EMGT 835 FIELD PROJECT:

General Construction Company

Private Development Procedure

By

Scott W. Eason

Master of Science

The University of Kansas

Spring Semester, 2006

An EMGT Field Project report submitted to the Engineering Management Program and the Faculty of the Graduate School of The University of Kansas in partial fulfillment of the requirements for the degree of Master of Science.

______________________________
Dr. David Kraft Date
Committee Chair

______________________________
Prof. Charles W. “Chick” Keller Date
Committee Member

______________________________
Mr. Tom Kellerman Date
Committee Member
## CONTENTS

<table>
<thead>
<tr>
<th>Heading</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>3</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>4</td>
</tr>
<tr>
<td>Introduction</td>
<td>6</td>
</tr>
<tr>
<td>Literature Review</td>
<td>8</td>
</tr>
<tr>
<td>Current Oral Documentation</td>
<td>11</td>
</tr>
<tr>
<td>Private Project Procedure – Flow Charts</td>
<td>15</td>
</tr>
<tr>
<td>Pre-Bid</td>
<td>15</td>
</tr>
<tr>
<td>Bid Process</td>
<td>16</td>
</tr>
<tr>
<td>Contract Administration</td>
<td>17</td>
</tr>
<tr>
<td>Construction Begins</td>
<td>20</td>
</tr>
<tr>
<td>Monthly Payment Application</td>
<td>21</td>
</tr>
<tr>
<td>Monthly Sub-Contractor Payment Application</td>
<td>22</td>
</tr>
<tr>
<td>Purchase Order</td>
<td>23</td>
</tr>
<tr>
<td>Summary and Conclusions</td>
<td>24</td>
</tr>
<tr>
<td>Suggestions for Additional Work</td>
<td>25</td>
</tr>
<tr>
<td>References</td>
<td>26</td>
</tr>
<tr>
<td>Appendices</td>
<td>28</td>
</tr>
</tbody>
</table>
Acknowledgements

Thanks to my wife Sarah and children Emily, Lauren and Grace for allowing me the time away from them and supporting me through this journey.

Thanks to all the employees at General Construction Company that reviewed, provided insight, and feedback during the development of this project.

Thanks to RED Development, City of Lee’s Summit and General Construction Company for financially supporting my effort.

Special thanks to Melissa Wiggins for countless hours of discussion and editing.

I would also like to express thanks to my committee (David Kraft, Chick Keller, and Tom Kellerman) for their help and guidance in completion of this project.
Executive Summary/Thesis Statement

General Construction Company (General) has a long history with an established procedure in constructing public, linear heavy/highway projects for state and federal agencies. The procurement process for such projects is defined by a low bid process and has a positive acceptance record in the state and federal legislatures. General’s management of governmental projects has consisted of four basic steps:

- Procurement: the General engineering team acquires the project
- Assignment: the general superintendent is handed the project
- Personnel placement: a network of field personnel within the grading, bridge and paving divisions are chosen by the superintendent, as well as, subcontractors are utilized
- Working to completion: successfully constructing each project

In order to manage government projects, General has allowed their methods to evolve in two ways:

- By relying on a long term employee base who know the procedures and the players
- An unwritten process that depends on “knowing how the system works.”

To survive in today’s competitive marketplace, it became inevitable that General would need to branch out into more than just acquiring government projects. As General pursues the private development community, a well-developed and more clearly defined procedural process becomes increasingly important to help the company improve efficiency and profitability.

Several books have been written as “how too” manuals on writing processes and procedures; however, minimum current information is available as a critical review. My project aims to develop a written manual to document General’s processes and procedures for private
development projects. This manual will improve communication and assist all employees in defining their roles, primary purposes, and responsibilities in relation to the successful and efficient completion of each project.

Moreover, a standard set of processes and procedures will increase consistency, efficiency, and the company’s general image to private clients. General will be able to portray a professional image of experience, cooperative teamwork, and the ability to get the job done on time and within budget.

Some evolution has taken place with the introduction of project managers at General, a development which has occurred only within the last several years. Project Managers now act as the intermediary between the engineering team, general superintendent, and field personnel. The official job description for project managers is to be responsible for contract administration and subcontractor management in the execution of each project.

General’s current operations are very conducive to private development. However, the company can no longer rely on an oral system to relay historical processes and procedures. In addition, the introduction of new personnel and a long record of tradition spark the need for written procedures to efficiently and consistently carry out each task.
Introduction

General Construction is a six generation, family-owned, heavy highway and site work general contractor with an average annual construction volume of $200 million. Established in 1880 as a grading contractor, General today is one of the largest and most diversified construction entities in the Midwest. With its home office in Kansas City, Missouri, General operates primarily in Missouri and Kansas and performs over eighty percent of its work with its own labor and equipment forces (General, internet).

The General family prides itself on providing quality, on-time construction while maintaining a safe environment for its workers. General is especially proud of their bi-state reputation of being able to complete projects on a fast-track basis, allowing the client to utilize the finished product at the earliest possible time (General, internet).

To keep the company moving forward and profitable, a standard set of procedures must be established for meeting the needs of the General private development projects. Efficiently processing payment applications, change orders, tracking schedules, costs, and profitability of private projects is challenging, especially to a company that has not formally documented many of their procedures. Clearly improvement is needed.

