, analyze the job and try to figure out whether they want to bid on it. If they want to bid on it, then they have to
fill out the bid proposal forms, and turn them in by that bid time and date...prior to the bid time and date. It's a matter of you have to have 5% bid bond by state law attached with their bid. Then it becomes usually less cost, the one with the lowest bid is the one that gets the job. Not always, but that's usually what happens.

I: When the successful contractor then is identified, you move to the construction stage.

N: Then you move to the construction phase. Then, the price that he has said that he's going to charge for different items are all in this book. The plans become a contract document, plus these other forms that are filled out by him...become a legal, binding thing between him and the owners.

I: And you act as the liaison.

N: Yeah. We act as...we do construction administration. In other words, take care of...if he turns in monthly estimates, or bi-monthly estimates, whatever or however it's set up...and we look those over, you know, to approve or disapprove, or change, or whatever for the owner as the project goes along. We also, if the job is set up that way, we also provide resident inspection--someone, a technician-type person is out there with the contractor to see if he's doing his work without telling him what to do, we just make sure that he follows the contract document, which in turn means the plans and specs.

I: And that...providing that kind of service is part of your contract with the owner.

N: Right. We have a...we usually have a contract to do surveying, for layout surveying, or layout construction. We usually have a design fee which includes the design, the bidding, and the construction administration. That's all under one fee. Then we have a resident inspection.

I: So you follow it right through to the conference where they substantially approve...substantial completion.

N: Yeah. Right. We even...we arrange that inspection with the owner and the contractor. And if there's someone financing...some government agency's involved has the financing part, they're involved too.

I: Then your responsibility for the job ceases or
terminates once that...the job has been signed over to the owner?

N: Well, up to a point. I think state law requires that the contractor to be liable for his work for a year at least after it's been turned over to the owner. It's a warranty type situation.

**EXCERPT 4.14:** John describes confirmation of bid document as legal contract

J: We actually take a copy of the contract and bonds and record it in the courthouse. And then towards the end of the job you have a substantial completion. And that particular document has to be approved by the council and it's recorded in the courthouse. According to the public bid law, 45 days after that's been recorded, the contractor has to provide a lien-free certificate stating there's no liens on the project. Once he does that, the town is relieved of anybody filing a lien on them according...and this is all in accordance with state law.

I: Then, virtually you're...once it's awarded, your involvement in preparing documents ceases...

J: Uh...

I: Unless there are inspection reports?

J: Then we have inspection reports, and then we have to fill out the necessary paperwork to get the funding agency to forward the money. Everyone has their own little form to fill out. There's uh,...we have to review shop drawings, we have to process the contractors to pay us. That means we get it in, we check it, we make sure it's all right.

**EXCERPT 4.15:** Pat describes the bidding phase

I: So then, that goes into the bid phase.

P: Right. Alright. Once you've sent out your addendum and you have your bid, OK, then the contractor has to send
you a...sign the contract, give you his bonds, his insurance certificate, anything that you ask for from the contractor. Then all that has to go to Farmer's Home Administration to be approved. OK, then they approve it, then they tell you, "OK, we'll set up the pre-construction conference" which is where they come in and they meet before the job actually proceeds. Normally the notice to proceed on the project is issued at the pre-construction conference, and that's when they have loan closing where the system will get their money to start paying the contractor and paying the engineer. OK, now you're in the construction phase. You've gone through that. And the construction phase mainly consists of...we have an inspector—that's another phase, inspection phase. Depending on the contract, we will have either a full-time inspector, or we might have one that just checks the job every couple of days like the lady here that called. OK, we have not got a full-time inspector but we have one out there a pretty good bit. And, right now, Melinda, the girl that came in here, is the one that's inspecting. She's an engineering student, she's a sharp girl. She's doing inspection on that particular job, 167, out here...I don't know if you've noticed all the pipe being...

I: Um-huh.

P: OK, that's our job. I'm so glad I don't live on 167 right now. We have a full-time inspector there. We have somebody out there eight hours a day on the job because it's a big job and a lot of, you know...he deals with the contractor as well as with the landowners. If they're unhappy about something and he has to get it straightened out. If he can't get it straightened out or deal with it, he comes back to the engineer and says, "Look, I need help or so-and-so, you know, explain something to me,"...that sort of thing. And, so that's the construction phase. 'Course, it's the main phase because that's where you're actually doing the work people have been waiting for for the past four or five years while you've been piddling around with all this preliminary stuff. And, so then, once the construction phase is over, then that finishes the job. The contractor has certain obligations—he has to guarantee his work for certain periods of time. It can vary, from a year to, you know, however. If he puts any new mechanical equipment in, that has to have a guarantee. Money is withheld from the contractor each time. It's called a retainage. He sends in a payment request once a month. And it's processed through the engineer and through the funding agency. It goes through the owner
too. It comes to us. We approve it, we review and approve it. The owner signs it. Then it's sent to the funding agency and then, they are paid their money. So that if a contractor, say, has finished a job and it's what we call substantially complete. There may be a few little things he has to go out there and check. Once he files his certificate of substantial completion, forty-five days later he can get from the Clerk of Courts Office what they call a lien-free certificate. Now he can't get that if anybody's put a lien on him. Like, if he hasn't paid a supplier or a sub-contractor and he doesn't get a lien-free certificate, then he doesn't get his final retainage until he satisfies his obligations to his supplier, his sub-contractor, or whoever's filed the lien on him. Then, once he gets his lien-free certificate and brings it in to us, then he's paid his final retainage, and the job is considered complete.

EXCERPT 4.16: John describes data retrieval system

I: Everything that goes with a specific project is grouped under that system?

J: That's right. Everything. The first three numbers say what it's for; the last four numbers say what the project is. What it's for, with any first three numbers, it can be for any of the projects and the last four are just for the job. So, I could look at this, "010" is for construction, it goes with construction account 3434.

I: Now, this is designed for accountability?

J: This was designed so we could find things. We always want to know, where is something? And, where do you look for it? We use documents, and really there's a lot of legal ramifications for everything we do, a lot...you have the potential of ending up in court on anything. So you have to have a way of finding things.
APPENDIX E: OUTLINE OF COMMERCE BUSINESS DAILY

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WORK TO BE ACCOMPLISHED UNDER AN INDEFINITE DELVY CONTRACT AT VARIOUS LOCATIONS WITHIN THE VICKSBURG DISTRICT NTE $400,000 PER YR. DELVY ORDER NTE $75,000 EACH.

PRESELECTION CRITERIA:

A. MUST HAVE 1 OR MORE REGISTERED LAND SURVEYORS AND CIVIL ENGINEERS.

B. HAVE CAPACITY (INCLUDING EQUIPMENT) TO FIELD 5 FIELD PARTIES OF 4-MEN EACH.

C. HAVE EXPERIENCE IN THE FOLLOWING:

1. HYDROGRAPHIC
2. TOPOGRAPHIC
3. CADAstral
4. CONTROL TYPE SURVEYS

D. INDICATE PRIOR EXPERIENCE IN PERFORMING 1ST ORDER HORIZONTAL AND VERTICAL CONTROL SURVEYS, IAW CRITERIA ESTABLISHED BY THE US DEPT. OF COMMERCE, NAT'L OCEANIC 7 ATMOSPHERIC ADMIN.

SELECTION WILL BE BASED ON THE FOLLOWING CRITERIA IN DESCENDING ORDER OF IMPORTANCE WITH C & D BEING OF EQUAL VALUE AND E & F BEING OF EQUAL VALUE:

A. SPECIALIZED EXPERIENCE WITH FOLLOWING SUBCRITERIA OF EQUAL VALUE:

1. HYDROGRAPHIC
2. TOPOGRAPHIC
3. CADAstral
4. CONTROL TYPE SURVEYS

B. PAST PERFORMANCE: CONSIDERATION WILL BE GIVEN TO RATINGS ON PREVIOUS DOD CONTRACTS. CONSIDERATION WILL BE GIVEN TO FIRMS WHICH INDICATE ABOVE AVERAGE PERFORMANCE IN TYPE OF WORK DESCRIBED IN PARAGRAPH "A" ABOVE.

C. PROFESSIONAL QUALIFICATIONS: FIRM MUST INDICATE PROFESSIONAL RECOGNITION AND WORK EXPERIENCE OF KEY PERSONNEL. FIRM SHOULD EMPHASIZE THE FOLLOWING:

1. PROFESSIONAL REGISTRATION
2. PROFESSIONAL ASSOCIATIONS
3. ADVANCED DEGREES
4. SPECIFIC WORK EXPERIENCE OF KEY PERSONNEL
D. CAPACITY: CONSIDERATION WILL BE GIVEN TO FIRMS HAVING THE PERSONNEL AND EQUIPMENT TO PERFORM WORK IN-HOUSE.

E. AMOUNT OF DOD WORK

F. LOCATION: PROXIMITY TO VICKSBURG, MS, AND THE AR, LA, MS GEOGRAPHICAL AREA.

IN FINAL SELECTION PROCESS, 4 OR MORE FIRMS WILL BE CHOSEN FOR INTERVIEWS BEFORE THE FINAL SELECTION IS MADE. UP TO 3 CONTRACTS WILL BE AWARDED.

FIRMS SHOULD CERTIFY THAT THEY ARE SMALL BUSINESS AS DESCRIBED IN NOTE 19.

MAIL TO: U.S. ARMY ENGINEER DISTRICT, VICKSBURG
ATTN: ENGINEERING CONTRACTS ADMINISTRATION UNIT (CELMK-ED-AEE)
820 CRAWFORD STREET
VICKSBURG, MS. 39180 OR

P.O. BOX 60
VICKSBURG, MS 39181-0060

SEND SELF-ADDRESSED ENVELOPE

NOTES 19, 62 AND 65

PHONE CALLS SHOULD BE DIRECTED TO: JOE HENDRIX
601-634-5374
R -- THREE INDEFINITE DELIVERY A-E CONTRACTS FOR SURVEYING SERVICES PRIMARILY WITHIN LIMITS OF VICKSBURG DISTRICT Due 30 days from date of synopsis.

POC: Shirley McNair, 601/634-5341. Professional services are required in connection with surveying services for the period of one yr from date of award at various locations within the Vicksburg District, Corps of Engineers, Vicksburg, MS. If approval is granted, an option yr may be included in the resulting sols, prior to negotiations. Work will be accomplished under an indefinite delivery contract NTE $400,000 per yr by the issuance of delivery orders NTE $75,000 ea. Failure of the firms to indicate compliance with any of the criteria listed below will result in that firm being eliminated from the selection process. Preselection will be based on the following criteria which are of equal importance: The selected firm must: A. have one or more registered land surveyors and registered civil engineers. B. Have the capacity (including equipment) to operate five field parties consisting of four men each. C. Have experience in hydrographic, topographic, cadastral and control type surveys. D. Indicate prior experience in performing first order horizontal and vertical control surveys, IAW criteria established by the US Dept. of Commerce, National Oceanic and Atmospheric Administration. Selection shall be based on the following criteria which are in descending order of importance with C and D being of equal value and E and F being of equal value: A. Specialized experience, with the following subcriteria of equal value: 1) hydrographic. 2) topographic. 3) cadastral. 4) control type surveys. B. Past Performance: consideration will be given to ratings on previous DOD contracts. Consideration will be given to ratings on previous DOD contracts. Consideration will also be given to firms which indicate above average performance in the type of work described in paragraph A above. C. Professional Qualifications: The firm must indicate professional recognition and work experience of key personnel. The firm should emphasize professional registration, professional associations, advanced degrees, and specific work experience of key personnel. D. Capacity: Consideration will be given to firms having the personnel and equipment to perform the work in-house. E. Am't. of DOD work. F. Location: Proximity to Vicksburg, MS and the Arkansas, Louisiana, Mississippi geographical area will be given consideration. In the final selection process, four (4) or more firms will be chosen for interviews before the final selection is made. Up to three (3) contracts will be awarded. Responding firms should certify that they are small business within the standards described in Note 19 and send SF 255 and SF 254 (if not already on file with the procuring office) to US Army Engineer District, Vicksburg, Attn: Engineering Contracts Administration Unit (CBLK-ED-ACE), 230 Crawford st., Vicksburg, MS 39180, or POB 60, Vicksburg, MS 39181-0060. All tel calls should be directed to Joe Hendrix, 601/634-5374. This is not a RFP. Request that firms responding to this announcement enclose a self-addressed label. See Notes 19, 62 and 65. (302)
The proposed procurement is under a 100 percent small business set aside, the size standard for which is a concern, including its affiliates, having an average annual sale or receipts for its preceding three fiscal years not in excess of 2.5 million. 25/8/86

Architect-Engineer firms which meet the requirements described in this announcement are invited to submit: (1) a Standard Form 254, Architect-Engineer and Related Services Questionnaire; (2) a Standard Form 255, Architect-Engineer and Related Services Questionnaire for Specific Project, when requested; and (3) any requested supplemental data to the procurement office shown. Firms having a current Standard Form 254 on file with the procurement office are not required to resubmit this form. Firms responding to this announcement before the closing date will be considered for selection, subject to any limitations indicated with respect to size and geographic location of firm, specialized technical expertise or other requirements as listed. Following an initial evaluation of the qualification and performance data submitted, three or more firms considered to be the most highly qualified to provide the services required will be chosen for interview. The Department of Defense policy for selection of architect-engineer firms is not based upon competitive bidding procedures, but rather upon the professional qualifications necessary to the satisfactory performance of the professional services required, subject to the following additional considerations: (a) Agencies shall evaluate each potential contractor in terms of (1) professional qualifications necessary for satisfactory performance of required services; (2) specialized experience and technical competence in the type of work required; (3) capacity to accomplish the work in the required time; (4) past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules; (5) location in the general geographical area of the project and knowledge of the locality of the project, provided that application of this criterion leaves an appropriate number of qualified firms, given the nature and size of the project; and (6) the volume of work previously awarded to the firm by the Department of Defense shall also be considered, with the object of effecting an equitable distribution of Department of Defense architect-engineer contracts among qualified architect-engineer firms, including small and small disadvantaged business firms, and firms that have not had prior Department of Defense contracts. Firms desiring to register for consideration for future projects administered by the procurement office (subject to specific requirements for individual projects) are encouraged to submit annually a statement of qualifications and performance data, utilizing Standard Form 254, Architect-Engineer and Related Services Questionnaire. 23/4/84

Small and disadvantaged firms are encouraged to participate as prime contractors or as members of joint ventures with other small businesses and all interested contractors are reminded that the successful contractor will be expected to place subcontracts to the maximum practicable extent with small and disadvantaged firms in accordance with the provisions of Public Law 95-507.
APPENDIX F: SAMPLES OF SF255 AND SF254
# STANDARD FORM (SF) 255

## Architect-Engineer Related Services for Specific Project

### 1. Project Name / Location for which Firm is Filing:

### 2. Commerce Business Daily Announcement Date, if any:

<table>
<thead>
<tr>
<th>Agency Identification Number, if any:</th>
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</table>

### 3. Firm (or Joint-Venture) Name & Address

<table>
<thead>
<tr>
<th>3a. Name, Title &amp; Telephone Number of Principal to Contact</th>
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<tr>
<th>3b. Address of office to perform work, if different from Item 3</th>
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### 4. Personnel by Discipline: (List each person only once, by primary function.)

<table>
<thead>
<tr>
<th>Administrative</th>
<th>Electrical Engineers</th>
<th>Oceanographers</th>
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<tbody>
<tr>
<td>Architects</td>
<td>Estimators</td>
<td>Planners: Urban/Regional</td>
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<tr>
<td>Chemical Engineers</td>
<td>Geologists</td>
<td>Sanitary Engineers</td>
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<tr>
<td>Civil Engineers</td>
<td>Hydrologists</td>
<td>Soils Engineers</td>
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<tr>
<td>Construction Inspectors</td>
<td>Interior Designers</td>
<td>Specification Writers</td>
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<tr>
<td>Draftsmen</td>
<td>Landscape Architects</td>
<td>Structural Engineers</td>
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<tr>
<td>Ecologists</td>
<td>Mechanical Engineers</td>
<td>Surveyors</td>
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<tr>
<td>Economists</td>
<td>Mining Engineers</td>
<td>Transportation Engineers</td>
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<th>Total Personnel</th>
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### 5. If submittal is by JOINT-VENTURE list participating firms and outline specific areas of responsibility (including administrative, technical and financial) for each firm: (Attach SF 254 for each if not on file with Procuring Office.)

### 5a. Has this Joint-Venture previously worked together? □ yes □ no
6. If respondent is not a joint-venture, list outside key Consultants/Associates anticipated for this project (Attach SF 254 for Consultants/Associates listed, if not already on file with the Contracting Office).

<table>
<thead>
<tr>
<th>Name &amp; Address</th>
<th>Specialty</th>
<th>Worked with Prime before (Yes or No)</th>
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</table>

STANDARD FORM 255 (Rev. 10-83)
7. Brief Resume of Key Persons, Specialists, and Individual Consultants Anticipated for this Project

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
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<tr>
<th>b. Project Assignment:</th>
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<tr>
<th>c. Name of Firm with which associated:</th>
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<tr>
<th>d. Years experience: With This Firm ___</th>
<th>With Other Firms ___</th>
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<tr>
<th>e. Education: Degree(s) / Year / Specialization</th>
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<tr>
<th>f. Active Registration: Year First Registered/Discipline</th>
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<tr>
<th>g. Other Experience and Qualifications relevant to the proposed project:</th>
</tr>
</thead>
</table>
B. Work by Firm or Joint Venture Members which Best Illustrates Current Qualifications Relevant to this Project  (List not more than 10 Projects)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Nature of Firm's Responsibility</th>
<th>c. Owner's Name &amp; Address</th>
<th>d. Completion Date (actual or estimated)</th>
<th>e. Estimated Cost (in thousands)</th>
<th>Work for which Firm was/is responsible</th>
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Standard Form 255 (Rev. 10-83)
9. All work by firms or joint-venture members currently being performed directly for Federal agencies.

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Nature of Firm's Responsibility</th>
<th>c. Agency (Responsible Office) Name &amp; Address</th>
<th>d. Percent complete</th>
<th>e. Estimated Cost (In Thousands)</th>
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<td>Entire Project</td>
<td>Work for which firm is responsible</td>
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10. Use this space to provide any additional information or description of resources supporting your firm's qualifications for the proposed project.

11. The foregoing is a statement of facts.

Signature: ___________________________ Typed Name and Title: ___________________________

Date: ___________________________

Standard Form 255 (Rev. 10-83)
1. Firm Name / Business Address:  
2. Year Present Firm Established:  
3. Date Prepared:  
4. Specify type of ownership and check below, if applicable.  
   A. Small Business  
   B. Small Disadvantaged Business  
   C. Woman-owned Business  

5. Name of Parent Company, if any:  
5a. Former Parent Company Name(s), if any, and Year(s) Established:  

6. Names of not more than Two Principals to Contact: Title / Telephone  
    1)  
    2)  

7. Present Offices: City / State / Telephone / No. Personnel Each Office  
   7a. Total Personnel  

8. Personnel by Discipline: (List each person only once, by primary function.)  
   __ Administrative  
   __ Architects  
   __ Chemical Engineers  
   __ Civil Engineers  
   __ Construction Inspectors  
   __ Draftsmen  
   __ Ecologists  
   __ Economists  
   __ Electrical Engineers  
   __ Estimators  
   __ Geologists  
   __ Hydrologists  
   __ Interior Designers  
   __ Landscape Architects  
   __ Mechanical Engineers  
   __ Mining Engineers  
   __ Oceanographers  
   __ Planners: Urban/Regional  
   __ Sanitary Engineers  
   __ Soils Engineers  
   __ Specification Writers  
   __ Structural Engineers  
   __ Surveyors  
   __ Transportation Engineers  

9. Summary of Professional Services Fees Received: (Insert index number)  
   Last 5 Years (most recent year first)  
   Direct Federal contract work, including overseas  
   All other domestic work  
   All other foreign work  
*Firms interested in foreign work, but without such experience, check here: □.  

Ranges of Professional Services Fees  
   INDEX  
   1. Less than $100,000  
   2. $100,000 to $250,000  
   3. $250,000 to $500,000  
   4. $500,000 to $1 million  
   5. $1 million to $2 million  
   6. $2 million to $5 million  
   7. $5 million to $10 million  
   8. $10 million or greater  

STANDARD FORM 254 (REV. 10/83)
### 10. Profile of Firm's Project Experience, Last 5 Years

<table>
<thead>
<tr>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
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### 11. Project Examples, Last 5 Years

<table>
<thead>
<tr>
<th>Profile Code</th>
<th>&quot;P&quot;, &quot;C&quot;, &quot;JV&quot;, or &quot;IE&quot;</th>
<th>Project Name and Location</th>
<th>Owner Name and Address</th>
<th>Cost of Work (in thousands)</th>
<th>Completion Date (Actual or Estimated)</th>
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12. The foregoing is a statement of facts

| Signatures: __________________________ | Typed Name and Title: __________________________ |
|____________________________________|______________________________________________|

Date: __________________________
APPENDIX G:
QUALIFICATIONS AND EXPERIENCE STATEMENT
(EXCERPTS)
PROJECT:  SURVEY SERVICES FOR MILITARY & CIVIL PROJECTS CENTERED IN THE EAST TEXAS AREA
            SOL DACA63-89-R-0046

AWARD OF AN INDEFINITE QUANTITY SERVICE CONTRACT (INTERMITTENT SURVEY WORK FROM TIME TO TIME) IS ANTICIPATED TO BEGIN O/A 5-3-89. CONTRACT WILL REQUIRE THE SERVICES OF:

(3) 4-man survey parties

WORK CONSISTS OF FURNISHING COMPLETE FIELD SURVEY DATA RELATING TO:
1) VERTICAL AND HORIZONTAL CONTROL
2) PLANE TABLE TOPOGRAPHY
3) CROSS SECTIONS
4) PHOTOGRAMMETRIC GROUND CONTROL
5) BOUNDARY SURVEYS
6) CONSTRUCTION LAYOUT, ETC.

