

Electric Utility Department

Warehouse & Inventory Control Improvement Project

Summary Report

April 2018

Project Facilitation
by
William Brown, CIA, CGAP
City of Lake Worth Internal Auditor

Page intentionally left blank

Electric Utility Department

Improvement Team¹

Mike Jenkins, Energy Delivery Manager

Nikki Mundon, Parts and Property Clerk

Rhonda Moore-Bush, Utilities Coordinator

Rossalind Breland, Budget Analyst

Team Resources²

Ed Liberty, Electric Utility Department Director

Walt Gill, Electric Utility Department Assistant Director

Paul Nicholas, Engineering Manager

Jason Bailey, Assistant Director – System Operations

¹ The EUD Improvement Team completed 17 hours of facilitated analysis and improvement work sessions.

² The Team Resources provided information and data for the EUD Improvement Team to use during work sessions.

Page intentionally left blank

Table of Contents

I. Project Introduction & Authorization	1
A. Project Objectives & Scope	1
B. Overview of Project Methodology	1
II. Work Session Methodology & Summary of Outputs	
A. Work Session I: Process Flowcharting Process Activities and Value-Added Analysis	2
B. Work Session II: Internal Controls Analysis, Opportunity Areas to Improve	3
C. Work Session III: Process Recommendations and Action Planning	4
D. Opportunity Areas for Improvement	4
E. EUD Improvement Team Recommendations	8
F. Action Plan Tables	10
IV. Appendix - <i>Available upon request</i>	36
A. <u>List of Project Resources</u>	
B. <u>Resource Listing for each Recommendation</u>	
C. <u>Appendix Resources</u>	
1. Input from EUD Department Director	
2. Input from T&D Manager, Warehouse Staff, Eng'g, Sys Ops and Vendor	
3. Input from Lake Worth Information Technology Department	
4. Input from Bar Code/Scanner Vendor: Quatred Touchless Technologies	
5. Input from Best Practice Research: Similar Cities	
6. Input from Public Services Department Director on Work Order App	
7. Internet Research: Inventory Management Best Practices	
8. Samples of Reports in use at Similar Cities	

Project Introduction & Authorization

During the 2018 Annual Risk Assessment conducted by the Internal Audit Department (IAD), the Electric Utility Department (EUD) submitted a request to conduct a consulting project to facilitate improvement in the department's warehousing and inventory control processes. The request was partly in response to the Palm Beach County Office of Inspector General (OIG) findings that concluded:

- Lake Worth EUD lacks Policy & Procedures
- Record keeping, chain-of-custody, ordering and receiving are not adequately segregated
- A PAR inventory system is not used³

The management and staff of the Electric Utility Department (EUD) were found to be willing partners, striving to attain a clear path forward, towards the achievement of the project's objectives. The IAD appreciates the assistance and support provided to the EUD Improvement Team. The Internal Audit Department (IAD) has maintained objectivity and independence throughout the assignment by acting simply as a facilitator of the group charged with developing process improvement recommendations.

Project Objectives & Scope

The IAD developed a Project Program (work plan) that addressed each of the following project objectives.

Objective 1: To systematically analyze warehouse activities, identify opportunities for improvement, and develop recommendations for increased efficiency and effectiveness.

Objective 2: To systematically analyze inventory/internal control whereby the following is able to occur:

- a) Inventory is safeguarded and secure
- b) System inventory data is accurate
- c) Inventory reports are used to monitor warehouse operations

The **scope** of the project includes an examination of warehouse activities (possibly to include staffing), and inventory/internal controls employed by the Electric Utility Department in the following areas:

- a) Inventory ordering (purchase process)
- b) Inventory receiving and stocking (put away activity)
- c) Inventory picking (work order fulfillment)
- d) Inventory work order stock return (end-of-day inventory accounting)

Overview of Project Methodology

During the course of the project, the City's Internal Auditor (IAD) performed the following: a) interviewed staff, management, and vendors, b) gathered background information through written surveys/questionnaires, c) documented observations, d) analyzed warehouse / inventory control documentation, g) evaluated current internal controls, such as chain-of-custody documentation, etc.

³ PAR is a system/method that, as the amount of a part number drops below a certain level, an order is automatically generated.

The IAD created a customized series of work sessions designed to enable the staff of the Electric Utility Department (EUD Improvement Team) to achieve the objectives of the project in a systematic, thorough manner. The work session Facilitator used a proven, analytical approach to enable the EUD Improvement Team to: a) document the current environment, b) analyze current business activities, c) recommend specific improvements, and d) create detail action plans to achieve the recommendations.

Work Session I: Flowcharting Process Activities, Value-Added Analysis

Session Synopsis

- The EUD Improvement Team validated Activity Flow Charts for the following areas:
 - “Order New Inventory”
 - “Receive Shipment and Put-away Inventory”
 - “Pick Job Order Inventory”
 - “After Hours Inventory & Warehouse Access”

All members of the EUD Improvement Team gained an equal understanding of current processes.

- The EUD Team used defined criteria to evaluate each of the 54 flowcharted activities to determine whether the activity “added value” to the objective of the process.

Table 1: Results of Value-Added Analysis

	Process Description	Activities Prioritized to Eliminate or Improve
I.	“Order New Inventory”	3 of 8 activities
II.	“Receive and Put-away Inventory”	3 of 13 activities
III.	“Pick Job Order Inventory”	3 of 14 activities
IV.	“After Hours Work and Warehouse Access”	4 of 19 activities

- **Characteristics of Non-Value Added Activities:** The EUD Improvement Team identified common themes among the non-value added activities, including:
 - Performed manually, inefficiently
 - Reviewing information for errors when errors were extremely infrequent
 - Involved non-warehouse staff creating extra work for warehouse staff
 - Verifying something unnecessarily
 - Determining when to reorder inventory and how much – basing decisions on a visual inspection, and either subjective reasoning, or through additional time-consuming research
 - Non-EUD staff inquiring about the status of orders instead of relying on the status found in the ERP system (Naviline)

- Physically transporting “paper” versus utilizing electronic means to communicate information
- Crew Foremen picking parts with Warehouse Staff because the Bill of Materials (BOM) or parts lists required for a job is incomplete from the originator.

Work Session II: Internal Controls Analysis, Opportunity Areas to Improve

Session Synopsis

- All members of the EUD Improvement Team gained an equal understanding of how internal controls are used to secure and safeguard inventory, as well as to shield employees from unfounded suspicion.
- The EUD Improvement Team used defined criteria to evaluate each of the 54 flowcharted activities. The EUD Team documented whether internal control deficiencies existed at each activity or group of activities.