With a strong history of state and federal highway projects, General has a clearly established process and procedure that has been passed down through the company institutional memory. Historically this has worked efficiently for the many loyal, life long, employees. This system does not work efficiently for newly hired or newly established positions, like the recent evolution of project managers on site to work with superintendents and construction crews.
In the more recent past, General has begun to establish itself in the private development market, consisting of commercial and residential real estate development site work. This site work usually consists of clearing, grading, storm sewer, sanitary sewer, water mains, dry utilities, landscaping, site lighting and paving. These types of projects often begin without a complete set of drawings, their schedules are aggressive, and change orders are numerous. This requires a dynamic environment that is adaptable to ever changing constraints.

I was hired as a new project manager in May of 2005 for one of the largest shopping destinations in the state of Kansas. My previous experience with RED Development, The City of Lee’s Summit and The Unified Government of Wyandotte County has given me a unique perspective of both public and private clients. During the past year I have clearly seen the need for a written process and procedural manual, especially for private projects like The Legends. With the cooperation of the Chief Engineer, we determined to create a “private development” procedure. Such a document will assist new employees to become familiar with the company faster and perform more efficiently, thereby increasing profitability.

Because General has established themselves very successfully in the state and federal arena, most if not all of its employees are trained for that environment. The state and federal environment is very systematic, well documented, highly structured, and proceeds chronologically. This is far different from the private business community which is much more dynamic, compressed, relational, and performance based. Not everyone is well suited for success in the private community; likewise not everyone is well suited for the state or federal environment. The original intent of this document was to produce one procedure for Private
Projects. As the procedure developed it became clear that not one but four procedures were necessary:

- The Private Project Procedure portion of the manual concentrates on **the steps necessary to carry out a successful project**.
- This quickly developed into the need for a Contract Administration Procedure which described **the nuts and bolts of contract performance**.
- Then it becomes apparent a methodology for handling **Payment Applications** was also required; which is a vital part of continuing in business and remaining profitable.
- Finally, a **procedure for Private Project Subcontractor Payments** was also created.

A standard set of processes and procedures will increase consistency, efficiency, and the company’s general image to private clients. General will be able to portray a professional image of experience, cooperative teamwork, and the ability to get the job done on time and within budget which is a vital part of the companies’ relationship and reputation to private clients.
Literature Review

In general, the details associated with writing a process and procedures manual is not a widely researched topic. However, a series of books by Stephen Page were very helpful in the steps associated with crafting the actual policies and procedures. Page’s book, *7 Steps to Better Written policies and Procedures* suggests ways to establish, maintain, and achieve compliance once the policy or procedure is in print and action. An assortment of other “how to” books are also on the market which all have a similar theme as Page’s (Page, 2004).

The goal of Page’s, is to demonstrate structured writing and shape what may be complicated processes into “. . . structured, consistent, logical, and well written, sentences, and paragraphs (policies and procedures)” (Page, 1, 2004). Page provides a logical approach to creating policies and procedures that is systematic and ideally suited for the technical nature of the construction industry, all the while providing a consistent style.

Other research in the form of journal articles is more pertinent to the heart of the procedural writing; why have a manual at all? Most companies function with the attitude that “this is the way it has been done, that is why we do it this way.” They think it is not worth the time and expense of examining the reasons and motives behind their processes. Instead of examining the gained efficiencies, increased profit, ease of training, companies often function as though everything should be learned through osmosis.

The authorities in the field of manual writing provide very good general rational for having policies and procedures. Bryant Caldwell indicated in his article *Blending policy and procedure with technology* that “the primary purpose of standardized policy and procedure is
twofold: it should support the company strategy, and it should deliver on the department’s mission and vision” (Caldwell, Feb 2002).

These types’ statements make good policy but do not go about explaining how policies get implemented. One look at most construction companies would suggest that it does not. If the manual is actually written, you will usually find it shelved until review time, when a question might come up or a new employee is presented a copy. However, Caldwell also suggests when a company does not have a manual “. . . to examine what happens when you don’t have it -- the downsides include employee inefficiencies and steep learning curve” (Caldwell, Feb 2002). This observation has certainly proved true in my own experience.

Caldwell goes on to suggest the up side of a policies and procedures manual that often get overlooked are due to the social stigma attached to such a document. Employees are often resistant to adopting a new manual, fearing the work place will become too rigid and inflexible. Engineers often complain about the stripping of their independence and drain creative design juices.

The policy manual has been compared to a black box that identifies the dreaded policies and procedures. Frank Barnes suggests in his article *ISO 9000 Myth and Reality: A Reasonable Approach to ISO 9000* that if “... procedures are documented, excess bureaucracy and inflexibility may result” (Barnes, Spring 1998).

DePena and Fisher suggest that “... examining and improving work processes have resulted in lower overheads and higher profits” (DePena and Fisher, July/August 1994). They then suggest a procedural manual “. . . presents an opportunity to reduce training costs, speed up
transitions, and have your new employees contributing a “veteran” level in record time” (Caldwell, Feb 2002).

A counter point of view supporting the social stigma suggested by Claire Cohen in her article *Striving for seamlessness: procedures manuals as a tool for organizational control* shows that the procedural manual is viewed as an inflexible rule book, and if employees feel controlled by it, high turnover will be the ultimate result. Using a procedural manual inappropriately can create inefficiencies and higher costs, resulting in lower profits.

