

Brevard County – Utility Services Department

South Central Regional Wastewater Treatment Facility Expansion

May 8, 2019



Table of Contents

Transmittal Letter	1
Background	2
Objectives and Approach	4
Project Snapshot	6
Observation and Recommendation Follow Up	11
Process Maps	14

Transmittal Letter

May 8, 2019

The Audit Committee of
Brevard County, Florida
2700 Judge Fran Jamieson Way
Viera, Florida 32940-6699

Pursuant to the approved 2018/2019 internal audit plan, we hereby submit the following report related to our monitoring assistance of the South Central Regional Wastewater Treatment Facility Expansion construction project. Our report is organized in the following sections:

Background	This provides an overview of the funding, key contacts, and timeline of the project to date.
Objectives and Approach	The objectives of our procedures and our approach to the execution of those procedures are expanded upon in this section.
Project Snapshot	This section provides an overview of the current status of the project.
Process Maps	This section provides a visual depiction of the workflow of all key processes included within our scope.

We would like to thank the staff and all those involved in assisting the Internal Auditors in connection with this review.

Respectfully Submitted,

INTERNAL AUDITORS

Background

The Board of County Commissioners approved a construction budget of \$38,074,000 for the South Central Regional Wastewater Treatment Facility Expansion & Improvements project. This project is funded via the State Revolving Fund (SRF) which includes specific requirements for the submission of various reports and summary documentation with each monthly pay application. The SRF is administered by the State of Florida for the purpose of providing low-interest loans for investments in water and sanitation infrastructure.

- Key Vendors:

- Contractor – Adams Robinson Enterprises, Inc.
- Engineer Consultant – Mead and Hunt (formerly Quentin L. Hampton Associates, Inc. (QLH))

- Key Dates:

- Design Engineer

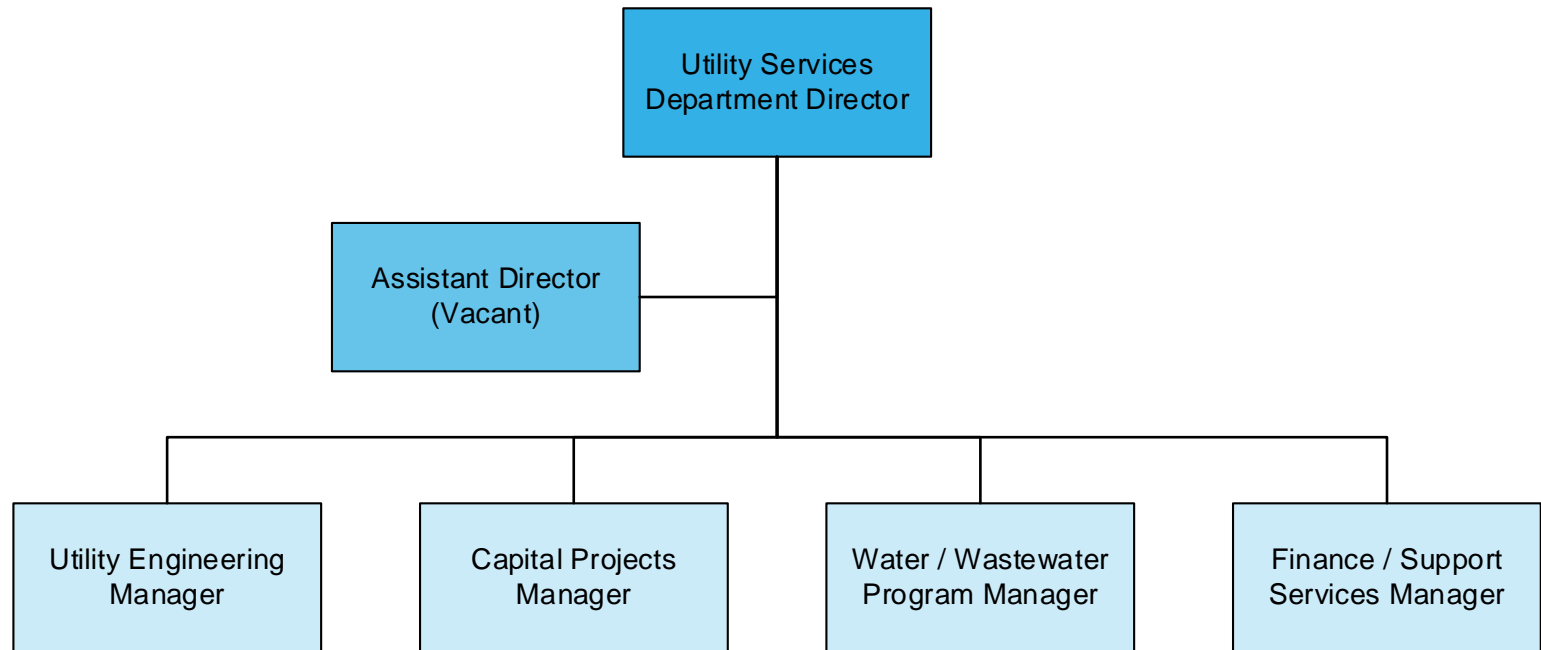
- RFQ Submission Date – April 10, 2014
 - Short List Meeting – May 5, 2014
 - Contract Execution Date – October 3, 2014