Table 2: Results of Internal Controls Analysis

	Process Description	Activities Identified for New or Improved Controls
I.	“Order New Inventory”	3 of 8 activities
II.	“Receive and Put-away Inventory”	5 of 13 activities
III.	“Pick Job Order Inventory”	3 of 14 activities
IV.	“After Hours Work and Warehouse Access”	3 of 19 activities

- **Warehouse/Inventory Management Process Risks and/or Internal Control Deficiencies:** The EUD Improvement Team identified risks and internal control deficiencies as follows:
 - A staff error is more likely to occur when manually recording a part number, bin location, and quantity information versus using scanner or automated systems.
 - The risk of vendor bribes increases when the Warehouse Staff soliciting quotes can place an expensive vendor above the low bid, because they *supposedly* are the only vendor that can deliver the parts when the warehouse *supposedly* needs them.
 - Warehouse staff performs incompatible sequential duties, increasing the risk that theft or error could be covered up and not detected.
 - The parts and quantity of parts that the Foreman selects for a Job is not verified as required, or even as used on the job. The **Foreman** *could* pick any quantity, any part, and steal it without the warehouse staff being the wiser, without the Department detecting the theft.
 - Likewise, **Warehouse staff** *could* cover up *their* theft by inputting into Naviline the amount the Foreman *actually* took for the Job, plus an *additional amount* stolen by the warehouse

- staff. So, by fraudulently applying a higher than actual material allotment to the job (without the Foreman knowing of the theft), the *warehouse staff could cover up their theft*.
- There are no controls over the “truck stock” or parts that are unused on the Job, being “restocked.” There is no visibility of what material was picked for the job, compared against what was actually used – verified by an independent party.

Work Session III: Process Recommendations and Action Planning for improved Security, Inventory Control, Efficiency, Reporting, and Accountability

Session Synopsis

- The EUD Improvement Team identified the potential impact and benefits of improving each of the “opportunity areas” identified in the first two work sessions.
- The EUD Team selected activities to improve that would either be “an easy fix” or have the biggest positive impact towards achieving the Project’s Objectives.
- The EUD Improvement Team used a proven methodology to formulate twelve specific recommendations to address the selected opportunity areas for improvement.
- The EUD Team developed twelve detailed Action Plans to achieve each of the Team’s recommendations.

Selected Opportunity Areas to Improve

For the Process “**Order New Inventory**”:

1. Where there is manual recording of information, and a bar code scanner could be used, there is an opportunity for improvement.

“Human error, the wrong part number to reorder could be written down, numbers transposed, etc.” [Applicable to Power Plant staff, T&D Crew (day and night), Warehouse staff]

Potential Impact: Warehouse staff orders the wrong part number -> the job cannot be performed because the wrong part number is delivered -> Warehouse Staff time and energy is expended to return the wrong part number -> additional cost is incurred to expedite the correct part number.

2. Wherever there is a manual recording of part numbers *to reorder*, there is an opportunity for improvement.

“Lack of training, or accountability, results in the acceptance of incomplete order forms.” [Applicable to Power Plant staff, T&D Crew (day and night), Warehouse staff]

Potential Impact: Material Requisition forms are not completely/correctly filled out, so, to order the correct part number, Warehouse Staff must spend additional time and energy to complete the Material Requisition sheet – which serves as the input document to the Naviline Purchasing

module. This results in an inefficient use of Warehouse Staff time, and could allow staff to fraudulently order “extra” parts as previously described.

3. Where there is a manual calculation of *the amount* of part numbers to order, there is an opportunity for improvement.

“Warehouse and Power Plant staff decide the amount of T&D material to reorder by one of the following three methods: a) guesstimate by Warehouse staff, b) guesstimate by Power Plant staff, or c) Warehouse staff manually researches the reorder amount based on Naviline history of usage and purchasing” [Applicable to Warehouse staff, and anyone who specifies the quantity to reorder, essentially authorizes the quantity to order “because they said so.”]

Potential Impact: When material ordering practices are not determined by analytic analysis (past historical usage, future planned orders, economic order quantities for the best price), then the Warehouse staff could order too many, or too few, resulting in unnecessary cost, time and energy being spent to react if the order amount is in error.

Potential Impact: When material ordering practices are not determined by analytic analysis, but rather by following the advice of a user (guesstimate), then the user has the ability to over-order for purposes of fraud and theft. This scenario, coupled with a lack of internal controls to verify the amount used on the job, increases the risk that the amount ordered could equal the amount to be used legitimately + an amount to be misappropriated, because parts don’t run out for the amount to be used legitimately, then no one is the wiser to the theft.

4. Where there is inadequate verification of exceptions to “low bid” procurement code, there is an opportunity for improvement.

“Warehouse staff can recommend a non-low bidder for a Purchase Requisition based on delivery time and urgency. The Purchasing Division receives verbal justification of the exception from Warehouse staff without independently verifying it - by contacting the vendors who have quoted the job.” [Applicable to Purchasing staff]

Potential Impact: If exceptions to “low bid” procurement are allowed based on verbal justification and/or accompanying vendor quotes alone, then it is possible that the Purchase (quote) requestor only requested an expedited service from one of the vendors – the one perpetrating fraud.

5. Where there are redundant, unnecessary reviews (“unnecessary” because info is likely to be correct) there is an opportunity for improvement.

“For Purchase Requisitions, Purchasing Division staff reviews the submitted Purchase Requisition and attached vendor quotes. The Purchase Requisition is then sent back to Department Management for a review and approval, the Purchase Requisition is then sent back to the Purchasing Division to have a Purchase Order created. The back and forth reviews rarely find an error from the Warehouse staff.” [Applicable to Purchasing staff and to the EUD Assistant Dept. Director (Possibly applicable to Power Plant Manager).]

Potential Impact: The reviews do not appear to be necessary, because historically, errors are seldom found (budget, account numbers, quotes), so the time and energy spent performing these reviews and “sending” the requisition document back and forth appear to be an inefficient use of Purchasing staff and EUD management time.

For the Process “**Receive and Put-away Inventory**”:

6. Where the same warehouse staff performs non-compatible activities, there is an opportunity for improvement.

“Same staff determines order quantity, obtains vendor quotes, creates purchase requisition, justifies exceptions to low-bidder purchase policy, receives shipments, updates purchase order record, puts away the inventory into the warehouse.” [Applicable to Warehouse staff]

Potential Impact: The Warehouse staff, performing non-compatible activities, has the opportunity to make errors, commit fraud or theft, and cover it up.

7. Where the Finance Department’s Accounts Payable staff makes an unnecessary PO status request from Warehouse staff, there is an opportunity for improvement.