Don Kennedy and John Whittaker in their article *Engineering procedures manuals—benefit or liability?* summarize several good points regarding the usefulness of a procedures manual. They suggest that shorter documents are less expensive to reproduce and will be used more often. Adding flow charts to a manual is very effective as a text replacement, especially if accompanied by a check list. They also note that general outlines get the point across more effectively than detailed oriented paragraphs and long chapters. It is important to recognize that the manual will mainly serve and have its biggest benefit as a training aid for the less experienced employee. Kennedy also points out that the document may be referenced more frequently and reduces costs by greater making it electronically available to its audience (Kennedy, Whittaker, Mar 2000).

The common themes shown by the literature for developing and writing procedural manuals tell us to keep it short, use flow charts and check lists, and develop it in such a way to allow the document to be flexible and “ever green”—in other words, updated as events warrant. Kennedy and Whittaker suggest “the duties of an engineer are complex and difficult to
document. Judgment calls, often required, are difficult to outline in a manual” (Kennedy, Whittaker, Mar 2000).

The goal of General, now branching out into the private arena means is to be flexible, timely, and profitable. Structure provided through a defined process is helpful in getting the daily business deeds done, but one must recognize the need to adapt to the circumstances of the project. Our procedural manual needs to be flexible, to use charts, check lists, and simple, easy to follow text while still allowing the employee to exercise his/her own judgment. This will make the General procedural manual retain training validity, while still providing consistency and efficiencies for increased profitability.
Current General Oral Documentation

The current Procedures Manual for General is a total of three pages. The information contained within clearly follows the philosophy of manual literature by not being overly detailed and allows the individual to exercise his/her judgment. The manual takes these fundamentals to the extreme, offering minimal direction and guidance, therefore allowing individuals to perform tasks with out consistency. The current manual is also not directed towards private development but more heavily slanted towards state or federal projects. It is, therefore, inappropriate for the ever changing pace of a private development project.

For example, a pay estimate or payment application procedure is defined by two bullet points: “The engineer needs to code a copy of the bid proposal to give to Melinda. She will then set up the pay estimate and put it on your computer” (General Style Guide & Procedures Manual). Yet this project, dealing with payment applications, identified thirty-seven (37) steps as well as an entirely separate procedure for payment of subcontractors. This clearly demonstrates the inefficiency of the current General manual as a training aid.

The newly documented procedures were developed through personal experience with the company, as well as drawing on feedback from specific key employees involved in the process from the beginning to its conclusion. The process was documented through the techniques of flow charting and written steps. The charts were then distributed to a pier group of key internal employee’s for feedback and process corrections. The flow charts were then documented in detail in written form, which may be reviewed in the appendices. The written procedures were
also reviewed by the same subset of employees for additional feedback and may also be reviewed in detail in the appendices.
Private Project Procedure – Flow Charts

Pre-bid

Market for New Projects

Identify Potential Projects

Gather Plans for Review of Project Potential

Evaluate/Discuss Potential Project

Drop Project

Determine either Negotiated or Competitive Bid

Gather Accessory Documents

Confer on Subcontractors

Bid Activity
Bid Process

Bid Activity
Contract Administration

Receive Notice of Award

Assign Project Number

Assign Cost Codes per Approved Bid Proposal

Coordinate Schedule of Values with Client

Prepare AIA Payment Applications

Receive Notice to Proceed

Develop and Provide First Schedule to Client

Negotiate Contract based on Schedule

Submit Insurance Certificate to Client

Notify Subcontractor of Intent to Award Contract

Issue Sub Contracts; Request Insurance Certificates

Issue Notice to Proceed to Subs

Receive Notice of Award
Receive Notice to Proceed

Submit Quantities at each Thursday Staff Meeting

Gather Weekly Timesheets for Cost Coding

Review Costs at Weekly Staff Meeting

Provide Approved Cost Codes to Field Personnel

Update Daily Reports in Force Account Tracker

Attend Client Meetings

Negotiate Force Account and Out of Scope Work

Receive and Scan Invoices into Force Account Tracker

Enter Weekly Cost Code Invoices into PO Tracker

Coordinate with Client Contractors

Prepare and Track Schedule Monitoring Job Progress
Construction Begins

Private Project Construction Activity
Monthly Payment Application

- Generate Materials / Equipment / Labor Report
- Request & Receive Payment Application from Subs
- Summarize Sub Invoices on Billing Sheet
- Review Sub Invoices for Percent Complete, Compliance with Contract Provisions, and Accuracy
- Prepare Proposals for Items Outside Contract Scope / Force Accounting
- Prepare and Execute Change Orders with Client
- Submit Executed Copy of Change Order to Accounting
- Incorporate Change Order Billing with next Payment Application
- Prepare AIA Documents
- Gather and Prepare Partial or Final Lien Wavers
- Submit Payment Applications with Lien Wavers to Client
- Submit Payment Applications with Lien Wavers Accounting