- Contractor

- Pre-Bid Date – April 7, 2016
 - Bid date – May 11, 2016
 - Contract Execution Date – May 27, 2016
 - Preconstruction Meeting – August 17, 2016
 - Notice to Proceed (NTP) – August 22, 2016
 - Original Contract Duration – 730 calendar days from NTP to substantial completion 760 calendar days from NTP to final completion
 - **Revised** Contract Duration – 975 calendar days from NTP to substantial completion and 1,005 calendar days from NTP to final completion (overall 245 day increase – see CO #2, #4, #7, and #8)

Background - continued

Organizational Chart of Management Team



In-Scope Process Relevance:
Serves as the acting project manager, responsible for procurement support, and the review of pay applications and change orders.

In-Scope Process Relevance:
Responsible for administrative processing of pay application payments and change orders.

Objectives and Approach

Objectives

For the construction project listed below, the objectives of our internal audit were as follows:

South Central Regional Wastewater Treatment Facility Expansion

- To assist the County in their construction contract monitoring efforts by leveraging RSM's experience with comparable agreements / projects
- To develop recommendations for improvement to key construction management processes and controls; facilitated through recurring involvement in the referenced project throughout the respective contract term
- To provide bi-annual status reports to Management and the Audit Committee regarding the progress of the project and any recommended improvements identified.

Approach

Our approach to the engagement was as follows:

Obtaining an Understanding and Risk Assessment

To establish a foundational understanding of the project and to better assist the County, RSM met with the key members of management and construction process owners directly involved with the project. Major work steps as a part of this phase were as follows:

- Kickoff meeting / facilitated session with management
- Key process owner interviews
- Construction contract review
- Process mapping / key control identification
- Construction contract risk / compliance matrix development
- Policies and Procedures documentation review
- Identification of KPIs and relevant project metrics for reporting

Objectives and Approach - continued

Approach - continued

Recurring Monitoring Assistance

Monthly, RSM performed select inquiry, review, and testing procedures as they related to the following key construction management processes:

- Procurement adherence to FL statutes and County Policies and Procedures
- Pay application approval
- Pay application contractual compliance / support
- Pay application mathematical accuracy / roll forward
- Pay application Florida Prompt Payment Act compliance
- Pay application adherence to best practice and industry standards
- Pay application packages submitted to SRF
- Change order approval
- Change order contractual compliance
- Change order mathematical accuracy
- Change order incorporation into monthly pay applications
- Change order adherence to best practices and industry standards
- Owner Direct Purchase program
- Weekly and monthly contractor reporting
- Quarterly jobsite inspection
- KPI / metric monitoring / evaluation
- Davis-Bacon and related Acts (DBRA) pay rate U.S. Department of Labor compliance

Reporting

We will continue to provide Utilities Management and the Audit Committee with a project status report on a bi-annual basis.

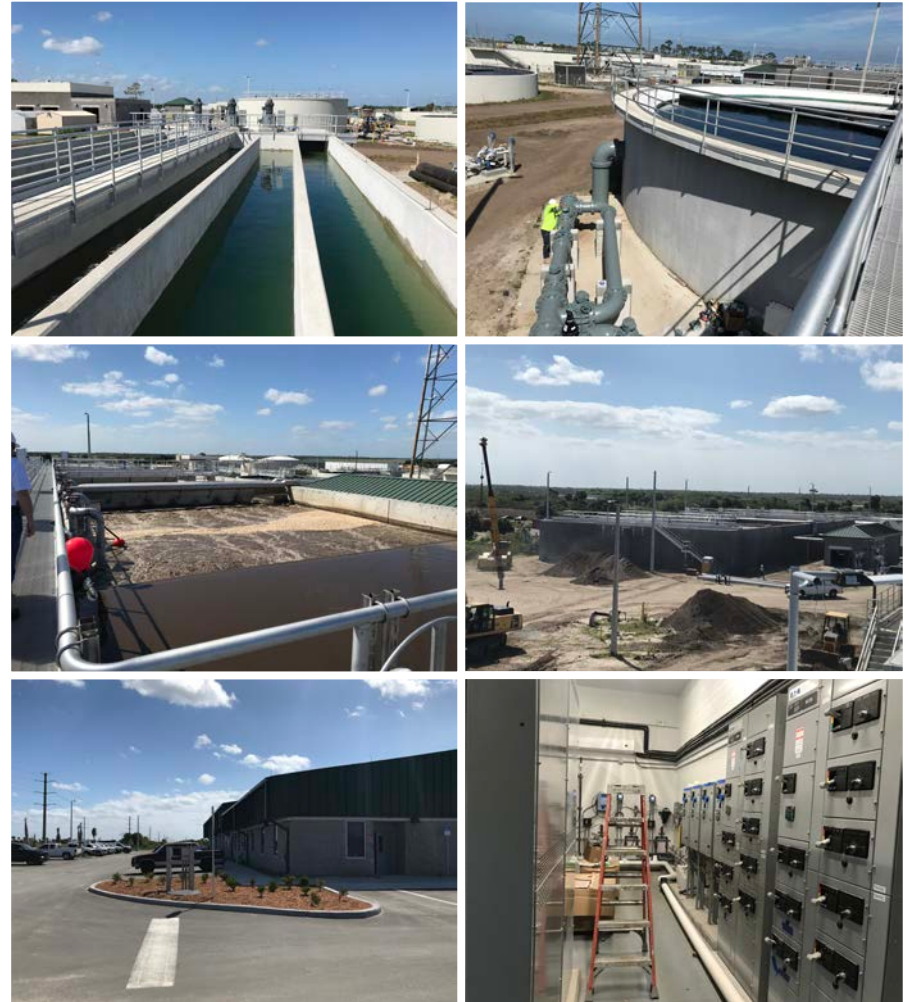
South Central Regional Wastewater Treatment Facility Expansion Snapshot - Summary