Per Warehouse staff: “A/P staff emails warehouse to confirm whether a PO has been delivered/received, often times when the receipt status has been updated in Naviline for all to see. Either A/P staff does not check the PO status in Nav, or they do not trust that the warehouse staff has updated the Nav system in a timely fashion. Warehouse staff manually pulls the hardcopy PO and/or accesses Naviline, to provide the PO status to the A/P staff. *Conversely, A/P staff indicates: “they always check Naviline prior to contacting Warehouse staff...”* [Applicable to EUD Warehouse and A/P staff]

Potential Impact: The Warehouse staff responsible for answering the inquiry from A/P staff must perform a manual PO search and/or the same Nav search that the A/P person could do. This results in an inefficient use of both the A/P and the Warehouse staff’s time.

For the Process “**Pick the Job Order Inventory**”:

8. Where the Job Packet is manually transported from division to division within the EUD, there is an opportunity for improvement.

“The hardcopy Job Packet is created by either System Operations or Engineering divisions. It is manually transported to the Transmission & Delivery division of EUD. The T&D manager then assigns the Job Packet to a Crew Foreman, who then transports the hardcopy Job Packet to the warehouse and uses the Engineering BOM as a Pick List. The Warehouse staff uses the BOM and additional parts specified by the Foreman, to pull parts needed for the job.” [Applicable to EUD Engineering, System Operations, T&D Management, Crew Foremen, Meter Shop, etc..]

Potential Impact: Inefficient transport of information, hand carrying paper seems outdated. Information listed on paper only is difficult to use in reporting or managing.

9. Where Job Orders created by EUD Engineering often have an incomplete Bill of Materials (BOM), and Job Orders created by System Operations never have a BOM for the job, there is an opportunity for improvement. [Applicable to EUD Engineering, and System Operations.]

Potential Impact: An incomplete BOM for Job Orders necessitates input from the Crew Foreman assigned to the job. The Crew Foreman identifies additional parts needed for the job and the amount of each part. Although actual parts usage has started to be recorded, it is not verified, this creates a risk for abuse.

10. When inventory parts leave the warehouse, and the Crew Foreman becomes accountable for their use on the job, but there is no documented transfer of custody assigning accountability for the parts to the Foreman there is an opportunity for improvement. [Applicable to Warehouse staff and Crew Foremen.]

“The Crew Foreman assists the warehouse staff identify which parts are needed for the Job Order. The Crew Foreman then takes possession of the parts and transport to the Crew truck. The Crew Foreman does not “sign” for the part numbers or the amount of each part number taken.”

Potential Impact: The Crew Foreman could *conceivably* pick unnecessary/extra parts or amounts of parts for the job – in order to steal the parts. If ever questioned, the Foreman could say that the part numbers and amount of parts attributed to the job in Naviline are not accurate, but something fabricated by the Warehouse staff who recorded the information on the Material Requisition Form and then inputted the information into Naviline. Management would not have a clear path of assigning accountability for the misappropriation of parts.

Imagine a bank loaning money or dispensing cash without documenting who received the loan or the cash - it is unimaginable.

11. Where current scanner technology has not been dependable...current staff has not received the necessary training on the scanners, there is an opportunity for improvement.

“The Naviline inventory module is currently manually updated by the Warehouse staff *after parts have been picked* for each Job Order - versus automatically, electronically updated via the bar code scanner *as material is picked* from warehouse locations.” [Applicable to Warehouse, others after-hours.]

Potential Impact: The manual data entry of job pick information, is necessitated because the current scanners have proven to be “off-line” and not able to be used when the material is actually being picked. This creates a situation where human error or possibly fraud, could result in inaccurate information being input into the Naviline – with little chance of inaccuracy being detected.

12. Where current security access into the warehouse has not been evaluated and documented with regards to: a) *preventing* unauthorized access, and b) *detecting* and reporting unauthorized entry, there is an opportunity for improvement.

Potential Impact: Unauthorized access to the warehouse increases the likelihood of theft.

EUD Improvement Team Recommendations

The EUD Improvement Team used a proven methodology to develop recommendations to improve the opportunity areas described in the previous section. Recommendations were grouped according to similar topics or other related synergies. Within each grouping, recommendations were prioritized based upon ease or impact of implementation.

Efficiency & Accountability Group

Priority A

Recommendation 1: The EUD Improvement Team recommends that a new form be created for the purpose of: a) Material Requisitions (removing inventory from the warehouse) and for b) Requesting inventory to be ordered (replenishing warehouse inventory).

Recommendation 2: The EUD Improvement Team recommends that a documented transfer-of-custody between the warehouse staff and those staff removing inventory from the warehouse be developed and Policy developed regarding responsibility of person taking custody.

Priority B

Recommendation 3: The EUD Improvement Team recommends that a new vendor verification checklist be created for Purchasing Division (Finance Department) staff's use - to verify the Electric Utility warehouse staff's request for "non-low bidder exception."

Recommendation 4: The EUD Improvement Team recommends the development of a Parts List for the top six or seven most common types of jobs – those where the parts required to do the job can be determined and documented. Ideally, a methodology would be developed to create and independently verify the parts required, and then used, on all jobs.

Roles and Responsibility Group

Priority A

Recommendation 5: The EUD Improvement Team recommends that Accounts Payable (A/P) staff (Finance Department) email receiving questions to a new "PO Receipt" inquiry mailbox, viewable by warehouse personnel and warehouse management.

Recommendation 6: The EUD Improvement Team recommends that no one person perform the following duties: a) determine the parts and quantities to order (create the purchase requisition in Naviline), b) receive and verify delivery of parts, c) input delivery/receipt data into the ERP system (Naviline), d) put-away the delivered inventory into warehouse racks/bins, and e) have uncontrolled access to inventory in the warehouse.

Priority B

Recommendation 7: The EUD Improvement Team recommends that the review activities associated with Electric Utility Warehouse Purchase Requisitions and Purchase Orders be streamlined.

Physical Security Group

Priority A

Recommendation 8: The EUD Improvement Team recommends that warehouse management perform a documented evaluation of the physical security and access to the warehouse from each point of entry, and for each major warehouse activity.

Technology and Automation Group

Priority A

Recommendation 9: The EUD Improvement Team recommends the Min-Max capability of Naviline be utilized to: a) indicate when warehouse inventory should be ordered and b) what the order quantity should be.

Priority B

Recommendation 10: The EUD Improvement Team recommends that the warehouse fully implement current scanning technology (in the following activities: Job Order Pick, Parts Ordering (until min-max is implemented) and Parts Receiving).

Recommendation 11: The EUD Improvement Team recommends that the manual activity of physically transporting hardcopy job packets and work order forms from one activity to the next be automated.

Priority C

Recommendation 12: The EUD Improvement Team recommends that warehouse management develop management reports that provide insight into the success of the EUD Team's recommendations.