Private Project Monthly Payment Application
Monthly Sub-Contractor Payment

- Review Subcontractor Payment Application
- Complete Paperwork based on Sub Contract
- Base Payment on Sub’s Schedule of Values and Job Progress
- List Payment Items on Summary Sheet
- Indicate Payment Amount for Each Line Item Based on Completed Quantity
- Prepare Change Orders for Client Approved Items
- List Change Order Items on Summary Sheet
- Track Force Account Items
- Process Sub Payment Through Admin
- Update Sub Data Base
- Gather Partial or Final Lien Wavers
- Reduce Retainage based on Client’s payment
- Make Payment to Subcontractor

Private Project Monthly Payment Application
Monthly Purchase Orders

- Fill out PO Form
  Print for Processing

- Add Cover Letter with EEO Certificate

- Verify Enclosure of Terms and Conditions

- File Executed PO in Material Procurement Folder

Private Project Monthly Purchase Order
Summary and Conclusions

Private development projects often have a strenuous start. They usually begin construction without a complete set of drawings because the project is still in development stage. These projects also have aggressive schedules and numerous change orders. All of these obstacles require a dynamic environment that is adaptable to ever changing constraints. This is not an environment for strict rules, inflexibility, or a rigid mindset.

General’s current operations are very conducive to a flexible environment enhanced by creative thinking. This is now nicely complemented by the introduction of project managers who help keep projects moving forward as efficiently as possible. On the other hand, the introduction of new personnel combined with a long history of oral tradition creates the need for written procedures to efficiently and consistently pursue projects within the private sector. General can no longer rely on institutional memory and oral tradition to effectively relay their processes and procedures to their employees.

This project has documented the procedures for pursuing a privately funded project through the use of flow charts and check-lists. These newly documented processes and procedures should assist new employees in becoming familiar with the company more quickly and efficiently than in the past, thereby increasing profitability. A standard set of processes and procedures will also increase consistency, which will enhance the company’s general image to private clients. General will be able to portray a professional image of experience, cooperative teamwork, and the ability to get the job done on time and within budget which is a vital part of the company’s relationship with and reputation to private clients.
Suggestions for Additional Work

To further emphasize the need to be flexible and efficient, additional work would include the detailed analysis and documentation of state and federal project processes.
References


Appendices

Private Project Procedure

Private Project Contract Administration Procedure

Private Project Payment Application Procedure

Private Project Subcontractor payment Procedure

Private Project Procedure Check List

Pre-Bid

Bid Process

Contract Administration

Construction Phase

Payment Application

Subcontractor Payment Procedure
Private Project Procedure

1.0 Purpose

This procedure establishes guidelines for the execution of Private Projects at General Construction Company. A standard establishes the flow of project requisition, execution, and completion keeping the company moving forward; delivering each project with consistency, on time, within budget and profitable.

2.0 Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Rev. No</th>
<th>Change</th>
<th>Reference Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1-05</td>
<td>1.0</td>
<td>New Procedure</td>
<td>All</td>
</tr>
</tbody>
</table>

3.0 Employees Affected

3.1. All Engineers & Project Managers assigned a private project.

3.2. All Superintendents with a scope of work in their assigned area.

3.3. All Field Supervisors assigned a private project.

3.4. All Equipment Supervisors supporting private projects scope of work.

3.5. Office personnel assigned in supporting private projects scope of work.

4.0 Policy

4.1. The policy of General Construction Company is to:

   4.1.1. Provide quality, consistent, on-time construction while maintaining a safe work environment.

   4.1.2. Align GCC strategic goals and action plans into every project.
4.1.3. Maintain a reputation of being able to complete projects on a fast-track basis, thus allowing the owner to utilize the finished product at the earliest possible time.

4.1.4. Promote capabilities while focusing on select opportunities with current and future private clients.

4.1.5. Know limits and boundaries allowing the freedom to exercise sound judgment and action.

5.0 Definitions

5.1. General Construction Company (GCC). Corporate organization

5.2. Notice to Proceed (NTP). “The beginning of contract time” established. (167, 1)

5.3. Substantial Completion (SC). Project is completed “to the structure’s capability of being utilized for its intended purpose despite small defects to be corrected or minor items not yet accomplished”. (150, 1) A Certificate of Substantial Completion is issued signifying the beginning of the maintenance period.

5.4. Final Completion (SC). The project has been completed satisfactorily and all the required documentation has been submitted to the owner. Final payment has been made including all retainage held by the owner. (148, 1)

5.5. Purchase Order (PO). “Written document that defines and prescribes the conditions pertaining to a purchase of materials, supplies, equipment, machinery, and similar goods.” (171, 1) Written authorization for goods not services to ship or supply products at a specified price, which is becomes a legally binding contract once accepted. (171, 1)

5.6. Payment Application (PA). Document used to track progress, payments due and payments received. “Value based on the work put in place, including that performed by subcontractors, during a prescribed period of time.” (145, 1)

5.7. Cost Codes. Series of codes that define categories of costs that may be tracked.

5.8. American Institute of Architects (AIA). Provide the standardized forms that are used for payment applications commonly known as AIA G702 and G703.

5.9. Force Account (FA). Work items that are performed usually without a contract and out of scope, the material, equipment and labor is tracked by cost or time and billed accordingly as cost-plus.