South Central Regional Wastewater Treatment Facility Expansion

Through inquiry with project management, inspection of the South Central Regional Wastewater Treatment Facility Expansion jobsite (03/14/2019) and review of pay applications and change orders through 2/28/2019, we noted the project schedule has been extended an additional 141 days (245 added overall, for 1,005 total days) since our last report, with final completion planned for May 24, 2019. The recent extension was approved per Change Order #7 for electrical and walkway work and Hurricane Irma delays, and per Change Order #8 for work on the maintenance building and pit collections system design delays. The contract was also increased by Change Order #8 in the amount of \$68,699.22.

Our site visits included a walkthrough and inquiry with the Construction Coordinator and Support Services Manager, who noted the general contractor's team is providing sufficient monitoring of subcontractors and actively working to complete the project. Most major portions of the work appeared complete and in operation.

Through inquiry with the County, we noted that the timing of SRF reimbursement package submissions has improved since our prior report (see Observation #1 follow up on page 11). We also noted that Mead & Hunt, the preparer of SRF packages, submitted change order #2 for additional fees related to the project timeline extension described above. The change order, totaling \$256,230 was approved by the Board of County Commissioners, bringing Mead & Hunt's total contract value to \$3,668,690.



Note 1: Pictures taken during RSM site visit in March 2019.

South Central Regional Wastewater Treatment Facility Expansion Snapshot – Metrics (as of 02/28/2019*)

30

Pay Applications Processed

8

Change Orders Processed

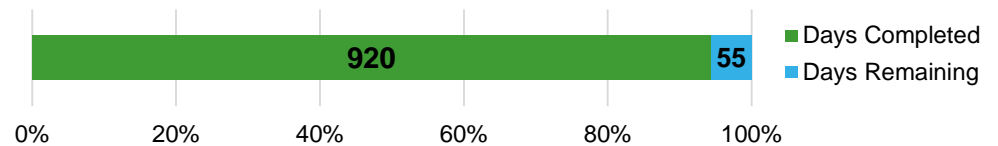
94%
975 days

Schedule Progression

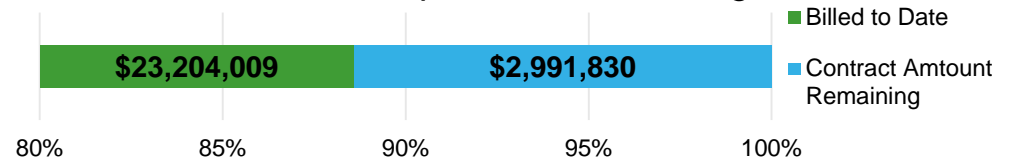
89%
\$26,195,840

Spending Progression

Days Completed vs. Remaining



Contract Spend vs. Remaining



Top 10 Largest Project Costs through PA #30:

Section	Line Item Description	Amount	% Complete
BNR Structure/Blower Building	Biological Process Equipment	\$ 3,430,000	100%
BNR Structure/Blower Building	Slab Concrete	\$ 2,400,000	100%
Electrical	Generators	\$ 2,332,400	100%
BNR Structure/Blower Building	Wall Concrete	\$ 2,263,600	100%
Filters & Filter Replacement	Filter Equipment	\$ 1,697,250	93%
Pretreatment Structure	Grit Equipment	\$ 979,000	100%
BNR Structure/Blower Building	Turbo Blowers	\$ 658,000	100%
Pretreatment Structure	Rotary Drum Screen & Pres	\$ 570,000	100%
Clarifiers/RAS/WAS Pumps	Clarifier Equipment	\$ 556,600	100%
Mob/Demo	Mobilization	\$ 500,000	100%

* Due to normal timing of the contractor pay application cut off date and pay application submission and approval, our scope period covers October 2018 through February 2019.