EUD Improvement Team Recommendations & Action Plans

The EUD Team created Action Plans detailing specific tasks required to implement each recommendation. The Action Plans include: a) descriptions of sequential tasks or items required to fully implement each recommendation, b) the action item “owner,” c) the resources required for the action owner to be successful, and d) the estimated amount of time required for the action item owner to complete the task.

Efficiency & Accountability Group

A-Priority

Recommendation & Action Plan to Improve: “Order New Inventory”

1. Recommendation: The EUD Improvement Team recommends that **a new form be created** for the purpose of: a) **Material Requisitions** (removing inventory from the warehouse) and for b) **Requesting inventory to be ordered** (replenishing warehouse inventory).

The new form is to be used for the T&D warehouse (Electrical and Water) and by the Power Plant (Electrical). The new form, along with Policy and Procedures defining its use, **provides a consistent approach** and **improved internal control** surrounding these requisition and ordering activities.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Design a single form to be used for: a) documenting the parts inventory removed from the warehouse, and b) the parts inventory requested to be reordered. X: Do Now: Design the hard copy form Y: Do Later: Design an electronic version for use on phones, tablets, etc. that communicates with ERP.	Mike J.	- Best Practices research - I.T. - EUD Director	5/1/18	5/6/18	
2	Develop and write the Policy & Procedure defining how staff uses the new form.	Mike J.	- Best Practices research - Nikki M.	5/1/18	5/6/18	

	X: Do Now: P&P for hard copy form. Y: Do Later: P&P for electronic version.		- Rhonda MB. - Rosalind B. - Clyde J.			
3	Communicate & Train on the new Policy & Procedure	Nikki M.	- Foremen (the originators of material requisitions) - Power Plant staff	5/7/18	5/11/18	
4	Monitor and document to verify that training is being followed. Monitor to identify if there are any improvements needed to the use of the new form.	Nikki M.	- Foremen (the originator's of material requisitions) - Power Plant staff	On-going		
<u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team's Process Flowchart I. "Order New Inventory," specifically Opportunity Areas for Improvement identified at activities: #1a and #1b - concerning how the need to reorder parts is determined.						

Efficiency & Accountability Group

A-Priority

Recommendation & Action Plan to Improve: “Pick Job Order Inventory”

2. Recommendation: The EUD Improvement Team recommends that a **documented transfer-of-custody** between the warehouse staff and those staff removing inventory be developed, and Policy developed **regarding responsibility of person taking custody of the City asset.**

As mentioned in recommendation #8, currently no Job Order contains a complete list of parts required for the job, even the most common types of work. The Foreman of the crew essentially picks the materials he needs to perform the job using his expertise and job knowledge. There is currently no documented transfer of custody. **A substantial risk for fraud or theft exists when an individual can commit a theft or fraud, and be able to conceal it.**

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	<p>X: Do Now: update the current Material Requisition/Chain-of-custody Form into a signature sheet to be used as a transfer of custody. The form should specify pertinent information such as: part numbers and amounts of parts, Job Order number, date, time, printed name, and signature, etc.</p> <p>Note: The warehouse scanner vendor, Quatred, indicated that a “Pick List” with the information fields specified above, could be printed from the warehouse’s current scanners.</p>	Rosalind B.	<ul style="list-style-type: none"> - Best Practices cities - Vendor - Nikki M. 	5/1/18	5/6/18	
2	Develop and write the Policy & Procedure defining the use of the updated Material Requisition/Chain-of-custody Form.	Mike J.	<ul style="list-style-type: none"> - Rosalind B. - Nikki M. - Foremen 	5/1/18	5/6/18	

3	Communicate & train staff on new Material Requisition/Chain-of-custody Policy & Procedure.	Mike J.	- Rosalind B. - Nikki M. - Foremen	5/7/18	5/11/18	
4	Monitor to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the Material Requisition/Chain-of-custody Policy & Procedures.	Mike J.	- Nikki M.	On-going		
5	<p>Work with I.T., or other, to explore and proto-type new software for the electronic transfer of custody throughout the warehouse process, from delivery Receipt to Pick to Re-inventory parts not used on a job.</p> <p>Y: Do Later: Investigate an electronic version of Job Order documentation for use on phones, tablets, etc. that communicates with the ERP – Parts Lists created via a pull down menu integrated with the ERP.</p> <p>Note: explore the “technology” being tested in the Public Services Department, ARCGIS Survey 123 app developed by the GIS Team Jessica S. and Joe.</p>	Mike J.	- Walt G. - Best Practices research - I.T. - Jessica S. - GIS Joe - IT Vendors	5/1/18	5/31/18	
6	Develop and write the Policy & Procedure defining the electronic documentation Job Order Parts List identified in the recommendation statement.	Mike J.	- Walt G. - Paul N. - Jason B.	tbd		
7	Communicate & train staff on new Policy & Procedure.	Mike J.	- Walt G. - Paul N. - Jason B.	tbd		
8	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the electronic generation of Parts Lists.	Mike J.	- Walt G. - Paul N. - Jason B.	On-going		
<p>Link to Process Flowchart: This recommendation addresses the EUD Team’s Process Flowchart III. “Pick Job Order Inventory,” specifically Opportunity Areas for Improvement identified at activity: #14 - concerning how Foremen accept parts that they help pick, without a formal documented transfer-of-custody, and recognized accountability for the proper use of those parts.</p>						

Efficiency & Accountability Group

B-Priority

Recommendation & Action Plan to Improve: “Order New Inventory”

3. Recommendation: The EUD Improvement Team recommends that **a new vendor verification checklist be created** for Purchasing Division (Finance Department) staff’s use - to verify the Electric Utility warehouse staff’s request for “non-low bidder exception.”

Occasionally, because an inventory part may be required on a priority job, warehouse staff recommends that a non- low bid vendor be used, because the vendor can deliver in the needed time frame. The EUD Team recommends, **in order to prevent/ detect staff-vendor collusion**, Purchasing Division staff physically verify and document via the new checklist that the vendor recommended by warehouse staff, is the only one that can deliver in the documented timeframe, and that the job is a rush/priority job.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	<p>Work with the Purchasing Division (Finance Dept.) to design a new checklist that would verify and document the Electric Utility warehouse staff’s recommendation to select non-low bidder to order inventory parts.</p> <ul style="list-style-type: none"> Obtain buy-in from Finance Dept. Draft the new checklist Determine best way to attach the checklist to the Purchase Requisition <p>Note: perhaps the checklist is one that warehouse staff fills out as a “cover” sheet to the request for a “non-low bidder” and then Purchasing staff accesses it from Purchase Requisition attachments, and fills out following verification of the vendors and delivery times.</p>	Rosalind B.	<ul style="list-style-type: none"> Walt G. Finance Dept. Director / Purchasing Staff I.T. 	5/14/18	5/18/18	