5.10. (UCI) coverage.
6.0 Responsibilities

6.1. The Vice-President of the company is responsible for ensuring compliance to this procedure.

6.2. Employees are expected to comply and adhere to the guidelines of this procedure when performing a private project.

6.3. The Chief Engineer shall provide oversight and support of project administration.

6.4. The Engineers and Project Managers shall be responsible for the overall project administration including subcontractors. Refer to the “Project Manager Responsibilities” description.

6.5. The Superintendent shall be responsible for the executing all aspects of the contract in the field.

6.6. The Office personnel shall monitor project progress, costs and payments.

6.7. The Field Supervisors shall execute all aspects of the contract in the field and shall accept responsibility for the management of the field personnel for the self performed scope of services.

6.8. The Equipment Management shall support execution of all aspects of the contract in the field.

6.9. The maintenance personnel shall support equipment management and field personnel with execution of field operations.

7.0 Procedures

7.1. Marketing

7.1.1. Existing Clients are those GCC had or has a current relationship with successful project completion that the desirable to continue the relationship will be mutually beneficial.

7.1.2. General publications: News Paper, Internet, Trade Journals

7.1.2.1. Track project, pre-bid, date use all means at GCC disposal to keep abreast of the available opportunities.

7.1.3. Cold call on prospective Clients, that a sufficient amount of due diligence has deemed opportunities are worth pursuing.
7.2. Bid: negotiated or competitive

7.2.1. Receive plans from Client

7.2.1.1. Client plans may be completed construction documents or in a state of completion. Verify the desired outcome from the Client whether it be a budget, competitive or negotiated bid.

7.2.2. Send to printer for copies, also accessory documents as needed

7.2.2.1. Determine the needed number of working copies for office use and distribution to subcontractors as required

7.2.3. Engineers and Project Manager confer on subcontractor list for applicable scope of services

7.2.3.1. Evaluate minority participation requirements if required

7.2.4. Enter project into Gradebeam

7.2.4.1. Copy new project from template

7.2.4.2. Verify/add UCI coverage per subcontractor list

7.2.4.3. Upload accessory documents as needed

7.2.4.4. Construct an initial schedule

7.2.4.5. Verify printer to be used

7.2.4.6. Determine bid due date

7.2.4.7. Execute notification to Bid

7.2.5. Generate take off for subcontracted and self performed work

7.2.6. Review specifications, geotechnical report and other accessory documents to verify coverage

7.2.7. Engineers and Project Managers confer on self performed work pricing; double check quantities and scope coverage

7.2.8. Collect subcontractor quotes as specified in Gradebeam

7.2.8.1. Review proposal
7.2.8.2. Verify scope coverage
   7.2.8.2.1. Include GCC’s supporting requirements for subcontractor in self performed scope of services

7.2.8.3. Verify accuracy

7.2.8.4. Verify quantities with GCC’s take off

7.2.8.5. Review inclusions/exclusions; subrogate into GCC proposal

7.2.9. Submit to engineering admin to compile on bid form proposal subcontracted and self performed work with inclusions/exclusions

7.2.10. Perform final review of bid proposal

7.2.11. Submit to Client

7.3. Notification of Bid
   7.3.1. Notification of Bid award
   7.3.2. Negotiate the terms and conditions of the scope of work

7.4. Project review meeting
   7.4.1. Refine proposal/scope based on Client comments
   7.4.2. Resubmit to Client - Finalize proposal/scope
   7.4.3. Client approval of subcontractors

7.5. Provide schedule to owner upon request
   7.5.1. Revise based on owner comments and resubmit

7.6. Negotiate contract based on agreed schedule and scope
   7.6.1. Execute approved contract
   7.6.2. Incorporate approved schedule with contract

7.7. Receive notice to proceed (NTP) with executed contract

7.8. Submit insurance certificate to Client
7.9. Notify general superintendents of receipt of NTP and scope of work

7.10. Notify equipment manager of work scope and equipment needs

7.11. Coordination meeting with superintendents, field supervisors, engineers and project managers

7.12. Manpower and resources procurement

7.13. Mobilization of equipment

7.14. Notify subcontractors of intent to award

7.14.1. Re-review scope/proposal verify based on final negotiations

7.15. Issue subcontracts

7.15.1. Issue based on final proposal and schedule

7.15.1.1. Fill out the “Information for New Job and Subcontracts” form

7.15.1.2. Provide the Subcontractors’ bid proposal with item, unit price, and quantity

7.15.1.3. Provide a copy of the original quote to verify bid proposal

7.15.1.4. Provide auxiliary documents such as special provisions, specifications, wage rates, etc. as needed

7.15.2. Compile a list of subcontractors and their Bond requirements if applicable

7.16. Finalize subcontracts

7.16.1. Prior to GCC signature review the executed subcontract for amendments by the subcontractor

7.16.2. If changes have been made the Engineer initial the change(s) if agreed, the contract will then be approved, processed and a copy returned to the subcontractor

7.16.3. If the change(s) are not agreeable, reject the subcontract and reissue revised to the subcontractor

7.16.4. Verify receipt of Bond requirement if applicable

7.17. Issue NTP to subcontractors
7.18. Request/receive certificate of insurance from subcontractors

7.19. Initiate subcontractors mobilization coordinate with field supervisors

7.20. Conduct subcontractor coordination meetings with field supervisors and other personnel as appropriate

7.21. Request/receive PA from subcontractors

7.22. Submit GCC PA to Client

7.23. Substantial Completion

7.24. Final Completion

7.25. Post Construction Project Review

1. Clough and Sears Construction Contracting sixth Edition
Private Project Contract Administration Procedure

1.0 Purpose

This procedure establishes guidelines for the administration of Private Project contracts at General Construction Company. A standard establishes the consistency, accuracy in execution, keeping the company moving forward and profitable