South Central Regional Wastewater Treatment Facility Expansion Snapshot – Change Orders (as of 02/28/2019*)

Change Order	Amount	Days Added	Description
CO #1	-	0	Schedule of Values change
CO #2	(2,544,025.00)	84	Owner Direct Purchase Reduction
CO #3	(9,352,853.00)	0	Owner Direct Purchase Reduction
CO #4	-	20	Schedule extension for soil settlement delays
CO #5	(57,396.00)	0	Owner Direct Purchase Reduction
CO #6	7,415.00	0	Owner Direct Purchase Adjustment
CO #7	-	28	Schedule extension for electrical and walkway work and Hurricane Irma delays
CO #8	68,699.22	113	Maintenance Building and pit collections system design changes
Totals	(11,878,159.78)	245	

* Due to normal timing of the contractor pay application cut off date and pay application submission and approval, our scope period covers October 2018 through February 2019.

South Central Regional Wastewater Treatment Facility Expansion Snapshot – Pay Applications

The results of our testing for this reporting period are below:

	Pay Application #26 October 2018	Pay Application #27 November 2018	Pay Application #28 December 2018	Pay Application #29 January 2019	Pay Application #30 February 2019
Test Criteria	\$316,391	\$473,720	\$383,615	\$728,955	\$420,476
Mathematical Accuracy					
Proper Approvals					
Documentation Support					
Consistent Schedule of Values					
Timeliness of Payment					
Support Provided to SRF					































 Denotes SRF package is under County review.

Observation and Recommendation

1. Timeliness of SRF Submissions	Management Response	Follow Up Status: Closed
<p>Low</p> <p>Through our review of contractor pay applications and SRF packages, we noted that the SRF packages have not been submitted timely to the County. The May 2018 package was submitted in August, with the June and July SRF packages provided to the County in October. The August and September SRF packages have not been submitted to the County. The SRF package is not part of the payment application, because payments to the contractor must be made before SRF funds can be requested.</p> <p>The delay in submission of the SRF packages creates a cash flow risk for the County, who is obligated by Florida Statutes to make payments to the contractor prior to submitting the SRF package. Currently, the County has encumbered \$2,461,735 of payments to the contractor for June through September pay applications, for which SRF funds have not been requested. This is a low risk issue for the County because the funds are available to cover the timing delay; however, should reserves or cash flow become limited, this funding delay could have a more severe impact.</p> <p>We recommend the County, together with Mead & Hunt, identify the cause of the delay in the SRF package submission process, and develop and implement a plan to submit the outstanding SRF packages and future SRF packages in a timely manner.</p>	<p>Management Response: Management agrees that the timing of obtaining the SRF packets could be improved, and we have already addressed this with the vendor. The timing has already improved as a result of the additional outreach.</p> <p>Responsible party: Utility Services Director</p> <p>Estimated completion date: Completed</p>	<p>Based on discussion with the County and review of documents, we noted the August 2018 SRF package was submitted to the County and approved in November, and the September 2018 SRF package was submitted in November and approved by the County in December. Since our prior report, we have reviewed these documents and updated our testing results to reflect this, shown on page 11.</p> <p>For our current report, we noted the SRF package for October 2018 was submitted and approved in December; the November and December 2018 packages were submitted and approved in February 2019; and the January 2019 package was submitted and approved in March. The current SRF package for February 2018 has been submitted to the County and is currently under review. Based upon the improvement in timing between the pay applications and SRF submissions, we agree the County has addressed the previous timing issues.</p>

South Central Regional Wastewater Treatment Facility Expansion Snapshot – Pay Applications











The results of our testing for the prior reporting period are below:

	Pay Application #21 May 2018	Pay Application #22 June 2018	Pay Application #23 July 2018	Pay Application #24 August 2018	Pay Application #25 September 2018
Test Criteria	\$794,605	\$588,253	\$655,889	\$658,458	\$559,134
Mathematical Accuracy					
Proper Approvals					
Documentation Support					
Consistent Schedule of Values					
Timeliness of Payment					
Support Provided to SRF					

Since our prior report, we have reviewed the SRF support for Pay Applications 22 – 25.

South Central Regional Wastewater Treatment Facility Expansion Snapshot – Change Orders

The results of our testing for the current reporting period are below.

