

# *Electronic Signatures on Approval Documents for Construction Contracts*

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**Abstract** — *The current process for approvals required by management for bid lists and for contract awards of Engineering and Construction Services (E&CS) Projects for Southern Company requires manual signatures. This delays the process due to the printing and time required to hand sign the documents, usually two to four weeks. The proposed method which is the basis of this project in order to accelerate this process is to create and use an electronic approval form requiring digital signatures versus hand signature. The electronic forms were prepared for digital signatures and tested by one project team at one operating plant in Georgia, part of the service territory of Southern Company. The results of using the new electronic forms requiring digital signatures yielded routing times of less than one week which supports the objective of the project to reduce the routing time using a new electronic process. There were some gaps that needed to be addressed with the new electronic forms to meet internal company procedures. Solutions to these gaps were implemented while testing the new electronic process. The new electronic signature process will continue to be tested and improved in order to implement in the future.*

**Key Terms** — *Bid List Approval Letter, E&CS, SDS, Summary of Award Recommendation*

## **INTRODUCTION**

The thesis for this project is that electronic signatures on approval documents will allow construction projects to be bid out and awarded in less time as opposed to using the current manual approval process. The thesis originated from the need to create a process that is faster than the current approval process in place for the approval of documents that are required for all construction contracts as part of the E&CS organization of

Southern Company. The current process requires hand signatures and takes 2 to 4 weeks to route one document for approval. The objective of this project is to reduce the amount of time required to reach approval for both documents (Bid List Approval Letters and Summary of Award Letters) to less than 1 week per document being routed.

There are three benefits to using electronic signatures which include making processes more efficient, reducing costs, and security [1]. The added security is accomplished through new technology and using encryption software designed for digital signatures. These benefits can be explored for the current signature process that is used at Southern Company for approval documents needed for construction contracts.

Management is concerned with saving time and money with its internal and external processes used to support business transactions. The new electronic process proposed for approvals will save the company money by reducing the time required for approvals which prevents project schedules from being delayed and allowing more projects to be competitively bid. Since every project is unique, the amount of money that can be saved will vary depending on the project.

## **BACKGROUND**

The Bid List Approval Letter is a document that contains information about the scope of the construction project, the estimated value and proposed bidders. The Summary of Award Recommendation is a document that contains information about the scope of the construction project, the bid evaluation, proposal pricing, estimated contract value, awarded contract value, the maximum Purchase Order value (the amount of money approved for funding the construction project including contingency), and the best

evaluated bidder recommended for award of the project.

The process for the Bid List Approval Letter begins at the construction site where it is generated. The document is then routed through management levels required which include the following signatures:

- Construction Manager
- Project Manager
- Labor Project Manager
- Regional General Manager
- Vice President of Projects and Construction
- Vice President of Operations Services

The approvals required are signed off manually and routed through email. After going through all of the signatures required, the document is sent to the Supply Chain management representative and the bid package is released to the approved bidders on the Bid List Approval Letter.

This document includes attachments such as the bidder matrix, which is a spreadsheet that is used to evaluate potential bidders for the project depending on scope and capabilities of contractors that are qualified to work for Southern Company. Other attachments that may be included are exception forms if any of the contractors on the bid list do not meet the company’s safety or quality requirements, but are still desired to bid on the work by the project team.

The Summary of Award Recommendation is routed in the same manner. The only difference is that the Vice President of Operations Services does not need to sign and the Senior Vice President of Georgia Power does need to sign if the Purchase Order is over \$5 million. These requirements have been established by internal operating procedures. Often, this document will include a bid evaluation spreadsheet as an attachment. Once Supply Chain receives the approved document, the project is awarded to the successful bidder and the contract negotiation process begins.

The problem with the current process is that the Bid List Approval Letters and Summary of Award Recommendations needed for all

construction contracts normally takes 2-4 weeks to be approved. The approval of these documents requires hand signatures on documents from management and executive management levels within Southern Company. Table 1 shows the historical data on days spent routing for approvals of ten document samples from 2017 where the average of days spent routing was fifteen days. This creates a ripple effect: the longer it takes these documents to route for signature, the longer the project schedule falls behind. There are certain construction contracts that need to be executed in a short period of time to support project schedules.