2	Develop and write the Policy & Procedure defining how staff uses the new checklist.	Mike Jenkins	- Nikki M. - Rosalind B. - Clyde J.	5/14/18	5/18/18	
3	Communicate & Train on the use of the new checklist.	Mike Jenkins	- Rosalind B. - Nikki M. - Walt G. - Finance Dept Director - Purchasing staff	5/21/18	5/25/18	
4	Monitor and document to verify that training and the new checklist is being followed. Monitor to identify if there are any improvements needed to the use of the new checklist.	Rosalind B.	- Nikki M. - Purchasing staff	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team's Process Flowchart I. "Order New Inventory," specifically Opportunity Areas for Improvement identified at activity: #4 - concerning how the "non-low bidder exceptions" are reviewed and approved.</p>						

Efficiency & Accountability Group

B-Priority

Recommendation & Action Plan to Improve: “Pick Job Order Inventory”

4. Recommendation: The EUD Improvement Team recommends **the development of a Parts List for the top six or seven most common types of jobs – those where the parts required to do the job can be determined and documented.** Ideally, a methodology would be developed to create and independently verify the parts required, and then used, on all jobs.

Currently, a Job Order originated by System Operations does not contain a list of parts required for the job. Currently, the Engineering division only includes a partial list of parts (Bill of Materials) required for the job. In both cases, because warehouse staff do not have specific job related experience, the crew Foreman accompanies the warehouse staff to obtain parts for the job. This presents a risk that one staff (the Foreman) is able to dictate, the types and amounts of parts for the jobs without verification, and then take sole control of those parts. The risk for fraud or theft is increased in that the department does not receive independent verification of usage - what parts were actually used on the job.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Review the Job Order descriptions history in Naviline and/or hardcopy files, to document the top six or seven types of Job Orders.	Paul N.	- Nikki M. - Walt G. - I.T. - Jason B.	5/1/18	5/4/18	
2	Work with Engineering, Crew Foremen, Job Order parts history, and other resources, to develop a complete Parts List for the six or seven most common Job type. Include photos of parts if helpful. X: Do Now: Design a more effective and controlled way with current technology to communicate the part’s requirements to the warehouse staff. This coupled with the warehouse staff capability to	Paul N.	- Nikki M. - Walt G. - I.T. - Jason B.	5/7/18	5/11/18	

	Pick and stage parts required for jobs in advance (Recommendation #7) makes the Parts Pick activity more efficient and greatly decreases the risk of theft or fraud.					
3	Design method and forms to identify: <ul style="list-style-type: none"> a) Standard parts to pull for “common” jobs. b) Identify the costs associated with each part, each job. c) Identify the way, non-standard parts pick can be authorized by EUD Management. d) Develop the way EUD Management can verify the justification for a non-standard parts pick was warranted/legitimate. 	Mike J.	-Walt G. - Paul N.	5/14/18	5/18/18	
4	Develop and write the Policy & Procedure defining the use of the Parts List, etc.	Mike J.	- Walt G. - Paul N. - Jason B.	5/21/18	5/25/18	
5	Communicate & train staff on new Policy & Procedure. Create and Issue new Parts Lists Manual to all party’s involved.	Mike J.	- Walt G. - Paul N. - Jason B. - Nikki M. - Foremen	5/28/18	5/31/18	
6	Monitor to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the Parts List use.	Mike J.	- Walt G. - Paul N. - Jason B.	On-going		
7	Work with I.T., or other, to explore and proto-type new software for the automation of Job Order: <ul style="list-style-type: none"> a) creation, b) Parts List generation, c) Parts List warehouse Pick, d) Parts usage documentation, e) Surplus Parts re-stock into the warehouse. 	Paul N.	- Walt G. - Best Practices research - I.T. - Jessica S. - GIS Joe	5/14/18	5/31/18	

	<p>Y: Do Later: Investigate an electronic version of Job Order documentation for use on phones, tablets, etc. that communicates with the ERP – Parts Lists created via a pull down menu integrated with the ERP.</p> <p>Note: explore the “technology” being tested in the Public Services Department, ARCGIS Survey 123 app developed by the GIS Team Jessica S. and Joe.</p>		- IT Vendors			
8	Develop and write the Policy & Procedure defining the electronic documentation Job Order Parts List identified in the recommendation statement.	Mike J.	- Walt G. - Paul N. - Jason B.	6/4/18	6/15/18	
9	Communicate & train staff on new Policy & Procedure.	Mike J.	- Walt G. - Paul N. - Jason B.	6/18/18	6/22/18	
10	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the electronic generation of Parts Lists.	Mike J.	- Walt G. - Paul N. - Jason B.	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team’s Process Flowchart III. “Pick Job Order Inventory,” specifically Opportunity Areas for Improvement identified at activities: #9, #13 - concerning how Foremen accompany warehouse staff throughout the warehouse identifying what parts to use on a job, because there is no pre-specified parts list for even “common” jobs.</p>						

Roles & Responsibility Group

A-Priority

Recommendation & Action Plan to Improve: “Receive Shipment and Put-away Inventory”

5. Recommendation: The EUD Improvement Team recommends that Accounts Payable (A/P) staff (Finance Department) email receiving questions to a new “PO Receipt” inquiry mailbox, viewable by warehouse personnel and warehouse management.

Electric Utility warehouse staff notes that A/P staff has developed a **practice of calling or emailing the warehouse for verification that a Purchase Order** has been received, many times when it has been received in Naviline. The current A/P processing staff (Finance Department) notes that **Naviline is always checked first when an invoice is received**. The A/P staff indicates that ~ 75% of the time, Naviline shows the invoice received; if it does not show, an inquiry email is sent to the warehouse staff.