Test Criteria	Change Order #7	Change Order #8
	\$0	\$68,699
	Contract Time Extension of 28 days	Contract Time Extension of 113 days
Contractor Entitlement		
Mathematical Accuracy		
Contractual Compliance		
Detailed Cost Breakdown		
Proper Approvals		

South Central Regional Wastewater Treatment Facility Expansion Snapshot – Davis Bacon Compliance

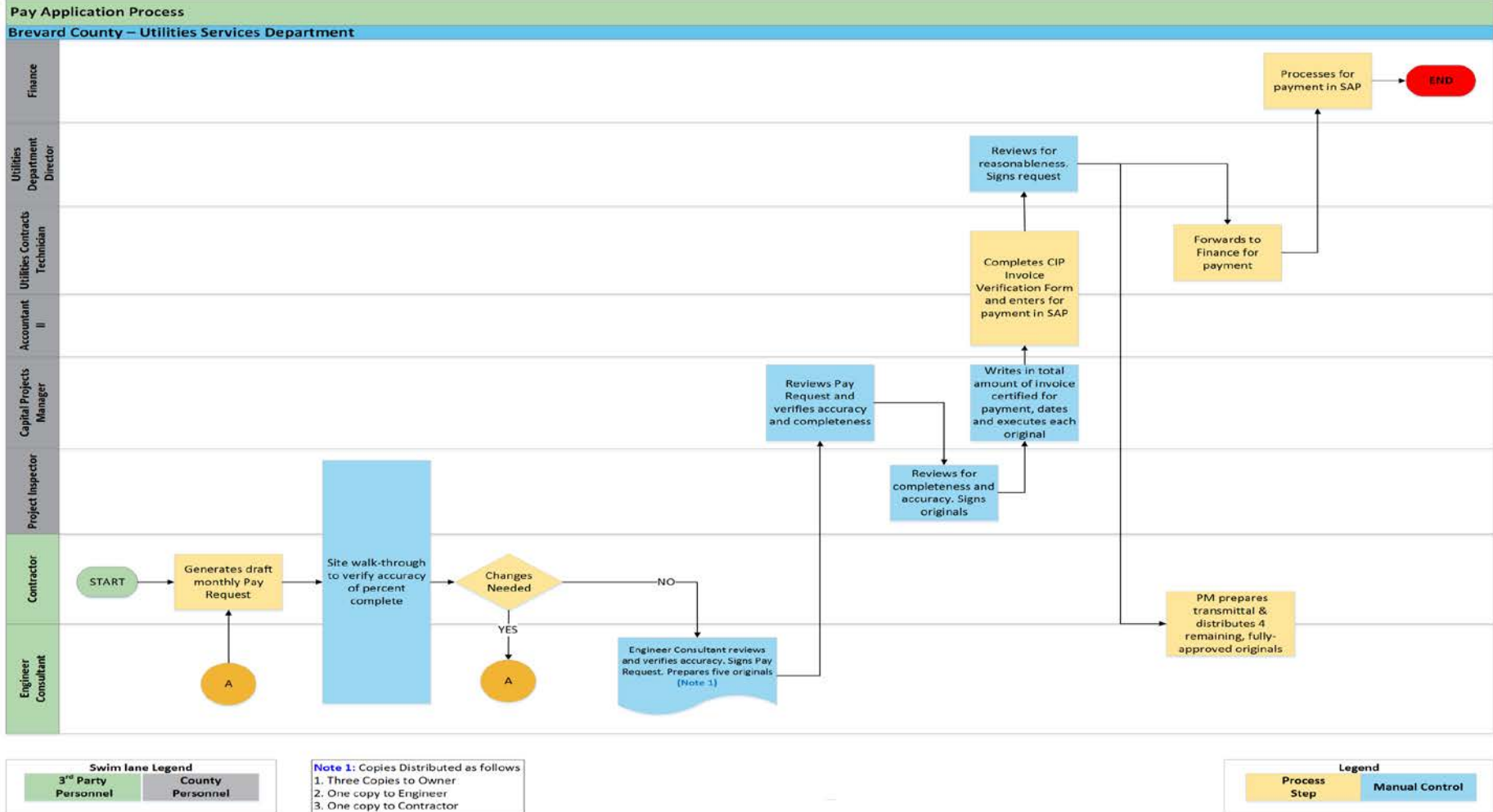
The results of our testing for prior and current reporting periods are below:

Test Criteria	June 2017	September 2017	February 2018	May 2018	October 2018	December 2018
Pay Rate Compliance	✓	✓	✓	✓	✓	✓
Payroll accompanied by Statement of Compliance Form	✓	✓	✓	✓	✓	✓
Employment Eligibility Verification	✓	✓	✓	✓	✓	✓
Interviews forms accurate and complete	✓	✓	✓	✓	✓	✓
Overtime rates compliance	✓	✓	✓	✓	✓	✓