EACH CONTRACTOR MUST HAVE A REGISTERED PUBLIC SURVEYOR. NOTWITHSTANDING THE FACT THAT THE SERVICES REQ'D UNDER THIS PROPOSED CONTRACT WILL BE FOR PROJECTS IN THE EAST TX AREA, SERVICES MAY BE REQ'D AT ANY PROJECT SITE IN TX., LA., & N.M.

CONTRACT WILL BE AWARDED FOR THE BASE YEAR NTE $400,000 WITH DEL ORDER LIMITS OF $75,000 EACH & 1 OPTION PERIOD NTE 12 MOS. FOR $400,000 WITH DEL ORDER LIMITS OF $75,000 EA.

INTERESTED FIRMS WHICH MEET REQ'T DESCRIBED IN ANNOUNCEMENT MUST FOLLOW PROCEDURES OUTLINED IN NOTE 62.

QUALIFICATION DATA MUST DEMONSTRATE THE ABILITY & TECHNICAL EXPERIENCE TO FIELD UP TO 3-SURVEY PARTIES, ALL OF WHICH MUST HAVE PLANE TABLE MAPPING EXPERIENCE.

A DETAILED EQUIPMENT LIST OF SURVEY INSTRUMENTS BY BRAND NAME, SERIAL NUMBER, TYPE AND RESUMES OF REGISTERED SURVEYOR, PROJECT MGR & PARTY CHIEFS & OTHER KEY PERSONNEL MUST BE SUBMITTED WITH EACH RESPONSE.

FIRMS SHOULD STATE THAT THEY ARE A SMALL BUSINESS FIRM OR A SMALL DISADVANTAGED FIRM.

NOTES 19, 62 & 65 APPLY. (COPIES ATTACHED)

MAIL TO:  CORPS OF ENGINEERS U.S. ARMY
          FRITZ G. LAMHAM BUILDING
          819 TAYLOR STREET
          P.O. 17300
          FT. WORTH, TX 76102-0300
          ATTN: CESW-CT-R
          DENNIS ANDERSON, CHIEF, SURVEY SECTION, CESW-ED-GS
          PHONE NO. 817-334-2281
SURVEYING SERVICES FOR MILITARY & CIVIL PROJECTS
CENTERED IN THE EAST TEXAS AREA

SOL DACA63-89-R-0046

PREPARED FOR

U. S. ARMY CORPS OF ENGINEERS
FRITZ G. LANHAM BUILDING
819 TAYLOR STREET
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

NOVEMBER 1988
November 15, 1988

U.S. Army Corps of Engineers
Fritz G. Lanham Building
819 Taylor Street
P.O. Box 17300
Fort Worth, Texas 76102-0300

Attention: Dennis Anderson, Chief
Survey Section, CESWF-ED-GS

Re: Survey Services for Military and Civil Projects
Centered in the East Texas Area

Dear Mr. Anderson:

The firm of submits herewith a qualifications and experience statement for your consideration and evaluation, to perform required services for the captioned project, as advertised in the Commerce Business Daily on October 24, 1988.

Supplemental data has been included which addresses the general evaluation criteria. All of the disciplines and requirements for selection have been accommodated.

Our qualified staff can deliver the professional services required for this project within budget and on schedule.

We would appreciate the opportunity to work with the Corps of Engineers on this project, and ask your favorable consideration of our qualifications and experience.

Respectfully submitted,

Enc.
The firm of proposes to provide comprehensive surveying services as required for the completion of - - - - -

SURVEYING SERVICES FOR MILITARY & CIVIL PROJECTS CENTERED IN THE EAST TEXAS AREA

MMLAH is among the largest multidisciplined engineering and land surveying firms in central Louisiana. The firm has performed engineering and land surveying services for several Department of Defense installations, namely:

U.S. Army Corps of Engineers, Vicksburg District
U.S. Army Corps of Engineers, Fort Worth District
England Air Force Base, Alexandria, Louisiana
Barksdale Air Force Base, Shreveport, Louisiana
Fort Polk, Leesville, Louisiana

Individual projects of the firm similar in scope are presented in the Standard Form 255, Section 8.

All of the disciplines required to complete the project are accommodated.
PROJECT MANAGEMENT

PROJECT MANAGEMENT PLAN

The project plan is based on organizing an action team comprising the decision-making people, including participation by the principals and the U.S. Army Corps of Engineers', Fort Worth District personnel into a viable team force. Project development will be activated under the direction of team leader, P.L.S. Knowledge of local conditions, specialized and broad experience in all types of surveys advertised lead to the early establishment of realistic objectives. This will permit assessment of project schedules prior to making significant commitments.

SCHEDULING AND COST CONTROL METHODS

The project team is dedicated to the idea of project scheduling and firm cost control. On line computer is used for cost, payroll, billing and other accounting functions. Meeting project schedules is absolutely necessary if cost control is to be achieved.

PRODUCTION FACILITIES

The primary office location will be in the most centrally situated city in Louisiana and easily accessible to the advertised project.

CAPABILITIES AND TECHNIQUES

Photographic reproduction techniques can be utilized for reproducible aerial photographs.

A CAD System is used extensively, in-house, to enhance drafting capabilities.

Overlay drafting and reprographics techniques can be utilized to enhance production time.

Memory bank typewriters and word processors are available to assure that report preparation and correspondence demands remain on schedule.
1. Project Name / Location for which Firm Is Filing:
Surveying Services for Military & Civil Projects
Centered in the East Texas Area
SOL DCA63-89-R-0046

2a. Commerce Business Daily Announcement Date, If any:
October 25, 1988

2b. Agency Identification Number, If any:

3. Firm (or Joint-Venture) Name & Address

I certify that the firm is a small business as of September 30, 1988 and that at least 50% of the cost of contract performance incurred for personnel shall be expended for employees of the prime contractor as defined in Note 19.

3a. Name, Title & Telephone Number of Principal to Contact

3b. Address of office to perform work, if different from Item 3

4. Personnel by Discipline:

<table>
<thead>
<tr>
<th>8 Administrative</th>
<th>10 Electrical Engineers</th>
<th>12 Oceanographers</th>
<th>3 Engineering Technicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Architect</td>
<td>1 Estimators</td>
<td></td>
<td>1 Petroleum Engineer</td>
</tr>
<tr>
<td>3 Chemical Engineers</td>
<td>1 Geologists</td>
<td>1 Planners: Urban/Regional</td>
<td></td>
</tr>
<tr>
<td>1 Civil Engineers</td>
<td>1 Hydrologists</td>
<td></td>
<td>1 Sanitary Engineers</td>
</tr>
<tr>
<td>12 Construction Inspectors</td>
<td>1 Interior Designers</td>
<td></td>
<td>1 Soils Engineers</td>
</tr>
<tr>
<td>1 Draftsmen</td>
<td>1 Landscape Architects</td>
<td></td>
<td>1 Specification Writers</td>
</tr>
<tr>
<td>1 Ecologists</td>
<td>1 Mechanical Engineers</td>
<td>** 2 Structural Engineers</td>
<td></td>
</tr>
<tr>
<td>1 Economists</td>
<td>1 Mining Engineers</td>
<td></td>
<td>1 Surveyors</td>
</tr>
</tbody>
</table>

5. If submittal is by Joint-Venture list participating firms and outline specific areas of responsibility (including administrative, technical and financial) for each firm: (Attach SF 254 for each if not on file with Procuring Office.)

N/A

5a. Has this Joint-Venture previously worked together? □ yes □ no
7. Brief Resume of Key Persons, Specialists, and Individual Consultants Anticipated for this Project

| a. Name & Title: | 1. Fort Polk Boundary Survey (1974) — re-establish and monument west boundary of Ft. Polk from original Central Land Office field notes. Work was performed to third order accuracy. |
| b. Project Assignment: | 2. Fort Polk Railroad Renovation Survey (1982) — design and construction surveys for replacement of 14,400 feet of railway and bridges. Work was performed to third order accuracy. |
| Surveyor and MOLAH Project Manager | 3. Fort Polk Gas Line Replacement Survey (1984) — design survey for replacement of 9,200 feet of gas lines. Work was performed to third order accuracy. |
| c. Name of Firm with which associated: | 4. Fort Polk Housing Project Survey (1981) — topographic survey of proposed housing area for Carter and Burgess, Inc., Fort Worth, Texas. Work was performed to third order accuracy. |
| d. Years experience: With This Firm 19 With Other Firms 15 | 5. LA 116 Survey (1980) — design and right-of-way surveys for 8 miles of highway construction. Work was performed to third order accuracy. |
| e. Education: Degree(s) / Year / Specialization | 6. I-49 Cyprus to Bayou Grand Lake (1981) — route, design and right-of-way surveys for 10 miles of interstate highway. Work was performed to second order accuracy. |
| U.S. Army Engineer School/1954 Ft. Belvoir, Virginia Surveying | 7. Port of Alexandria (1986) — boundary, design and construction surveys for 50 acre port site. Work was performed to third order accuracy. |
| f. Active Registration: Year First Registered/Discipline | 8. Relocation of LA Railroad Facilities (1987) — control, design and right-of-way surveys for relocation of 9 miles of main line railway with major bridge and yard area. Work was performed to first and second order accuracies. |
| 1963/Land Surveyor/Louisiana #282 | 9. Sims Bayou Survey (1986) — control and design surveys on 6 miles of Sims Bayou in Houston, Texas. Work was performed to third order accuracy. |
| 1986/Land Surveyor/Arkansas #1097 | 10. Louisiana Paving Company Survey (1986) — construction surveys for paving control on 6 miles of interstate highway. Work was performed to third order accuracy. |
| g. Other Experience and Qualifications relevant to the proposed project: | has extensive experience in retracement of old surveys, research and interpretation of ownership and conveyance records. Has experience in transferring deed information and old survey records to maps and |
| Serves as Survey Division Director, with extensive experience in the practice of land surveying, including cadastral, topography, aerial control, construction layout, route layout, subdivision, etc. Mr. LaCroix has extensive experience in performing control surveys of any accuracy required. |
The first phase of surveying for the Port of Alexandria was boundary and topographic surveys to determine the amount of clearing and grubbing, required quantities for excavation of a barge channel, the amount of hydraulic fill required, and installation of stone revetment.

The second phase, now underway, includes construction surveys for access road, parking, utilities (water, sewerage and electrical service), a petroleum offloading dock and transfer facilities, and a general cargo wharf and dock. Hydrographic surveys are being performed periodically for the purposes of determining volumes of foreshore removal, the amount of scour or sedimentation in the barge channel and navigation channel, to furnish information for validation of a two-dimensional model study designed to predict future sedimentation potential along the riverfront at the port.
### B. All work by firms or Joint Venture members currently being performed directly for Federal agencies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Inspection and Related Services&lt;br&gt;Red River Waterway, Mile 6-140</td>
<td>Construction Quality Assurance Inspection at Various Construction Sites</td>
<td>U.S. Army Corps of Engineers&lt;br&gt;Vicksburg District&lt;br&gt;P.O. Box 60&lt;br&gt;Vicksburg, MS 39180</td>
<td>50%</td>
<td>1,224</td>
</tr>
</tbody>
</table>
is a multidisciplined engineering firm with its primary office located in Louisiana. A branch office is located in Louisiana. I qualifies as a small business concern as defined in the solicitation for this project. The firm was founded in 1968 and offers a wide range of engineering services, including preliminary planning, complete project design services, construction administration services, field inspection services, facility start-up services and operator training services.

PRE-SOLICITATION CRITERIA:

A.  is a fully licensed engineering and land surveying firm under certificate number 00096 issued by the Louisiana State Board of Professional Engineers and Land Surveyors. The firm qualifies in land surveying because of the full-time employment of five (5) registered land surveyors, namely:

P.L.S.
P.E., P.L.S.
Jr., P.E., P.L.S.
P.E., P.L.S.
P.E., P.L.S.

Resumes for each are detailed in Section 7 and following in this section.

B. The firm has the capability of field as many survey parties as necessary. Currently, the company's staff includes five (5) registered land surveyors and two well-qualified party chiefs. Immediately, three (3) 4-person fully equipped survey parties can be placed in the field with the following full-time employees in charge of the crews:

The experience records of each are detailed in Section 7 and following in this section.

Additional survey parties consisting of 4-men each can be provided without delay.

11. The foregoing is a statement of facts.

Signature: ___________________________ Typed Name and Title: ___________________________

Date: ___________________________
10. Use this space to provide any additional information or description of resources (including any computer design capabilities) supporting your firm's qualifications for the proposed project.

All crews operate with company-owned surveying equipment and vehicles. Currently, the firm's inventory of vehicles totals fourteen (14) sedans, trucks and carry-alls. Providing additional vehicles (if necessary) which meet the requirements of the advertised project will not be a problem.

A partial list of owned surveying equipment in the current inventory is detailed and following in Section 10. Any required increases in the inventory to meet the exigencies of the advertised project will be routine.

Personnel who are currently on staff and are available for assignment to this project include:

<table>
<thead>
<tr>
<th></th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>2.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>3.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>4.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>5.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>6.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>7.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>8.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>9.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>10.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>11.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>12.</td>
<td>Rodman/Chainman</td>
</tr>
</tbody>
</table>

Reserve personnel who are currently available to supplement our staff include:

<table>
<thead>
<tr>
<th></th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>2.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>3.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>4.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>5.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>6.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>7.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>8.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>9.</td>
<td>Rodman/Chainman</td>
</tr>
<tr>
<td>10.</td>
<td>Rodman/Chainman</td>
</tr>
</tbody>
</table>

11. The foregoing is a statement of facts.

Signature: ____________________________  Typed Name and Title: ____________________________

Date: ________________________________
10. Use this space to provide any additional information or description of resources (including any computer design capabilities) supporting your firm's qualifications for the proposed project.

11. Rodman/Chairman
12. Rodman/Chairman
13. Rodman/Chairman
14. Rodman/Chairman
15. Rodman/Chairman
16. Rodman/Chairman

C. The firm has extensive experience required in hydrographic, topographic, cadastral and construction type surveys, layouts, "as built" quantity and measurement surveys to establish both temporary and permanent benchmark marks, the equipment, the capacity, and the demonstrated experience to perform precise horizontal and vertical control surveys as evidenced in Section 10 and on individual resumes listed in Section 7 of the Standard Form 255 which provides a brief description of related qualifications and experience of key personnel proposed for project assignment. Equipment includes modern theodolites and electronic distance meters.

D. has extensive experience in performing precise horizontal and vertical control surveys to any accuracy required and has survey personnel qualified to perform field office calculations, note reduction and capabilities to furnish plotted cross sections. As evidenced by projects in Section 8 of the Standard Form 255, the firm has prior experience in performing first order horizontal and vertical surveys meeting criteria established by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

A. PROFESSIONAL QUALIFICATIONS:

is a multi-disciplined engineering and land surveying firm offering a variety of services to clients ranging from preliminary design concepts and specific site layouts to comprehensive engineering design, and inspection of construction. The company also offers complete surveying and drafting services. The in-house disciplines include expertise in:

- Surveying (cadastral, topographic, hydrographic and construction layout)
- Civil Engineering
- Structural Engineering
- Hydraulic Engineering
- Mechanical Engineering
- Hydrologic Engineering
- Planning - urban/regional, water resource

11. The foregoing is a statement of facts.

Signature: ___________________________ Typed Name and Title: ___________________________

Date: ___________________________
The firm maintains complete drafting services with five full-time draftspersons under the supervision of a graphics division chief.

Survey crews are equipped with the latest electronic equipment.

Cost estimators are also engineers and engineering technicians.

is certified by the Louisiana State Board of Registration for Professional Engineers and Land Surveyors as described in the preselection criteria. The firm maintains membership in the American Congress of Surveying and Mapping, the Louisiana Association of Land Surveyors and the Society of American Military Engineers. The personnel proposed by the firm for this project are identified in Section 7 of the Standard Form 255. The range of expertise offered by this group includes all of the advertised requirements.

1. **GENERAL:** In addition to the engineering personnel, the firm's active in-house staff includes five registered land surveying professionals, some of which are registered in the States of Louisiana and Arkansas.

2. **CONSTRUCTION:** During the last five years the firm has completed contracts for the Corps of Engineers involving construction surveys. All of the personnel identified in Section 7 of the Standard Form 255 have worked on one or more of these contracts.

3. **KEY PERSONNEL:** Management personnel and their professional capabilities, background, and experience include the following:

   * .  P.L.S., a principal who manages the company's survey division, will serve as project manager, coordinator, and initially, one of the field survey parties. .  has over thirty-four years expertise in land surveying. He has extensive experience in construction surveys, earthwork, grading, security fences, pipelines, parking lots, roads, streets, erosion control, planning, calculating and research development and mapping of subdivisions and real estate plans, transferring deed information and old record surveys to maps and aerial photographs, right-of-way maps and field control surveys. Mr. LaCroix performs surveys for municipalities and private developers. He supervises up to five field crews performing cadastral, topographic, hydrographic, aerial control, route, construction layouts, right-of-way and subdivision surveys and quantity and measurement surveys. He is registered in the States of Louisiana and Arkansas.

11. The foregoing is a statement of facts.

   **Signature:**

   **Typed Name and Title:**

   **Date:**
1. Firm Name / Business Address: [Redacted]

2. Your Present Firm Established:
   January 1, 1975

3. Date Prepared:
   September 1, 1988

4. Specify type of ownership and check below, if applicable
   Corporation
   A. Single Proprietor
   B. Small Business
   C. Woman-owned Business

5. Name of Parent Company, if any:

5a. Former Parent Company Name(s), if any, and Year(s) Established:

6. Names of not more than Two Principals to Contact: Title / Telephone
   1)
   2)

7. Present Offices: City / State / Telephone / No. Personnel Each Office

   Base Office:
   No. of Personnel

   Branch Office:
   No. of Personnel

8. Personnel by Discipline: (List each person only once, by primary function)

   8. Administrative
   9. Architects
   10. Chemical Engineers
   11. Civil Engineers
   12. Construction Inspectors
   13. Draftsmen
   14. Ecologists
   15. Economists

   * Your licensed surveyors are also civil engineers

   3. Engineering Technicians
   4. Petroleum Engineers
   5. Sanitary Engineers
   6. Soils Engineers
   7. Specification Writers
   8. Surveyors
   9. Structural Engineers
   10. Transportation Engineers

   52

9. Summary of Professional Services Fees

   Received: (Insert index number) Last 5 Years (most recent year first)

   Direct Federal contract work, including overseas
   All other domestic work
   All other foreign work

   Ranges of Professional Services Fees

   1. More than $100,000,000
   2. $50,000,000 to $74,999,999
   3. $25,000,000 to $49,999,999
   4. $10,000,000 to $24,999,999
   5. $5,000,000 to $9,999,999
   6. $1 million to $4,999,999
   7. $750,000 to $999,999
   8. $500,000 to $749,999

   *Firms interested in foreign work, but without such experience, check here: 

   No.
### 10. Profile of Firm's Project Experience, Last 5 Years

<table>
<thead>
<tr>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
<th>Profile Code</th>
<th>Number of Projects</th>
<th>Total Gross Fees (in thousands)</th>
</tr>
</thead>
<tbody>
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<td>005</td>
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<td>63</td>
<td>072</td>
<td>3</td>
<td>261</td>
<td>103</td>
<td>4</td>
<td>18</td>
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<tr>
<td>009</td>
<td>5</td>
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<td>4</td>
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<td>110</td>
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<tr>
<td>011</td>
<td>12</td>
<td>694</td>
<td>079</td>
<td>5</td>
<td>60</td>
<td>106</td>
<td>54</td>
<td>1,152</td>
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<td>14</td>
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<td>084</td>
<td>1</td>
<td>4,558</td>
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<td>217</td>
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<tr>
<td>017</td>
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<td>087</td>
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<td>1,586</td>
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<td>096</td>
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<td>3,464</td>
<td>117</td>
<td>4</td>
<td>36</td>
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<tr>
<td>046</td>
<td>22</td>
<td>1,645</td>
<td>099</td>
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<td>67</td>
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<td>30</td>
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<tr>
<td>056</td>
<td>12</td>
<td>818</td>
<td>101</td>
<td>12</td>
<td>53</td>
<td>227</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td>062</td>
<td>8</td>
<td>11</td>
<td>102</td>
<td>482</td>
<td>938</td>
<td>231</td>
<td>12</td>
<td>70</td>
</tr>
</tbody>
</table>

### 11. Project Examples, Last 5 Years

<table>
<thead>
<tr>
<th>Profile Code</th>
<th>&quot;P&quot;, &quot;C&quot;, &quot;JV&quot;, or &quot;IE&quot;</th>
<th>Project Name and Location</th>
<th>Owner Name and Address</th>
<th>Cost of Work (in thousands)</th>
<th>Completion Date (Actual or Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>009</td>
<td>P</td>
<td>Town of Winnasboro Potable Water Treatment Plant</td>
<td>Town of Winnasboro Town Hall Winnasboro, LA 71295</td>
<td>52 (fee)</td>
<td>1983</td>
</tr>
<tr>
<td>011</td>
<td>P</td>
<td>Grant Parish Off-System Bridge Replacement Grant Parish, LA</td>
<td>Grant Parish Policy Jury Colfax, LA 71417</td>
<td>520</td>
<td>1984</td>
</tr>
<tr>
<td>011</td>
<td>P</td>
<td>Rapides Parish Bridges Rapides Parish, LA</td>
<td>Rapides Parish Police Jury P. O. Box 1150 Alexandria, LA 71301</td>
<td>47 (fee)</td>
<td>1988</td>
</tr>
<tr>
<td>040</td>
<td>P</td>
<td>Fort Polk Gas Line Replacement Fort Polk, LA</td>
<td>U.S. Army Corps of Engineers Fort Worth District Fort Worth, TX 76102</td>
<td>117</td>
<td>1988</td>
</tr>
<tr>
<td>040</td>
<td>P</td>
<td>Central State Hospital Gas System Improvements Pineville, LA</td>
<td>State of Louisiana Division of Administration Baton Rouge, LA 70804</td>
<td>262</td>
<td>1988</td>
</tr>
<tr>
<td>042</td>
<td>P</td>
<td>Port of Alexandria Alexandria, LA</td>
<td>City of Alexandria P. O. Box 71 Alexandria, LA 71309-0071</td>
<td>8,900</td>
<td>1990</td>
</tr>
</tbody>
</table>
APPENDIX H: QUALIFICATIONS AND EXPERIENCE STATEMENT WITH COST PROPOSAL

(SOLICITATION LETTER AND COST PROPOSAL ONLY)
January 6, 1986

Gentlemen:

Our firm has been selected by the Vicksburg District, Corps of Engineers to provide professional services to prepare feature design documents, contract drawings, specifications, and related reports for the Yazoo Basin Demonstration Erosion Control Project (DEC).