A policy/procedure should be developed for the receiving/invoice processing activities: for warehouse staff to respond to any emailed PO inquiry within a defined length of time, monitored by A/P and warehouse management; and that the A/P staff utilize Naviline as the first source of whether POs have been received, monitored by warehouse and Finance Management.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Investigate whether there is an existing policy or procedure that: <ul style="list-style-type: none"> a) For A/P staff dictates that they manually check with warehouse receiving staff prior to paying a vendor invoice. b) For warehouse/receiving staff dictates the timeframe that a delivery must be received and processed into Naviline. c) Determine if there is anything that would prevent the recommendations from being put into place, and whether it could be changed or overcome. 	Rosalind B.	- EUD Management - Finance Dept Management - A/P processing staff	5/1/18	5/4/18	
2	Develop and write the Policy & Procedure defining the timeframe that warehouse staff must meet when receiving deliveries.	Mike J.	- Nikki M. - Rosalind B.	5/1/18	5/4/18	

3	Obtain buy-in from Finance Department to institute a policy to “check Naviline” for status of PO delivery prior to paying invoices.	Rosalind B.	- Finance Dept. Director	5/7/18	5/11/18	
4	Communicate & Train on the use of the new streamlined process.	Rosalind B.	- Nikki M. - A/P staff	5/7/18	5/11/18	
5	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the use of the new “check Naviline first” policy.	Rosalind B.	- Nikki M.	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team’s Process Flowchart II. “Receive Shipment and Put-away Inventory,” specifically Opportunity Areas for Improvement identified at activities: #11, #12, #13 - concerning how Accounts Payable staff seems to rely on warehouse staff vs. the Naviline ERP to obtain the current status of a parts order.</p>						

Roles & Responsibility Group

A-Priority

Recommendation & Action Plan to Improve: “Receive Shipment and Put-away Inventory”

6. Recommendation: The EUD Improvement Team recommends that **no one person perform the following duties:** a) determine the parts and quantities to order (create the purchase requisition in Naviline), b) receive and verify delivery of parts, c) input delivery/receipt data into the ERP system (Naviline), d) put-away the delivered inventory into warehouse racks/bins, and e) have uncontrolled access to inventory in the warehouse.

The current Electric Utility warehouse staff performs all of the above duties. If the department implements a min-max capability with the ERP (Naviline), and another staff assumes some of the other duties outlined above, an adequate segregation of duties is possible. Although there is no indication of theft or fraud, a **substantial risk for fraud or theft exists when an individual can commit a theft or fraud, and be able to conceal it.**

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Identify a second person to perform one or more of the activities identified in the recommendation statement.	Mike J.	- Best Practices cities - Walt G. - Nikki M.	5/1/18	5/4/18	
2	Develop and write the Policy & Procedure defining the Segregation-of-Duties throughout the activities identified in the recommendation statement.	Mike J.	- Nikki M.	5/7/18	5/11/18	
3	Communicate & train staff on new Policy & Procedure.	Mike J.	- Nikki M.	5/14/18	5/18/18	
4	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the Segregation-of-Duties Policy & Procedures.	Mike J.	- Nikki M.	On-going		

Link to Process Flowchart:

This recommendation addresses the EUD Team's Process Flowchart II. "Receive Shipment and Put-away Inventory," specifically **Opportunity Areas for Improvement** identified at activities: **#2, #3, #4, #5, #7** - concerning how warehouse staff receives, puts-away and enters parts received into the Naviline ERP.

Roles & Responsibility Group

B-Priority

Recommendation & Action Plan to Improve: “Order New Inventory”

7. Recommendation: The EUD Improvement Team recommends that the **review activities** associated with Electric Utility Warehouse Purchase Requisitions and Purchase Orders **be streamlined**.

Streamlining these activities will improve efficiency: a) orders will be processed to the vender in a shorter amount of time, and b) the vendor parts will be arrive at the warehouse quicker.

Note: a summary of the EUD Team’s analysis is found in the Summary Report.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Determine if there is current policy or other rationale that would prevent: a) The Purchase Requisition review (and authorization) currently performed by EUD management to be performed by some other EUD personnel. b) The purchase requisition review by the Purchasing Division and the review and issuance of the Purchase Order by the Purchasing Division, to be performed by the same person at the same time.	Rosalind B.	- Walt G. - Finance Dept. Director / Purchasing Staff	5/21/18	5/25/18	
2	Develop and document the streamlined process (flowchart).	Rosalind B.	- Walt G. - Clyde J. - Finance Dept. Director / Purchasing Staff	5/21/18	5/25/18	

3	Develop and write the Policy & Procedure defining staff uses the new streamlined process.	Mike Jenkins	- Rosalind B. - EUD Management - Finance Dept Director - Purchasing staff - Clyde J.	5/28/18	5/31/18	
4	Communicate & Train on the use of the new streamlined process.	Rosalind B.	- EUD Management - Finance Dept Director - Purchasing staff	6/4/18	6/8/18	
5	Monitor and document to verify that training and the new streamlined process is being followed. Monitor to identify if there are any improvements needed to the use of the new streamlined process.	Rosalind B.	- Rosalind B. - EUD Management - Purchasing staff	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team's Process Flowchart I. "Order New Inventory," specifically Opportunity Areas for Improvement identified at activities: #4, #5, #6 - concerning how the Purchase Requisitions and Purchas Orders are reviewed and authorized.</p>						

Physical Security Group

A-Priority

Recommendation & Action Plan to Improve: “Pick Job Order Inventory”

8. Recommendation: The EUD Improvement Team recommends that warehouse management **document an evaluation of the physical security and access** to the warehouse from each point of entry, and for each major warehouse activity.

The evaluation could identify such information as: those staff authorized to access (perform for each point of entry), how each point of entry is designed to restrict access to unauthorized staff, the times of the week that access is authorized, how access is monitored, etc.

Warehouse staff indicated that many physical security initiatives are either under-way, or already in place, since the EUD Improvement Project began.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Evaluate current warehouse access practices and physical security. Document findings. Determine if current access practices and physical security is sufficient. Communicate findings to EUD Management. - Perform for T&D Warehouse and Power Plant.	Mike J.	- Best Practices cities - Walt G. - Brian King - H2O Chris - Nikki M. - Eng’g staff/Mgt - System Ops staff/Mgt	5/1/18	5/4/18	
2	Create Policy & Procedures for warehouse authorized access and for physical security (at each primary activity: Receiving, Put-away, Pick, Staging Orders, Obtaining staged parts orders, etc.).	Mike J.	- Walt G. - Brian King - Nikki M.	5/1/18	5/4/18	

			<ul style="list-style-type: none"> - H2O Chris - Rhonda MB - Foremen - Power Plant staff 			
3	Communicate & train staff on access and physical security Policy & Procedure.	Mike J.	<ul style="list-style-type: none"> - Nikki M. - H2O Chris - Power Plant staff - Foremen 	5/7/18	5/11/18	
4	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the access and physical security Policy & Procedures.	Mike J.	<ul style="list-style-type: none"> - Nikki M. - Foremen - Power Plant staff 	On-going		
<u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team's analysis and general recognition that the recommended evaluation should be performed and documented for all 4 processes evaluated (including "after-hours access" to the warehouse by Call-out Crews).						

Technology and Automation Group

A/C-Priority

Recommendation & Action Plan to Improve: “Order New Inventory”

9. Recommendation: The EUD Improvement Team recommends **the Min-Max capability** of Naviline be utilized to: a) **indicate when warehouse inventory should be ordered** and b) what **the order quantity** should be.