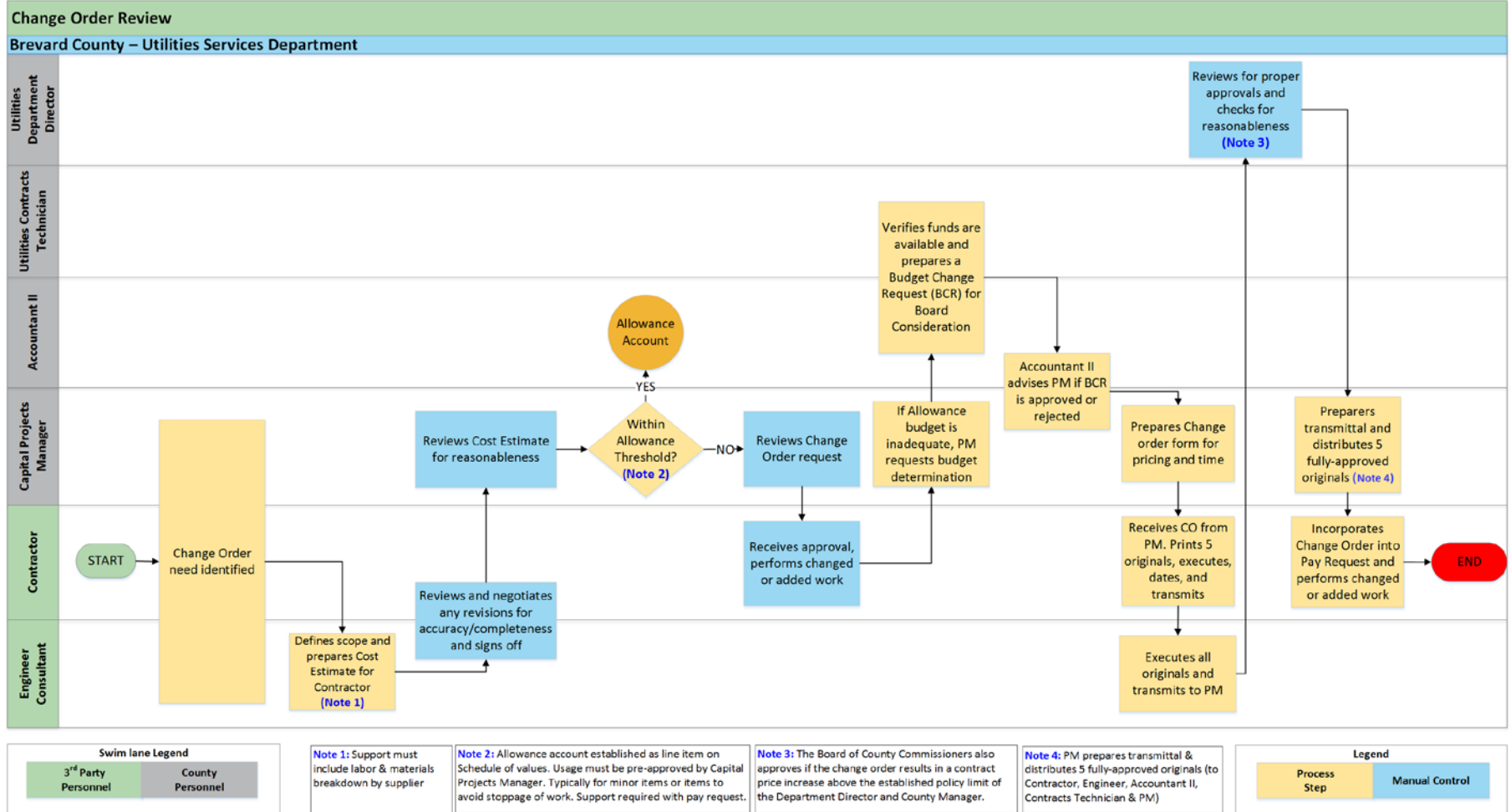
Davis-Bacon and Related Act Compliance (DBRA): Mead and Hunt

As outlined in the Consulting Services Agreement, and as discussed during the pre-construction meeting, Mead and Hunt is responsible for compiling data for all loan reimbursement requests, including the performance of certain duties related to the monitoring of compliance with prevailing wages (Davis Bacon). This process is illustrated in the flowchart included on page 18.