2.0 Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Rev. No.</th>
<th>Change</th>
<th>Reference Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1-05</td>
<td>1.0</td>
<td>New Procedure</td>
<td>All</td>
</tr>
</tbody>
</table>

3.0 Employees Affected

3.1. All Engineers & Project Managers assigned a private project

3.2. All Superintendents with a scope of work in there assigned area

3.3. All Field Supervisors assigned a private project

3.4. All Equipment Supervisors supporting private projects scope of work

3.5. Office personnel assigned in supporting private projects scope of work

4.0 Policy

4.1. The policy of General Construction Company is to:

4.1.1. Provide quality, consistent, on-time construction while maintaining a safe work environment.

4.1.2. Align GCC strategic goals and action plans into every project.

4.1.3. Maintain a reputation of being able to complete projects on a fast-track basis, thus allowing the owner to utilize the finished product at the earliest possible time.
4.1.4. Promote capabilities while focusing on select opportunities with current and future private clients.

4.1.5. Know limits and boundaries allowing the freedom to exercise sound judgment and action.

5.0 Definitions

5.1. **General Construction Company (GCC).** Corporate name

5.2. **Notice to Proceed (NTP).**

5.3. **Substantial Completion (SC).** Project is completed to the point it may be used for its intended purpose. A Certificate of Substantial Completion is issued signifying the beginning of the maintenance period.

5.4. **Final Completion (SC).** Project is completed, accepted and final payment has been issued.

5.5. **Purchase Order (PO).** Written authorization for goods not services to ship or supply products at a specified price, which becomes a legally binding contract once accepted.

5.6. **Payment Application (PA).** Document used to track progress, payments due and payments received.

5.7. **Cost Codes.** Series of codes that define categories of costs that may be tracked.

5.8. **American Institute of Architects (AIA).** Provide the standardized forms that are used for payment applications commonly known as AIA G702 and G703.

5.9. **Force Account (FA).** Work items that are performed usually without a contract and out of scope, the material, equipment and labor is tracked by cost or time and billed accordingly.

6.0 Responsibilities

6.1. The Vice-President of the company is responsible for ensuring compliance to this procedure.

6.2. Employees are expected to comply and adhere to the guidelines of this procedure when performing a private project.

6.3. The Chief Engineer shall provide oversight and support of project administration.
6.4. The Chief Engineer shall review the prepare the initial draft of the contract, assign a project number, assign the cost codes based on project bid, review and approve final documents.

6.5. The Engineers and Project Managers shall be responsible for the overall project administration including subcontractors. Refer to the “Project Manager Responsibilities” description.

6.6. The Superintendent shall be responsible for the executing all aspects of the contract in the field.

6.7. The Office personnel shall monitor project progress, costs and payments.

6.8. The Field Supervisors shall execute all aspects of the contract in the field and shall be responsible for the management of the field personnel for the self performed scope of services.

6.9. The Equipment Management shall support execution of all aspects of the contract in the field. Administration of the quantities and cost reports for review meetings.

6.10. The maintenance personnel shall support equipment management and field personnel with execution of field operations.

7.0 Procedures

7.1. Procedure shall commence upon receipt of the NTP and a signed contract.

7.2. Assign a project number.

7.3. Assign Cost codes per approved bid proposal see “GCC Private Project Procedure”.

7.4. Prepare AIA payment application see “GCC Private Project Payment Application procedure”.

7.4.1. Coordinate line items with Client approval.

7.5. Weekly cost review at Monday morning staff meeting.

7.5.1. Weekly quantities due Thursday of previous week.

7.5.2. Cost code time sheets as-needed for payroll due Tuesday each week.

7.5.2.1. Provide an approved cost code list to field supervisors.

7.5 Update daily reports weekly in force account tracker.
7.5.1 Daily reports will lag one week from real time due to pay roll system

7.6 Client meetings

7.6.1 Attend weekly or as requested client meetings

7.7 Force account and out of scope work negotiations

7.7.1 Scan invoice into the force account tracker

7.7.2 Cost code invoices in PO tracker weekly

7.8 Coordinate with Client contractors as needed

7.9 Project Contact

7.10 Prepare and track schedule monitoring job progress

7.11 Notify subcontractors when to be on the project

7.12 Coordinate subcontractors concurrently with self performed work, schedule and job progress

7.13 Track subcontractors progress

7.14 Track force account items

7.15 Prepare change orders with Client assistance

7.16 Review accident reports

7.17 Visit Job site daily or as-needed

7.18 Coordinate surveying and layout needs

7.19 Safety coordination with GCC safety manager

7.20 Weekly meetings with subcontractors and field superintendent(s)
Private Project Payment Application Procedure

1.0 Purpose

This procedure establishes guidelines for the administration of Private Project Payment Application at General Construction Company. A standard establishes consistency, and accuracy, in execution keeping the company moving forward and profitable.