We are interested in receiving from you a cost proposal to conduct Structural-Civil-Hydraulic work. Enclosed are copies of supporting documents which were made available to us. These documents include Technical Specifications (Performance Requirements), description of demonstration watersheds, examples of design, manpower estimate forms and cost summary tables. Please present your cost estimate by using the above mentioned forms and tables.

Work will be accomplished for one initial contract period from date of notice to proceed through 30 September 1987 and up to four option periods which may be exercised at the discretion of the Vicksburg District.

Please note that work schedules presented on pages 8 and 9 of the Technical Specifications is for our firm only and we will require subcontractors to submit all deliverables for our evaluation 30 days prior to dates indicated.

Due to the short period of performance for design and surveying work the tasks could be distributed among several subcontractors. Therefore, it is recommended that you clearly indicate which items or components of work you are most interested in performing.

Your proposal and an updated SF-255 must be received by our office not later than January 15, 1987.

Please address your proposal to:

Louis Berger & Associates, Inc.
P. O. Box 64853
4440 North Blvd. (70806)
Baton Rouge, LA 70896

Please be advised that selection of the subcontractors will be made by our firm, subject to the approval by the Vicksburg District.

Should you have any questions please contact Dr. Anatoly Hochstein or Mr. Harold Williamson at phone number 504/927-6323.

Sincerely,

Debrah M. Wolff
President
January 19, 1987

Louis Berger & Associates, Inc.
P. O. Box 64853
4440 North Boulevard (70806)
Baton Rouge, LA 70896

Re: Surveying Proposal
Yazoo Basin Demonstration Erosion Control Project
O/H

Gentlemen:

Enclosed is our cost proposal for the surveying work we would be most interested in performing on the above project. Also enclosed are our updated SF254 and SF255. We would also be interested in submitting proposals for survey work on other items in this project if the scope of work is more clearly defined.

We would be pleased to work with you on this project and if further information is needed or you have any questions, please advise.

Very truly yours,

enclosure
ITEM NO. 0001, Option 1 Site Surveys a

(Low drop grade control structure)

1. **Direct Labor or Salary Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Hours</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Land Surveyor</td>
<td>8</td>
<td>$21.73</td>
<td>$174</td>
</tr>
<tr>
<td>Field Survey crew/4 man</td>
<td>80</td>
<td>$34.04</td>
<td>$2,723</td>
</tr>
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<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

2. **Overhead on Direct Labor Costs**

   21.73% of Item 1 above

   $630

3. **General and Administrative Overhead**

   144.58% of Item 1 above

   $4,188

4. **Materials Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey supplies</td>
<td>$50</td>
</tr>
<tr>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

5. **Travel Costs**

   1650 miles @ 0.21¢

   $346

6. **Other Significant Costs**

   Meals and lodging ($60/day per man)

   $2,460

   |                  | $      |
   |                  | $      |
   |                  | TOTAL  | $2,460 |

7. **Profit**

   Profit is added at 12%  

   $1,269

**SUMMARY - ITEM NO.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Labor or Salary Costs</td>
<td>$2,897</td>
</tr>
<tr>
<td>Overhead on Direct Labor Costs</td>
<td>$630</td>
</tr>
<tr>
<td>General and Administrative Overhead</td>
<td>$4,188</td>
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<tr>
<td>Materials Costs</td>
<td>$50</td>
</tr>
<tr>
<td>Travel Costs</td>
<td>$346</td>
</tr>
<tr>
<td>Other Significant Costs</td>
<td>$2,460</td>
</tr>
<tr>
<td>Profit</td>
<td>$1,269</td>
</tr>
</tbody>
</table>

**TOTAL ESTIMATED ITEM COST** ** $11,840**

* For sites 2 acres or less

** Does not include surveying horizontal or vertical control to sites or boundary surveys
APPENDIX I: GENERAL PRELIMINARY ENGINEERING REPORT
PROPOSAL TO INDUSTRY FOR RLIDC PROPERTY

The Village of has a proposition whereby in order to induce an industry to the RLIDC industrial park that would provide water and sewer service to the industrial park. The city limits presently have been extended to be adjacent to the south portion of the industrial park. would apply to become eligible for UDAG funding. Simultaneously, the industry would also apply for eligibility for UDAG funding. Contingent upon this funding being made available, would submit an application to UDAG to complete water and sewer system improvements for the RLIDC Industrial Park. After the improvements were installed, proposes to have available to the Town and Industrial Park the following:

1. One 200 gallon per minute water well.
2. One 570 gallon per minute water well.
3. One 500,000 gallon elevated tank.
4. One 500 gallon per minute water well.
5. A capability of providing 1500 gallons a minute peak flow at 25 psi residual pressure for fire protection at the industrial park.
6. Fire hydrants located along the industrial park proposed road.
7. Master meter assembly including fire meter for the industry.
8. Lift station capable of pumping 400 gallons a minute to wastewater treatment facility including an 8" force main. Modifications to the wastewater treatment facility to handle an industrial flow of 300,000 gallons a day of 200 mg/l BOD5 and Total Suspended Solids concentration. would have a plant that would meet the 10 mg/l BOD5 and 15 mg/l suspended solids effluent requirement.
9. The ability to continuously supply 600,000 gallons per day of potable water to the industry.

This proposal includes RLIDC furnishing the necessary land and easements and right-of-way for the installation, operation and maintenance of a gravity sewer collection system, lift station, and force main within the RLIDC property.

The Village of would expect the industry to make a to be determined lump sum annual payment for the sewer and water services for 10 to 20 years. 's standard rates are $1.00 per thousand gallons of water supplied and $1.00 per thousand gallons of wastewater placed in the wastewater collection system. These rates are negotiable based upon financing. The annual payment to would be pledged to industrial development. 50% of the annual payment would be pledged to the industry on a first refusal basis based upon expanding the money for the industry adding new jobs in the Industrial Park.

This proposal is being made by the Village of Mayor. The industry and RLIDC understands that for this project Mr. will be the consultant who will be responsible for completing the grant application. and will be the engineer for the Village of A qualification statement is attached for the industry's review. This proposal is being presented to Mr. Executive Director, , with the understanding that he will present it to the industry for their review and comment. The timing and availability for the proposed funding will be contingent upon receipt of funding from the Federal government.
APPENDIX J: DETAILED PRELIMINARY ENGINEERING REPORT
PRELIMINARY ENGINEERING REPORT
FOR
WATER SYSTEM IMPROVEMENTS
FOR
ALBERTA WATER SYSTEM

BIENVILLE AND NATCHITOCHES PARISHES
STATE OF LOUISIANA

NOVEMBER 1988

PREPARED BY:
1. Purpose and Scope:

This preliminary investigation was undertaken at the request of the Board of Directors of the Alberta Water System located in southwestern Bienville and western Natchitoches parishes. The objective of this report is to recommend a program and method of financing to alleviate current problems within the system. Specifically, the Board of Directors would like to drill an additional well, modify existing wells, construct an elevated storage tank and expand the system.

2. Organization:

The Alberta Water System was created as a political subdivision of the Bienville Parish Police Jury. The members of the Board of Directors are:

President:
Vice President:
Secretary:

3. The Location:

The system is located in southern Bienville and north Natchitoches parishes. The system extends from just north of Castor to just south of Ashland. It is bounded by Black Lake Bayou on the west and the L&A railroad and at Castor Creek where Castor Creek is east of the L&A railroad. The area is served by LA Highways 4, 153, 154, 155, and 502. The area topography is gently rolling to hilly with elevation extremes of 150 MSL to 300 MSL.

4. The Economy:

The area served by the Alberta Water System can be classified as rural. The majority of the system area has an agricultural or timber base. Mobile homes and frame homes make up the majority of the homes within the system.

5. The Existing System:

The existing distribution system consists of approximately 50 miles of 2" through 4" mains. All water main pipe is PVC. The distribution system has three hydromatic booster pump stations. The system serves 345 customers.

Water supply is furnished by three wells. Well No. 1 has a capacity of 80 gpm and is located off of State Highway 153. The water at this well is of a poor quality and requires treatment. Well No. 2 has a capacity of 100 gpm and is located on Parish Road 610. This well is served by a single phase power line which causes continual maintenance problems. One additional well is also located near Well No. 1 and has a capacity of less than 15 gpm.
Storage consists of 4 ground storage tanks with 3 pressure tanks for a total capacity of 35,000 gallons.

6. Customers, Rates, Revenues:

The Alberta Water System has 345 customers. Those living in Bienville Parish total 251 customers, leaving 89 living in Natchitoches Parish.

The average monthly consumption per customer is 5000 gallons. The average monthly bill is approximately $14.00.

Rates:

First 2000 Gallons @ $9.50 Minimum
Next 3000 Gallons @ $1.50 per thousand
Next 5000 Gallons @ $1.00 per thousand
All excess of above @ $0.90 per thousand

Plus tax.

Three commercial customers exist on the water system. Two small commercials each with a present average monthly bill of $30.00 and one large commercial with an average monthly bill of $70.00. These monthly charges are based upon the same rates mentioned above.

7. Financial Condition:

The financial statement of December 31, 1987 for the Alberta Water System indicates the following:

January 1, 1987 through December 31, 1987

Income:

Sales of water $ 58,928.35
Interest received 365.48
Meter Deposits and Installations 1,028.00
$ 60,322.23

Expenses:

Utilities $ 11,377.93
Supplies and Chemicals 4,862.53
Repair 393.61
Payroll 11,925.00
Addition overhead (office, insurance, payroll taxes, etc.) 4,912.48
Notes payable 25,464.00
$ 58,875.55

Surplus: $ 1,466.68
The Alberta Water System is in need of modifications in order to upgrade service to existing customers and expand to additional customers. Specifically, the system needs to construct a 250 gpm water well. This well is needed to improve the quality of water supplied to the existing customers and to provide an adequate amount to supply new customers added by system expansion. The new water well will be located adjacent to the existing 100 gpm water well which is presently furnishing good quality water. The new 250 gpm water well will supply the required .6 gpm per customer for the entire system. The existing 100 gpm water well located at the same site is proposed to alternate with the new 250 gpm water well. Both of the other water wells are to be strictly back up water wells. Due to the poor quality of the water from these other two wells, their use will be limited to emergency situations.

The system is in need of additional storage and correcting present design circumstances. The existing booster pump station located at the proposed new 250 gpm water well will be modified to allow 3 phase power to run the pumps and the existing water well. Power will be supplied for LP&L with the cash allowance stated in the budget to complete this construction.

A 186,000 gallon ground storage tank will be added to this booster pump station site. This new ground storage tank will allow the system to have storage in excess of the 300 gallons per customer required.

In order to reduce operation and maintenance costs, Booster Pump Station No. 3 which is located on State Highway 153 immediately north of Ashland will be abandoned. This booster station will be replaced by a 45,000 gallon standpipe. The standpipe will furnish the necessary pressure to the customers south of its location. Lines will be sized from the new well location to this elevated tank such that .6 gpm per customer can be furnished to the tank while it maintains the required hydraulic grade line to furnish water to the customers of the standpipe.

An in line booster pump station consisting of two booster pumps each capable of pumping approximately 75 gpm will be installed near the northeast corporate limits of Castor. This new booster pump station will supply water at the required .6 gpm per customer to another 45,000 gallon standpipe located west of Kepler Lake on Highway 507. This standpipe will furnish the required pressure for the water demand for all of the customers from the booster pump station north. The project estimate includes replacing the existing creek crossings on the system which have been a continual maintenance problem. The existing pressure tanks and ground storage tanks which are usable will be inspected and repaired during the construction. Chlorination facilities will be installed at each of the existing well sites. The electrical at each of the existing well sites as required will be renovated in order to meet the electrical code requirements. New gate valves will be installed in the existing lines in order to allow the lines to be sectioned during maintenance. The existing pump stations will be modified as required in order to meet the new demands. Maintenance equipment including computer and software for billing will be furnished to the system as part of this project.
The existing water distribution system will be modified to increase the
carrying capacity and provide water at a minimum of 20 psi during a peak
demand of 2 gpm per customer. In addition the existing system will be
expanded to serve customers in the Kepler Lake area. These residents
are currently served by private wells. This modification will require
the installation of 7¼ miles of new mains. The site distribution of
these mains is 2 inch through 10 inch.

9. Design Criteria:

The proposed water well was designed for 250 gpm such that it and the
existing good well provides the required 0.6 gpm/customer for the expanded
system. The existing system has 345 customers and expansion could add
another 287 customers.

\[(285+35) \times 0.6 = 375 \text{ gpm required capacity.}\]

10. Cost Estimate:

This is shown as Exhibit A and the project estimate is shown as Exhibit
B.

11. Operating Cost:

Operation and maintenance will be measured due to the additions made
to the system. The estimated operation and maintenance cost of for the
improved system is an additional $4.50 per customer per month. The existing
operation and maintenance cost should be reduced upon the installation
of the new system, but the proposed budget is not modified in order to
allow for a budget cushion.

12. Revenue Requirements and Financing:

It is not expected that any source of conventional financing is available
with terms which would result in economic feasibility for the project.
Because of the need for a dependable source and supply of potable water
supply for this rural community, the proposed project should qualify
for financial assistance from the Farmers Home Administration.

13. Proposed Rates and Revenues:

The water rates to retire revenue bonds for the total project cost of
this system would exceed water rates for similar systems.

The operating budget presented below allows for 80% of the potential
customers to connect to the system.

The operating system shown also reflects the rates to remain as they
presently are. Since Farmers Home Administration will complete the
calculations on the required rates based upon similar systems, a review
of what the existing rates would finance is shown as part of the proposed
operating budget.
OPERATING BUDGET
ALBERTA WATER SYSTEM
AFTER COMPLETION OF PROPOSED IMPROVEMENTS

Present Income $ 60,342.00
New Income-.8 x 287 x 14.00 x 12 38,572.80
Total Income $ 98,915.00

Present Operation & Maintenance Cost $ 33,611.52
Additional Operation & Maintenance Cost .8 x 274 x 4.00 x 12 9,484.00
Total Expense $ 43,095.52

Sub-Total Available for Financing $ 55,820.00
Less 10% Reserve 5,582.00
Available for Financing $ 50,237.00

Based upon this estimated rate and a 5% interest rate for 40 years, the system could finance $862,000 in debt. This would indicate a grant of $828,000.00.
## PRELIMINARY ENGINEERING REPORT
### ALBERTA WATER SYSTEM IMPROVEMENTS

#### EXISTING SYSTEM IMPROVEMENTS

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<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>UNIT PRICE</th>
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<th>EXTENSION</th>
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<tr>
<td>2 WATER SERVICE PIPE</td>
<td>LF</td>
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<td>3 10&quot; SDR21 PVC PIPE</td>
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<td>4 8&quot; SDR21 PVC PIPE</td>
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<td>24 REPAIR ELECTRICAL</td>
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<td>25 NEW GV IN OLD LINE</td>
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<td>28 MAINTENANCE EQUIP.</td>
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<tr>
<td>29 45000 GAL STANDPIPE</td>
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<tr>
<td>30 NEW PUMP STATION</td>
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<td>31 186000 GAL GRD. TANK</td>
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<td>32 45000 GAL STANDPIPE</td>
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</table>

**TOTAL EXTENSION SAY**
ALBERTA WATER SYSTEM IMPROVEMENTS
PROJECT BUDGET

CONSTRUCTION

LAND
- ENLARGE SITE AND PURCHASE 2 NEW SITES
- RIGHT-OF-WAY

ENGINEERING
- DESIGN @ 7.35%
- RESIDENT INSPECTION @ 2.35%
- SURVEYING

LEGAL @ 2.5%

CONTINGENCIES @ 5%

ADMINISTRATIVE

SUBTOTAL

INTEREST DURING CONSTRUCTION

TOTAL
Alberta Water System
P. O. Box 145
Castor, LA 71016

Dear [Name],

The Office of State Clearinghouse has completed the review of your request for federal assistance. In conducting this review we have requested comments from the regional clearinghouses where your project will have impact, as well as from various state agencies concerned with your particular type of application. If your application has statewide impact, or requests state funds, it was also reviewed by the State's Budget Office.

Included in this packet is a list showing the reviewing agencies. Comments were requested from agencies or clearinghouses marked with an asterisk (*). Comments were received from agencies and clearinghouses marked with an (x).

All agencies reviewing your request have sent us positive comments, therefore, we recommend approval of your application. Special note should be given to any requests or recommendations made by these reviewing agencies. Before approval of this application, the federal funding agency will study all comments and recommendations resulting from this review. All comments, including this letter, should be included in your application packet to be forwarded to the federal funding agency.

Also included in this packet is the 424-A Reporting Form. Retain this form in your office until you are notified by the funding agency of their decision. Upon notification, complete the form, numbers on the 424-A Reporting Form correspond to the numbers on the Standard Form 424) and return it to our office within seven (7) working days.

I congratulate you on your efforts to bring additional funds to the State of Louisiana and wish you the best of luck on your application. If you have any questions, or if I can be of any assistance to you, please contact my office.

Sincerely,

[State Single Point of Contact]

Enclosures
Dear Applicant:

On behalf of the Department of Urban and Community Affairs, I wish to take the opportunity to thank you for submitting your 424 Federal Assistance Application for consideration of funding your proposed project(s).

Good luck in your efforts to secure Federal and/or State government funding assistance.

INSTRUCTIONS:

Information to complete this form should be extracted from the OMB Standard Form 424 (cover sheet of grant) or directly from package.

3A. STATE APPLICATION IDENTIFIER # ____________________________

23A. NAME & TITLE ____________________________________________
            (Contact Representative)

3B. SIGNATURE ____________________________

19. FUNDING AGENCY NAME ____________________________
            (Federal or State)

27. ACTION TAKEN

        a. AWARDED
        b. REJECTED
        c. RETURNED OR AMENDED
        d. DEFERRED
        e. WITHDRAWN

29. FUNDING SOURCE AMOUNT

        a. FEDERAL $ ___________00
        b. APPLICANT $ ___________00
        c. STATE-(cash or in-kind?) $ ___________0x
        d. LOCAL $ ___________0x
        e. OTHER $ ___________0x
        f. TOTAL $ ___________0x

29. ACTION DATE: 19 ____________________________

30. START DATE: 19 ____________________________

31. NAME ____________________________
            (Federal Contact Person)

            TELEPHONE # ____________________________

32. ENDING DATE: ____________________________

PARISH (ES) PROJECT WILL IMPACT ____________________________
REVIEWING AGENCIES

Department of Urban & Community Affairs, Office of Community Services

Department of Culture, Recreation, & Tourism, Division of Archeology & Preservation

Department of Environmental Quality

Division of Administration, State Budget Office

Department of Labor

Coastal Zone Management

CLEARINGHOUSE:

Regional Planning Commission (1 & 13)
Capital Regional Planning Commission (2 & 9)
Teche Regional Clearinghouse (3)
Acadiana Regional Clearinghouse (4)
Southwest Regional Clearinghouse (5 & 11)
Central Regional Clearinghouse (6)
Northwest Regional Clearinghouse (7)
North Delta Regional Planning (8)
Lafayette Regional Planning Commission (10)
Shreve Area Council of Government (14)
Ouachita Council of Government (12)
**APPLICATION FOR FEDERAL ASSISTANCE**

1. **TYPE OF ACTION**
   - Q Preapplicaton
   - □ Application
   - □ Notification of Intent (Opt.)
   - □ Report of Federal Action

2. **APPLICANT'S APPLICATION IDENTIFICATION NO.**
   - 19040054

3. **DATE OF APPLICATION**
   - 19 08 07

4. **LEGAL APPLICANT/RECIPIENT**
   - **a. Applicant Name:** Alberta Water System
   - **b. Organization Unit:** Non-Profit Corporation
   - **c. City:** Castor
   - **d. State:** LA
   - **e. Zip Code:** 71016

5. **TITLE AND DESCRIPTION OF APPLICANT'S PROJECT**
   - Improvements to Alberta Water System includes supplemental water supply, storage, distribution and supplying water to new customers in the Kepler Creek Lake area.