Utilizing this capability of the ERP (Naviline) will **increase the efficiency of warehouse staff**, and **improve the internal control** over this activity – the ERP will recognize the *number of parts in inventory* and based on *usage* recommend when a reorder is required (the “Min”). The ERP will recommend a reorder amount (to the “Max”). If staff recognizes parts should be ordered prior to that time, there may have been unauthorized use, or misappropriation, of the part - this could prompt an investigation.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Work with I.T. to determine whether the Naviline ERP is able, based on historical usage and ordering practices, to auto-designate the min-max for active parts.	Mike J.	- Walt G. - I.T. Director / Assistant Director	5/1/18	5/4/18	
2	<p>Work with I.T. to implement min-max for active warehouse inventory:</p> <p>a) Define, and then develop the min-max for, “high usage” parts.</p> <ul style="list-style-type: none"> • Contact Best Practices cities. • Work with I.T. to define and run a report of “high usage” • Work with I.T. to identify best method of defining min-max for “high usage” <p>b) Define, then develop the min-max for, “medium usage” parts.</p> <ul style="list-style-type: none"> • Contact Best Practices cities. • Work with I.T.: define and run a report of “medium usage” • Work with I.T.: identify best method of defining min-max for “medium usage” 	Mike J.	- Nikki M. - I.T. - Rhonda MB - Chris H2O	5/7/18	5/11/18 5/18/18	

	<p>c) Define and then develop the min-max for “low usage” parts.</p> <ul style="list-style-type: none"> • Contact Best Practices cities. • Work with I.T. to define and run a report of “low usage” • Work with I.T. to identify best method of defining min-max for “low usage” <p>d) Define and identify the parts and warehouse locations of inactive/obsolete parts.</p> <ul style="list-style-type: none"> • Separate inactive/obsolete from active parts. • Develop a strategy to remove obsolete parts from the warehouse, ideally generating City revenue. 				5/25/18	
3	Develop and write the Policy & Procedure defining how staff uses the ERP’s min-max capability.	Mike J.	<ul style="list-style-type: none"> - Best Practices research - Nikki M. - Rhonda MB. - Rossalind B. - Clyde J. 	6/11/18	6/15/18	
4	Communicate & Train on the new Policy & Procedure	Nikki M.	<ul style="list-style-type: none"> - IT Dept. - Purchasing staff 	6/18/18	6/22/18	
5	Monitor and document to verify that training is being followed. Monitor to identify if there are any improvements needed to the Min/Max settings.	Nikki M.	<ul style="list-style-type: none"> - IT Dept. - Purchasing staff 	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team’s Process Flowchart I. “Order New Inventory,” specifically Opportunity Areas for Improvement identified at activities: #1a and #1b - concerning how the quantity of parts to reorder is determined.</p>						

Technology and Automation Group

B-Priority

Recommendation & Action Plan to Improve: “Pick Job Order Inventory”

10. Recommendation: The EUD Improvement Team recommends that the warehouse **fully implement current scanning technology** (in the following activities: Job Order Pick, Parts Ordering (until min-max is implemented) and Parts Receiving).

Warehouse staff indicated that current scanners have had “uptime” problems. If this issue can be addressed and staff receives adequate training, and learns from best practices cities, then utilizing the scanning technology will **increase the efficiency of warehouse staff**, and **improve the internal control** over this activity.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Identify and document: <ul style="list-style-type: none"> a) The problems with the current scanners, b) The capabilities that the EUD would like to have in scanning technology (review best practices research), and c) Document the training required by warehouse staff and EUD management (for these activities: Pick the Order (w/ Material Requisition Form) / Reorder Parts (until min-max is implemented) / Receive & put-away parts). <ul style="list-style-type: none"> - The ERP (Naviline) can be updated via the scanning technology in each of these activities. 	Mike J.	<ul style="list-style-type: none"> - Best Practices cities - Walt G. - Nikki M. 	5/1/18	5/11/18	
2	Coordinate through I.T. (who oversees the training budget that pays the current vendor, Quatred) to arrange training for warehouse staff and EUD management.	Mike J.	<ul style="list-style-type: none"> - Walt G. - Nikki M. - H2O Chris - Rhonda MB - I.T. 	5/7/18	5/18/18	

3	Attend training, document how current practices will be improved. Have an I.T. representative attend training and offer an ERP perspective.	Mike J.	- Nikki M. - Rhonda MB - I.T.	5/21/18	5/25/18	
4	Develop and write the Policy & Procedure defining the use of scanning technology.	Mike J.	- Nikki M.	5/28/18	5/31/18	
5	Communicate & train staff on new scanning Policy & Procedure.	Mike J.	- Nikki M.	6/4/18	6/8/18	
6	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the scanning technology Policy & Procedures.	Mike J.	- Nikki M.	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team's Process Flowchart I. "Order New Inventory," Process Flowchart II. "Receive Shipment and Put-away Inventory," and Process Flowchart III. "Pick Job Order Inventory," specifically Opportunity Areas for Improvement identified at activity: I. #1a. & 1b. / II. #7, #8 / III. #9, #13, #12 - concerning how the ERP (Naviline) inventory module is updated – the recommendation is to use the scanner technology to update in real-time vs. the current manual data entry into Naviline (due at least in part from perceived unreliable scanner technology).</p>						

Technology and Automation Group

B-Priority

Recommendation & Action Plan to Improve: “Pick Job Order Inventory”

11. Recommendation: The EUD Improvement Team recommends that **the manual activity of physically transporting hardcopy job packets and work order forms from one activity to the next be automated.**

Hardcopies of Job Order packets from engineering and Job Order forms printed from Naviline by System Ops are manually transported to and from Transmission & Delivery Management, the T&D warehouse, and the Meter Shop (where they are closed out in Naviline).

Electronic processing **provides a consistent approach among those entities creating job tickets (work orders) and improved job processing** documentation and reporting. Utilizing even existing automation capabilities will **increase the efficiency of warehouse staff (allowing them to pick inventory ahead of the actual need)**. Creating and assigning Job Orders and then tracking the job order electronically allows: a) EUD management to see what job is assigned to what staff, b) what jobs are prioritized (including changing priority electronically), c) what jobs have been pre-pulled and ready for job crews, d) automatic capture of job start and finish time and electronic capture of job labor, and e) an assortment of EUD Management reporting capabilities. This information allows EUD Management to make informed decisions on staff efficiency, utilization, and scheduling - with the end result being better customer service.