**Table 1  
Historical Data of Routing Time for Bid List and Summary of Award Documents in 2017**

Type	Project	Start Date	Finish Date	Days Spent Routing
Bid List	Bowen Site Development	12/11/17	12/18/17	7
Bid List	Scherer Field Erected Tanks	11/2/17	11/20/17	18
Bid List	Yates Cofferdam	8/23/17	8/31/17	8
Bid List	Yates Permanent Pipe	5/30/17	6/19/17	20
Summary of Award	Yates Permanent Pipe	8/25/17	9/11/17	17
Bid List	Bowen Borrow Area	12/11/17	12/18/17	7
Summary of Award	Bowen WM Deep Foundations	11/2/17	11/16/17	14
Summary of Award	Bowen Third Dewatering Belt	8/8/17	9/11/17	34
Bid List	Bowen Bottom Ash Foundations	2/9/17	2/22/17	13
Summary of Award	Yates Water Treatment Pipe	5/26/17	6/6/17	11
Average Days Routing				15

However, a bid package cannot go out to bidders without a Bid List Approval Letter which needs to be signed by certain managers. Moreover, a project cannot be awarded to the successful bidder without an approved Summary of Award Recommendation. In both cases, the project schedule is hindered the longer these documents are routing for approval signatures. When project schedules are altered, the cost of the project usually

increases due to compressed schedules and not being able to bid projects due to not having enough time to route a Bid List Approval Letter. When this happens, the projects are usually sole sourced to one Contractor which does not allow for competitive pricing which increases costs of the project.

## METHODOLOGY

The methodology for the completion of the objective consists of the following steps:

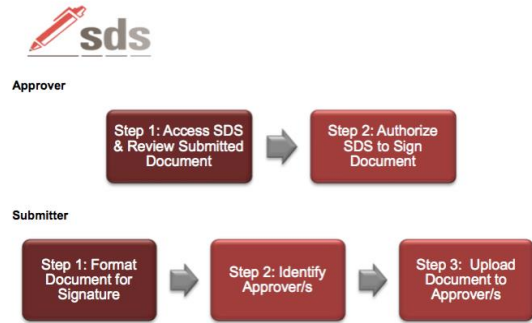
- Prepare the pdf version of the Bid List Approval Template and the Summary of Award documents for digital signature.
- Create an online user interface that could be accessed from any device to approve documents in the routing process.
- Test the new electronic signature process and verify that the time spent routing for approvals is less than 1 week per document.

The first step to create the pdf version of the templates was achieved with the help of the supply chain department. The documents were created using the Adobe Pro program and prepared for digital signatures. The online user interface is the Southern Digital Signature (SDS) Application. The new electronic forms were set up to work with the SDS Application by supply chain management. This means that the approvers can sign the documents from any device electronically using the SDS Application.

Figure 1 outlines the process for approvers and submitters as explained in [2]. For approvers, the first step is to access the SDS Application and review the document. Once reviewed, the approver can sign the document using digital signature through the SDS Application. As a submitter, the document needs to be formatted for digital signature by adding the approvers required with signature fields and uploading the document in the SDS Application.

### III. Document Approver / Submitter Process

For approval of Documents, the construction and design of the application is based on simplicity, and is comprised by the following 2 steps:



**Figure 1**  
SDS Document Approver and Submitter Process

A milestone schedule for the completion of the activities to support the methodology is shown in Table 2. The forms need to be clear and informative which means that the information boxes created in the new electronic version for digital signature need to allow the user to input the information needed and be visible to others. It is important that the internal procedures are followed as part of the new electronic process. These procedures require all Bid List Approval Letters to have an attached Bidder Matrix which is a document that is a spreadsheet that is used to evaluate potential bidders for the project based on capabilities, scope, and experience. Moreover, exception forms may need to be attached in the case that a project team wants to include a bidder that does not currently meet the safety requirements for bidding purposes. Bid evaluation spreadsheets are often attached to Summary of Award documents for reference as well. Addressing these needs will be important while testing the new electronic process.