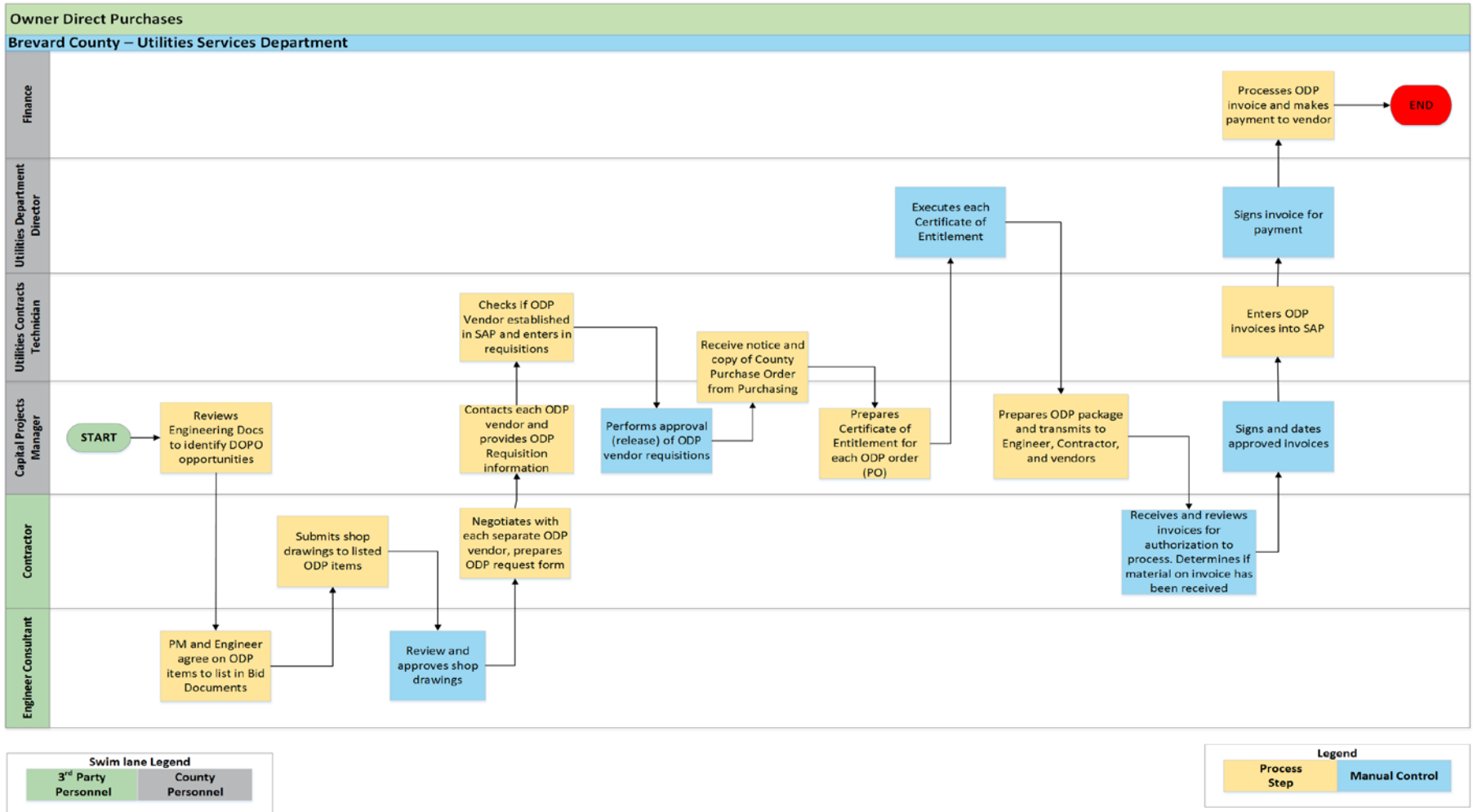
Process Maps



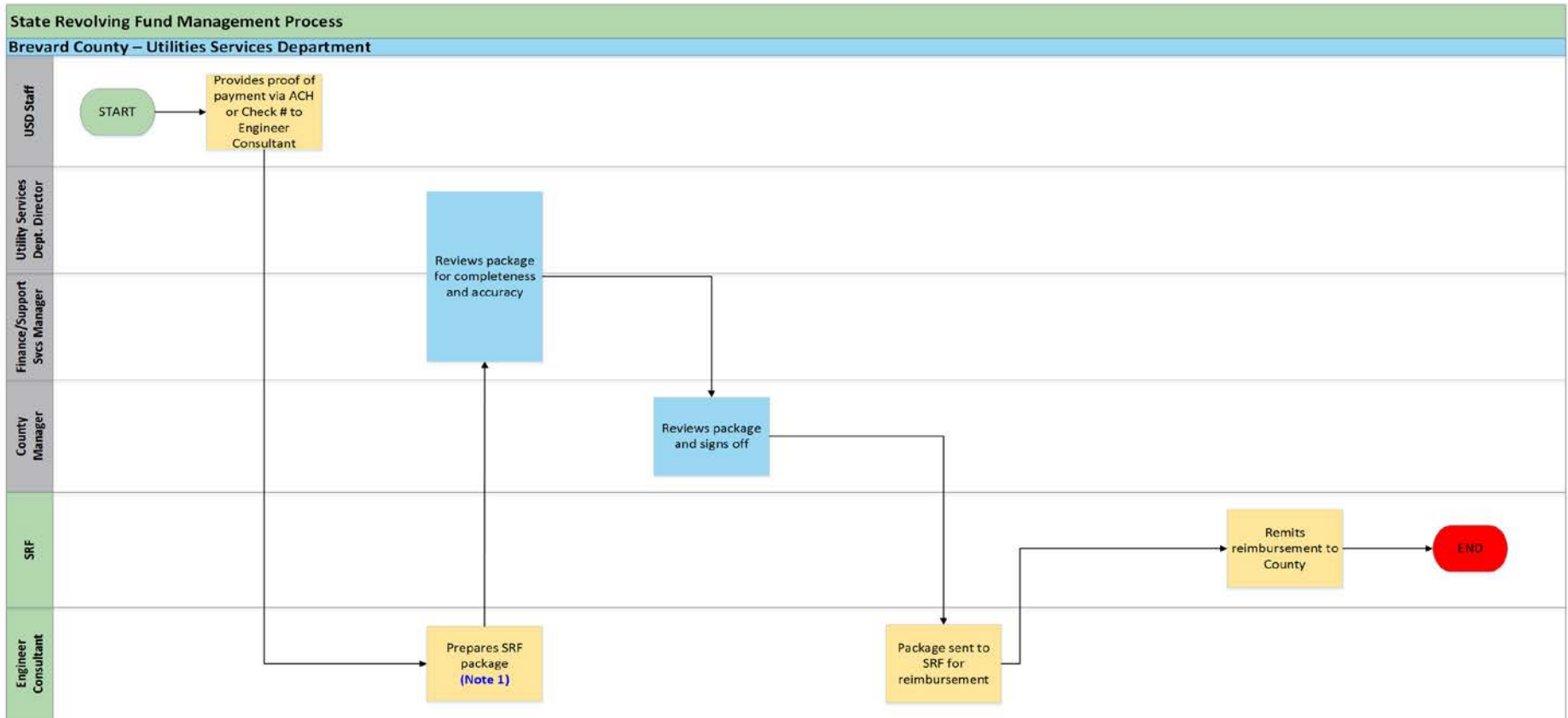
Process Maps - continued



Process Maps - continued



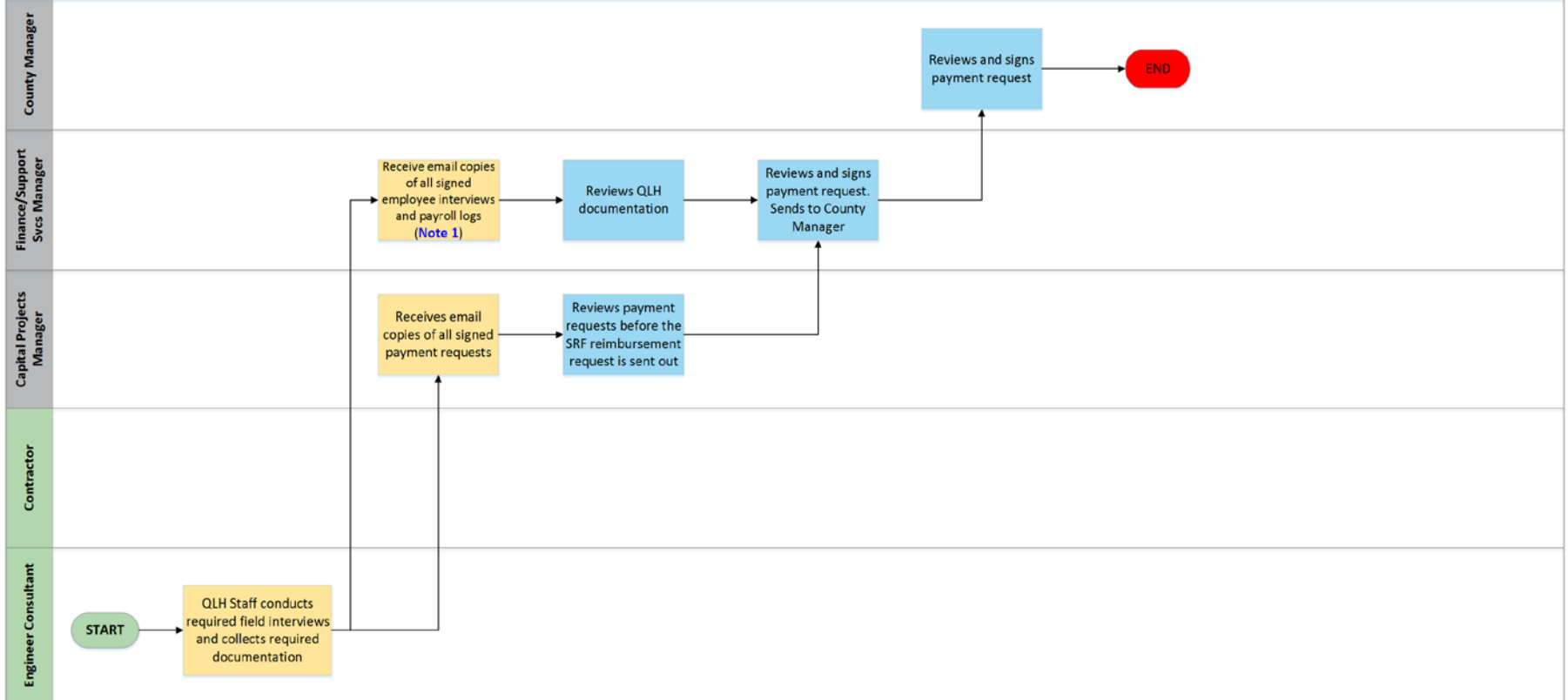
Process Maps - continued



Process Maps - continued

Quentin L Hampton – Davis Bacon Process

Brevard County – Utilities Services Department





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