6. **TYPE OF APPLICANT/RECIPIENT**
   - □ Non-Profit Corporation

7. **AREA OF PROJECT IMPACT**
   - Parts of Bienville and Natchitoches Parishes

8. **FEDERAL EMPLOYER IDENTIFICATION NO.**
   - 72-1058154

9. **STATEMENT OF PERSONNEL TO BE BENEFITING**
   - 1800

10. **PROJECT DATE**
    - 18 87 12 31

11. **TOTAL FUNDING GEANTED**
    - 500,000.00

12. **FEDERAL AGENCY TO RECEIVE REQUEST**
    - □ Yes □ No

13. **CERTIFYING REPRESENTATIVE**
    - □ Yes

14. **REMARKS**
    - □ Yes □ No

15. **REQUEST RECEIVED**
    - □ Yes □ No

16. **ADMINISTRATIVE OFFICE**
    - 19

17. **DATE OF ACTION**
    - 19 08 07

18. **ACTION TAKEN**
    - □ Yes □ No

19. **ACTION DATE**
    - 19 08 07

20. **FEDERAL AGENCY**
    - □ Yes □ No

21. **FEDERAL AGENCY TO RECEIVE REQUEST**
    - □ Yes □ No

22. **CERTIFYING REPRESENTATIVE**
    - □ Yes □ No

23. **REMARKS**
    - □ Yes □ No

24. **AGENCY NAME**
    - □ Yes □ No

25. **ORGANIZATIONAL UNIT**
    - □ Yes □ No

26. **ADDRESS**
    - □ Yes □ No

27. **ACTION TAKEN**
    - □ Yes □ No

28. **ACTION DATE**
    - □ Yes □ No

29. **TOTAL FUNDING REQUESTED**
    - □ Yes □ No

30. **FEDERAL AGENCY**
    - □ Yes □ No

31. **FEDERAL AGENCY TO RECEIVE REQUEST**
    - □ Yes □ No

32. **CERTIFYING REPRESENTATIVE**
    - □ Yes □ No

33. **REMARKS**
    - □ Yes □ No
September 16, 1987

Robert B. DeBlieux
State Historic Preservation Officer

Re: SAI #LA8708100949

Water System Improvements
Alberta Water System
Bienville & Natchitoches Parishes, LA

Dear Mr. [Name],

Reference is made to your memorandum dated August 10, 1987, requesting our comments on the subject preapplication. Our review indicates the presence of recorded archaeological sites in the general project area. Consequently, while we have no objections in principle to this project, we would like the opportunity to review more specific project plans when they become available. Upon receipt of this additional information, we will complete our review in a timely manner.

Should you have any questions concerning our comments, do not hesitate to contact my staff in the Division of Archaeology.

Sincerely,

Robert B. DeBlieux
State Historic Preservation Officer
<table>
<thead>
<tr>
<th>applicant:</th>
<th>ALBERTA WATER SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>contact person:</td>
<td>Mr.</td>
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<tr>
<td></td>
<td>P. O. Box 145, Castor, LA 71016</td>
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<tr>
<td>grantor agency/program name and number:</td>
<td>FmHA Water &amp; Waste Disposals Systems for Rural Communities 10.418</td>
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<td>WATER SYSTEM IMPROVEMENTS</td>
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<td>clearinghouse comment:</td>
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The project does comply with water and sewerage plans for Bienville Parish.
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<tr>
<th>Applicant:</th>
<th>ALBERTA WATER SYSTEM</th>
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<td>Mr. P. O. Box 145, Castor, LA 71016</td>
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<tr>
<td>Grantor agency/program and number:</td>
<td>FmHA Water &amp; Waste Disposal Systems for Rural Communities</td>
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<td>Federal:</td>
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<td>Description:</td>
<td>Improvements to Alberta Water System includes supplemental water supply, storage, distribution and supplying water to new customers in the Kepler Creek Lake Area.</td>
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<td>Technical review:</td>
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<tr>
<td>Time/place/date of NWRD meeting:</td>
<td>3:00 P.M. Minden C of C August 18, 1987</td>
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<td>Response sheets:</td>
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</tbody>
</table>
APPENDIX K: PROPOSAL TO PROVIDE ENGINEERING SERVICES
January 20, 1988

Honorable Mayor
Village of Simsboro
P.O. Box 40
Simsboro, LA 71275

Dear Mayor and Aldermen:

Our firm is pleased to submit this statement for furnishing administration and design on your recently acquired LCDBG grant. In accordance with your advertisement, we are proposing to perform all of the management, administration, and design services.

In accordance with your evaluation process, we offer responses as follows:

1. Specialized experience and technical competence:
   Our firm has been in business over 19 years specializing in water, wastewater, and roads and drainage projects. We have a staff of more than 11 Registered Professional Engineers complete with an assist force of including more than 25 draftsmen, surveyors, clerical and inspectors. We are planning to do this work in the Office with Office personnel. In the Office, we have three Registered Professional Engineers with more than 35 years experience in Civil and Mechanical Engineering projects. We have successfully completed providing professional design services as required by this project for well over 100 projects of various types similar to that proposed by the Village of

2. Past Record of Performance with Local, State, and Federal entities and agencies: We have completed successfully or are in the process of completing the following partial list of LCDBG projects:

   City of Oakdale-$750,000-1983
   City of Oakdale-$750,000-1981
   Webster Parish Police Jury Water Improvements-1983
   Town of Delhi-Community Development Block Grant-1981
   Glenmora LCDBG-1981
   City of Ruston LCDBG-1985
   Town of Bernice LCDBG-1985
   Lincoln Parish Police Jury LCDBG-1986
   Town of Grambling LCDBG-1986

3. Capacity to Perform Work in the Time Limitations:
   We have available engineers, draftsmen, and project inspectors who are ready to begin immediately upon being authorized to proceed. We will meet all necessary time limitations with no exceptions.
4. **Familiarity with Applicable Problems:**
   Since we offered our services at no cost to the Village in preparing the application, we are familiar with special design considerations necessary. We have completed our proposed plan of attack in this area and feel that we can complete it with the least possible amount of problems. Our firm has annually assisted the Village since 1982 in efforts to achieve funding for various public facilities.

5. **Priority Applicant Will Assign to the Project:**
   We will assign this project a number one priority.

6. **Compliance with Section 3 of HUD Act of 1963:**
   We will comply with HUD Act of 1963.

One additional item of consideration is that we are prepared to complete all of the design professional services by this grant for an amount equal to or less than the budget numbers which are approved in the grant.

Very truly yours,
This Agreement, made this 17th _________________ day of November __________, by and between Alberta Water System hereinafter referred to as the OWNER, and ____________ hereinafter referred to as the ENGINEER:

The OWNER intends to construct ____________ water system improvements in Bienville & Natchitoches Parishes, State of Louisiana, which may be paid for in part with financial assistance from the United States of America acting through the Farmers Home Administration of the United States Department of Agriculture, hereinafter referred to as FmHA, pursuant to the consolidated Farm and Rural Development Act, (7 U.S.C. 1921 et seq.) and for which the ENGINEER agrees to perform the various professional engineering services for the design and construction of said system.

WITNESSETH:

That for and in consideration of the mutual covenants and promises between the parties hereto, it is hereby agreed:

SECTION A - ENGINEERING SERVICES

The ENGINEER shall furnish engineering services as follows:

1. The ENGINEER will conduct preliminary investigations, prepare preliminary drawings, provide a preliminary itemized list of probably construction costs effective as of the date of the preliminary report, and submit a preliminary engineering report following FmHA instructions and guides.

2. The ENGINEER will furnish 10 copies of the preliminary engineering report, and layout maps to the OWNER.

3. The ENGINEER will attend conferences with the OWNER, representatives of FmHA, and other interested parties as may be reasonably necessary.

4. After the preliminary engineering report has been reviewed and approved by the OWNER and by FmHA and the OWNER directs the ENGINEER to proceed, the ENGINEER will perform the necessary design surveys, accomplish the detailed design of the project, prepare construction drawings, specifications and contract documents, and prepare a final cost estimate based on the final design for the entire system. It is also understood that if subsurface explorations (such as borings, soil tests, rock soundings and the like) are required, the ENGINEER will furnish coordination of said explorations without additional charge, but the costs incident to such explorations shall be paid for by the OWNER as set out in Section D hereof.

5. The contract documents furnished by the ENGINEER under Section A-4 shall utilize FmHA endorsed construction contract documents, including FmHA Supplemental General Conditions, Contract Change Orders, and partial payment estimates. All of these documents shall be subject to FmHA approval. Copies of guide contract documents may be obtained from FmHA.
6. Prior to the advertisement for bids, the ENGINEER will provide for each construction contract, not to exceed 10 copies of detailed drawings, specifications, and contract documents for use by the OWNER, appropriate Federal, State, and local agencies from whom approval of the project must be obtained. The cost of such drawings, specifications, and contract documents shall be included in the basic compensation paid to the ENGINEER.

7. The ENGINEER will furnish additional copies of the drawings, specifications and contract documents as required by prospective bidders, material suppliers, and other interested parties, but may charge them for the reasonable cost of such copies. Upon award of each contract, the ENGINEER will furnish to the OWNER five sets of the drawings, specifications and contract documents for execution. The cost of these sets shall be included in the basic compensation paid to the ENGINEER. Original documents, documents, survey notes, tracings, and the like, except those furnished to the ENGINEER by the OWNER, are and shall remain the property of the ENGINEER.

8. The drawings prepared by the ENGINEER under the provisions of Section A-4 above shall be in sufficient detail to permit the actual location of the proposed improvements on the ground. The ENGINEER shall prepare and furnish to the OWNER without any additional compensation, three copies of a map(s) showing the general location of needed construction easements and permanent easements and the land to be acquired. Property surveys, property plats, property descriptions, abstracting and negotiations for land rights shall be accomplished by the OWNER, unless the OWNER requests, and the ENGINEER agrees to provide those services. In the event the ENGINEER is requested to provide such services, the ENGINEER shall be additionally compensated as set out in Section D hereof.

9. The ENGINEER will attend the bid opening and tabulate the bid proposals, make an analysis of the bids, and make recommendations for awarding contracts for construction.

10. The ENGINEER will review and approve, for conformance with the design concept, any necessary shop and working drawings furnished by contractors.

11. The ENGINEER will interpret the intent of the drawings and specifications to protect the OWNER against defects and deficiencies in construction on the part of the contractors. The ENGINEER will not, however, guarantee the performance by any contractor.

12. The ENGINEER will establish baselines for locating the work together with a suitable number of bench marks adjacent to the work as shown in the contract documents.

13. The ENGINEER will provide general engineering review of the work of the contractors as construction progresses to ascertain that the contractor is conforming with the design concept.

14. Unless notified by the OWNER in writing that the OWNER will provide for resident inspection, the ENGINEER will provide resident construction inspection. The ENGINEER's undertaking hereunder shall not relieve the contractor of contractor's obligation to perform the work in conformity with the drawings and specifications and in a workmanlike manner; shall not make the ENGINEER an insurer of the contractor's performance; and shall not impose upon the ENGINEER any obligation to see that the work is performed in a safe manner.
15. The ENGINEER will cooperate and work closely with FmHA representatives.

16. The ENGINEER will review the contractor's applications for progress and final payment and, when approved, submit same to the OWNER for payment.

17. The ENGINEER will prepare necessary contract change orders for approval of the OWNER, FmHA, and others on a timely basis.

18. The ENGINEER will make a final review prior to the issuance of the statement of substantial completion of all construction and submit a written report to the OWNER and FmHA. Prior to submitting the final pay estimate, the ENGINEER shall submit a statement of completion to and obtain the written acceptance of the facility from the OWNER and FmHA.

19. The ENGINEER will provide the OWNER with one set of reproducible record (as-built) drawings, and two sets of prints at no additional cost to the OWNER. Such drawings will be based upon construction records provided by the contractor during construction and reviewed by the resident inspector and from the resident inspector's construction data.

20. If State statutes require notices and advertisements of final payment, the ENGINEER shall assist in their preparation.

21. The ENGINEER will be available to furnish engineering services and consultations necessary to correct unforeseen project operation difficulties for a period of one year after the date of statement of substantial completion of the facility. This service will include instruction of the OWNER in initial project operation and maintenance but will not include supervision of normal operation of the system. Such consultation and advice shall be furnished without additional charge except for travel and subsistence costs. The ENGINEER will assist the OWNER in performing a review of the project during the 11th month after the date of the certificate of substantial completion.

22. The ENGINEER further agrees to obtain and maintain, at the ENGINEER's expense, such insurance as will protect the ENGINEER from claims under the Workmen's Compensation Act and such comprehensive general liability insurance as will protect the OWNER and the ENGINEER from all claims for bodily injury, death, or property damage which may arise from the performance by the ENGINEER or by the ENGINEER's employees of the ENGINEER's functions and services required under this Agreement.

23. The services called for in the Section A-1 and A-2 of this Agreement shall be completed and the report submitted within 30 calendar days from the date of authorization to proceed. After acceptance by the OWNER and FmHA of the Preliminary Engineering Report and upon written authorization from the OWNER, the ENGINEER will complete final plans, specifications and contract documents and submit for approval of the OWNER, FmHA and all State regulatory agencies within 90 calendar days from the date of authorization unless otherwise agreed to by both parties.

If the above is not accomplished within the time period specified, this Agreement may be terminated by the OWNER. The time for completion will be extended by the OWNER for a reasonable time if completion is delayed due to unforeseeable causes beyond the control and without the fault or negligence of the ENGINEER.
SECTION B - COMPENSATION FOR ENGINEERING SERVICES

1. The OWNER shall compensate the ENGINEER for preliminary engineering services in the sum of ____________________ Dollars ( ) after the review and approval of the preliminary engineering report by the OWNER and FmHA.

2. The OWNER shall compensate the ENGINEER for design and contract administration engineering services in the amount of: (Select (a) or (b))
   (a) Not applicable ____________________ Dollars ($) ____________ or
   (b) As shown in Attachment 1

   When Attachment 1 is used to establish compensation for the design and contract administration services, the actual construction costs on which compensation is determined shall exclude legal fees, administrative costs, engineering fees, land rights, acquisition costs, water costs, and interest expense incurred during the construction period.

3. The compensation for preliminary engineering services, design and contract administration services shall be payable as follows:
   (a) A sum which equals seventy percent (70%) of the total compensation payable under Section B-1 and 2, after completion and submission of the construction drawings, specifications, cost estimates, and contract documents, and the acceptance of the same by OWNER and FmHA.
   (b) A sum equal to fifteen percent (15%) of the compensation will be paid on a monthly basis for general engineering review of the contractor's work during the construction period on percentage ratios identical to those approved by the ENGINEER as a basis upon which to make partial payments to the contractor(s). However, payment under this paragraph and of such additional sums as are due the ENGINEER by reason of any necessary adjustments in the payment computations will be in an amount so that the aggregate of all sums paid to the ENGINEER will equal ninety-five (95%) of the compensation. A final payment to equal 100 percent shall be made when it is determined that all services required by this Agreement have been completed except of the services set forth in Section A-21 hereof.

SECTION C - COMPENSATION FOR RESIDENT INSPECTION AS SET FORTH IN SECTION A-14

When the ENGINEER provides resident inspection, the ENGINEER will, prior to the preconstruction conference, submit a resume of the resident inspector's qualifications, anticipated duties and responsibilities for approval by the OWNER and FmHA. The OWNER agrees to pay the ENGINEER for such services in accordance with the schedule set out in Attachment 1. The ENGINEER will render to OWNER for such services as itemized bill, once each month, for compensation for such services performed hereunder during such period, the same to be due and payable by the OWNER to the ENGINEER on or before the 10th day of the following period. Under normal construction circumstances, and for the proposed construction period of 90 days, the cost of resident inspection is estimated to be $
SECTION D - ADDITIONAL ENGINEERING SERVICES

In addition to the foregoing being performed, the following services may be provided UPON PRIOR WRITTEN AUTHORIZATION OF THE OWNER and written approval of FmHA.

1. Site surveys for water treatment plants, sewage treatment works, dams, reservoirs, and other similar special surveys as may be required.
2. Laboratory tests, well tests, borings, specialized geological, soils, hydraulic, or other studies recommended by the ENGINEER.
3. Property surveys, detailed description of sites, maps, drawings, or estimates related thereto; assistance in negotiating for land and easement rights.
4. Necessary data and filing maps for water rights, water adjudication, and litigation.
5. Redesigns ordered by the OWNER after final plans have been accepted by the OWNER and FmHA, except redesigns to reduce the project cost to within the funds available.
6. Appearances before courts or boards on matters of litigation or hearings related to the project.
7. Preparation of environment impact assessments or environmental impact statements.
9. The ENGINEER further agrees to provide the operation and maintenance manual for facilities when required for $ Not Applicable . Payment for the services specified in this Section D shall be as agreed in writing between the OWNER and approved by FmHA prior to commencement of the work. Barring unforeseen circumstances, such payment is estimated not to exceed $ . The ENGINEER will render to OWNER for such services an itemized bill, separate from any other billing, once each month, for compensation for services performed hereunder during such period, the same to be due and payable by OWNER to the ENGINEER on or before the 10th day of the following period.

SECTION E - INTEREST ON UNPAID SUMS

If OWNER fails to make any payment due ENGINEER within 60 days for services and expenses and funds are available for the project then the ENGINEER shall be entitled to interest at the rate of ______ percent per annum from said 60th day, not to exceed an annual rate of 12 percent.
1.1 GENERAL: The Engineer shall perform:

a) detailed resident construction inspection as set forth in Section C.

b) additional engineering services as set forth in Section D.

c) additional Section A services which result because the actual construction time exceeds the contract time defined in the official Notice to Proceed. The normal services identified in Section A, Paragraphs 14 and 16, will be considered additional engineering services for the period between the initially scheduled construction completion date and the actual date of granting of substantial completion to the contractor(s).

Compensation for these services shall be as follows:

(a) Personnel: Compensation for engineering, surveying and drafting, and inspection personnel shall be billed on the basis of salary cost of the work times an agreed multiplier. Salary cost is defined as the cost of salaries (including sick leave, vacation, holiday and incentive pay applicable thereto) of principals, engineers, technicians, draftspersons, clerical, planners, surveymen, specialists, etc. for time directly chargeable to the projects, plus unemployment, excise, and payroll taxes, and contributions for social security, employment compensation insurance, retirement, medical and insurance benefits which is in effect at the time the work is performed.

The multiplier which is applied to salary cost is a factor which compensates for overhead, plus a reasonable margin for contingencies, interest on invested capital, readiness to serve, and profit.

The multiplier for all personnel shall be 2.7.

Overtime shall be at 1.5 times regular hourly rate.

(b) Travel shall be billed at the State of Louisiana prevailing rate per mile.

(c) Expenses: Reimbursable expenses shall be billed at actual cost. Reimbursable expense shall include subsistence, lodging, telephone, postage, office supplies, surveying, drafting and printing materials, laboratory tests, and services of others reasonably required by the Engineer in the performance of his duties.

(d) It is understood that the Engineer will provide Section A1, A2, and A3 Services for compensation in accordance with Bl. Amount of compensation will be based upon salary cost times a multiplier of 2.7 plus expenses. One half of this amount is to be included as part of Item B.3.

The Owner shall compensate the Engineer an amount not to exceed Five Hundred Dollars ($500.00) to complete the Request for Environmental Information. Compensation will be based upon salary cost times a multiplier of 2.7 plus expenses.
1.2 COST LIMITATIONS:

a) The cost for resident inspection shall not exceed the amount shown in Section C and the approved project budget, provided that the amount shall be increased by the pro rata increase in construction time, calculated from the scheduled construction completion date and the actual date of granting of substantial completion to the contractor(s).

b) The cost for normal additional engineering services shall not exceed the amount shown in the approved project budget, or as agreed to by OWNER for those services not generally included in project budgets (Section D, Paragraphs 4, 5, 7, and 8).

c) The cost for extraordinary Section A services identified above (except for Section A, Paragraph 14 which is covered under Paragraph 1.2(a)) shall not exceed an amount calculated by multiplying the actual number of additional months, or part thereof, of construction time, computed as provided in Paragraph 1.2(a), times an amount determined by dividing twenty percent (20%) of the compensation for Basic Engineering Services by the initially scheduled number of construction months.

d) The cost for preparation of operation and maintenance manuals, and/or the providing of operator training and plant start-up services shall not exceed the amount shown in Section D and the approved project budget.

1.3 INSPECTOR'S DUTIES: In accordance with Section C, the duties, responsibilities and limitations of the authority of the resident project representative(s) shall be as detailed in Section F, Part II.

SECTION II - OWNER'S RESPONSIBILITIES

2.1 GENERAL: It shall be the Owner's duty to provide all requirements of the Project not specifically designated duties of the Engineer. The Owner shall:

2.2 Provide full information as to his requirements for the Project.

2.3 Assist Engineer by placing at his disposal all available information pertinent to the Project including previous reports and any other data relative to design and construction of the Project.
2.4 Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by Engineer, obtain advice of an attorney, insurance counselor and other consultants as he deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of Engineer.

2.5 Give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of any defect in the Project.

2.6 Designate in writing a person to act as Owner's representative with respect to the work to be performed under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Owner's policies and decisions with respect to materials, equipment, elements and systems pertinent to Engineer's services.

2.7 Guarantee access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform his services.

2.8 Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.

2.9 Furnish or direct the Engineer to furnish necessary additional Engineering services.

2.10 Furnish all land, land rights easements, rights-of-way, and permits necessary for the construction of the Project.

Furnish all necessary property, boundary, topographic, utility, easement, and right-of-way surveys.

Whether or not field surveys are necessary it shall be the Owner's duty to furnish accurate property descriptions, zoning and deed restrictions, and identification of the names of each property owner where construction or permanent easements or rights-of-way are required.

2.11 Furnish to Engineer, as required by him for performance of his Basic Services, data prepared by or services of others, such as core borings, probings and sub-surface explorations, hydrographic surveys, laboratory tests and inspection of samples, materials and equipment; appropriate professional interpretations of all of the foregoing; property, boundary, easement, right-of-way, topographic, and utility surveys and property descriptions; zoning and deed restriction; identification of each property owner; and other special data or consultations not covered in Section A, all of which Engineer may rely upon in performing his services.
2.12 Provide engineering surveys to enable Contractor(s) to proceed with their work.

2.13 Provide such legal, accounting, independent cost estimating and insurance counseling services as may be required for the Project, and such auditing service as Owner may require to ascertain how or for what purpose any contractor has used the monies paid to him under the construction contract.

2.14 Bear all costs incident to compliance with the requirements of this Section F.

3.0 The $4000.00 preliminary engineering report fee is to be due to the Engineer as part of the compensation under Item B-2. If, however, any of the improvements proposed by the preliminary engineering report completed by the Engineer are constructed by the Owner and the Owner does not utilize the Engineer in accordance with this contract, the amount of the preliminary engineering fee will be due and payable to the Engineer.
SECTION F - SPECIAL PROVISIONS
PART II - DUTIES, RESPONSIBILITIES AND LIMITATIONS
OF THE AUTHORITY OF RESIDENT PROJECT REPRESENTATIVE

A. GENERAL

Resident Project Representative is ENGINEER's Agent and shall act as directed by and under the supervision of ENGINEER. He shall confer with ENGINEER regarding his actions. His dealings in matters pertaining to the on-site Work will in general be only with ENGINEER and CONTRACTOR. His dealings with subcontractors will only be through or with the full knowledge of CONTRACTOR or his superintendent. He shall generally communicate with OWNER only through or as directed by ENGINEER.