**Table 2**  
Milestone Schedule

Description	Date
Address Spacing Requirements for Information Boxes on Electronic Approval Forms	3/1/18
Attach Supporting Documentation to Electronic Approval Forms	3/9/18
Route Electronic Approval Forms in less than 1 week	3/30/18

## RESULTS

The testing of the new electronic process for the Bid List Approval Letters and the Summary of Award Recommendations commenced with one project team in Georgia (Plant Bowen Construction). In a recent test sample Bid List Approval Letter in Figure 2, the electronic approval document routed for seven days. Table 3 shows the data gathered from four recent test electronic documents where the average days spent routing is seven days. This is an improvement when compared to the average days spent routing in the historical data of fifteen days to the new average of seven days.

Confidential and Privileged Information		
Bid List Approval Letter		
Approval: <u>Shawn Powell</u>	Date: <u>1/26/2018</u>	
Construction Manager, Shawn Powell		
Approval: <u>Luke Bohnenkamp</u>	Date: <u>1/29/2018</u>	
Project Manager, Luke Bohnenkamp		
Approval: <u>Keith Metcalf</u>	Date: <u>1/29/2018</u>	
Project Manager (Labor), Keith Metcalf		
Approval: <u>Alan McCullough</u>	Date: <u>1/30/2018</u>	
Regional General Manager, Stuart McCullough		
Approval: <u>Robin Hurst</u>	Date: <u>1/30/2018</u>	
VP of Projects and Construction, Robin Hurst		
Approval: <u>Jeff Peoples</u>	Date: <u>2/2/2018</u>	
VP of Operations Services, Jeff Peoples		

\*\*BIDDER MATRIX ATTACHED\*\*

**Figure 2**  
**SDS Document Approver and Submitter Process**

**Table 3**  
**New Testing Data of Time Spent Routing for Electronic Approval Documents in 2018**

Type	Project	Start Date	Finish Date	Days Spent Routing
Bid List	Bowen Underground Pipe	1/26/18	2/2/18	7
Bid List	Bowen WM Electrical	1/22/18	2/2/18	11
Summary of Award	Bowen WM Storm Drain	1/24/18	1/30/18	6
Summary of Award	Bowen East Borrow Area	2/2/18	2/5/18	3
Average Days Routing				7

The process and the electronic documents were evaluated during testing. This allowed gaps in the

process and suggestions for improvement to be identified. These included the spacing for input on the information boxes needed to be larger in the forms so that the information is visible by all parties. This was communicated to Supply Chain Management and fixed. Another gap identified was the need to attach supporting documents to the electronic forms such as exception forms, bidder matrices, and bid evaluation spreadsheets. These documents were able to be attached to the electronic forms using the Adobe Pro program. This program allows the user to convert files to pdf format and then combine them with an existing pdf file in the program. The only downside is that the submitter will need to do this as part of their submittal process before the document is routed and have the program in order to follow the internal procedural requirements.

## CONCLUSION

In conclusion, the ability to use electronic signatures on approval documents for the Bid List Approval Letter and Summary of Award Recommendations for construction projects at Southern Company is possible. There are items that can still be improved such as the attachment of supporting documentation, perhaps by using another tool in the future. The testing of the electronic approval documents was successful in that it yielded shorter routing times as compared to the current manual signature process used for approvals. The objective of the project was accomplished partially due to routing three documents in a week or less time. However, not every document that routed was not routed in less than one week. There were two documents that routed in seven to eleven days.

The new electronic process will continue to be tested and may show less routing times as the submitters/approvers gain more knowledge about using SDS. This is still an improvement as compared to the previous manual signature process and should be considered as a new technology to use within the company for these types of

documents. There will be further progress needed to be made as far as implementing this new electronic approval process in lieu of the current manually approved documents which would include changing the internal procedures to reference the new process, training employees to use it, and gain acceptance by management in the company.

## **REFERENCES**

- [1] contractlogix. (2018, February 2). The 3 Main Benefits of Using Electronic Signatures. Retrieved from contractlogix: <https://www.contractlogix.com/2012/01/the-3-main-benefits-from-using-electronic-signatures/>
- [2] Southern Company Supply Chain Management. (2017, March 13). Southern Digital Signature (SDS) Application User Guide for the Document Approver Role.