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	<p>Work with I.T. to develop and implement <i>using existing automation capabilities</i> improvement in the transport of Job Orders described in the Recommendation statement.</p> <p>X: Do Now: Design a more effective and efficient way with current technology. Develop a method to:</p> <p>a) allow the warehouse staff to pre-pull Job Orders,</p>	Mike J.	<ul style="list-style-type: none"> - Walt G. - Best practices research - I.T. - Paul N. - Jason B. - IT Vendors 	5/21/18	5/31/18	

	<p>b) to notify T&D Management that orders have been pulled, and</p> <p>c) easily communicate the assignment and prioritization of Job Orders.</p> <p>Utilize scanning technology, email with attachments, Excel Spreadsheets, current computers and easily obtained tablets, etc.</p>					
2	Develop and write the Policy & Procedure defining the improved transportation of Job Order activities identified in the recommendation statement.	Mike J.	<ul style="list-style-type: none"> - Walt G. - I.T. - Paul N. - Jason B. 	6/4/18	6/15/18	
3	Communicate & train staff on new Policy & Procedure.	Mike J.	<ul style="list-style-type: none"> - Walt G. - Paul N. - Jason B. 	6/18/18	6/22/18	
4	Monitor to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the transfer of Job Order information from initiate to close-out.	Mike J.	<ul style="list-style-type: none"> - Walt G. - Paul N. - Jason B. 	On-going		
5	<p>Work with I.T., or other, to explore and proto-type new software for the transfer, tracking, and processing of EUD Engineering and System Operations Job Orders.</p> <p>Y: Do Later: Investigate an electronic version of Job Order documentation for use on phones, tablets, etc. that communicates with the ERP.</p> <p>Note: explore the “technology” being tested in the Public Services Department, ARCGIS Survey 123 app developed by the GIS Team Jessica S. and Joe.</p>	Mike J.	<ul style="list-style-type: none"> - Walt G. - Best Practices research - I.T. - Jessica S. - GIS Joe - IT Vendors 	6/25/18	6/29/18	
6	Develop and write the Policy & Procedure defining the electronic transfer of Job Order activities identified in the recommendation statement.	Mike J.	<ul style="list-style-type: none"> - Walt G. - Paul N. - Jason B. 	tbd		

7	Communicate & train staff on new Policy & Procedure.	Mike J.	- Walt G. - Paul N. - Jason B.	tbd		
8	Monitor to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the transfer of Job Order information from initiate to close-out.	Mike J.	- Walt G. - Paul N. - Jason B.	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses the EUD Team’s Process Flowchart III. “Pick Job Order Inventory,” specifically Opportunity Areas for Improvement identified at activities: #6, #8, #11 - concerning how warehouse staff transports hardcopy Job Orders from activity to activity.</p>						

Technology and Automation Group

C-Priority

Recommendation & Action Plan to “Measure the Success of EUD Team Improvements”

12. Recommendation: The EUD Improvement Team recommends that warehouse management **develop management reports** that provide insight into the success of the EUD Team’s recommendations.

Develop and review management reports, such as:

- Access exception reporting (after hours, weekends, etc.)
- Cycle Count reporting such as % accuracy
- Results of inventory shortages investigation
- Results of periodic review of surveillance video
- Job Cost Reporting: by type of job, by Crew Foreman
- Number of jobs completed per week: by type of job, by Crew Foreman
- Time to complete jobs: by type of job, by Crew Foreman

Action Step	Action Description	Responsible Person	Resources Required	Start	End	Status
1	Identify the warehouse activities and the inventory control areas that are most important to EUD management. Identify the purpose of management’s desired reporting – document what information they want, and how they will use the information.	Mike J.	- Best Practices cities - Ed Liberty - Walt G. - Brian King	6/18/18	6/22/18	
2	Document specific desired Management Reports by Report Title, and report fields, and the frequency of each report (weekly, monthly, quarterly, etc.) for each report. Review with Management.	Mike J.	- Best Practices cities - Ed Liberty - Walt G. - Brian King	6/25/18	6/29/18	

3	<p>Coordinate through I.T., and/or vendor, other, to physically design Management Reports. Ideally reports will generate automatically at the desired frequency and be sent electronically to the users of the reports.</p> <ul style="list-style-type: none"> a) Run test reports b) Review test reports with EUD Management c) Solicit Management input d) Finalize reports 	Mike J.	<ul style="list-style-type: none"> - Ed Liberty - Walt G. - Brian King - I.T. 	7/2/18	7/6/18	
4	Develop and write the Policy & Procedure defining the creation and use of Management Reports.	Mike J.	<ul style="list-style-type: none"> - Ed Liberty - Walt G. - Brian King 	7/9/18	7/18/18	
5	Communicate & train staff & management on new Management Report Policy & Procedure.	Mike J.	<ul style="list-style-type: none"> - Ed Liberty - Walt G. - Brian King 	7/23/18	7/27/18	
6	Monitor and document to verify that new policy and practices are being followed. Monitor to identify if there are any improvements needed to the Management Report Policy & Procedures.	Mike J.	<ul style="list-style-type: none"> - Ed Liberty - Walt G. - Brian King 	On-going		
<p><u>Link to Process Flowchart:</u> This recommendation addresses ways to measure the success of the EUD Improvement Team's recommendations. Additionally, it addresses the EUD Department Director's request that meaningful reports be generated that management can use in the decision-making process.</p>						

Appendix of Project Resources

(Available upon request)

The following Appendix materials are provided to the Electric Utility Department for use in implementing the EUD Team's recommendations and/or used by the EUD Team during Team work sessions.

I. List of Project Resources (available upon request)

II. Resource Listing for each Recommendation (available upon request)

III. Appendix Resources (available upon request)

- A. Input from EUD Department Director
- B. Input from T&D Manager, Warehouse Staff, Eng'g, Sys Ops and Vendor Anixter
- C. Input from Lake Worth Information Technology Department
- D. Input from Bar Code/Scanner Vendor: Quatred Touchless Technologies
- E. Input from Best Practice Research: Similar Cities
 - City of Boca Raton
 - City of Winter Park
 - City of Tarpon Springs
 - City of Homestead
 - Gainesville Regional Utility
- F. Input from Public Services Department Director on Work Order App
- G. Internet Research: Inventory Management Best Practices
 - The Ultimate Guide to Warehouse Inventory Management
 - Warehouse Inventory Management Best Practices
 - Important Warehouse Inventory Management Metrics
 - Choosing the Right Warehouse Inventory Management Software
 - Enhancing Your Inventory Management System with Mobile Apps
 - Choosing the Right Barcode Scanners
 - Low-Tech Solutions for Warehouse Inventory Management
 - Five Best Practices for Inventory Management That Apply to Every Business
 - Proper Asset Categorization Lays the Foundation
 - Automate, Automate, Automate
 - Simplify Re-Ordering Processes
 - Maintain Minimal Stock Levels

- The Future of Utility Supply Chain Management
 - Internal Realignment
 - Category Management
 - Supplier Integration
 - Inventory Optimization
 - Improved Metrics

H. Samples of Reports in use at Similar Cities