B. DUTIES AND RESPONSIBILITIES

Resident Project Representative shall:

1. Schedules: Review the progress schedule, schedule of Shop Drawing submissions, schedule of values and other schedules prepared by CONTRACTOR and consult with ENGINEER concerning their acceptability.

2. Conferences: Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with ENGINEER and notify in advance those expected to attend. Attend meetings, and maintain and circulate copies of minutes thereof.

3. Liaison:
   a. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist him in understanding the intent of the Contract Documents. Assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
   b. As requested by ENGINEER, assist in obtaining from OWNER additional details or information, when required at the job site for proper execution of the Work.
   c. In the interest of preserving the proper channels of communication, advise ENGINEER of any direct communication between OWNER and CONTRACTOR.

4. Shop Drawings and Samples:
   a. Receive and record date of receipt of Shop Drawings and samples which have been approved by ENGINEER.
b. Receive samples which are furnished at the site by CONTRACTOR for ENGINEER's approval, and notify ENGINEER of their availability for examination.

c. Advise ENGINEER and CONTRACTOR or his superintendent immediately of the commencement of any Work requiring a Shop Drawing or sample submission if the submission has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining that the Project is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.

b. Report to ENGINEER whenever he believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspections, tests or approvals required to be made; and advise ENGINEER when he believes Work should be corrected or rejected or should be uncovered for observation, or requires special testing or inspection.

c. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and that CONTRACTOR maintains adequate records thereof; observe, record and report to ENGINEER appropriate details relative to the test procedures and startups.

d. Accompany OWNER and visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to ENGINEER.

6. Interpretation of Contract Documents: Transmit to CONTRACTOR clarification and interpretation of the Contract Documents as issued by ENGINEER.

7. Modifications: Consider and evaluate CONTRACTOR's suggestions for modifications in Drawings or Specifications and report them with recommendations to ENGINEER.
8. Records:
   a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and sample submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports and other Project-related documents.
   b. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of principal visitors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to ENGINEER.
   c. Record names, addresses and telephone numbers of all CONTRACTORS, subcontractors and major suppliers of equipment and materials.
   d. Advise ENGINEER whenever CONTRACTOR is not currently maintaining an up-to-date copy of Record Drawings at the site.

9. Reports:
   a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the approved progress schedule, schedule of Shop Drawing submissions and other schedules.
   b. Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

10. Payment Requisitions: Review Application for Payment with CONTRACTOR for compliance with the established procedure for their submission and forward them with recommendations to ENGINEER, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site.

11. Guarantees, Certificates, Maintenance and Operation Manuals: During the course of the Work verify that guarantees, certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed; and deliver these data to ENGINEER for his review and forwarding to OWNER prior to final acceptance of the Project.
12. Completion:
   a. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring correction.
   b. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR and prepare a final list of items to be corrected.
   c. Verify that all items on final list have been corrected and make recommendations to ENGINEER concerning acceptance.

C. LIMITATIONS OF AUTHORITY

Except upon written instructions of ENGINEER, Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
2. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractors or CONTRACTOR's superintendent.
3. Shall not expedite Work for the Contractor.
4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
5. Shall not advise on or issue directions as to safety precautions and programs in connection with the Work.
6. Shall not authorize OWNER to occupy the Project in whole or in part.
7. Shall not participate in specialized field or laboratory tests or inspections conducted by others.
8. Shall not assist CONTRACTOR in maintaining up-to-date copy of Record Drawings.
This Agreement shall not become effective until approved by FmHA. Such approval shall be evidenced by the signature of a duly authorized representative of FmHA in the space provided at the end of this Agreement. The approval so evidenced by FmHA shall in no way commit FmHA to render financial assistance to the OWNER and is without liability for any payment hereunder, but in the event such assistance is provided, the approval shall signify that the provisions of this Agreement are consistent with the requirements of FmHA.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate on the respective dates indicated below.

OWNER:

By:

Type Name_________________________
Title ____________
Date Nov. 17, 1988

ATTEST:

Type Name_________________________
Title ____________

(SEAL)

Date

ATTEST:

Type Name_________________________
Title ____________

(Sign)

Date

ENGINEER:

By:

Type Name_________________________

Title Manager,

Date Nov. 17, 1988

APPROVED:

FARMERS HOME ADMINISTRATION

By:

Type Name_________________________

Title____________

Date____________
ENGINEERING FEES

The following tables are the maximum allowable engineering fee for Farmers Home Administration-financed projects. This fee includes preliminary engineering services (Section B.1) and design and contract administration services (Section B.2) for the total engineering fee.

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<td></td>
</tr>
</tbody>
</table>
Curve A is intended to apply to assignments of which the following are typical examples:

a. Airports with extensive terminal facilities;
b. Water, waste water, and industrial waste treatment plants;
c. Bridges which are asymmetric or are otherwise complicated;
d. Public and office buildings;
e. Power plants;
f. Large dams or complicated small dams;
g. Highways and urban and suburban arterial streets;
h. Grade crossing eliminations;
i. Highway and railway tunnels;
j. Pumping stations;
k. Incinerators;
l. Large intercepting and relief sewers;
m. Sanitary sewer lines under 24 inches in diameter;
n. Water distribution lines under 16 inches in diameter;
o. Complicated waterfront and marine terminal facilities;
p. Foundations;
q. Large sports stadiums; and
r. Additions to or reconstruction of projects classified in Curve B.

Curve B is intended to apply to less complex assignments of which the following are examples:

a. Industrial buildings, warehouses, garages, hangars, and comparable structures;
b. Bridges and other structures of conventional design;
c. Simple waterfront facilities;
d. Railways;
e. Roads and streets;
f. Conventional levees, flood walls, and retaining walls;
g. Small dams;
h. Sewer and water tunnels (free-air);
i. Storm sewers and drains;
j. Sanitary sewers 24 inches and larger;
k. Water distribution lines 16 inches and larger;
l. Irrigation works, except pumping plants; and
m. Airports except as classified for Curve A.
**Resident Inspection Fee**

<table>
<thead>
<tr>
<th>Net Construction Cost</th>
<th>Percent Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000 or less</td>
<td>4.0% or negotiated sum</td>
</tr>
<tr>
<td>200,000</td>
<td>3.6</td>
</tr>
<tr>
<td>300,000</td>
<td>3.3</td>
</tr>
<tr>
<td>400,000</td>
<td>3.1</td>
</tr>
<tr>
<td>500,000</td>
<td>2.9</td>
</tr>
<tr>
<td>600,000</td>
<td>2.8</td>
</tr>
<tr>
<td>700,000</td>
<td>2.7</td>
</tr>
<tr>
<td>800,000</td>
<td>2.6</td>
</tr>
<tr>
<td>900,000</td>
<td>2.5</td>
</tr>
<tr>
<td>1,000,000</td>
<td>2.4</td>
</tr>
<tr>
<td>2,000,000</td>
<td>2.3</td>
</tr>
<tr>
<td>3,000,000</td>
<td>2.2</td>
</tr>
<tr>
<td>4,000,000</td>
<td>2.1</td>
</tr>
<tr>
<td>5,000,000</td>
<td>2.0</td>
</tr>
</tbody>
</table>

The above percentages are to be used as a guide for establishing resident inspection fees for utility-type projects financed by the Farmers Home Administration. Actual fees are negotiable on an individual job basis dependent upon the type of project to be constructed.

It is anticipated that on some jobs, such as where a storage tank or treatment plant is constructed, there may be little resident inspection needed. On projects involving pipeline installation, full-time resident inspection will be required.

The cost and type of resident inspection needed must be discussed by the applicant and consulting engineer and the fee established prior to the start of construction.

The engineer is not relieved of providing general engineer inspection by a qualified engineer when he is providing full-time resident inspection.
APPENDIX M: FUNDING AGENCY PROPOSAL
APPLICATION FOR FEDERAL ASSISTANCE (For Construction Programs)

Section: FEDERAL ASSISTANCE

1. TYPE OF ACTION
   - [ ] PREAPPLICATION
   - [ ] APPLICATION

2. APPLICANT
   - AGENCY NAME
   - Alberta Water System

3. FEDERAL AGENCY
   - [ ] WITHDRAWN
   - [ ] DATED/STamped

4. ADDRESS
   - [ ] AWARD
   - [ ] REJECTED
   - [ ] REQUESTED FOR AMENDMENT
   - [ ] CANCELED

5. ACTION DATE
   - [ ] FEDERAL
   - [ ] FEDERAL AGENCY

6. LEGAL APPLICANT/RECIPIENT
   - [ ] TITLED NAME
   - Alberta Water System

7. TITLE AND DESCRIPTION OF APPLICANT'S PROJECT
   - Alberta Water System improvements and storage

8. AREA OF PROJECT IMPACT
   - [ ] Type
   - [ ] Non-profit corporation

9. PROJECT
   - [ ] Project Description
   - Town of Castor & Ashland

10. ESTIMATED TOTAL
    - [ ] Month
    - [ ] Year

11. ESTIMATED NUMBER OF PERSONS BENEFITING
    - [ ] Month
    - [ ] Year

12. TYPE OF APPLICATION
    - [ ] Construction
    - [ ] Non-profit

13. TYPE OF ASSISTANCE
    - [ ] Federal
    - [ ] Local

14. CONGRESSIONAL DISTRICT
    - [ ] Month
    - [ ] Year

15. EXISTING FEDERAL IDENTIFICATION NUMBER
    - [ ] Month
    - [ ] Year

16. FEDERAL AGENCY TO RECEIVE REQUEST
    - [ ] Month
    - [ ] Year

17. ADMINISTRATIVE OFFICE
    - [ ] Month
    - [ ] Year

18. FEDERAL GRANT IDENTIFICATION
    - [ ] Month
    - [ ] Year

19. REMARKS ADDED
    - [ ] Month
    - [ ] Year

U.S. DEPARTMENT OF AGRICULTURE

APPLICATION FOR FEDERAL ASSISTANCE (For Construction Programs)

Section: FEDERAL ASSISTANCE

1. TYPE OF ACTION
   - [ ] PREAPPLICATION
   - [ ] APPLICATION

2. APPLICANT
   - AGENCY NAME
   - Alberta Water System

3. FEDERAL AGENCY
   - [ ] WITHDRAWN
   - [ ] DATED/STamped

4. ADDRESS
   - [ ] AWARD
   - [ ] REJECTED
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   - [ ] CANCELED

5. ACTION DATE
   - [ ] FEDERAL
   - [ ] FEDERAL AGENCY

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    - [ ] Year

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    - [ ] Construction
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    - [ ] Month
    - [ ] Year

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    - [ ] Month
    - [ ] Year

16. FEDERAL AGENCY TO RECEIVE REQUEST
    - [ ] Month
    - [ ] Year

17. ADMINISTRATIVE OFFICE
    - [ ] Month
    - [ ] Year

18. FEDERAL GRANT IDENTIFICATION
    - [ ] Month
    - [ ] Year

19. REMARKS ADDED
    - [ ] Month
    - [ ] Year

U.S. DEPARTMENT OF AGRICULTURE

APPLICATION FOR FEDERAL ASSISTANCE (For Construction Programs)

Section: FEDERAL ASSISTANCE

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    - [ ] Construction
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    - [ ] Federal
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    - [ ] Year

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    - [ ] Year

16. FEDERAL AGENCY TO RECEIVE REQUEST
    - [ ] Month
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    - [ ] Month
    - [ ] Year

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    - [ ] Year

19. REMARKS ADDED
    - [ ] Month
    - [ ] Year

U.S. DEPARTMENT OF AGRICULTURE

APPLICATION FOR FEDERAL ASSISTANCE (For Construction Programs)

Section: FEDERAL ASSISTANCE

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    - [ ] Year

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    - [ ] Month
    - [ ] Year

12. TYPE OF APPLICATION
    - [ ] Construction
    - [ ] Non-profit

13. TYPE OF ASSISTANCE
    - [ ] Federal
    - [ ] Local

14. CONGRESSIONAL DISTRICT
    - [ ] Month
    - [ ] Year

15. EXISTING FEDERAL IDENTIFICATION NUMBER
    - [ ] Month
    - [ ] Year

16. FEDERAL AGENCY TO RECEIVE REQUEST
    - [ ] Month
    - [ ] Year

17. ADMINISTRATIVE OFFICE
    - [ ] Month
    - [ ] Year

18. FEDERAL GRANT IDENTIFICATION
    - [ ] Month
    - [ ] Year

19. REMARKS ADDED
    - [ ] Month
    - [ ] Year

U.S. DEPARTMENT OF AGRICULTURE

APPLICATION FOR FEDERAL ASSISTANCE (For Construction Programs)

Section: FEDERAL ASSISTANCE

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    - [ ] Year

12. TYPE OF APPLICATION
    - [ ] Construction
    - [ ] Non-profit

13. TYPE OF ASSISTANCE
    - [ ] Federal
    - [ ] Local

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    - [ ] Month
    - [ ] Year

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    - [ ] Month
    - [ ] Year

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    - [ ] Month
    - [ ] Year

18. FEDERAL GRANT IDENTIFICATION
    - [ ] Month
    - [ ] Year

19. REMARKS ADDED
    - [ ] Month
    - [ ] Year
### REQUEST FOR ENVIRONMENTAL INFORMATION

**Name of Project:** Alberta Water System  
**Location:**

**Item 1a.** Has a Federal, State, or Local Environmental Impact Statement or Analysis been prepared for this project?  
☐ Yes  ☐ No  ☐ Copy attached as EXHIBIT I-A.

**Item 1b.** If "No," provide the information requested in Instructions as EXHIBIT I.

**Item 2.** The State Historic Preservation Officer (SHOP) has been provided a detailed project description and has been requested to submit comments to the appropriate FmHA Office.  
☐ Yes  ☐ No  
**Date description submitted to SHOP:**

**Item 3.** Are any of the following land uses or environmental resources either to be affected by the proposal or located within or adjacent to the project site(s)? (Check appropriate box for every item of the following checklist).

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Industrial</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Commercial</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>3. Residential</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Agricultural</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Grazing</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Mining, Quarrying</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Forests</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Recreational</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. Transportation</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>10. Parks</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>11. Hospitals</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. Schools</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. Open spaces</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. Aquifer Recharge Area</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. Steep Slopes</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16. Wildlife Refuge</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. Shoreline</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>18. Beaches</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>19. Dunes</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>20. Estuary</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>21. Wetlands</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>22. Floodplain</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>23. Wilderness</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>24. Wild or Scenic River</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>25. Historical, Archeological Sites</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>26. Critical Habitats</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>27. Wildlife</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>28. Air Quality</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>29. Solid Waste Management</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>30. Energy Supplies</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>31. Natural Landmark</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>32. Coastal Barrier Resources System</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Item 4.** Are any facilities under your ownership, lease, or supervision to be utilized in the accomplishment of this project, either listed or under consideration for listing on the Environmental Protection Agency’s List of Violating Facilities?  
☐ Yes  ☐ No

**Signed:**

11-15/88  
(Date)

**President**

(Title)

---

*This information is being collected so that FmHA can comply with the various Federal environmental requirements that affect the processing of your application. The information will be used by FmHA staff in analyzing the potential environmental impacts of your application. Completion of this form is necessary for obtaining a decision.*
This project will furnish additional storage, increase the pressure, and dependability for the Alberta Water System. The project will serve up to 287 additional customers who are presently on private wells. The project will provide better water at a lower expense per customer to approximately 1875 residents. The project consists of a 186,000 gallon ground storage tank, connecting piping and equipment, and rehabilitation, and installation of 75 miles of 2" through 6" water mains. The installation of one 250 gpm well, new electrical service, two 45,000 gallon stand pipes, and one in line booster station are included in the project.
This is a multi-purpose standard form. First, it will be used by applicants as a required facesheet for pre-applications and applications submitted in accordance with OMB Circular A—102. Second, it will be used by Federal agencies to report to clearinghouses on major actions taken on applications reviewed by clearinghouses in accordance with OMB Circular A—95. Third, it will be used by Federal agencies to notify States of grants-in-aid awarded in accordance with Treasury Circular 1082. Fourth, it may be used, on an optional basis, as a notification of intent from applicants to clearinghouses, as an early initial notice that Federal assistance is to be applied for (clearinghouse procedures will govern).

Applicant will complete all items in Section I. If an item is not applicable, write "NA". If additional space is needed, insert an asterisk "*" and use the remarks section on the back of the form. An explanation follows for each item:

1. Mark appropriate box. Pre-application and application guidance is in OMB Circular A—102 and Federal agency program instructions. Notification of intent guidance is in Circular A—95 and procedures from clearinghouse. Applicant will not use "Report of Federal Action" box.

2a. Applicant's own control number, if desired.

2b. Date Section I is prepared.

3a. Number assigned by State clearinghouse, or if deleted by State, by area-wide clearinghouse. All requests to Federal agencies must contain this identifier if the program is covered by Circular A—95 and required by applicable State/area-wide clearinghouse procedures. If in doubt, consult your clearinghouse.

3b. Date applicant notified of clearinghouse identifier.

4a-h. Legal name of applicant/recipient, name of primary organization or unit which will undertake the assistance activity, complete address of applicant, and name and telephone number of person who can provide further information about this request.

5. Employer identification number of applicant as signed by Internal Revenue Service.

6a. Use Catalog of Federal Domestic Assistance number assigned to program under which assistance is requested. If more than one program (e.g., joint-funding) write "multiple" and explain in remarks. If unknown, cite Public Law or U.S. Code.

6b. Program title from Federal Catalog. Abbreviate if necessary.

7. Brief title and appropriate description of project. For notification of intent, continue in remarks section if necessary to convey proper description.

8. Mostly self-explanatory. "City" includes town, township or other municipality.

9. Check the type(s) of assistance requested. The definitions of the terms are:

A. Basic Grant. An original request for Federal funds. This would not include any contribution provided under a supplemental grant.

B. Supplemental Grant. A request to increase a basic grant in certain cases where the eligible applicant cannot satisfy the required matching share of the basic Federal program (e.g., grants awarded by the Appalachian Regional Commission to provide the applicant a matching share).

C. Loan. Self explanatory.

D. Insurance. Self explanatory.

E. Other. Explain on remarks page.

10. Governmental unit where significant and meaningful impact could be observed. List only largest unit or units affected, such as State, county, or city. If entire unit affected, list it rather than subunits.

11. Estimated number of persons directly benefiting from project.

12. Use appropriate code letter. Definitions are:

A. New. A submittal for the first time for a new project.

B. Renewal. An extension for an additional funding/budget period for a project having no projected completion date, but for which Federal support must be renewed each year.

C. Revision. A modification to project nature or scope which will result in funding change (increase or decrease).

D. Continuation. An extension for an additional funding/budget period for a project the agency initially agreed to fund for a definite number of years.

E. Augmentation. A requirement for additional funds for a project previously awarded funds in the same funding/budget period. Project nature and scope unchanged.

13. Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions will be included. If the action is a change in dollar amount of an existing grant (i.e., revision or augmentation), indicate only the amount of the change. For decreases enclose the amount in parentheses. If both basic and supplemental amounts are included, breakout in remarks. For multiple program funding, use totals and show program breakouts in remarks. Item definitions: 13a, amount requested from Federal Government; 13b, amount applicant will contribute; 13c, amount from State, if applicant is not a State; 13d, amount from local government, if applicant is not a local government; 13e, amount from any other sources, explain in remarks.

14a. Self explanatory.

14b. The district(s) where most of actual work will be accomplished. If city-wide or State-wide, write "city-wide" or "State-wide."