2.0 Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Rev. No.</th>
<th>Change</th>
<th>Reference Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1-05</td>
<td>1.0</td>
<td>New Procedure</td>
<td>All</td>
</tr>
</tbody>
</table>

3.0 Employees Affected

3.1. All Engineers & Project Managers assigned a private project

3.2. Office personnel assigned in supporting private projects scope of work

3.3. All Equipment Supervisors supporting private projects scope of work

4.0 Policy

4.1. The policy of General Construction Company is to:

4.1.1. Provide quality, consistent, on-time construction while maintaining a safe work environment.

4.1.2. Align GCC strategic goals and action plans into every project.

4.1.3. Maintain a reputation of being able to complete projects on a fast-track basis, thus allowing the owner to utilize the finished product at the earliest possible time.

4.1.4. Promote capabilities while focusing on select opportunities with current and future private clients.
4.1.5. Know limits and boundaries allowing the freedom to exercise sound judgment and action.

5.0 Definitions

5.1. General Construction Company (GCC). Corporate name

5.2. Equal Employment Opportunity (EEO).

5.3. Substantial Completion (SC). Project is completed to the point it may be used for its intended purpose. A Certificate of Substantial Completion is issued signifying the beginning of the maintenance period.

5.4. Final Completion/Acceptance (FC). Project is completed, accepted and final payment has been issued.

5.5. Payment Application (PA). Document used to track progress, payments due and payments received.

5.6. Cost Codes. Series of codes that define categories of costs that may be tracked.

5.7. American Institute of Architects (AIA). Provide the standardized forms that are used for payment applications commonly known as AIA G702 and G703.

5.8. Force Account (FA). Work items that are performed usually without a contract and out of scope, the material, equipment and labor is tracked by cost or time and billed accordingly.

6.0 Responsibilities

6.1. The Vice-President of the company is responsible for ensuring compliance to this procedure.

6.2. Employees are expected to comply and adhere to the guidelines of this procedure when performing a private project.

6.3. The Chief Engineer shall review and approve payment application prior to submission to the Client.

6.4. The Project Manager shall prepare and compile payment application. Sign payment application as approved.

6.5. The accounting department shall process payment application internally. Signatures and notary seal for payment application and lien waiver.
6.6. The Office personnel shall monitor project progress, costs and payments.

6.7. Equipment Manager Shall generate the material/equipment/labor report

7.0 Procedures

7.1. Assign Cost codes to line items per approved proposal see “GCC Private Project Procedure”

7.2. Generate material/equipment/labor report

7.3. Summarize subcontractors invoices on billing sheet

7.3.1. Review subcontractor invoices for percent complete, compliance with contract provisions and accuracy

7.3.2. Prepare subcontractors payment see “GCC subcontractors payment procedure”

7.3.3. Base payment on subcontractors schedule and job progress or percent complete

7.4. Prepare self performed portion of payment application from material/equipment/labor report enter onto billing sheet

7.4.1. Base payment on percent complete, schedule and job progress

7.5. Prepare AIA payment application

7.5.1. Coordinate line items with Client approval

7.5.1.1. Use Client cost codes if applicable

7.5.2. Prepare AIA G702 and G703

7.5.3. Bill out in excess of costs if not provide explanation

7.21 Prepare lien waiver

7.21.1 Provide partial lien waiver on progress payments

7.21.1.1 Verify partial lien waivers have been provided from subcontractors

7.21.2 Provide final lien waiver after final acceptance

7.22 Submit original PA, lien waiver and appropriate number of copies to client
7.23  Submit copy to office personnel

7.24  Submit copy to Chief Engineer

7.25  Prepare proposals for items outside contract scope or force account

   7.25.1  Track force account items

   7.25.2  Base proposal format off GCC standards

   7.25.3  If required submit proposals as client requires

7.26  Prepare change orders with Client assistance

   7.26.1  Upon receipt of the change order provide accounting with a copy so the status form may be updated

7.27  Bill change orders as appropriate

7.28  Purchase Orders

   7.28.1  Fill out the purchase order form print for processing

   7.28.2  Add a cover letter with EEO certificate

   7.28.3  Verify the terms and conditions are on the back of the purchase order form

   7.28.4  Upon receipt of the executed purchase order file in the Material Procurement folder
Private Project Subcontractor payment Procedure

1.0 Purpose

This procedure establishes guidelines for the administration of Private Project Subcontractor Payment procedure at General Construction Company. A standard establishes the consistency, accuracy, and execution, keeping the company moving forward and profitable.

2.0 Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Rev. No.</th>
<th>Change</th>
<th>Reference Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1-05</td>
<td>1.0</td>
<td>New Procedure</td>
<td>All</td>
</tr>
</tbody>
</table>

3.0 Employees Affected

3.1. All Engineers & Project Managers assigned a private project

3.2. Office personnel assigned in supporting private projects scope of work

4.0 Policy

4.1. The policy of General Construction Company is to:

   4.1.1. Provide quality, consistent, on-time construction while maintaining a safe work environment.

   4.1.2. Align GCC strategic goals and action plans into every project.

   4.1.3. Maintain a reputation of being able to complete projects on a fast-track basis, thus allowing the owner to utilize the finished product at the earliest possible time.