15. Complete only for revisions (item 12c), or augmentations (item 12e).

STANDARD FORM 424 PAGE 3 (10-75)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>Approximate date project expected to begin (usually associated with estimated date of availability of funding).</td>
</tr>
<tr>
<td>17.</td>
<td>Estimated number of months to complete project after Federal funds are available.</td>
</tr>
<tr>
<td>18.</td>
<td>Estimated date preapplication/application will be submitted to Federal agency if this project requires clearinghouse review. If review not required, this date would usually be same as date in item 2b.</td>
</tr>
<tr>
<td>19.</td>
<td>Existing Federal identification number if this is not a new request and directly relates to a previous Federal action. Otherwise write “NA”.</td>
</tr>
<tr>
<td>20.</td>
<td>Indicate Federal agency to which this request is addressed. Street address not required, but do use ZIP.</td>
</tr>
<tr>
<td>21.</td>
<td>Check appropriate box as to whether Section IV of form contains remarks and/or additional remarks are attached.</td>
</tr>
</tbody>
</table>

**APPLICANT PROCEDURES FOR SECTION II**

Applicants will always complete items 23a, 23b, and 23c. If clearinghouse review is required, item 22b must be fully completed. An explanation follows for each item:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22a.</td>
<td>List clearinghouses to which submitted and show in appropriate blocks the status of their responses. For more than three clearinghouses, continue in remarks section. All written comments submitted by or through clearinghouses must be attached.</td>
</tr>
<tr>
<td>22b.</td>
<td>Use to identify non-award actions where Federal grant identifier in item 20 is not applicable or will not suffice.</td>
</tr>
<tr>
<td>23a.</td>
<td>Name and title of authorized representative of legal applicant.</td>
</tr>
</tbody>
</table>

**FEDERAL AGENCY PROCEDURES FOR SECTION III**

If applicant-supplied information in Sections I and II needs no updating or adjustment to fit the final Federal action, the Federal agency will complete Section III only. An explanation for each item follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.</td>
<td>Executive department or independent agency having program administration responsibility.</td>
</tr>
<tr>
<td>25.</td>
<td>Self explanatory.</td>
</tr>
<tr>
<td>26.</td>
<td>Primary organizational unit below department level having direct program management responsibility.</td>
</tr>
<tr>
<td>27.</td>
<td>Office directly monitoring the program.</td>
</tr>
<tr>
<td>28.</td>
<td>Use to identify non-award actions where Federal grant identifier in item 20 is not applicable or will not suffice.</td>
</tr>
<tr>
<td>29.</td>
<td>Complete address of administering office shown in item 2b.</td>
</tr>
<tr>
<td>30.</td>
<td>Use to identify award actions where different from Federal application identifier in item 28.</td>
</tr>
<tr>
<td>31.</td>
<td>Self explanatory. Use remarks section to amplify where appropriate.</td>
</tr>
<tr>
<td>32.</td>
<td>Amount to be contributed during the first funding period by each contributor. Value of in-kind contributions will be included. If the action is a change in dollar amount of an existing grant (a revision or augmentation), indicate only the amount of change. For decreases, enclose the amount in parentheses. If both basic and supplemental amounts are included, breakout in remarks. For multiple program funding, use totals and show program breakdown in remarks. Item definitions: 32a. amount awarded by Federal Government; 32b. amount applicant will contribute; 32c. amount from State, if applicant is not a State; 32d. amount from local government if applicant is not a local government; 32e. amount from any other sources, explain in remarks.</td>
</tr>
<tr>
<td>33.</td>
<td>Date action was taken on this request.</td>
</tr>
<tr>
<td>34.</td>
<td>Date funds will become available.</td>
</tr>
<tr>
<td>35.</td>
<td>Name and telephone number of agency person who can provide more information regarding this assistance.</td>
</tr>
<tr>
<td>36.</td>
<td>Date after which funds will no longer be available.</td>
</tr>
<tr>
<td>37.</td>
<td>Check appropriate box as to whether Section IV of form contains Federal remarks and/or attachment of additional remarks.</td>
</tr>
<tr>
<td>38.</td>
<td>For use with A-95 action notices only. Name and telephone of person who can assure that appropriate A-95 action has been taken—if same as person shown in item 35, write &quot;same&quot;. If not applicable, write &quot;NA&quot;.</td>
</tr>
</tbody>
</table>

**Federal Agency Procedures—special considerations**

A. Treasury Circular 3002 compliance. Federal agency will assure proper completion of Sections I and II. If Section I is being completed by Federal agency, all applicable items must be filled in. Addresses of State Information Reception Agencies (SCIRAs) are provided by Treasury Department to each agency. This form replaces SF 240, which will no longer be used.

B. OMB Circular A-95 compliance. Federal agency will assure proper completion of Sections I, II, and III. This form is required for notifying all reviewing clearinghouses of major actions on all programs reviewed under A-95. Addresses of State and area-wide clearinghouses are provided by OMB to each agency. Substantive differences between applicant’s request and/or clearinghouse recommendations, and the project as finally awarded will be explained in A-95 notifications to clearinghouses.

C. Special note. In most, but not all States, the A-95 State clearinghouse and the TC 1082 SCIRA are the same office. In such cases, the A-95 award notice to the State clearinghouse will fulfill the TC 1082 award notice requirement to the State SCIRA. Duplicate notification should be avoided.
U.S. DEPARTMENT OF AGRICULTURE
APPLICATION FOR FEDERAL ASSISTANCE
( FOR CONSTRUCTION PROGRAMS)
PART II
PROJECT APPROVAL INFORMATION
SECTION A

Item 1.
Does this assistance request require State, local, regional, or other priority rating? None of Governing Body
Priority Rating
Yes X No

Item 2.
Does this assistance request require State, or local advisory, educational or health clearances? Name of Agency - Health & Human Resources
Priority Rating
Yes X No (Attach Documentation)

Item 3.
Does this assistance request require clearinghouse review in accordance with OMB Circular A-95? Name of Agency - Board of Health & Human Resources
Priority Rating
Yes X No

Item 4.
Does this assistance request require State, local, regional or other planning approval? Name of Approving Agency
Date
Yes X No

Item 5.
Is the proposed project covered by an approved comprehensive plan? Check one - State Local Regional
Yes X No Location of plan

Item 6.
Will the assistance requested serve a Federal installation? Name of Federal Installation Federal Population benefiting from Project
Yes X No

Item 7.
Will the assistance requested be on Federal land or installation? Name of Federal Land
Location of Federal Land
Percent of Project
Yes X No

Item 8.
Will the assistance requested have an impact or effect on the environment? See instruction for additional information to be provided.
Yes X No

Item 9.
Will the assistance requested cause the displacement of individuals, families, businesses, or farms? Number of:
Individuals
Families
Businesses
Farms
Yes X No

Item 10.
Is there other related assistance on this project previous, pending, or anticipated? See instructions for additional information to be provided.
Yes X No

Item 11.
Is the project in a designated flood hazard area? See instruction for additional information to be provided.
Yes X No
Federal agency requests more information at a later date. Provide supplementary data for all "Yes" answers in the space provided in accordance with the following instructions.

Item 1 — Provide the name of the governing body establishing the priority system and the priority rating assigned to this project.

Item 2 — Provide the name of the agency or board which issued the clearance and attach the documentation of status or approval.

Item 3 — Attach the clearinghouse comments for the application in accordance with the instructions contained in Office of Management and Budget Circular No. A-95. If comments were submitted previously with a preapplication, do not submit them again but any additional comments received from the clearinghouse should be submitted with this application.

Item 4 — Furnish the name of the approving agency and the approval date.

Item 5 — Show whether the approved comprehensive plan is State, local or regional, or if none of these, explain the scope of the plan. Give the location where the approved plan is available for examination and state whether this project is in conformance with the plan.

Item 7 — Show the percentage of the project work that will be conducted on federally owned or leased land. Give the name of the Federal installation and its location.

Item 8 — Briefly describe the possible beneficial and/or harmful impact on the environment because of the proposed project. If an adverse environmental impact is anticipated, explain what action will be taken to minimize the impact. Federal agencies will provide separate instructions if additional data is needed.

Item 9 — State the number of individuals, families, businesses, or farms this project will displace. Federal agencies will provide separate instructions if additional data is needed.

Item 10 — Show the Federal Domestic Assistance Catalog number, the program name, the type of assistance, the status and amount of each project where there is related previous, pending, or anticipated assistance. Use additional sheets, if needed.

Item 11 — Contact the Federal agency concerning the provisions of the Flood Disaster Protection Act of 1973 (P.L. 93-234).
U.S. DEPARTMENT OF AGRICULTURE
APPLICATION FOR FEDERAL ASSISTANCE
( FOR CONSTRUCTION PROGRAMS )
INSTRUCTION
PART II - SECTION B

11. SITES AND IMPROVEMENTS: ______ Not required. X Attached as exhibits
   Applicant intends to acquire the site through:
   ______ Earnest deposit. ______ Registered purchase. ______ Other means (specify)

12. TITLE OR OTHER INTEREST IN THE SITE IS OR WILL BE VESTED IN:
   ______ Applicant. ________ Agency or institution operating the facility. ______ Other (specify)

13. INDICATE WHETHER APPLICANT/OPERATOR HAS:
   ______ Fee simple title. ________ Leasehold interest. X Other (specify) Pending negotiation

14. IF APPLICANT/OPERATOR HAS LEASEHOLD INTEREST, GIVE THE FOLLOWING INFORMATION:
   a. Length of lease or other estate interest ________, and number of years to run ________
   b. Is lease renewable? ________ Yes ________ No
   c. Current appraised value of land $ ________
   d. Annual rental rate $ ________

15. ATTACH AN OPINION FROM ACCEPTABLE TITLE COUNSEL DESCRIBING THE INTEREST APPLICANT/OPERATOR HAS IN THE SITE AND CERTIFYING THAT THE ESTATE OR INTEREST IS LEGAL AND VALID.

16. WHERE APPLICABLE, ATTACH SURVEY, SOIL INVESTIGATION REPORTS AND COPIES OF LAND APPRAISALS.

17. WHERE APPLICABLE, ATTACH CERTIFICATION FROM ARCHITECT ON THE FEASIBILITY OF IMPROVING EXISTING SITE TOPOGRAPHY.

18. ATTACH PLOT PLAN.

19. CONSTRUCTION SCHEDULE ESTIMATES: ______ Not required. ______ Being prepared. ________ Attached as exhibits
   Percentage of completion of drawings and specifications at application date:
   Schematics ______% Preliminary ______% Final ______%

20. TARGET DATES FOR:
   Bid Advertisements ________ January 1990 ________ Contract Award ________ May 1990
   Construction Completion ________ December 1990 ________ Occupancy ________ January 1991

21. DESCRIPTION OF FACILITY: ______ Not required. X Attached as exhibits
   Drawings - Attach any drawings which will assist in describing the project.
   Specifications - Attach copies of completed outline specifications.
   (If drawings and specifications have not been fully completed, please attach copies or working drawings that have been completed.)

NOTE: ITEMS ON THIS SHEET ARE SELF-EXPLANATORY, THEREFORE, NO INSTRUCTIONS ARE PROVIDED.
### SECTION B - CALCULATION OF FEDERAL GRANT

<table>
<thead>
<tr>
<th>Cost Classification</th>
<th>Use only for estimates</th>
<th>Total Amount Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latest Approved Amount</td>
<td>Adjustment (±)</td>
</tr>
<tr>
<td>1. Administration expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Preliminary expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Legal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Architectural engineering basic fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Other architectural engineering fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Project inspection fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Land development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Relocation Expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Relocation payments to individuals and businesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Demolish and removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Construction and project improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Miscellaneous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Total (Lines 1 through 13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Estimated Income (if applicable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Net Project Amount (Line 14 minus 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Less: Ineligible Exclusions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Add: Contingencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Total Project Amount (Excluding Rehabilitation Grants)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Federal Share Requested (Line 19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Add Rehabilitation Grants Requested (100 Percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Total Federal grant Requested (Lines 20 &amp; 21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Grants plus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Other shares</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Total Project (Lines 22, 23 &amp; 24)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INSTRUCTIONS

PART III

Section A. General

1. Show the Federal Domestic Assistance Catalog Number from which the assistance is requested. When more than one program or Catalog Number is involved and the amount cannot be distributed to the Federal grant program or catalog number on an overall percentage basis, prepare a separate set of Part III forms for each program or Catalog Number. However, show the total amounts for all programs in Section B of the basic application form.

2. Show the functional or other categorical breakouts, if required by the Federal grantor agency. Prepare a separate set of Part III forms for each category.

Section B. Calculation of Federal Grant

When applying for a new grant, use the Total Amount Column only. When requesting revisions of previously awarded amounts, use all columns.

Line 1 — Enter amounts needed for administration expenses including such items as travel, legal fees, rental of vehicles and any other expense items expected to be incurred to administer the grant. Include the amount of interest expense when authorized by program legislation and also show this amount under Section E Remarks.

Line 2 — Enter amounts pertaining to the work of locating and designing, making surveys and maps, sinking test holes, and all other work required prior to actual construction.

Line 3 — Enter amounts directly associated with the acquisition of land, existing structures, and related right-of-way.

Line 4 — Enter basic fees for architectural engineering services.

Line 5 — Enter amounts for other architectural engineering services, such as surveys, tests, and borings.

Line 6 — Enter fees for inspection and audit of construction and related programs.

Line 7 — Enter amounts associated with the development of land where the primary purpose of the grant is land improvement. Site work normally associated with major construction should be excluded from this category as shown on Line 11.

Line 8 — Enter the dollar amounts needed to provide relocation advisory assistance, and the net amounts for replacement (last resort) housing. Do not include relocation administration expenses on this Line; include them on Line 1.

Line 9 — Enter the estimated amount of relocation payments to be made to displaced persons, businesses concerns and non-profit organizations for moving expenses and replacement housing.

Line 10 — Enter the gross salaries and wages of employees of the grantee who will be directly engaged in performing demolition or removal of structures from developed land. This line should show also the cost of demolition or removal of improvements on developed land under a third party contract. Reduce the costs on this line by the amount of expected proceeds from the sale of salvage, if so instructed by the Federal grantor agency. Otherwise, show the proceeds on Line 15.

Line 11 — Enter amounts for the actual construction of, addition to, or restoration of a facility. Also include in this category the amounts of project improvements such as sewers, streets, landscaping and lighting.

Line 12 — Enter amounts for equipment both fixed and movable exclusive of equipment used for construction. For example, include amounts for permanently attached laboratory tables, built-in audio visual systems, movable desks, chairs, and laboratory equipment.

Line 13 — Enter amounts for items not specifically mentioned above.

Line 14 — Enter the sum of Lines 1-13.

Line 15 — Enter the estimated amount of program income that will be earned during the grant period and applied to the program.

Line 16 — Enter the difference between the amount on Line 14 and the estimated income shown on Line 15.

Line 17 — Enter amounts for those items which are part of the project but not subject to Federal participation (See Section C, Line 26g, Column (1)).

Line 18 — Enter the estimated amount for contingencies. Compute this amount as follows: Subtract from the net project amount shown on Line 16 the ineligible project exclusions shown on Line 17 and the amount which is excluded from the contingency provisions shown in Section C, Line 26g, Column (2). Multiply the computed amount by the percentage factor allowed by the grantor agency in accordance with the Federal program guidance. For those grants which provide for a fixed dollar allowance in lieu of a percentage allowance, enter the dollar amount of this allowance.

Line 19 — Show the total amount of Lines 16, 17, and 18.

Line 20 — Show the amount of Federal funds requested exclusive of funds for rehabilitation purposes.

Line 21 — Enter the estimated amounts needed for rehabilitation expense if rehabilitation grants to individuals are made for which grantees are reimbursed 100 percent by the Federal grantor agency in accordance with program legislation. If the grantee shares in part of this expense show the total amount on Line 13 instead of on Line 21 and explain in Section E.

Line 22 — Show the total amount of the Federal grant requested.

Line 23 — Show the amount from Section D, Line 27h.

Line 24 — Show the amount from Section D, Line 28c.

Line 25 — Self-explanatory.
**U.S. DEPARTMENT OF AGRICULTURE**

**APPLICATION FOR FEDERAL ASSISTANCE (FOR CONSTRUCTION PROGRAMS)**

**SECTION C - EXCLUSIONS**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Ineligible for Participation (1)</th>
<th>Excluded from Contingency Provision (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION D - PROPOSED METHOD OF FINANCING NON-FEDERAL SHARE**

<table>
<thead>
<tr>
<th>27. Grantee Share</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Securities</td>
<td>$</td>
</tr>
<tr>
<td>b. Mortgages</td>
<td>$</td>
</tr>
<tr>
<td>c. Appropriations (By Applicant)</td>
<td>$</td>
</tr>
<tr>
<td>d. Bonds</td>
<td>$</td>
</tr>
<tr>
<td>e. Tax Levies</td>
<td>$</td>
</tr>
<tr>
<td>f. Non Cash</td>
<td>$</td>
</tr>
<tr>
<td>g. Other (Explain)</td>
<td>$</td>
</tr>
<tr>
<td>h. TOTAL - Grantee share</td>
<td>$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>28. Other Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. State</td>
</tr>
<tr>
<td>b. Other</td>
</tr>
<tr>
<td>c. Total Other Shares</td>
</tr>
<tr>
<td>29. TOTAL</td>
</tr>
</tbody>
</table>

**SECTION E - REMARKS**

**PART IV PROGRAM NARRATIVE (Attach - See Instructions)**

FORM AD-434 (REVISED 6-78) PAGE 10
PART III:

Section C. Exclusions

Line 26 a-g Identify and list those costs in Column (1) which are part of the project cost but are not subject to Federal participation because of program legislation or Federal grantor agency instructions. The total amount on Line g should agree with the amount shown on Line 17 of Section B. Show in Column (2) those project costs that are subject to Federal participation but are not eligible for inclusion in the amount used to compute contingency amounts as provided in the Federal grantor agency instructions.

Section D. Proposed Method of Financing Non-Federal Share

Line 27 a-g Show the source of the grantee's share. If cash is not immediately available, specify the actions completed to date and those actions remaining to make cash available under Section E Remarks. Indicate also the period of time that will be required after execution of the grant agreement to obtain the funds. If there is a noncash contribution, explain what this contribution will consist of.

Line 27 h - Show the total of Lines 27 a-g. This amount must equal the amount shown in Section B, Line 23.

Line 28 a - Show the amount that will be contributed by a State or state agency, only if the applicant is not a State or state agency. If there is a noncash contribution, explain what the contribution will consist of under Section E Remarks.

Line 28 b - Show the amount that will be contributed from other sources. If there is a noncash contribution, explain what this contribution will consist of under Section E Remarks.

Line 28 c - Show the total of Lines 28a and 28b. This amount must be the same as the amount shown in Section B, Line 24.

Line 29 - Enter the totals of Line 27h and Line 28c.

Section E. Other Remarks

Make any remarks pertinent to the project and provide any other information required by these instructions or the grantor agency. Attach additional sheets, if necessary.
Prepare the program narrative statement in accordance with the following instructions for all new grant programs. Requests for supplemental assistance should be responsive to Item 5b only. Requests for continuation or refunding or other changes of an approved project should be responsive to Item 5c only.

1. OBJECTIVES AND NEED FOR THIS ASSISTANCE.
Pinpoint any relevant physical, economic, social, financial, institutional, or other problems requiring a solution. Demonstrate the need for assistance and state the principal and subordinate objectives of the project. Supporting documentation or other testimonies from concerned interests other than the applicant may be used. Any relevant data based on planning studies should be included or footnoted.

2. RESULTS OR BENEFITS EXPECTED.
Identify results and benefits to be derived. For example, include a description of who will occupy the facility and show how the facility will be used. For land acquisition or development projects, explain how the project will benefit the public.

3. APPROACH.
   a. Outline a plan of action pertaining to the scope and detail of how the proposed work will be accomplished for each assistance program. Cite factors which might accelerate or decelerate the work and your reason for taking this approach as opposed to others. Describe any unusual features of the project such as design or technological innovations, reductions in cost or time, or extraordinary social and community involvements.
   b. Provide for each assistance program monthly or quarterly quantitative projections of the accomplishments to be achieved, if possible. When accomplishments cannot be quantified, list the activities in chronological order to show the schedule of accomplishments and their target dates.
   c. Identify the kinds of data to be collected and maintained, and discuss the criteria to be used to evaluate the results and success of the project. Explain the methodology that will be used to determine if the needs identified and discussed are being met and if the results and benefits identified in Item 2 are being achieved.
   d. List each organization, cooperator, consultant, or other key individuals who will work on the project along with a short description of the nature of their effort or contribution.

4. GEOGRAPHIC LOCATION.
Give a precise location of the project and area to be served by the proposed project. Maps or other graphic aids may be attached.

5. IF APPLICABLE, PROVIDE THE FOLLOWING INFORMATION:
   a. Describe the relationship between this project and other work planned, anticipated, or underway under the Federal Assistance listed under Part II, Section A, Item 10.
   b. Explain the reason for all requests for supplemental assistance and justify the need for additional funding.
   c. Discuss accomplishments to date and list in chronological order a schedule of accomplishments, progress or milestones anticipated with the new funding request. If there have been significant changes in the project objectives, location, approach or time delays, explain and justify. For other requests for changes or amendments, explain the reason for the change(s). If the scope or objectives have changed or an extension of time is necessary, explain the circumstances and justify. If the total budget has been exceeded or if individual budget items have changed more than the prescribed limits contained in Attachment K, Office of Management and Budget Circular No. A-102, explain and justify the change and its effect on the project.
PART V
ASSURANCES

The applicant hereby assures and certifies that he will comply with the regulations, policies, guidelines, and requirements including Office of Management and Budget Circular Nos. A-11, OMB Circular, A-95, A-102, as they relate to the application, acceptance and use of Federal funds for this federally-assisted project. Also, the applicant gives assurance and verifies with respect to the grant that:

1. It possesses legal authority to apply for the grant, and to finance and construct the proposed facilities; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant’s governing body, authorizing the hiring of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

2. It will comply with the provisions of Executive Order 11296, relating to evaluation of flood hazards, and Executive Order 11298, relating to the prevention, control, and abatement of water pollution.

3. It will have sufficient funds available to meet the minimum standards for construction projects. Sufficient funds will be available when construction is completed to assure effective operation and maintenance of the facility for the purposes constructed.

4. It will obtain approval by the appropriate Federal agency of the final working drawings and specifications before the project is advertised or placed on the market for bidding, that it will construct the project, or cause it to be constructed, to final completion in accordance with the application and approved plans and specifications, that it will submit to the appropriate Federal agency for prior approval changes that alter the cost of the project, use of space, or functional layout, that it will not enter into a construction contract(s) for the project or undertake other activities until the conditions of the construction grant and grant(s) have been met.

5. It will provide and maintain competent and adequate architectural engineering supervision and inspection of the construction site to ensure that the completed work conforms with the approved plans and specifications, that it will furnish progress reports and such other information as the Federal grantor agency may require.

6. It will operate and maintain the facility in accordance with the minimum standards as may be required or prescribed by the applicable Federal, State and local agencies for the maintenance and operation of such facilities.

7. It will give the sponsoring agency and the Comptroller General through any authorized representative access to and the right to examine all records, books, papers, or documents related to the grant.

8. It will require the facility to be designed to comply with the “American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped,” Number A117.1-1961, as modified (41 CFR 101-17.703). The applicant will be responsible for conducting inspections to ensure compliance with these specifications by the contractor.

9. It will cause work on the project to be commenced with in a reasonable time after receipt of notification from the approving Federal agency that funds have been approved and that the project will be prosecuted to completion with reasonable diligence.

10. It will not dispose of or encumber its title or other interests in the site and facilities during the period of Federal interest or while the Government holds bonds, whether as the holder.

11. It will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-353) and in accordance with Title VI of that Act, no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity for which the applicant receives Federal financial assistance and will immediately take any measures necessary to effectuate this agreement. If any real property or structure therein is purchased or improved with the aid of Federal financial assistance extended to the Applicant, the assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits.

12. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

13. It will comply with the requirements of Title II and Title III of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced as a result of Federal and federally assisted programs.

14. It will comply with all requirements imposed by the Federal sponsoring agency concerning special requirements of law, program requirements, and other administrative requirements approved in accordance with Office of Management and Budget Circular No. A-102.

15. It will comply with the provisions of the March Act which limit the political activity of employees.

16. It will comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act, as they apply to hospital and educational institution employees of State and local governments.

17. It will ensure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency’s (EPA) list ofViolating Facilities and that it will notify the Federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be utilized in the project is under consideration for listing by the EPA.

18. It will comply with the flood insurance purchase requirements of Section 1011(a) of the Flood Disaster Assistance Act of 1973 (P.L. 93-231) as amended.

FORM AD-624 (REVISED 6-78) PAGE 13
Protection Act of 1973, Public Law 93-394, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires, on and after March 2, 1975, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards. The phrase "Federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance.

19. It will assist the Federal grantor agency in its compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470), Executive Order 11593, and the Archeological and Historic Preservation Act of 1968 (16 U.S.C. 460f-1 et seq.) by (a) consulting with the State Historic Preservation Officer on the conduct of investigations, as necessary, to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Part 600.4) by the activity, and notifying the Federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the Federal grantor agency to avoid or mitigate adverse effects upon such properties.

20. It will comply with Section 504 of the Rehabilitation Act of 1973 as amended (29 USC 794) and all regulations, guidelines and interpretations issued pursuant thereto. Section 504 provides that no otherwise qualified handicapped individual shall solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or subject to discrimination under any program or activity receiving Federal financial assistance.
**USDA-FmHA**

**Form FmHA 1940-20 (Rev. 11-14-83)**

**REQUEST FOR ENVIRONMENTAL INFORMATION**

**Name of Project:** Alberta Water System

**Location**

**Position 3**

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**Item 4.** Are any facilities under your ownership, lease, or supervision to be utilized in the accomplishment of this project, either listed or under consideration for listing on the Environmental Protection Agency's List of Violating Facilities? ☐ Yes ☐ No

**Signed:**

**Date:** 11-15/88

**President**

---

This information is being collected so that FmHA can comply with the various Federal environmental requirements that affect the processing of your application. The information will be verified by FmHA staff and used in analyzing the potential environmental impacts of your application. Completion of this form is necessary for obtaining a loan.
INSTRUCTIONS FOR PREPARING FORM FmHA 1940-20

Federal agencies are required by law to independently assess the expected environmental impacts associated with proposed Federal actions. It is extremely important that the information provided be in sufficient detail to permit FmHA to perform its evaluation. Failure to provide sufficient data will delay agency review and a decision on the processing of your application.

This information request is designed to obtain an understanding of the area's present environmental condition and the project's elements that will affect the environment. Should you believe that an item does not need to be addressed for your project, consult with the FmHA office from which you received this Form before responding. In all cases when it is believed that an item is not applicable, explain the reasons for this belief.

It is important to understand the comprehensive nature of the information requested. Information must be provided for a) the site(s) where the project facilities will be constructed and the surrounding areas to be directly and indirectly affected by its operation and b) the areas affected by any primary beneficiaries of the project. The amount of detail should be commensurate with the complexity and size of the project, and the magnitude of the expected impact. Some examples:

A small community center project may not require detailed information on air emissions, meteorological conditions and solid waste management.

A water resource, industrial development, or housing development project will require detailed information.

Item 1a - Compare the Environmental Impact Statement or Analysis that was previously prepared with the information requested in the instructions for Item 1b below to be sure that every point in the information request is covered in the Environmental Impact Statement or Analysis. If any of the requested information is not covered, attach to the Environmental Impact Statement or Analysis a supplemental document that corrects any deficiencies or omissions.

Item 1b - Provide responses to the following items in the order listed and attach as EXHIBIT I. In order to understand the full scope of the land uses and environmental factors that need to be considered in responding to these items, it may be helpful to complete Item 3 of the Form before completing these narrative responses. If your application is for a project that FmHA has classified as a Class I action, complete only parts (1), (2), (13), (15), (16), and (17) of this Item. The FmHA office from which you received this Form can tell you if your application falls within the Class I category.

(1) Primary Beneficiaries

Identify any existing businesses or major developments that will benefit from the proposal, and those which will expand or locate in the area because of the project. These businesses or major developments hereafter will be referred to as primary beneficiaries.
(2) Area Description

(a) Describe the size, terrain, and present land uses as well as the adjacent land uses of the areas to be affected. These areas include the site(s) of construction or project activities, adjacent areas, and areas affected by the primary beneficiaries.

(b) For each box checked "Yes" in item 3, describe the nature of the effect on the resource. If one or more of boxes 17 through 22 is checked "Yes" or "Unknown," contact FmHA for instructions relating to the requirements imposed by the Floodplain Management and Wetland Protection Executive Orders.

(c) Attach as Exhibit II the following: 1) a U.S. Geological Survey "15 minute" ("7 1/2 minute" if available) topographic map which clearly delineates the area and the location of the project elements; 2) the Federal Emergency Management Administration's floodplain map(s) for the project area; 3) site photos; 4) if completed, a standard soil survey for the project area; and 5) if available, an aerial photograph of the site. If a floodplain map is not available, contact FmHA for additional instructions relating to the requirements imposed by the Floodplain Management Executive Order.

(3) Air Quality

(a) Provide available air quality data from the monitoring station(s) either within the project area or, if none exist, nearest the project area.

(b) Indicate the types and quantities of air emissions to be produced by the project facilities and its primary beneficiaries. If odors will occur, indicate who will be affected.

(c) Indicate if topographical or meteorological conditions hinder the dispersal of air emissions.

(d) Indicate the measures to be taken to control air emissions.

(4) Water Quality

(a) Provide available data on the water quality of surface or underground water in or near the project area.

(b) Indicate the source, quality, and available supply of raw water and the amount of water which the project is designed to utilize.

(c) Describe all of the effluents or discharges associated with the project facilities and its primary beneficiaries. Indicate the expected composition and quantities of these discharges prior to any treatment processes that they undergo and also prior to their release into the environment.
(d) Describe any treatment systems which will be used for these effluents and indicate their capacities and their adequacy in terms of the degree and type of treatment provided. Indicate all discharges which will not be treated. Describe the receiving waters and their uses (e.g., recreational) for any sources of treated and untreated discharge.

(e) If the treatment systems are or will be inadequate or overloaded, describe the steps being taken for necessary improvements and their completion dates.

(f) Describe how surface runoff will be handled if not discussed in (d) above.

(5) Solid Waste Management

(a) Indicate the types and quantities of solid wastes to be produced by the project facilities and its primary beneficiaries.

(b) Describe the methods for disposing of these solid wastes plus the useful life of such methods.

(c) Indicate if recycling or resource recovery programs are or will be used.

(6) Transportation

(a) Briefly describe the available transportation facilities serving the project area.

(b) Describe any new transportation patterns which will arise because of the project.

(c) Indicate if any land uses, such as residential, hospitals, schools or recreational, will be affected by these new patterns.

(d) Indicate if any existing capacities of these transportation facilities will be exceeded. If so, indicate the increased loads which the project will place upon these facilities, particularly in terms of car and truck traffic.

(7) Noise

(a) Indicate the major sources of noise associated with the project facilities and its primary beneficiaries.

(b) Indicate the land uses to be affected by this noise.

(8) Historic/Archeological Properties

(a) Identify any known historic/archeological resources within the project area that are either listed on the National Register of Historic Places or considered to be of local and state significance and perhaps eligible for listing in the National Register.

(b) Attach as EXHIBIT III any historical/archeological survey that has been conducted for the project area.
(9) Wildlife and Endangered Species
   (a) Identify any known wildlife resources located in the project area or its immediate vicinity.
   (b) Indicate whether to your knowledge any endangered or threatened species or critical habitat have been identified in the project area or its immediate vicinity.

(10) Energy
   (a) Describe the energy supplies available to the project facilities and the primary beneficiaries.
   (b) Indicate what portion of the remaining capacities of these supplies will be utilized.

(11) Construction
    Describe the methods which will be employed to reduce adverse impacts from construction, such as noise, soil erosion and siltation.

(12) Toxic Substances
    (a) Describe any toxic, hazardous, or radioactive substances which will be utilized or produced by the project facilities and its primary beneficiaries.
    (b) Describe the manner in which these substances will be stored, used, and disposed.

(13) Public Reaction
    (a) Describe any objections which have been made to the project.
    (b) If a public hearing has been held, attach a copy of the transcript as EXHIBIT IV. If not, certify that a hearing was not held.
    (c) Indicate any other evidence of the community's awareness of the project such as through newspaper articles or public notification.

(14) Alternatives to the Proposed Project
    Provide a description of any of the following types of alternatives which were considered:
    (a) Alternative locations.
    (b) Alternative designs.
    (c) Alternative projects having similar benefits.

(15) Mitigation Measures
    Describe any measures which will be taken to avoid or mitigate any adverse environmental impacts associated with the project.
(16) Permits

(a) Identify any permits of an environmental nature which are needed for the project.

(b) Indicate the status of obtaining each such permit and attach as EXHIBIT V any that have been received.

(17) Other Federal Actions

Identify other federal programs or actions which are either related to this project or located in the same geographical area and for which you are filing an application, have recently received approval, or have in the planning stages.

Item 2 - All applicants are required to provide the State Historic Preservation Officer (SHPO) with (a) a narrative description of the project's elements and its location, (b) a map of the area surrounding the project which identifies the project site, adjacent streets and other identifiable objects, (c) line drawings or sketches of the project and (d) photographs of the affected properties if building demolition or renovation is involved. This material must be submitted to the SHPO no later than submission of this Form to FmHA. Additionally, the SHPO must be requested to submit comments on the proposed project to the FmHA office processing your application.

Item 3 - Self-explanatory.

Item 4 - Self-explanatory.
EXHIBIT II OF EXHIBIT C

II-1. U.S. Geological Survey Map
II-2. FEMA Flood Plain Map
II-3. Site Photos
EXHIBIT I
TO
EXHIBIT C OF APPENDIX
FORM FHWA 1940-20

(1) Primary Beneficiaries: The existing and proposed customers of the Alberta Water System located from Kepler Lake in Bienville Parish down to south of Ashland in Natchitoches Parish bounded on the west by Black Lake Creek.

(2) Area Description:
(a) The system is in the northwestern portion of Louisiana. The topography is rolling hills to hilly.
(b) Nature of the Effect on Resources:
1) Industrial—There is no anticipated industrial increase.
2) Commercial, 3) Residential, and 12) School—safer and more cost effective and more dependable water supply capabilities are proposed.
(c) Attached as Exhibit II of Exhibit C are the following:
II-1. U.S. Geological Survey Map
II-2. FEMA Flood plain map
II-3. Site Photos
A soil survey has not been completed at this time and an aerial photograph is not available.

(3) Air Quality:
(a) In a phone conversation with David Simmons at the Shreveport Office of the Dept. of Environmental Quality, 318-226-7476, our office was informed that the ambient air quality is good based on results of monitors in Homer and Shreveport.
(b) There will not be any air emissions produced by the project or any produced by the primary beneficiaries due to the project. No odors will occur due to the project.
(c) Topography and meteorology do not hinder the dispersal of air emissions.

(4) Water Quality:
(a) Water quality samples are available from the parish sanitarian as per the monthly report.
(b) The proposed system will utilize water from an aquifer which is good and the supply is adequate to supply the proposed system. Existing iron removal filters will be abandoned as part of the project which will eliminate present effluents and discharges.
(c) The proposed project will not have any effluent discharges.

(d) Not applicable.

(e) Not applicable.

(f) Any surface runoff of rainwater will not be diverted as a result of the proposed project.

(5) **Solid Waste Management:**

(a) There will be no solid waste produced by this project.

(b) Not applicable.

(c) Not applicable.

(6) **Transportation:**

(a) The proposed site is located on a parish asphalt road. The site is accessible for operation and maintenance checks and suitable for the project.

(b) There should not be any new traffic patterns which will arise because of the project.

(c) There should not be any land uses affected by the project.

(d) Traffic loads and volumes should not be affected by the project.

(7) **Noise:**

(a) The proposed well and booster pump station will add the noise of electric motors to the environment. The proposed sites are not located immediately adjacent to residences or businesses and therefore the minimal noise from these motors operating should not disturb the population. The other improvements will not create any noise during operation.

(b) No land uses should be affected by noise for the project.

(8) **Historic/Archaeological Properties:**

(a) There are not any historic/archaeological resources located within the project area.

(b) Attached as Exhibit IV of Exhibit C is the State of Louisiana D.U.C.A. Office of State Clearinghouse Letter of Approval.

(9) **Wildlife and Endangered Species:**

(a) The project area is located in an area where wildlife is limited to typical wildlife for North Louisiana woods. All of the proposed improvements are located in areas of low population as compared to the population of municipalities.
(b) To my knowledge, no endangered or threatened species or critical habitat are located in the project area or its immediate vicinity.

(10) Energy:

(a) The proposed water well, rehabilitated booster pump station and new booster pump station will all be supplied by electrical power.

(b) The project will utilize only electrical power needed to operate the water wells, booster pumps and accessories.

(11) Construction:

The project shall be constructed in a workmanship manner to avoid creating any adverse effects such as excessive noise, soil erosion, dust and siltation.

(12) Toxic Substances:

(a) There will not be toxic, hazardous, or radioactive substances utilized or produced by the project and its primary beneficiaries.

(b) Not applicable.

(13) Public Reaction:

(a) There have not been objections to this project concerning the environment, aesthetic, or other impacts of the project on the area.

(b) A public hearing has not been held at this time.

(c) The scope of the project will be published in the newspaper upon approval by the Preliminary Engineering Report by FmHA.

(14) Alternatives to the Proposed Project:

(a) Alternative sites are available for the two proposed standpipes, and booster pump station. The proposed well and ground storage tank will be located at the site of an existing well and ground storage tank. The range of location of these proposed improvements are shown on the drawings.

(b) Alternative Design-No alternative design has been considered at this time.

(c) The existing system provides fairly similar benefits to the proposed system. However, the proposed system will eliminate discharges of the existing filter system due to not utilizing the existing wells which require treatment. This proposed system is the most apparent cost effective method of construction for the project.
(15) Mitigation Measures:

The contractor will be required to perform the proposed construction in a workmanlike manner in accordance with the specifications and will adhere to environmentally sound construction techniques as per the instructions of the Farmers Home Administration and the Engineer.

(16) Permits:

No environmental permits are required for this type of project.

(17) Other Federal Actions:

No other Federal actions are proposed as part of the water system.
SPECIFICATIONS AND CONTRACT DOCUMENTS
FOR CONSTRUCTION OF
WATER WELL #R-1210
FOR
CITY OF ALEXANDRIA, LOUISIANA
ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Council of the City of Alexandria up to 6:00 P.M. CDST on the 21st day of April, 1982, for CONSTRUCTION OF WATER WELL #R-1210 for the Water Department.

Full information, together with specifications, are on file at the office of Inc., Consulting Engineers, P. O. Drawer Louisiana, where they may be obtained by prospective bidders.

Contract will be awarded to the lowest bidder who bids according to specifications with the right reserved by the City to reject any and all bids and to waive informalities.

Preference is hereby given to materials, supplies and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside of the State.

Bids must be filed prior to the above hour and date with the undersigned at City Hall at which time all bids will be opened by the City Council in the Council Chambers.

/s/ Jon W. Grafton  
City Clerk

PLEASE PUBLISH THREE (3) TIMES  
4/2, 4/6, 4/8
NOTICE TO BIDDERS

CITY OF ALEXANDRIA

(OWNER)

CITY HALL, P. O. BOX 71
ALEXANDRIA, LOUISIANA 71301

Sealed bids for the construction of WATER WELL #R-1210 for the City of Alexandria, Rapides Parish, Louisiana, will be received by the City of Alexandria, at the office of the City Clerk, John Grafton, City Hall, until 6:00 p.m., CDST, April 27, 198., and then at Council Chambers publicly opened and read aloud.

The Instruction to Bidders, Form of Bid, Form of Contract, Plans, Specifications, and Forms of Bid Bond, Performance and Payment Bond, and other contract documents may be examined and obtained at the office of Consulting Engineers, P. O. Drawer Louisiana 71301. Cost per contract set will be $30.00, non-refundable.

Bid proposal is to be accompanied by a bid bond in the amount of five (5%) per cent of the base bid. No bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof.

Contract will be awarded to the lowest responsible bidder who bids according to requirements with the right reserved by the City to reject any or all bids, and to waive informalities including technicalities in specifications which preclude competition.
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BIDDER'S PROPOSAL

TO: ____________

FOR: ________ CONSTRUCTION OF WATER WELL # R-1210

PLACE: COUNCIL CHAMBERS, CITY HALL, CITY OF ALEXANDRIA

DATE: ________

1. In compliance with your Advertisement for Bids dated ________, subject to all the conditions thereof, the undersigned ____________________________ (Business Name of Bidder) (complete one) a corporation, incorporated in the State of ____________, a partnership, consisting of _______________________________________________ _____________________________________________________________________________, an individual, doing business as ____________________________, State of ____________, hereby proposes to furnish and do everything required by the contracts to which this refers for the construction of all structures listed at the unit prices shown for each bid item on the following Bid Schedule. (The Bid Schedule attached lists the various divisions of construction contemplated in the Plans and Specifications, together with an estimate of the units of each. With these units as the basis, the bidder will extend each item, using the cost he inserts in the unit column. Any total cost found inconsistent with the unit cost when the bids are examined will be deemed in error and corrected to agree with the unit cost which shall be considered correct).

2. The undersigned bidder does hereby declare and stipulate that this proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that it is made in pursuance of and subject to all the terms and conditions of the Invitation for Bids, the Construction Contract, the Detailed Specifications, and the Plans pertaining to the work to be done, all of which have been examined by the undersigned.

3. Accompanying this proposal is a certified check or standard bid bond in the sum of ____________________________ Dollars ($_______) in accordance with the Notice and Instructions to Bidders.

4. The undersigned bidders agrees to execute the contract for the amount of the total of this bid within 10 calendar days from the date when the written Notice of the Award of the contract is delivered to him at the address given on this proposal. The name and address of the corporate surety with which the bidder proposes to furnish the specified performance and payment bond is as follows:

______________________________
CITY OF ALEXANDRIA
CONSTRUCTION OF WATER WELL # R-1210
BID SCHEDULE

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<th>DESCRIPTION OF ITEM</th>
<th>UNIT PRICE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>W-223-4.1</td>
<td>1 Each</td>
<td>Pumping Equipment 1000 GPM @ 485' TDH 380 L.F. 8&quot; x 1-11/16&quot; Column &amp; Shaft, 200 Hp Motor, Motor Starter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>W</td>
<td>Lump Sum</td>
<td>General Site Work for Well #R-1210, Discharge Assembly, Electrical Work, Telemetry Modifications, Chain Link Fence, Etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>W-200-5.5</td>
<td>1 Each</td>
<td>24&quot; x 10&quot; Tapping Sleeve &amp; Tapping Valve w/Box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>W-200-5.2</td>
<td>55 L.F.</td>
<td>10&quot; Class 50 M.J. Ductile Iron Water Main</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Bidder's Proposal for: CONSTRUCTION OF WATER WELL # R-1210, CITY OF ALEXANDRIA

5. Bidder acknowledges receipt of the following addenda:

NONE

6. Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project in 120 consecutive calendar days. Bidder agrees to pay as liquidated damages, the sum of $50.00 for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

7. All the various phases of work enumerated in the Detailed Specifications with their individual jobs and overhead, whether specifically mentioned, included by implication or appurtenant thereto, are to be performed by the Contractor under one of the items listed in the Bid Schedule, irrespective of whether it is named in said list.

8. Payment for work performed will be in accordance with the Bid Schedule, subject to changes as provided for in the Construction Contract.

(Contractor)

By

(Title)

(Business Address)

Contractor's License No. ________________

State of ____________________________
Know all Men by These Presents,

That we,

____________________

of __________________________ (hereinafter called the Principal), as Principal, and __________________________ (hereinafter called the Surety), as Surety are held and firmly bound unto __________________________

____________________

(thereinafter called the Obligee) in the penal sum of __________________________

____________________

FIVE PER CENT OF AMOUNT BID (5%) __________________________ DOLLARS

for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED and SEALED this ______ day of ______ 1982

THE CONDITION OF THIS OBLIGATION IS SUCH That, whereas the Principal has submitted or is about to submit a proposal to the Obligee on a contract for __________________________

____________________

Water Well Number R-1210 and appurtenances.

____________________

NOW, THEREFORE, if the said contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the contract in writing and give bond with surety acceptable to the Obligee, for the faithful performance of the said contract, then this obligation shall be void; otherwise to remain in full force and effect.

____________________

(L. S.)
The Trinity Companies

Dallas, Texas 75201

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That TRINITY UNIVERSAL INSURANCE COMPANY and SECURITY NATIONAL INSURANCE COMPANY, each a Texas Corporation and TRINITY UNIVERSAL INSURANCE COMPANY OF KANSAS, INC., a Kansas Corporation do hereby appoint

Lake Charles, LA

its true and lawful Attorney-in-Fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

EXCEPT NO AUTHORITY IS GRANTED FOR:

1. Open Penalty bonds.
2. Bonds where Attorney(s)-in-Fact appear as a party at interest.

IN WITNESS WHEREOF, TRINITY UNIVERSAL INSURANCE COMPANY, SECURITY NATIONAL INSURANCE COMPANY and TRINITY UNIVERSAL INSURANCE COMPANY OF KANSAS, INC., have each executed and attested these presents

18th day of ____________ ____________ 19__

______________________________________ • ______________ • __________________________________

AUTHORITY FOR POWER OF ATTORNEY

That TRINITY UNIVERSAL INSURANCE COMPANY and SECURITY NATIONAL INSURANCE COMPANY, each a Texas Corporation and TRINITY UNIVERSAL INSURANCE COMPANY OF KANSAS, INC., a Kansas Corporation, in pursuance of authority granted by that certain resolution adopted by their respective Board of Directors on the 1st day of March, 1976 and of which the following is a true, full, and complete copy:

"RESOLVED, That the President, any Vice-President, or any Secretary of each of these Companies be and they are hereby authorized and empowered to make, execute, and deliver in behalf of all these Companies unto such person or persons residing within the United States of America, as they may select, its Power of Attorney constituting and appointing each such person its Attorney-in-Fact, with full power and authority to make, execute and deliver, for it, in its name and in its behalf, as surety, any particular bond or undertaking that may be required in the specified territory, under such limitations and restrictions, both as to nature of such bonds or undertakings and as to limits of liability to be undertaken by these Companies, as said Officers may deem proper, the nature of such bonds or undertakings and the limits of liability to which such Powers of Attorney may be restricted, to be in each instance specified in such Power of Attorney.