   4.1.4. Promote capabilities while focusing on select opportunities with current and future private clients.

   4.1.5. Know limits and boundaries allowing the freedom to exercise sound judgment and action.
5.0 Definitions

5.1. **General Construction Company (GCC).** Corporate name

5.2. **Notice to Proceed (NTP).**

5.3. **Substantial Completion (SC).** Project is completed to the point it may be used for its intended purpose. A Certificate of Substantial Completion is issued signifying the beginning of the maintenance period.

5.4. **Final Completion (SC).** Project is completed, accepted and final payment has been issued.

5.5. **Purchase Order (PO).** Written authorization for goods not services to ship or supply products at a specified price, which is becomes a legally binding contract once accepted.

5.6. **Payment Application (PA).** Document used to track progress, payments due and payments received.

5.7. **Cost Codes.** Series of codes that define categories of costs that may be tracked.

5.8. **American Institute of Architects (AIA).** Provide the standardized forms that are used for payment applications commonly known as AIA G702 and G703.

5.9. **Force Account (FA).** Work items that are performed usually without a contract and out of scope, the material, equipment and labor is tracked by cost or time and billed accordingly

6.0 Responsibilities

6.1. The Vice-President of the company is responsible for ensuring compliance to this procedure.

6.2. Employees are expected to comply and adhere to the guidelines of this procedure when performing a private project.

6.3. The Chief Engineer shall monitor subcontractor progress through updates from the Project Manager.

6.4. The Engineers and Project Managers shall be responsible for the overall project administration including subcontractors. Refer to the “Project Manager Responsibilities” description.

6.5. The Office personnel shall monitor project progress, costs and payments.
7.0 Procedures

7.1. Retrieve the subcontractor folder

7.2. Summarize subcontractors invoices on billing sheet
   7.2.1. Review subcontractor invoices for percent complete, compliance with contract provisions and accuracy
   7.2.2. Base payment on subcontractors schedule and job progress

7.3. List payment items on summary sheet

7.4. Indicate payment amount for each line item based on completed quantity

7.5. Prepare change orders for Client approved items
   7.5.1. List change order items on the summary sheet
   7.5.2. Track force account items

7.6. Provide to Engineering Administrator for processing

7.7. Update the subcontractor data base

7.8. Provide to accounting for issuance of check

7.9. Hold payment until payment is received from Client

7.10. Hold payment until waiver and release of lien has been received for previous payments

7.11. Reduce retain age to subcontractor if Client reduces retain age to GCC
General Construction Company

Private Project Check List

Pre-Bid

☐ Identify Potential Projects
☐ Gather Plans for Review of Project Potential
☐ Evaluate/Discuss Potential Project
☐ Determine either Negotiated or Competitive Bid
☐ Gather Accessory Documents
☐ Discuss Potential Subcontractors

Bid Process

☐ Enter Project into Gradebeam
☐ Generate Plan Takeoff
☐ Review Specifications, Geotech Reports, & Accessory Documents
☐ Compile and Double-check Pricing
☐ Request and Receive Subcontractor Quotes
☐ Compile Bid
☐ Review Final Bid
☐ Submit Bid to Client
☐ Receive Notice of Award

Contract Administration

☐ Assign Project Number and Cost Codes per Approved Bid Proposal
☐ Coordinate Schedule of Values with Client
☐ Submit Insurance Certificate to Client
☐ Notify Subcontractor Intent to Award Contract
☐ Issue Sub Contracts
☐ Request/Receive Sub Insurance Certificates
☐ Issue Notice to Proceed to Subcontractors
☐ Prepare AIA Payment Applications
☐ Submit Quantities each Thursday to Present at Staff Meeting following Monday
Gather Timesheets each week for Cost Coding
Provide Approved Cost Codes to Field Personnel
Update Daily Reports in Force Account Tracker Weekly
Negotiate and Track Force Account and Out of Scope Work
Prepare Change Orders with Client coordination
Cost Code Invoices in PO Tracker weekly
Prepare and Track Schedule Monitoring Job Progress
Notify Sub of Work Schedule; Coordinate with job progress

**Construction Phase**

- Notify General Superintendent of Notice to Proceed
- Notify Equipment Manager of Notice to Proceed
- Project Review Meeting with Site Superintendent
- Procure and Mobilize Manpower / Resources
- Coordinate Mobilization
- Coordinate Surveying contract and Layout
- Coordinate Safety with GCC Safety Manager
- Weekly Progress Meeting

**Payment Application**

- Generate Materials / Equipment / Labor Report
- Request & Receive Payment Application from Subs
- Summarize Self Performed and Sub Invoices on Billing Sheet
- Prepare Proposals for Items Outside Contract Scope / Force Account
- Submit Executed Copy of Change Order to Accounting
- Incorporate Change Order Billing with Payment Application
- Prepare AIA Documents
- Gather and Prepare Partial or Final Lien Wavers

**Subcontractor Payment Procedure**

- Review Subcontractor Payment Application
- List Payment Items on Summary Sheet
- Indicate Payment Amount for Each Line Item Based on Completed Quantity
Prepare Sub Change Orders for Client Approved Items
List Change Order Items on Summary Sheet
Process Sub Payment Though Admin
Update Sub Data Base
Gather Partial or Final Lien Wavers
Reduce Retainage based on Client’s Payment
Make Payment to Subcontractor