RESOLVED, That any and all Attorneys-in-Fact and Officers of the Companies, including Assistant Secretaries, whether or not the Secretary is absent, be and are hereby authorized and empowered to certify or verify copies of the By-Laws of these Companies as well as any resolution of the Directors, having to do with the execution of bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, or with regard to the powers of any of the officers of these Companies or of Attorneys-in-Fact.

RESOLVED, That the signature of any of the persons described in the foregoing resolution may be facsimile signatures as fixed or reproduced by any form of typing, printing, stamping or other reproduction of the names of the persons hereinabove authorized."

CERTIFICATION OF POWER ATTORNEY

I, Judy Fagan, Asst. Secretary of TRINITY UNIVERSAL INSURANCE COMPANY, SECURITY NATIONAL INSURANCE COMPANY and TRINITY UNIVERSAL INSURANCE COMPANY OF KANSAS, INC. do hereby certify that the foregoing Resolution of the Boards of Directors of these Corporations, and the Power Attorney issued pursuant thereto, are true and correct and are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each Corporation

this 27 ____________ ____________ 19__

______________________________________ • ______________ • __________________________________
FORM OF CONTRACT

This agreement made and entered into at Alexandria, Louisiana, this 25th day of May, 1982, by THE CITY OF ALEXANDRIA, LOUISIANA, hereinafter represented by ________________, Mayor, hereinafter called the Owner, and __________________, hereinafter represented by ____________________

and hereinafter called the Contractor.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction as follows: WATER WELL FR-1210 hereinafter called the project, for the sum of __________________________

and for all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract, and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendents, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions of the Contract, the plans, which include all maps, plats, blueprints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents thereof as prepared by ________________________, Consulting Engineers,

all of which are made a part hereof and collectively evidence and constitute the contract.
The Contractor hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within the time intervals and subject to all the conditions enumerated in the Proposal Form and Special Conditions, which are made a part hereof.

The Owner agrees to pay the Contractor in current funds for the performance of the contract, subject to additions and deductions, and to make payments on account thereof as provided in the General Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in six (6) counterparts, each of which shall be deemed an original, in the year and day first mentioned.

(Seal) ATTEST: |
--- |
(Sec) By |
Title: Mayor |

(Seal) ATTEST: |
--- |
By |
Title: Vice-President |

CITY OF ALEXANDRIA, LOUISIANA
GENERAL CONDITIONS

DEFINITION OF TERMS

1-01 GENERAL: Wherever in these Specifications, Addenda, Proposal, Contract, and Bond, the following terms are used, the intent and meaning shall be interpreted as follows:

1-02 THE OWNER: The Owner shall be as defined in Special Provisions hereof.

1-03 THE ENGINEERS: The Engineers shall be as defined in Special Provisions hereof.

1-04 INSPECTOR (RESIDENT ENGINEER): The authorized representative of the Engineer assigned to the inspection of the work or the material in, the improvement covered by the contract.

1-05 THE BIDDER: Any qualified individual, firm or corporation, submitting a proposal for the contemplated work, acting directly or through an agent.

1-06 THE CONTRACTOR: Any Construction Agency selected by the Owner and to whom contract is awarded by said Owner.

1-07 THE SUB-COIVTRACTOR: Any Construction Agency selected by the Contractor and approved by the Engineer to handle any phase of the contract work.

1-08 SURETY: The corporate body licensed to do business in Louisiana which is bound with and for the Contractor and which is primarily liable and responsible for the payment of all obligations pertaining to and for the acceptable performance of the work required by the contract.

1-09 LABORATORY: Any testing laboratory designated or approved by the Engineers to perform tests on materials entering the work.

1-10 PROPOSAL: The written offer of the bidder to perform the contemplated work and furnish the necessary materials, when made out on the prescribed form and properly signed and guaranteed.

1-11 BID SECURITY (BID BOND): The security designated in the "Proposal Form" to be furnished by the bidder as a guarantee of good faith to enter into a contract with the Owner, if the contract is awarded to him.

1-12 PLANS: The plans, cross sections, working drawings and supplemental drawings, or exact reproductions thereof, approved by the Engineers, which show the location, character, dimensions, and details of the work to be done, and which are to be considered as a part of the contract supplementary to these specifications.
1-23 TEMPORARY STRUCTURE: Any structure required during construction which will be dismantled when the work is completed.


1-30 A.S.C.E.: The American Society of Civil Engineers.

1-31 A.S.M.E.: The American Society of Mechanical Engineers.


1-35 D.O.T.D.: Department of Transportation and Development

1-36 A.C.I.: American Concrete Institute.


1-43 A.I.: The Asphalt Institute

1-44 N.B.S.: National Bureau of Standards.


DIVISION III
GENERAL CONDITIONS
SECTION II - GENERAL PROVISIONS

2-01 CONTRACT AND CONTRACT DOCUMENTS: These general conditions, special provisions, construction specifications bound herewith and all addenda or other documents that may be issued prior to bidding, together with the general plans, details, supplemental drawings, or written instruction shall form the basis of the construction contract.

2-02 STATE OF WORK: The Contractor shall furnish and pay the cost, including sales tax, and all other applicable taxes and fees, of all the necessary materials not furnished by the Owner and shall furnish and pay for all the superintendence, labor, tools, equipment and transportation and perform all the work required for the construction of all structures listed and itemized under the bid schedule of the Bidder's Proposal in strict accordance with the Plans, Specifications and requirements which are attached hereto and made a part hereof, and any amendments thereto and such supplemental Plans and Specifications which may hereafter be approved.

2-03 PERFORMANCE AND PAYMENT BOND: The Contractor shall within ten days after the receipt of the Notice of Award and before the commencement of any operations hereunder execute the contract and furnish the Owner with a performance and payment bond in a penal sum equal to the amount of the contract price, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of this contract. Such bond shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State of Louisiana and acceptable to the Owner. The expense of this bond shall be borne by the Contractor. If at any time a surety on such bond becomes irresponsible or loses its right to do business in the State of Louisiana, the Owner may require another surety which the Contractor shall furnish within ten calendar days after receipt of written notice to do so. Evidence of authority of an attorney in fact acting for the corporate surety must be provided in the form of a certificate as to his power of attorney and to the effect that it is not terminated and remains in full force and effect on the date of the bond. The form of the bond shall be subject to approval by the Owner.
DIVISION II

GENERAL CONDITIONS

SECTION III - SPECIAL PROVISIONS

2-01 GENERAL: The following special provisions shall be applicable to all contracts.

2-02 OWNER DEFINED: The CITY OF ALEXANDRIA, domiciled in Rapides Parish, Louisiana, acting through the Mayor and City Council.

2-03 ENGINEERS DEFINED:

2-04 CONSTRUCTION SPECIFICATIONS: Should a conflict exist between the requirements of the bid documents, general and special provisions, and instructions to bidders; and the construction specifications, the former shall take precedence. The construction specifications may contain items of a nontechnical nature which are superceded by the general conditions.

2-05 NOTICE TO PROCEED: No work shall begin on this project until the Owner has issued a "Notice to Proceed" directing the Contractor to proceed.

2-06 MANUFACTURED EQUIPMENT: In these specifications and on accompanying drawings there are specified and shown certain equipment and materials most suitable for the service anticipated. This is not done, however, to eliminate other items as good and efficient. The Contractor may prepare his bid on the basis of other makes of equipment and materials, provided that the proposed substitution is superior or equal in construction and/or efficiency, and that high quality has been demonstrated by several years of service in similar installations.

The Contractor shall submit complete details, including shop and erection drawings of all appropriate equipment and materials. Should substituted equipment be proposed, the submittal shall be made and approval obtained prior to placing an order for the equipment. In the event approval is obtained for alternate equipment, the Contractor shall, at his own expense, make any changes in the structures, building, piping or electrical necessary to accommodate the equipment. If engineering is required due to the substitution of other material, the Contractor shall pay the Engineer for the engineering service.

2-06 SERVICE OF NOTICES: All notices required to be given hereunder shall be mailed or delivered in the case of the Owner to CITY OF ALEXANDRIA, HONORABLE MAYOR, CITY HALL, ALEXANDRIA, LOUISIANA 71301.

SP-1
necessary, for the best interest of the Owner, to make changes in excess of that herein specified, the same shall be covered by change order issued in accordance with paragraph 2.07 of the General conditions.

Should any of the changes, not requiring change order, be made as provided herein, the Contractor shall perform the work as altered, increased, or decreased at the contract unit price or prices.

2-21 CLEARING AND GRUBBING: No special payment shall be made for clearing and grubbing on highway or private right-of-way. The cost for any necessary clearing and grubbing shall be included in the price bid for furnishing and installing the pipe.

2-22 EXISTING FENCES: Any existing fences damaged by the Contractor shall be repaired or replaced by him in their original condition. The cost of such replacement or repair shall be borne by the Contractor.

2-23 The Contractor shall be responsible for obtaining all permits and approvals of the Federal Communications Commission. All license requests shall be prepared by the Contractor for submittal by the City of Alexandria.

2-24 All concrete construction shall be in accordance with Section GB-320 of these specifications.

2-25 SHOP DRAWINGS, MAINTENANCE MANUALS, PARTS LISTS: Six bound sets of shop drawings, operation and maintenance manuals, and parts lists will be supplied. The shop drawings shall indicate the complete details of all units delivered.

2-26 Should it become necessary to remove any surfacing the Contractor shall replace the surfacing and repair any damage caused by his operations. The surfacing shall be equal to or better than that removed. The Contractor shall include the cost of any surfacing removed or replaced in the lump sum price bid for the project.

2-27 START UP AND CHECK OUT OF TELEMETRY SYSTEM: The Contractor shall provide complete start up and check out of the system installed. This start up and check out shall include, but not be limited to, operation of the complete system through every function required by the specifications. The Contractor shall clearly demonstrate that the system operates as designed. Included in the start up and check out period will be instruction of City personnel on the operation and maintenance of the system. The cost of start up and check out will be included in the lump sum price bid.

2-28 The Contractor shall cooperate with City Water Department personnel during the change over of the telemetry system. If it becomes necessary to stop existing reporting data, the Contractor shall give the City personnel sufficient time to plan for alternate method of operation.

SP-5
2-29 ELECTRIC DOUBLE CUSHIONED CHECK VALVES: Electric double cushioned check valves shall be installed at locations as shown on the plans. The check valves shall be the type that will allow removal of all internal parts without removing the valve body from the line.

All electric double cushioned check valves shall be of cast iron body and cover with all bronze or non-corrosive trim construction. All valves shall be flanged, faced and drilled to conform to 125 lb. ASA Standards.

The valve shall be constructed with complete bronze or non-corrosive lining which shall extend down to and form the seat of the valve. The liner shall be provided with cast "V" port openings. The piston shall be bronze. The pilot shall be of the 3-way type and of all bronze construction.

The design of the valve shall be such as to provide air and water cushioning to prevent hammer and shock. Speed of valve closing/opening shall be adjustable by a hand operated regulating valve. Wear on valve moving parts shall be absorbed by renewable leather or rubber cups and seat. The design of valve shall be such that the area above the piston shall be approximately twice the area on the small end of the piston. The valve shall be designed to provide full pipeline flow when open, and it shall shut off tight when closed.

The valve shall be as manufactured by G.A. Industries, Inc., Figure No. 1730-U, or approved equal.

Valve shall provide normal automatic opening and closing function, plus emergency closing on electrical outage. It shall also provide manual control for opening main valve.

All solenoids, time delays, relays and necessary valves shall be supplied by the valve manufacturer.

2-30 VALVE CONTROL PANEL: Each well pump motor starter and pump discharge control valve shall be automatically sequenced by a factory pre-wired electric control panel. The electric control panel shall be manufactured by the valve manufacturer. The control panel shall be a Model 7600 "Pump Director", as manufactured by G.A. Industries, Inc., or approved equal.

The control panel enclosure shall be NEMA 4 or better with gasketed door and four oil tite indicator lights.

All timing sequences shall be adjustable. The timers shall be field adjusted by trial and error such that when the well starts, all air in the pump discharge column will be discharged to atmosphere before the control valve begins to open.
The control sequence shall be as follows:

A. Normal Pump Start (Hand or Auto):
   1. Pump motor starter energized - pump starts. A flashing blue light is displayed.
   2. Timing sequence "F.B." initiated (6 to 300 sec.).
   3. If adequate pump pressure develops to actuate the pressure switch, the emergency solenoid pilot is energized, and a steady blue light begins.
   4. A failure of the pump to develop pressure within the preset time (flashing blue light) will result in a pump shut down, requiring a manual reset. (No subsequent pump starts can occur until the "reset" has been accomplished.)
   5. Following expiration of the steady blue light timer, the normal solenoid pilot is energized. The check valve is commanded to open. A flashing green occurs for a preset time (timer F.G.). A failure of the check valve to open within the time period of flashing green, the pump starter is de-energized and the flashing "red" light begins requiring a manual reset.
   6. A normal opening of the check valve shall result in a steady green indicated for the duration of the pump operation.
   7. A loss of pump discharge pressure during a normal pumping operation (pump mechanical failure, loss of suction) shall result in a pump and check valve emergency shutdown with a flashing "red" indication. A premature valve closure shall also result in a similar pump shutdown (solenoid coil burnout).

B. Normal Pump Shutdown (Hand or Auto):
   1. An intentional pump stop command will first cause the de-energizing of the normal solenoid pilot only, initiating a normal controlled closing sequence. At approximately the 95% closure point, the electric check valve will actuate a limit switch which shall de-energize the pump starter circuit and the emergency solenoid. The pump will stop after the check valve is closed.

C. Power Failure:

An electrical power failure to the pump of any duration, even momentary, shall result in an emergency closure of the check valve. The pump shall not restart for a minimum of five minutes (can be modified) unless the manual reset switch is turned off momentarily (approximately 6 seconds) permitting immediate restart of the pump.
2-39 **TELEMETRY MODIFICATIONS**: The Contractor shall furnish and install equipment necessary to modify existing telemetry system for automatic control of Well #R-1210. Control and status functions required are as follows:

- transmit: "well on" indication
- flow meter high alarm
- flow meter low alarm
- receive: automatic start-stop
- manual on-off

The modified telemetry system shall provide all control and status reporting functions for Well #R-1209 as are provided for the existing wells. The Contractor shall provide any programming modifications necessary to the central control station. Timing equipment shall be installed to prevent Well #R-1210 from starting simultaneously with other (existing) wells.

Telemetry modifications shall be included as part of the "General Site Work" bid item for Well #R-1210 and shall comply with Section T-501 of these specifications.

2-40 **LOWER PUMP IN EXISTING WELL #R-937**: Contractor shall remove pumping equipment from Owner's existing Well #R-937. Equipment to be removed includes 150 Hp motor, pump base, discharge head, 300 L.F. of 8 X 1 11/16 column and shaft, 11 stage 10" THC bowl assembly, 10 L.F. of 8" suction pipe with 8" cone type strainer.

Contractor shall disassemble and clean existing pump column, shaft, and bearings and shall lay out same for inspection by Owner and Engineer. Contractor shall inspect all pumping equipment for wear and shall report in writing the mechanical condition of all equipment. Contractor’s written report shall provide recommendations for repairs (if any) needed.

Contractor shall furnish 100 L.F. of new 8 X 1 11/16 open lineshaft pump column and shaft. New pump column and shaft shall comply with section W-223 of these specifications. Contractor shall furnish and install any adaptors and/or machined parts necessary to couple existing column and shaft to new column and shaft.

Contractor shall reinstall existing pumping equipment along with the required 100 L.F. of new column and shaft at a total pump setting of 400 feet.

The Contractor shall make any adjustments necessary and shall return the equipment to operating condition. All above work shall be paid for at the lump sum price provided in the proposal.

The cost of any repair work not specified above shall not be included in the lump sum price provided in the proposal. Should any additional repair work be required the Owner may negotiate with the Contractor or with others for the work to be done and the price to be paid therefor. The Contractor shall not perform nor shall he be eligible for additional payment for pump repairs without specific written authorization by the Owner.
2-41 SITE WORK, FUTURE WELL SITE: Site work for the future well site located in Section 16, T2N/R2W includes clearing and grubbing according to Section SW-100 of these specifications and broadcast seeding according to Section SW-101 of these specifications.

2-42 STATED CREDIT FOR SAW TIMBER AND PULPWOOD: Standing saw timber and pulpwood to be cleared and grubbed at the well sites has been estimated to have a market value of $749.63 as follows:

<table>
<thead>
<tr>
<th>Site</th>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Value</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well #R-1210</td>
<td>Saw Timber</td>
<td>1145</td>
<td>Board Ft.</td>
<td>$0.11607</td>
<td>$122.90</td>
</tr>
<tr>
<td>Well #R-1210</td>
<td>Round Wood</td>
<td>1170</td>
<td>Cu. Ft.</td>
<td>0.015</td>
<td>17.55</td>
</tr>
<tr>
<td>Sec. 16, T2N/R2W</td>
<td>Saw Timber</td>
<td>5095</td>
<td>Board Ft.</td>
<td>$0.11607</td>
<td>591.38</td>
</tr>
<tr>
<td>Sec. 16, T2N/R2W</td>
<td>Round Wood</td>
<td>520</td>
<td>Cu. Ft.</td>
<td>0.015</td>
<td>7.80</td>
</tr>
</tbody>
</table>

This timber shall become the property of the Contractor and shall be removed from the site. The Contractor shall allow full credit for the value of the timber as provided by the stated lump sum credit on the proposal form.

2-43 COOPERATION WITH U.S. FOREST SERVICE: This paragraph modifies paragraph 2-25 of the General Conditions. The work to be performed under this contract is located on sites owned by the U.S. Forest Service and use thereof is permitted to the City of Alexandria under the terms of a Special Use Permit.

The Contractor shall at all times coordinate with and cooperate with the U.S. Forest Service, Evangeline District Ranger, Mr. Dale Fisher, 3727 Government Street, Alexandria, LA 71301, phone (318) 445-9396.

The Contractor shall notify the Forest Ranger prior to commencement of any work. The Contractor shall notify the Forest Ranger prior to removal of trees from the site. The Forest Service will designate an area for disposal of stumps.

2-44 PUMPING EQUIPMENT: Pumping equipment for Well #R-1210 shall be capable of withstanding the shutoff head developed by the pump. The discharge flange of the pump shall be drilled to match ANSI 250 lb. standard flange.
DIVISION V

TECHNICAL SPECIFICATIONS
ITEM SW-100 - CLEARING AND GRUBBING

100-1 - GENERAL

100-1.1 DESCRIPTION: This item shall consist of clearing and grubbing including the disposal of materials, for all areas within the limits designated on the plans or as required by the Engineer.

Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris and rubbish of any nature, natural obstructions of such material which in the opinion of the Engineer is unsuitable for the foundation of the proposed construction, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing by burning or otherwise. Any marketable timber shall be the property of the Contractor.

100-1.2 LAYOUT OF WORK: Layout of work shall be as specified in the Special Conditions.

100-2 - CONSTRUCTION METHODS

100-2.1 CLEARING: The areas to be cleared shall be completely stripped of all trees, logs, stumps, brush, vegetation, rubbish or other perishable or objectionable matter. Such individual trees as the Engineer may designate and mark within any clearing area shall be left standing, uninjured. All trees not required to be moved shall be carefully protected.

Material without value shall be piled in the right-of-way and burned or otherwise disposed of in such a manner as not to injure any trees or other property on the right-of-way or abutting property.

Trees, brush, stumps, etc., not burned shall not be deposited on adjacent lands, but shall be disposed of in spoil areas obtained by the Contractor.

It shall be the Contractor's responsibility to remove, load, haul, and dump all materials required to make the right-of-ways and plant sites ready to construct the facilities as planned.

100-2.2 GRUBBING: All stumps, roots, and other objectionable materials within the pipe trench and specified plant site limits shall be removed and disposed of.

The Contractor shall root rake the entire area within the limits shown on the plans. The Contractor's attention is particularly called to the fact that all the tubular roots from any palmetto plants on the site shall be removed before any embankment is started.

SW-100-1
VITA

Terry Martin McConathy
Rt. 2, Box 107
Gibsland, LA 71028
(318) 843-6007

EDUCATION
Ph.D., English (Composition and Rhetoric), 1989
Louisiana State University, Baton Rouge, LA

M.A., English, 1986
Louisiana Tech University, Ruston, LA

B.A., English, 1969
University of Toronto, Toronto, Canada

PROFESSIONAL EXPERIENCE
1988-1989 Louisiana Tech University, Ruston, LA. Acting Assistant Professor, English.
1974-1979 Gage Educational Publishing Ltd., Toronto, Canada. Sales, editorial, and marketing.

MEMBERSHIPS
National Council of Teachers of English

AWARDS
1983 Governor's Arkansas Traveler's Award, for outstanding contribution to adult education.
1983 Certificate of Appreciation, Southeastern Corrections Association, for outstanding contribution to adult education.
1982 Xerox Professional Selling II.
1980 Xerox Professional Selling I.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Terry McConathy

Major Field: English


Approved:

Sarah Lippett
Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

M. J. Selling

Susan Richardson

Karen Z. Busch

Date of Examination:

April 24, 1989